

8. 1958.

C O N T E N T S .

1.	Annual Administration Report of the Veterinary Department of the Government of India, 1903-1904.	λ. 2r	D 4	1-24 pp.
2.	dt o	1904-1905.	λ. 2r D 5	25-43 pp.
3.	dt o	1907-1908.	λ. 2r D 8	44-75 pp.
4.	dt o	1908-1909.	λ. 2r D 9	76-109 pp.
5.	dt o	1909-1910.	λ. 2r E 0	110-135 pp.
6.	dt o	1910-1911.	λ. 2r E 1	136-157 pp.
7.	Statistics compiled by the Govt. of India from the reports of Provincial Civil Veterinary Departments, 1911-1912.			158-168 pp.
8.	dt o	λ. 2r	E 2	1912-1913. 169-179 pp.
9.	dt o	λ. 2r	E 3	1913-1914. 180-193 pp.
10.	dt o	λ. 2r	E 4	1914-1915. 194-207 pp.
11.	dt o	λ. 2r	E 5	1915-1916. 208-221 pp.
12.	dt o	λ. 2r	E 6	1916-1917. 222-235 pp.
13.	dt o	λ. 2r	E 7	1917-1918. 236-248 pp.
14.	dt o	λ. 2r	E 8	1918-1919. 249-261 pp.
15.	dt o	λ. 2r	E 9	1919-1920. 262-274 pp.

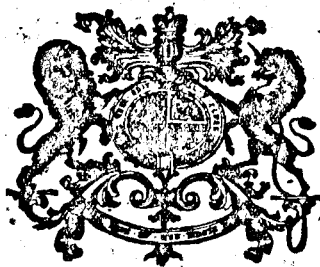
ANNUAL ADMINISTRATION REPORT

OF THE

CIVIL VETERINARY DEPARTMENT IN INDIA

FOR THE OFFICIAL YEAR

1903-1904.



SIMLA :
PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.
1904.

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GOVERNMENT OF INDIA.

ANNUAL ADMINISTRATION REPORT
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PART I.—IMPERIAL REPORT.

I.—HORSE BREEDING.

The opening balance, as shown in Table I, was 349. During the year only 2 Arabs were purchased by this Department, the remaining requirements of the year were obtained under arrangements of the Army Remount Department, to which the control and administration of all Imperial horse breeding in certain selected districts, were transferred under orders contained in Government of India, Revenue and Agriculture Department endorsement No. 482-36-4, dated 20th March 1903. In the year under report, 2 stallions died, 24 were destroyed either for old age or otherwise unfit for stud purposes, 22 were sold, 292 transferred to the Army Remount Department, and 10 handed over, free of charge, to District Boards; leaving a balance of only 3 Arab stallions in Guzerat of the Bombay Presidency.

Number of stallions on the Register.

2. As shown in Table II, of the 3 stallions remaining at the end of the year, 2 were up to 10 years of age, and 1 over 10 years.

Ages of stallions.

3. For purposes of comparison it has been found necessary to confine the particulars noted in Table V to non-selected districts only. The number of horse stallions actually employed at stud in those districts during the year under report was 58.70 against 86.51 in the previous year; the remainder having either been transferred to selected districts, or stopped from serving mares, being cases of suspected "Dourine."

Number of stallions at work.

4. The general average cost of feed and keep of horse stallions, as shown in Table IX, indicates a satisfactory decrease, being Rs. 298-11-9 against Rs. 348-15-0 in the previous year; this to some extent may be accounted for by the fact of Rajputana, Baluchistan and Sind having been omitted by reason of transfer to the Army Remount Department; but even so, a reference to Table IX will show that a satisfactory corresponding decrease is noticeable in United Provinces, Punjab, and the North-West Frontier.

Cost of feed and keep.

5. The stallions imported from England having arrived in India after the transfer of horse breeding to the Army Remount Department was effected, they will be accounted for by that Department; together with the Arabs purchased in India by the Purchasing Committee. The 2 Arab horse stallions shown in Table I as "Purchased in India" are those bought for the Bombay Government.

Stallions imported and purchased in India.

6. An abstract of casualties given in Table III shows that during the year under report 2 horse stallions died and 22 were destroyed, or a percentage of 0.5 and 6.2 respectively. Detailed particulars of each stallion died or destroyed will be found in Table III (a), from which it will be observed that of 24 horse and pony stallions destroyed, 15 were cases of "Dourine."

Casualties during the year.

- Sale of rejected stallions.** 7. The Sale Roll (Table IV) is unusually large this year, owing to orders having been received from the Government of India to dispose of all stallions not taken over by the Army Remount Department or by District Boards.
- Castration.** 8. Table XI shows that the number of colts castrated during the year by Veterinary Assistants was 1,457 against 2,485 in the previous year. This large decrease is entirely due to the transfer of selected districts and Veterinary Assistants to the Army Remount Department.
- Number of branded mares.** 9. A reference to Table X will show that the opening balance of the year under report was 21,911 branded mares for horse breeding. Only 68 were branded during the year by Officers of this Department, and after deducting those sold, died, and transferred to the Army Remount Department, the closing balance was 5,574 branded mares in non-selected districts. The question of providing a sufficient number of stallions for these mares, and of continuing the system of branding approved mares, is now under the consideration of the Government of India.
- Number of mares covered by stallions.** 10. The particulars embodied in Table V have been confined to non-selected districts. The number of mares covered by stallions during the year under report was 3,190 against 4,127 in the previous year; the reason for the decrease is the withdrawal of stallion power from non-selected districts for transfer to the Army Remount Department. A perusal of the table will show that, with the exception of Rajputana and North Punjab, the number of stallions previously located in the non-selected districts of all the other Provinces was less than in the preceding year.
- Average coverings per stallion employed.** 11. As a result of the insufficiency of stallion power, the average coverings per stallion employed exceeded those of the previous year, being 54.34 against 47.75 in 1902-03.
- Produce.** 12. The reported foalings in non-selected districts, as shown in Table V, amounted to 907, giving an average of 10.48 head of produce per stallion employed in the previous year, which is less than the *general* average of 1902-03, *viz.*, 13.83 per stallion, but compares favourably with the general average of the preceding year.
13. The unreliability of these statistics, due to the insufficiency of the district staff, has in almost every Annual Report been fully represented; but since the transfer of Imperial horse breeding to the Army Remount Department has been effected, the staff has been correspondingly reduced, and it is feared that greater difficulties will be experienced in the future as regards the collection of these necessary statistics unless some arrangements are made by District Boards or other local District officials to organize a proper agency.
- Country-bred remounts purchased.** 14. The particulars on this head will be furnished by the Army Remount Department, as the annual rolls of all country-bred remounts purchased have been supplied to that Department. Table VI has therefore been omitted from the appendices of this Report.
- Relative success of different classes of stallions as sires.** 15. The number of prizes awarded at Horse Fairs and Shows to produce of Government stallions, will be found in Table XIV. The produce of Australian sires again head the list with a proportion of 2.8 followed in order by half and three-quarter-bred English, Thoroughbred English, Arabs and Stud-breds.
- General statement of the cost of the Department.** 16. Table XVIII, as furnished by Comptroller, India Treasuries, shows that the cost of the Department during the year under report debited to India Estimates, amounted to Rs. 3,50,833-3-7 against Rs. 6,87,191-14-11, showing a decrease of Rs. 3,36,353-11-4 on the expenditure incurred in the preceding year. The decrease is due to the transfer of Imperial horse breeding in selected districts, to the control of the Army Remount Department, and the consequent reductions effected in the expenditure incurred under that head, in the Civil Veterinary Department.
17. The prices paid for imported horse and donkey stallions during the year under report, will be furnished in the Annual Report of the Army Remount Department.

18. Following the practice of previous years, the maps showing the breeding districts and the stands where stallions were located up to the actual date of handing over to the Army Remount Department, have been attached to this Report; but as no Imperial stallions now remain under the control of this Department, these maps will in future be discontinued.

II.—MULE BREEDING.

19. Table I will show that at the beginning of the year under report there were 492 donkey stallions present. The donkey stallions imported during the year, will be accounted for by the Army Remount Department: there were 16 Punjabis purchased in the Indian market and 8 others added by births at the Hissar Farm; deducting casualties and transfers to the Army Remount Department and District Boards, the number remaining at the close of the year was 29: these are maintained at the Hissar Cattle Farm, and are all under 10 years of age as shown in Table II.

20. The number of donkey stallions employed at stud in selected districts having been omitted from Table VII, it will be observed that the number employed to serve pony mares was 127 against 156·7 last year, and the number utilized to serve donkey mares was 8 against 7·6 in the previous year.

21. A satisfactory decrease in the cost of feed and keep of donkey stallions is apparent, as compared with last year's figures. Table XII shows the general average cost to be Rs. 148·6·6, against Rs. 161·9·3 in the previous year.

22. As all imported donkey stallions were received this year by the Army Remount Department, they will be commented on in the Annual Report of that Department.

23. The 16 Punjabis purchased by me at fairs and in the districts were powerful, straight-backed animals, and in every way promise to grow up into suitable sires. An abstract of particulars and measurements of these animals at the time of purchase, is given below:—

Average age	...	...	...	...	2 years.
„ height	...	...	...	...	12 hds. 1 inch.
„ girth	...	...	...	...	52 inches
„ shank	...	...	...	...	6½ inches

24. A reference to Table III will show that, during the year under report, 8 donkey stallions died, and 5 were destroyed, giving a percentage of 1·6 and 1·01 respectively. The general percentage was 2·6 against 3·97 in the previous year. Particulars as to causes of death, etc., will be found recorded in Table III (a).

25. Table IV gives detailed information of 52 donkey stallions sold during the year under report; of this number 37 were disposed of owing to age, or being otherwise unfit for stud work, and the remaining 15 were sold to the Army Remount Department and Native States for mule breeding purposes.

26. The question of the supply of Imperial donkey stallions in selected districts, will be dealt with, in future, by the Army Remount Department; but the supply of suitable jacks to District Boards in non-selected districts and to Native States, is one of the subjects now under the consideration of the Government of India.

27. The selected districts now under the control of the Army Remount Department having been omitted from Table VII, the number of mares covered by donkey stallions in non-selected districts, is 8,333. pony mares and 255 donkey mares, against 9,513 and 319 respectively.

28. The average of mares covered per donkey stallion is as follows:—

Pony mares	65·6 against 60·9	Average coverings per stallion employed.
Donkey mares	31·8 „ 41·9	

Produce. 29. The number of mule and donkey foals dropped is 1,936 and 88 respectively; the average result of coverings per stallion employed being mules 12.4 and donkey stock 11.5, which compare very favourably with the figures of previous years.

Mules purchased. 30. As all statistics regarding mules purchased have been furnished to the Army Remount Department, no information on this head is available in this office for the year under report; Table VIII has therefore been omitted from the appendices.

III.—HORSE FAIRS AND SHOWS.

UNITED PROVINCES.

Horse Fairs and Shows. 31. Table XIII is an abstract of particulars of Horse Fairs and Shows held in non-selected districts during the year under report. Those held in selected districts will be alluded to in the Annual Report of the Army Remount Department. In the United Provinces only one fair was held. The number of animals competing was 129 against 83 in the previous year. No information has been furnished as to sales effected or the number of remounts purchased.

PUNJAB.

32. Six Fairs and Shows were held in North and South Punjab. The number of animals competing for prizes was 1,352 against 1,295 in the previous year. Only 4 remounts are reported to have been purchased, of which 3 went to the Police Department and 1 to the Army Remount Department. 28 mules were also obtained at these fairs, of which 3 were secured by Government and 25 were bought by other purchasers.

NORTH-WEST FRONTIER PROVINCE.

33. Only one show was held, at which 183 animals competed for prizes against 518 in the previous year. No record has been furnished of remounts or mules sold at the show.

BALUCHISTAN AND SIND.

34. Particulars of horse fairs and shows held in these Provinces will be furnished by the Army Remount Department.

BENGAL.

35. No statistics have been furnished of any of the local horse fairs held in the Bengal Presidency.

BOMBAY.

36. Only one horse show was held, at which 293 animals competed for prizes. 7 remounts for the Police Department were purchased, but no information has been furnished with regard to sales of mules.

HORSE AND MULE BREEDING IN NATIVE STATES.

37. No information has been furnished to this office of horse and mule breeding carried on by Native States during the year under report. It is believed that these particulars will be embodied in the Annual Report of the Army Remount Department, therefore this heading will, in future, be omitted from the Annual Reports of this Department.

IV.—INSTRUCTION FARMS.

38. The 2 Instruction Farms attached to the stallion depôts in the United Provinces and the Punjab, no longer exist, as noted in paragraph 52 of last

year's Annual Report. Tables XV to XVII are attached to show how the farm animals were disposed of. These tables will, in future, be omitted from the appendices of the Annual Reports of this Department.

GOVERNMENT CATTLE FARM, HISSAR.

39. The Farm has now been 5 years under the management of the Civil Veterinary Department.

40. *Cows*.—On the 31st March there were 736 cows present against 779 last year. 17 died, 1 was destroyed, and 25 barren, old and worthless cows were sold during the year. 85 very high class farm-bred heifers were put into the breeding herds on the 1st April, making the total up to 821. As the Military Department require 250 Siege Train bullocks annually and it is estimated that about 100 bulls will also be required, it is proposed to raise the breeding herd to 1,100 cows which should be sufficient to meet all requirements.

41. *Young Stock*.—The number of female produce present on the 31st March was 513 and the number of calves born during the year was 310, *viz.*, 126 males and 184 females. These are valuable stock and true to type.

42. *Bulls*.—There were 11 bulls remaining on the 31st March against 18 last year. 1 died, 2 were sold as unfit for use, and 4 castrated and worked on the farm. 4 farm-bred bulls joined the herds on the 1st April, thus allowing 1 bull for every 50 cows. Although the districts were carefully searched and every fair attended, it was found impossible to purchase a single bull true to type and otherwise good enough to place with the breeding herds.

43. *Supernumerary Bulls*.—34 bulls for issue to the districts were purchased by the Punjab Government, 1 bull was supplied to the Remount Depot at Babugarh, 1 to Colonel Atkinson for the 17th Bengal Lancers Farm on the Jhelum Colony, and 1 to Faridkot. These bulls are the first batch issued since the reorganization of the farm. They have been very carefully reared, are well grown, straight-legged animals, possessing great power and all the true characteristics of the Harriana breed. Pure bred sires of this description will rapidly improve the stock of the districts in which they are placed.

44. *Males*.—395 were present on the 31st March. 16 died, 1 was destroyed and 162 sold as being undersized and unfit for Siege Train bullocks.

45. *Females*.—Out of the 513 present on the 31st March, 9 died, 3 were destroyed and 33 sold, being undersized and not true to type.

46. The above 2 batches of 162 males and 33 females are the remnants of the cross bred stock which it has been deemed advisable to draft and sell. The castings in future years will be very small, as the breeding herds are now composed of practically pure bred Harriana cattle which have been very carefully selected.

47. *Mules*.—There were 287 mules present on the 31st March. 7 were born on the farm and 59 purchased during the year. 11 mules were cast and sold being unfit for Ordnance purposes. 66 mules were supplied to the Remount Department and classified as follows :—

Ordnance ...	...	...	...	17
Ordnance Baggage ...	...	...	...	45
Transport ...	...	...	...	4

This is the first batch of mules issued from the farm.

48. The small percentage of Ordnance mules is attributed to the fact that these animals were originally purchased for Rs. 70 each. It was recognised that this amount was insufficient to procure the right class of young mule that would eventually grow into an animal fit for Ordnance purposes and the price was accordingly raised to Rs. 120.

49. It is estimated that 70 out of the 110 which will be issued this year will prove good enough for Ordnance and the remaining 40 for Ordnance baggage.

50. Owing to the increased price, it has been possible to purchase a very much better stamp of young mule and the probable castings in future years should not exceed 2 per cent.

51. The mulés bred from the farm mares and born on the farm are far superior in every way to those purchased in the open market.

52. *Donkeys*.—29 donkey stallions were present on the 31st March. 16 colts were purchased and 6 born on the farm during the year. 12 donkey stallions were supplied to the Army Remount Department, 2 to Kashmir, and 1 to the Bharatpur State. 13 Italian donkeys were disposed of—9 sold by auction, 3 castrated and sold, and 1 destroyed. The Army Remount Department rightly refused to take these animals as they were very crooked legged, flat-sided and totally unfit for breeding purposes.

53. *Donkey Mares*.—32 were present on the 31st March. 14 were purchased during the year and 3 fillies born on the farm. 1 mare was sold and 1 died.

54. This scheme which was started at such an opportune moment is now getting into working order and there can be no question that it is a thorough and complete success. It will be gradually enlarged as suitable brood mares are forthcoming and the fillies born on the farm are old enough to breed from. It is an acknowledged fact that the best mules in India are sired by country-bred donkeys, and the class we are now rearing and issuing from the farm cannot fail to leave its mark on the mule stock of the country.

55. *Zebras*.—4 zebra stallions were received from Africa in February last. They arrived in excellent condition, very soon settled down and are now perfectly tractable and docile. 40 pony and donkey mares have been purchased to mate with these animals and a series of most interesting experiments with regard to zebrule breeding will be carried on.

56. *Cultivation*.—No effort has been spared to bring this branch of the farm into a thoroughly efficient state. All borders of the fields have been properly mapped out, the land thoroughly cleaned, jungle growth cleared away, low-lying marshy land levelled and put under crops, and the whole of the cultivated area surrounded by a high wall to prevent destruction of crops by pigs and other animals.

57. A reference to Table XIX (b) will show the amount of fodder grown and consumed on the farm. Owing to a succession of famine years it has hitherto been found impossible to put by a reserve of fodder, but during the past year, 70,000 maunds have been stacked for this purpose.

58. Table XIX shows that the receipts from the farm exceed the expenditure by Rs. 5,508-2-6 and the estimated market value of the stock on the farm amounts to Rs. 2,26,689.

59. Rapid and satisfactory progress has been made throughout all branches of the farm. The receipts exceed the expenditure by Rs. 5,508-2-6; the land let out to zamindars shows a larger income by Rs. 717 than last year; 66 mules, 15 donkey stallions and 250 bullocks were issued to the service, and 37 bulls supplied to the Punjab, Native States and private individuals.

60. Great credit is due to Captain Farmer for the able and zealous manner in which he has managed the farm. Its financial condition is most satisfactory and it is now fully meeting the requirements for which it was established.

V.—BACTERIOLOGICAL LABORATORY.

61. The Annual Report of the Imperial Bacteriologist has been submitted strictly in accordance with Revenue and Agriculture Department letter No. 861—49-1, dated 19th March 1901, and deals only with the actual working of the Laboratory.

62. All reports connected with investigation and research work have been published separately under the following heads:—

- (i)—Notes on the different degrees of susceptibility to Rinderpest exhibited by the various pure and mixed breeds of bovines and buffaloes.

(ii)—Report on Dourine.

(iii)—Report on the preparation of Rinderpest Protective Serum.

The work of the year can be conveniently divided into two parts—that done at Muktesar and Bareilly.

At Muktesar—

63. *Anti-rinderpest Serum*.—520,925 c. c. were prepared and 571,740 c. c. or 114,798 doses were issued during the year under report against 87,791 doses last year. This serum was utilised by the various Superintendents in Bengal, the Punjab, United Provinces of Agra and Oudh, Central Provinces, Madras, North-West Frontier Province, Assam, Burma, the Sikkim-Tibet Force, the State Surgeons of Perak and Selangor, and the Sanitary Department of the Egyptian Government.

64. *Dry Serum (Anti-rinderpest)*. This serum was for the first time prepared at Muktesar in dry form. It possesses many advantages over the liquid and is being thoroughly tested in the field.

65. *Anthrax Serum*.—40,018 c. c. were prepared. This is equivalent to 8,003 doses against 3,094 last year. This serum was used in Madras, United Provinces of Agra and Oudh, and the North-West Frontier Province.

66. *Mallein*.—247 doses of English and 28 doses of French were issued. 850 doses of Mallein were prepared at the Laboratory and in future all Mallein required for India and the East will be made at Muktesar.

67. *Training of Veterinary Assistants* in inoculation and Bile Therapeutics was continued during the year, 28 being trained at Muktesar and 24 at Bareilly.

68. *Buildings*.—The engines and centrifugal machines arrived last year and have been stored at Roorkee pending completion of the buildings for their accommodation. It is much to be regretted that so much delay has occurred in erecting these buildings, as the machinery now in use is totally inadequate to prepare the enormous quantity of serum required in India and other countries which indent on us.

69. *Forest and Fodder Supply*.—These two branches of the Laboratory have been worked satisfactorily during the year, and arrangements made to greatly increase the fodder supply.

70. *Meteorological Observations*.—The new Observatory shed was completed by the end of December 1903. A thermograph was added and all observations carefully recorded.

At Bareilly—

71. The Imperial Bacteriologist and certain members of his staff moved down in November 1903 and the following experiments were carried out, full details of which have been submitted to Government :—

(i)—Experiments with Hamirpur and Bijnor District bulls, with a view to test their susceptibility to rinderpest.

(ii)—Experiments with a view to find out periods during which hill bulls are found to be protected against rinderpest when injected with varying doses of anti-rinderpest serum and subsequently tested with virulent rinderpest material.

(iii)—Observations of Dourine cases.

(iv)—Observations of Camel Surra.

(v)—Training of Veterinary Assistants.

72. Considerable progress was made with regard to the Laboratory buildings, roads, fencing, etc., and every endeavour made to get the Institution into thorough working order.

73. Table XX shows the main results of the working of the Laboratory, the quantity of serum prepared and issued, practical instruction in inoculation,

and the financial results. The last named is satisfactory as the receipts are higher by Rs. 5,567-6-3 and the expenditure lower by Rs. 17,023-12-10 than last year.

74. The report shows continued good work on the part of the Imperial Bacteriologist and his staff and marked progress in all departments of the Laboratory.

VI.—EQUINE DISEASES.

Glanders and
Farcy.

75. The following table shows the number of cases of Glanders and Farcy dealt with by the various Superintendents and is a decrease against 100 reported last year:—

Punjab	...	...	...	...	...	6
Bombay	...	...	...	...	...	13
Bengal	...	...	...	...	...	53
<hr/>						Total
						72

76. Arrangements are being made to introduce and work the Act in Calcutta where the disease is very prevalent. The number of cases reported and destroyed in this Presidency is a mere fraction of the amount which exists.

77. All equine diseases in selected districts are now dealt with by the Army Remount Department.

78. Two cases of Epizootic Lymphangitis are also reported to have been destroyed at Bombay during the year under report.

Publications.

79. The following books and special reports were published by the Department during the year 1903-04:—

- (a) Further Note on "Dourine" by Major H. T. Pease.
- (b) Report by Dr. A. Lingard on "Dourine."
- (c) Report by Dr. A. Lingard on the preparation of Rinderpest Protective Serum.
- (d) Note on the different degrees of Susceptibility to Rinderpest exhibited by the various, pure and mixed, breeds of Bovines and Buffaloes, etc., submitted to Serum Testing by the 'serum alone' and the 'simultaneous' methods during the years 1899-1903.
- (e) Agricultural Ledger (Special Veterinary Series No. 16) of 1903. "Sheep (parasites): on the occurrence of *Stilesia globipunctata* and *Stilesia centripunctata* in Indian Sheep" by Captain H. T. Pease.
- (f) Manual of the more deadly forms of Cattle Disease in India. Third edition. Revised by Captain G. K. Walker.
- (g) Breeds of Indian Cattle, Punjab. By Major H. T. Pease. Edited by Captain F. S. H. Baldrey.
- (h) Monograph on the breeds of Cattle and Buffaloes in Burma by Major G. H. Evans.

80. The "Manual of the more deadly forms of Cattle Disease in India" has supplied a long felt want, as applications for copies have been very numerous. 2,000 have been printed in English and it is proposed to print in the various vernaculars.

81. The "Monograph on the breeds of Cattle and Buffaloes in Burma" by Major Evans is a most valuable and interesting report. The author has evidently exercised considerable care in compiling the work and it clearly denotes his great local knowledge of Burma and its cattle.

82. The number of horse-boxes and cattle-trucks inspected during the year under report, is as follows:—

	Cleansing of horse-boxes and cattle-trucks.
United Provinces	55
North Punjab	87
South Punjab	29
Baluchistan and Sind	211
Rajputana	79
Bengal	175

Total 636
against 588 last year.

83. An increase is noticeable in the number of horse-boxes and cattle-trucks inspected, *viz.*, 636 against 588 last year. With very few exceptions the reports are satisfactory, denoting that the measures adopted by the Railway Authorities are effective.

PART II.—PROVINCIAL REPORT.

I.—HORSE BREEDING.

84. Table I (Provincial) shows that there were 209 horse and pony stallions at the beginning of the year; 19 were added and 110 removed from the Registers during the year, leaving a closing balance of 113.

85. Table V (Provincial) shows that the number of stallions actually employed during the year was 113—the same as in the previous year.

86. An abstract of casualties is given in Table III (Provincial) showing 5 deaths and 2 destroyed; the general percentage of casualties being 7.01 for horses and 1.09 for ponies.

87. Five horses and 4 ponies, as shown in Table IV (Provincial), were disposed of during the year, being unfit for further stud work. The average price realized per horse was Rs. 177 and per pony Rs. 275-8-0.

88. An abstract showing cost of feed and keep of horse and pony stallions will be found in Table IX (Provincial); the figures being:—

Horses	Rs. 208 against Rs 230
Ponies	Rs. 257 „ Rs. 243

As noted in last year's Report, the highest averages were in Burma and Central Provinces.

89. The selected districts which have been handed over to the Army Remount Department having been excluded from Table V (Provincial), the figures cannot be compared with those furnished in last year's Report. There were 5,689 mares covered, giving an average of 50.34 per stallion employed, which is quite up to the average of previous years and may be considered satisfactory. The results of covering are also up to the usual average.

90. Table XVIII (Provincial) shows the total Provincial cost of the Department as furnished by the Accounts Offices of the various Provinces. The total amounts to Rs. 4,73,481-10-0 against Rs. 4,56,269-0-10 in the preceding year, showing an increase of Rs. 17,212-9-2. The principal increase is under the head "Superintendent, Civil Veterinary Department, South Punjab," which, in last year's Table, was entirely omitted by the Accounts Department for reasons not known in this office.

II.—MULE BREEDING.

91. A reference to Table I (Provincial) will show that the year under report opened with a balance of only 31 donkey stallions. During the year 61 were added and 17 removed from the Register; leaving a closing balance of 75.

animals, of which 61 are located in the Punjab, 6 in the United Provinces and 8 in the North-West Frontier Province. Table VII (Provincial) shows that of this number 23 were employed, covering 319 pony mares and 162 donkey mares.

Cost of feed and keep.

92. A satisfactory decrease in the average cost of feed and keep will be noticed in Table XII (Provincial); the amount being Rs. 134-2-4 against Rs. 156-6-3 in the previous year.

Produce.

The produce reported is very disappointing. A reference to Table VII (Provincial) shows that only 79 mules and 35 head of young donkey stock are reported as the results of the previous year's coverings, giving an average per stallion employed of 6.07 of mules and 4.37 of donkey stock. This is too absurd; and for want of proper agency to collect and furnish accurate statistics, the incomplete particulars rendered to this Department have to be accepted.

III.—CATTLE DISEASE—INVESTIGATION AND PREVENTION.

Outbreaks of cattle disease.

94. Table XX (Provincial) shows the Provinces in which outbreaks of cattle disease occurred. The return is incomplete as Burma and Madras have been unable to furnish returns with regard to the number attacked.

95. Every endeavour, however, has been made during the past year to collect accurate statistics with regard to the total mortality and I have reason to believe that the figures quoted, *viz.*, 258,419 are more or less reliable and to be depended upon.

96. These figures clearly indicate that if outbreaks of disease are to be dealt with on systematic lines and attempts made to reduce these enormous annual losses, it is essential that our staff, both superior and subordinate, should be adequate and thoroughly efficient.

PREVENTIVE INOCULATION AGAINST RINDERPEST, ETC.

97. A reference to Table XXIII (Provincial) will show that very material progress has been made under this important head during the past year. It is to be regretted that owing to insufficient machinery the Laboratory was unable to meet all demands for serum; but the arrangements now made should suffice for all requirements in the future.

98. In the "serum alone" method we have the best and only system possible for this country at the present day. As the native owners more fully recognise the benefit of an active immunity for their cattle and as we obtain Veterinary Assistants of higher intelligence and training, the simultaneous method may become feasible. The experience of the past 3 years shows that the "serum alone" method is an undoubted success in India and until we can discover other more effective means at once applicable to this country and its people it would be highly dangerous and undesirable to change our present system.

99. It is significant of the value of serum when used in affected herds of the Darjeeling and Chittagong Hill Tracts to find that only 3.25 per cent. of injected animals succumbed; whereas in an ordinary outbreak of rinderpest among such cattle a percentage of 90 to 98 usually follows.

100. *Rinderpest*.—390 outbreaks were dealt with and 47,360 cattle immunised against 42,871 last year; the mortality after injection being only 280.

101. Rinderpest broke out amongst the Transport bullocks engaged in the Sikkim Tibet Force. The serum supplied kept the Force free from rinderpest.

102. *Anthrax*.—48 outbreaks were dealt with and 6,385 animals were immunised against 3,405 last year. The mortality after injection was 33.

103. *Hæmorrhagic Septicæmia and Charbon Symptomatique*.—A serum for both these diseases is now under preparation at Muktesar and will be used in the field after thorough testing at the Laboratory.

104. All reports received from the various parts of India and Burma, with the exception of one or two villages in the United Provinces of Agra and Oudh, state that no opposition whatever was shown to the system of injection. The rapidity with which the native owner has grasped the benefits to be derived from this method augurs well for the future and will considerably reduce the difficulties of the Department in coping with outbreaks of disease.

VETERINARY DISPENSARIES.

105. In Table XIX (Provincial) will be found a statement showing the number of animals treated during the year by Veterinary Assistants. The numbers are :—

In-patients ...	...	...	5,122	against 5,199	last year.
Out-patients	...	...	178,935	„ 146,982	„
or a total of			...	184,057	or an increase of 31,876
over the previous year.					

106. A reference to the corresponding table in last year's Report will show that while there was a decrease of one Veterinary Dispensary in the United Provinces and one in the Punjab, due to the transfer of selected districts to the Army Remount Department, a satisfactory increase of Veterinary Dispensaries was effected, *viz.*, 2 in Bengal, 1 in Bombay, 11 in Central Provinces, and 17 in Berar.

VETERINARY ASSISTANTS.

107. Table XXIV (Provincial) gives the total strength of the subordinate Veterinary Staff, after deducting those transferred to the Army Remount Department. The present staff consists of 13 Veterinary Inspectors and 308 Veterinary Assistants. This number for, practically, the whole of India will be admitted to be quite inadequate to cope with outbreaks of cattle disease and the treatment of animals at dispensaries, etc.

108. The number of Veterinary Assistants employed at dispensary work has increased from 64 to 99: those employed at work connected with horse and mule breeding have decreased from 37 to 3 owing to the transfer of breeding operations to the Army Remount Department. The number employed in attending to cattle disease is practically the same as last year, being 204 against 205 in 1902-03.

109. The number of animals treated by Veterinary Assistants *in villages* is shown in Table XXI (Provincial). It is reported that 38,396 villages were visited by 264 Veterinary Assistants, and that the total number of animals treated by them amounted to 203,197 against 165,238 in the previous year.

110. It will be observed that, with the exception of Bombay and Burma, all the other Provinces show an increase in the number of animals treated. Last year no particulars were furnished by Madras, and this year the North-West Frontier Province has failed to fill up details required for Table XXI (Provincial).

IV.—CATTLE BREEDING, ETC.

CATTLE FAIRS AND SHOWS.

111. Reports were received of the following Cattle Fairs and Shows :—

Sonepore, Kalimpong, Khagra, Rajnagar, Suri, Bittah and Sitamarhi in Bengal.

Lakhimpur, Karwi, Batesar and Karma in the United Provinces.

Choa Saidan Shah, Amritsar, Karnal, Muzafargarh, Jellalabad, Hissar, Lyallpur, Lidbari and Jehazgarh in the Punjab.

None from Burma.

Singaji and Chapara in Central Provinces.

Sibi in Baluchistan.

Tezaji, Pushkar and Alwar in Rajputana.

112. The classes of animals competing are favourably reported on and are described as deserving of encouragement. The cows at the Sonapore Fair are said to be fair in number and quality. The best of the pure breed represented at the Kalimpong Fair is reported to be "*Siri*" both for draught and milch purposes. The bulls seen at Lakhimpur Fair are reported as magnificent animals, especially those of the "*Parhar*" breed. Those seen at Choa Saidan Shah have been described as worthy of encouragement and the cattle inspected at Muzafargarh are reported as "*fair*."

113. As noted in paragraph 118 of last year's Report, the amalgamation of the Imperial grant for prizes with contributions from other sources, and the meeting of all expenditure incurred from one general fund, renders it difficult to detail the actual awards. This system will be altered and, if possible, the different sources of receipts and expenditure separately shown in future. So far as can be ascertained from the figures rendered, Rs. 3,875 were awarded in prizes from Imperial Funds, and Rs. 3,922 from Local and District Funds; but cannot be accepted as correct, as in some instances no information has been furnished as to the sources from which the prizes awarded were derived.

114. The Imperial grant sanctioned for the year under report, for the award of prizes to cattle, was allotted as follows:—

						Rs.
Bengal	...	...	...	...	...	2,500
United Provinces	...	...	...	...	...	2,500
Punjab	...	...	...	...	...	2,500
Burma	...	...	...	...	...	1,000
Central Provinces	...	...	...	...	...	1,000
Baluchistan	...	...	...	...	...	500
						<hr/>
				Total	...	10,000
						<hr/>

CATTLE BREEDING.

115. As stated in paragraph 43, thirty-seven bulls were issued from the Hissar Farm to the districts, etc.

116. The proposals for establishing bull breeding and rearing farms mentioned in last year's Annual Report are now under the consideration of Local Governments and measures for giving effect to the scheme have already been adopted by the Punjab, Central Provinces, United Provinces of Agra and Oudh, Bengal and Bombay.

V.—VETERINARY INSTRUCTION.

VETERINARY COLLEGES AND SCHOOLS.

117. Table XXV (Provincial) shows the results of the working of the several Veterinary Colleges and Schools.

118. The total number of students passed out was 103 against 101 last year.

119. Eight were graduates from the Bombay Veterinary College, 8 from Bengal and 34 Veterinary Assistants from the Punjab. These men have all gone through a course of 3 years' study. The Bombay College also passed out 21 Salutris, Ajmer 21 and the Burma School 11. These men have gone through a 2 years' course only.

120. The abolition of the Ajmer Veterinary School and its amalgamation with the Punjab Veterinary College was finally decided upon during the year and the transfer of the teaching staff and students will take place next April, when the increased accommodation for their reception will be complete. With the closing of this school all 2 years' courses in India (with the exception of the Salutri class in Bombay) cease to exist.

121. It is very gratifying to note that the Madras Veterinary College was started in temporary premises in October 1903 in Vepery. A large plot of land has been acquired, plans and estimates sanctioned and when complete, this college should be one of the best equipped in India. Several hundred applications were received for admission, but it was deemed advisable to limit the number to 20 students. All these have been carefully selected and form a very promising nucleus.

122. The outturn of the colleges is unequal to meeting the great demand for graduates and Veterinary Assistants and it is satisfactory to find that the men have no difficulty in finding employment.

VI.—GENERAL.

123. This report closes a phase in the history of the Department and will be the last submitted on the present lines. Remarks

124. Owing to the recommendations of the Horse and Mule Breeding Commission, certain districts were, during the year, handed over to the Army Remount Department, and in future all Imperial horse and mule breeding operations in the areas selected will be under the control of that Department.

125. The handing over and other matters connected with the transfer occupied time which otherwise would have been devoted to furthering the work which has now been assigned to the Department.

126. During the year under report, Major Ringe was permitted to retire and Major Hagger died from abscess of the liver in Bombay whilst officiating Principal of the College, otherwise the personnel of the Department remains unchanged.

J. W. A. MORGAN, *Colonel,*

Inspector-General,

Civil Veterinary Department.

SMMLA ;

The 30th September 1904. }

TABLE I.

IMPERIAL.

Return of Government horse, pony and donkey stallions for the official year 1903-04.

DETAILS.	GOVERNMENT HORSE AND PONY STALLIONS.														GOVERNMENT DONKEY STALLIONS.																
	HORSES.													Total horses and ponies.	PONIES.													Total.			
	Thorough-bred English.	Three-quarter bred.	Half-bred English, and Norfolk Ironers.	Hackney.	Roadster.	Australian.	Arab.	Persian.	Turkoman.	Country-bred.	Stud-bred.	Total.	Arab.	Country-bred.	Total.	Spanish (Catalonian).	Arab.	Home-bred.	Country-bred.	Gujrat.	Punjab.	Italian.	American.	Persian.	Cyprian.	Gami.	Mesher.	Chinese.	Zanibar.	Total.	
Balance on 1st April 1903	87	4	13	10	59	173			3		349	17	1	18	867	46	10	5	17	1	46	156	12	14	176	1	2	4	2	492	
Increase																															
Received by imporation																															
Purchased in India																															
Presented																															
Error in last year's report																															
Born at Hisar and received from other sources																															
Total	87	4	13	10	59	175			3		361	21	2	23	874	46	10	5	17	1	80	157	12	14	176	1	2	4	2	527	
Decreases																															
Died	1																														
Destroyed	3		2	1	2	13			1		22	2		2	24																
Sold	3		9	5	1	4					22			22	2	1	1	1													
Transferred to Remount Department	83		1	3	56	147			2		292	9	1	10	302	39	6	8	16	1	27	102	11	10	140	1	2	2	1	361	
Transferred to District Boards			1	1		7					10			10	5	2						10	32		1	21				71	
Error in last year's report																															
Total	87	4	13	10	59	172			3		348	11	1	12	860	46	10	5	17	1	54	155	11	14	176	1	2	4	2	498	
Balance on 31st March 1904																															
In United Provinces of Agra and Oudh (allotted)																															
Ditto ditto (unallotted)																															
In Rajputana																															
In North Punjab																															
In South Punjab																															
Ditto ditto (unallotted)																															
North-West Frontier Province																															
In Baluchistan																															
In Sind																															
In Central India																															
Hisar Cattle Farm																															
In Bengal																															
In Decan																															
In Guserat																															
Total																															

TABLE II.

IMPERIAL.

Statement showing the ages of stallions on the Register at the close of the year under report, viz :—1903-04.

Province.	HORSES.				DONKEYS.				REMARKS.
	Up to 10 years.	Over 10 and up to 15 years.	Over 15 years.	Total.	Up to 10 years.	Over 10 and up to 15 years.	Over 15 years.	Total.	
United Provinces (allotted)	
Ditto (unallotted)	
Rajputana	
North Punjab	
South Punjab ... (allotted)	
Ditto (unallotted)	
North West Frontier Province	
Baluchistan	
Sind	
Central India	
Hissar Cattle Farm	20	...	...	20	
Bengal	
Deccan	
Guzrat ...	2	1	...	3	...	...	...	...
Lahore Veterinary College	
Muktesar Laboratory	
TOTAL	2	1	...	3	20	...	...	20	

TABLE III.

IMPERIAL.

Abstract of casualties of Government Horse, Pony and Donkey stallions during the year 1903-04.

Province.	NUMBERS DIED.			NUMBERS DESTROYED.			TOTAL.			PERCENTAGE OF DEATHS.			PERCENTAGE DESTROYED.			GENERAL PERCENTAGE.			REMARKS.	
	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.		
United Provinces...	2	5	...	2	5	...	4	...	...	15	47	...	15	47	...	31		
Rajputana		
North Punjab	4	2	...	1	3	...	5	...	...	271	274	...	67	274	...	337		
South Punjab	5	...	1	5	...	1	72	...	71	72	...	71	...	71	
Baluchistan		
Sind		
Central India		
North-West Frontier Province ...	1	...	1	2	3	...	1	7.69	...	3.03	15.38	...	23.07	...	3.03	...	3.03	
Bengal		
Deccan	1	...	1	...	...	...	...	...	5.8	...	...	5.8	...	...
Guzrat ...	1	...	...	2	1	...	3	1	...	16.6	...	33.3	100.00	...	30.00	100.00	...	...
Hissar Cattle Farm	1	...	...	1	...	2	...	5.5	...	5.8	...	...	...	...	...	11.00		
Punjab Veterinary College	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Muktesar Laboratory	4	...	...	4	...	...	...	...	...	...	...	...	...	...	...
TOTAL	2	...	6	22	2	5	24	2	23	0.8	...	1.8	6.3	11.1	1.01	6.9	11.1	2.6		

Note.—The percentages to be taken on stock existing at the beginning of the year under report.

TABLE III (a).

IMPERIAL.

Casualty roll of horse and donkey stallions of the Civil Veterinary Department
for the official year 1903-04.

Brand No.	Name.	Class.	Description of casualty.	Nature of casualty.
HORSE STALLIONS.				
<i>United Provinces.</i>				
2528	Kirby	Hackney .	Destroyed .	Dourine.
2253	His Grace	N. T. .	Do. .	Do.
...	.....	Country-bred	Do. .	Do.
...	.....	Arab .	Do. .	Do.
...	Quit	Do. .	Do. .	Do.
<i>North Punjab.</i>				
2133	Alario	T. B. E. .	Destroyed .	Old and worn out.
180	Sardis	Do. .	Do. .	Unfit for stud.
<i>South Punjab.</i>				
114	Qui Vive	Arab .	Destroyed .	Dourine.
68	Cato II	T. B. E. .	Do. .	Do.
195	Highland Fling	T. B. A. .	Do. .	Paralysis.
...	.....	Arab .	Do. .	Dourine.
...	.....	Do. .	Do. .	Do.
<i>North West Frontier Provinces.</i>				
140	Faldo	T. B. E. .	Died .	Bilious fever.
2207	Conduct	N. T. .	Destroyed .	Old and worn out.
2656	Quid	Arab .	Do. .	Unsuited for stud work.
<i>Bombay Presidency.</i>				
...	Hakin	Arab-Pony .	Destroyed .	Old and worn out.
...	Jamadar	Arab-Horse .	Died .	Colic.
...	Monsoon	Arab-Horse .	Destroyed .	Incurable attack of paralysis of the loins.
...	Hassan	Arab-Pony .	Do. .	Old and worn out.
...	Glenmore	Arab-Horse .	Do. .	Ditto.
<i>Punjab Veterinary College.</i>				
...	.....	Arab .	Destroyed .	Dourine.
...	.....	Do. .	Do. .	Do.
<i>Muktesar Laboratory.</i>				
...	.....	Australian .	Destroyed .	Dourine.
...	.....	Arab .	Do. .	Do.
...	.....	Do. .	Do. .	Do.
...	.....	Do. .	Do. .	Do.

TABLE III (a)—*contd.*

IMPERIAL.

*Casualty roll of horse and donkey stallions of the Civil Veterinary Department
for the official year 1903-04.*

Brand No.	Name.	Class.	Description of casualty.	Nature of casualty.
DONKEY STALLIONS.				
<i>United Provinces.</i>				
455	Opehra	H. B.	Died	Intestinal rupture.
489	Golmal	Italian	Do.	Enteritis.
580	Bela	Do.	Destroyed	Dourine.
9	Firdous	Arab	Do.	Paraplegia.
<i>North Punjab.</i>				
208	Antar	Cyprian	Died	From operation for gall stones.
369	Ajal	Italian	Do.	General debility.
371	Seram	Cyprian	Do.	Enteritis.
362	Goalpara	Italian	Do.	Rupture of the intestines.
375	Jaora	Do.	Destroyed	Old and worn out.
<i>South Punjab.</i>				
371	Chola	Italian	Destroyed	Old and worn out.
<i>North-West Frontier Provinces.</i>				
287	Karina	Catalonian	Died	Colic.
<i>Sind.</i>				
...	Nil.	...	...	.....
<i>Hissar Cattle Farm.</i>				
357	.....	Italian	Destroyed	Unsuitable for stud purposes.
...	.....	Punjabi	Died	Kicked by a mule.

TABLE IV.

IMPERIAL.

Sale Roll of Government Horse, Pony and Donkey stallions during 1903-04.

Brand No.	Name.	Class.	Age on 1st January 1904.	Horse, pony or donkey.	Name of purchaser.	Amount sold for.	Cause of rejection.
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UNITED PROVINCES.

			Yrs.			Rs. A. P.	
196	Emperor . . .	N. T.	18	Horse.	Ramlall	87 0 0	Unfit for stud work.
2318	Excelsior IV . . .	N. T.	15½	Do.	Mahomed Zahurul Hasan	445 0 0	
2337	Imperial	N. T.	14½	Do.	Amanant Ali	82 0 0	
2530	Holme Cadet . . .	Hackney	12½	Do.	Asharfilal	178 0 0	
139	Real Glue	H. B. E.	11	Do.	Ramlall	320 0 0	
34	Witcham Firesaway	Hackney	12	Do.	Mahomed Zahurul Hasan	515 0 0	
205	Kidnapper	Arab	9	Do.	Sheikh Asghar Ali . . .	275 0 0	
2523	Locket	Hackney	13½	Do.	Ramlall	540 0 0	

NORTH PUNJAB.

			Ys. Ms.			Rs. A. P.	
115	Quad	Arab	8 4	Horse.	Babu Gulab Singh Bedi	690 0 0	Unsuitable for stud purposes. Unsuitable for stud purposes. Refuses to cover.
215	Gamecock	¾ bred	6 0	Do.	Munshi Ramlall	455 0 0	
295	Mariner II	T. B. A.	6 0	Do.	C. J. Halifax, Esq., D. C.	800 0 0	

SOUTH PUNJAB.

			Ys. Ms.			Rs. A. P.	
116	Quota	Arab	10 2	Horse.	Shazada Fagfur Jan . . .	690 0 0	Unfit for stud work.
2390	Milhem	¾ bred	15 0	Do.	Lala Dina Nath	145 0 0	
2522	Zeus	Hackney	15 8	Do.	Munshi Ramlall	325 0 0	
2381	Speedwell	N. T.	15 4	Do.	Major G. F. Evans, I.M.S.	100 0 0	
216	Drake	¾ bred	6 3	Do.	Inayat Karim	285 0 0	
265	Mikado	Arab	7 3	Do.	Captain Comar	230 0 0	
2388	Bacon Captivator	N. T.	15 3	Do.	Major Walker	85 0 0	
36	Wainfleet Bean . .	¾ bred	10 3	Do.	Mr. G. Mackay	470 0 0	

NORTH-WEST FRONTIER PROVINCE.

			Ys. Ms.			Rs. A. P.	
2372	Romeo	H. B. E.	14 0	Horse.	Seth Adamji Mamooji . .	390 0 0	Unfit for stud work.
2327	Gauntlet	H. B. E.	15 0	Do.	Munshi Ramlall	350 0 0	
2517	Stuntney King Tom	Hackney	13 0	Do.	Seth Adamji Mamooji . .	160 0 0	

TABLE IV—contd.

IMPERIAL.

Sale Roll of Government Horse, Pony and Donkey stallions during 1903-04.

Brand No.	Name.	Class.	Age on 1st January 1904.	Horse, pony or donkey.	Name of purchaser.	Amount sold for.	Cause of rejection.
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UNITED PROVINCES.

			Ys. Ms.			Rs. A. P.	
460	Ajitmal	Persian	14 0	Donkey	Chbala	17 0 0	} Unfit for stud work.
589	Chimna	Do.	14 0	Do.	Ramzani	12 0 0	
547	Zaminkand	Cyprian	13 0	Do.	Budha	18 0 0	
327	Asami	Do.	5 3	Do.	Budhu	17 0 0	
445	Dabbara	Italian	16 0	Do.	Neyadar	14 0 0	
480	Shalemar	Do.	14 0	Do.	Seyan	18 0 0	
158	Sanda	Catalonian	9 0	Do.	Budhu	19 0 0	
513	Sayan	Italian	16 0	Do.	Ramzani	32 0 0	
559	Guftar	Punjabi	14 0	Do.	Budhu	35 0 0	
235	Kulaba	Cyprian	8 0	Do.	Budhu	45 0 0	
61	Rawalpindi	Punjabi	11 0	Do.	Karimullah	25 0 0	
603	Buxar	C. B.	13 0	Do.	Budhu	25 0 0	
554	Munkapur	Zanzibar	14 0	Do.	Ramzani	19 0 0	
526	Bilwara	Italian	15 0	Do.	Budhu	16 0 0	
590	Diwan	Persian	12 0	Do.	Budhu	14 0 0	

NORTH PUNJAB.

						Rs. A. P.	
381	Lala Musa	Italian . . . .	...	Donkey	Haji Qadir Bux	35 0 0	} Unfit for stud work.
427	Datia	Italian . . . .	...	Do.	Mian Mahomed Amir	20 0 0	

SOUTH PUNJAB.

			Ys. Ms.			Rs. A. P.	
400	Bolan	H. B.	18 5	Donkey.	Mian Mahomed Amir	22 0 0	} Unfit for stud work.
245	Saras	C. B.	9 3	Do.	Mian Mahomed Amir	23 0 0	
146	Anwarpur	Cyprian	12 5	Do.	Mian Mahomed Amir	27 0 0	
375	Bekas	Do.	8 0	Do.	Lala Ganesh Dass	36 0 0	
570	Akola	Do.	13 0	Do.	Mr. G. Mackay.	25 0 0	
139	Miliana	Do.	11 5	Do.	Mr. G. Mackay	40 0 0	
344	Doul	Do.	6 0	Do.	Mr. G. Mackay.	60 0 0	
511	Gahmar	Italian	15 4	Do.	Haji Qadir Bux	22 0 0	
301	Dustoor	Do.	6 4	Do.	Haji Qadir Bux	37 0 0	
100	Sopari	Arab	11 5	Do.	Mr. G. Mackay.	40 0 0	

TABLE IV—concl'd.

IMPERIAL.

Sale Roll of Government Horse, Pony and Donkey stallions during 1903-04.

Brand No.	Name.	Class.	Age on 1st January 1904.	Horse, pony or donkey.	Name of purchaser.	Amount sold for.	Cause of rejection.
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CENTRAL INDIA.

...	Sp. Cat.	...	Donkey	Officer Commanding 13 Duke of Connaught's Lancers.	Rs. A. P.	Unfit for stud work.
						50 0 0	

HISSAR CATTLE FARM.

			Ys. Ms.			Rs. A. P.	
363	Italian	5 2½	Donkey	Haji Qadir Bux	10 0 0	Unfit for Farm use.
353	.....	Chinese	6 2½	Do.	Mr. F. S. Glandy	41 0 0
381	.....	Do.	5 10½	Do.	Mian Mahomed Shariff	28 0 0
385	.....	Do.	5 4½	Do.	Mr. F. S. Glandy	45 0 0
387	.....	Do.	4 10½	Do.	Haji Qadir Bux	26 0 0
362	.....	Italian	4 9½	Do.	Ali Baksh (Hansi)	17 8 0
364	.....	Do.	4 9½	Do.	Mr. Herdon (Hansi)	11 0 0
366	.....	Do.	4 9½	Do.	Ali Baksh	17 8 0
30	.....	Punjabi	0 10	Do.	Ladu, Hissar	13 0 0
...	Phee	Chinese	...	Do.	Bharatpur State	400 0 0		For mule breeding purposes.
...	.....	Punjabi	...	Do.	Kashmir State	400 0 0
...	.....	Do.	...	Do.	Kashmir State	400 0 0
...	.....	Do.	...	Do.		400 0 0
...	.....	Do.	...	Do.		400 0 0
...	.....	Do.	...	Do.		400 0 0
...	.....	Do.	...	Do.		400 0 0
...	.....	Do.	...	Do.		400 0 0
...	.....	Do.	...	Do.		400 0 0
...	.....	Do.	...	Do.		400 0 0
...	Do.	...	Do.	Army Remount Department.	400 0 0	For stud purposes.
...	.....	Do.	...	Do.		400 0 0
...	.....	Do.	...	Do.		400 0 0
...	.....	Do.	...	Do.		400 0 0
...	Italian	...	Do.		400 0 0	
...	Cyprian	...	Do.		400 0 0	

TABLE V.

IMPERIAL.

Numbers and produce of each class of Government Horse and Pony stallion during 1903-04.

Horse or pony.	Class.	Stallions on Register on 31st March 1904.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.		RESULT OF PREVIOUS YEAR'S COVERINGS.			AVERAGE RESULT OF PREVIOUS YEAR'S COVERINGS PER STALLION EMPLOYED AT STUD.			REMARKS.
			Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of produce.	Number not held.	Number not known.	Average of produce.	Average of not held.	Average of not known.	
Horse	United Provinces	18-72	26-43	800	1,043	42-7	40-2	303	625	135	11-4	23-6	5-1	
	Rajputana . . . . .	..	1	1	14	20	14	20	..	..	20	..	..	..
	North Punjab . . . . .	..	10	10	974	906	97-4	90-6	112	207	587	11-20	20-70	58-70
	South Punjab . . . . .	..	17	31	890	1,508	52-35	48-64	309	768	431	9-96	24-77	13-90
	Baluchistan . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..
	Sind . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..
	Deccan . . . . .	..	1-45	3-98	42	56	23-97	14-46	23	23	10	5-93	5-93	2-58
	Guzerat	3	3-53	4-20	129	97	36-54	23-09	36	50	11	8-57	11-90	2-62	
	North-West Frontier Province . . . . .	..	7	10	341	477	43-71	47-70	124	217	136	12-40	21-70	13-60
	TOTAL	3	58-70	86-51	3,190	4,127	54-34	47-75	907	1,890	1,330	10-48	21-84	15-37	
Pony	Deccan	7	5-83	7-45	114	114	19-55	15-30	41	35	38	5-50	4-70	5-10	
	Guzerat	4	5-24	5-95	170	137	32-44	23-03	54	61	22	9-08	10-25	5-70	
	TOTAL	11	11-07	13-4	284	251	25-65	18-73	95	96	60	7-09	7-16	4-47	
	GRAND TOTAL	14	69-77	99-91	3,474	4,378	49-79	43-81	1,002	1,986	1,390	10-02	19-87	13-91	

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TABLE VII.

IMPERIAL.

Services and produce of each class of Government Donkey stallion during 1903-04.

CLASS OF DONKEY STALLIONS.	Stallions on register on 31st March 1904.	DONKEY STALLIONS ACTUALLY EMPLOYED AT STUD.				NUMBER OF MARES COVERED.				AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.				RESULT OF PREVIOUS YEAR'S COVERINGS.						AVERAGE RESULT OF PREVIOUS YEAR'S COVERINGS PER STALLION EMPLOYED AT STUD.					
		For mule-breeding.		For Donkey-breeding.		Pony mares.		Donkey mares.		Pony mares.		Donkey mares.		Pony mares.			Donkey mares.								
		Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of mule produce.	Number not held.	Number not known.	Number of Donkey produce.	Number not held.	Number not known.	Average of mule produce.	Average of not held.	Average of not known.	Average of donkey produce.	Average of not held.	Average of not known.
United Provinces . . .	38	447	7	5.6	2,182	2,502	217	195	57.4	55.9	31.00	34.8	733	1,206	563	57	104	94	16.3	26.9	12.5	10.1	18.5	6.07	
North Punjab . . .	14	18	1	2	1,137	1,515	38	124	81.21	84.16	38.00	62.00	257	815	443	31	75	18	14.27	45.27	24.61	15.50	37.50	9.00	
South Punjab . . .	65	77	...	...	4,126	4,452	...	...	63.47	57.81	...	...	826	2,311	1,315	...	...	...	10.72	30.01	17.07	...	...	...
Baluchistan . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sind . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bengal . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North-West Frontier Province.	10	17	...	...	888	1,044	...	...	88.80	61.41	...	...	120	376	548	...	...	...	7.05	22.11	32.23	...	...	...
Central India . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hissar Cattle Farm .	29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total . . .	29	127	156.7	8	7.6	8,333	9,513	255	319	65.6	60.9	31.8	41.9	1,936	4,708	2,869	88	179	52	12.4	30.1	18.3	11.5	23.5	6.8

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TABLE IX

IMPERIAL.

Abstract showing average cost of feed, keep, attendants, &c., of Government Horse and Pony stallions during 1903-04.

PROVINCE.	AVERAGE COST PER STALLION PER ANNUM.				REMARKS
	HORSE.		POWY.		
	Year under report.	Previous year.	Year under report.	Previous year.	
	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	
<i>Imperial charges.</i>					
United Provinces	300 4 5	315 1 7	...	...
Rajputana . . . . .	...	339 4 5	...	...
North Punjab	301 10 4	308 7 5	...	...
South Punjab	293 1 8	313 5 0	...	...
Baluchistan . . . . .	...	544 15 8	...	...
Sind . . . . .	...	322 14 1	...	...
North-West Frontier Province	311 6 2	321 9 11	...	...
General average-Imperial charges	298 11 9	348 15 0	...	...
<i>Provincial charges.</i>					
Deccan	348 0 0	424 0 0	315 0 0	382 0 0	
Guzerat	427 0 0	414 0 0	389 0 0	400 0 0	
General average-Provincial charges	400 0 0	422 0 0	333 0 0	384 0 0	

TABLE X.

IMPERIAL.

Return of branded or certificated Mares and their produce for the official year 1903-04.

DETAILS.	BRANDED OR CERTIFICATED MARES.			PRODUCE.				
	For horse-breeding.	For mule-breeding.	TOTAL.	Horse stock.	Pony stock.	Mule stock.	Donkey stock.	TOTAL.
Balance on 1st April 1903	21,911	58	21,969	Information not available.				
Increase								
{ Branded during the year	68	...	68	...	...	...	...	...
{ Certificated mares	...	...	...	...	...	...	...	...
{ Received by transfer from other districts.	215	...	215	...	...	...	...	...
{ Foaled during the year	...	...	...	818	...	1,763	82	1,845
Total	22,194	58	22,252	818	...	1,763	82	1,845
Decrease								
{ Died	119	...	119	...	...	...	...	...
{ Sold	708	...	708	...	...	...	...	...
{ Stolen	4	...	4	...	...	...	...	...
{ Transferred to other districts	...	...	...	...	...	...	...	...
{ Struck off the register and transferred to Remount Department.	15,789	58	15,847	...	...	...	...	...
Total	16,620	58	16,678	...	...	...	...	...
Balance on 31st March 1904	5,574	...	5,574					
In United Provinces	1,266	...	1,266	Information not furnished.				
In North Punjab	884	...	884	112	...	257	31	400
In South Punjab	2,749	...	2,749	309	828	...	...	1,135
In Baluchistan	...	...	...	...	...	...	...	...
In Sind	...	...	...	...	...	...	...	...
In Deccan	...	...	...	...	...	...	...	...
In Guzerat	...	...	...	...	...	...	...	...
In North-West Frontier Provinces	675	...	675	124	...	120	...	...
Total	5,574	...	5,574	545	...	1,203	31	...

* No record of total number of stock in districts is available.

DETAILS.

MAKES.		PRODUCE.						
		Horse-breeding.	Mule-breeding.		Horse stock.	Foxy stock.	Male stock.	Donkey stock.
Bred during the year.	United Provinces . . . . .	...	...	Foaled during the year.	United Provinces	273	560	51
	North Punjab	30	...		North Punjab	112	257	31
	South Punjab	12	...		South Punjab	309	826	...
	N.-W. Frontier Province	26	...		N.-W. Frontier Province	124	120	...
	Baluchistan . . . . .	...	...			
	Sind . . . . .	...	...			
		68	...		818	1,763	82	
Received from other districts.	United Provinces	27	...	Died.				
	North Punjab	105	...					
	South Punjab	57	...					
	N.-W. Frontier Province	26	...					
	Sind . . . . .	...	...			
		215	...					
Died	United Provinces	31	...	Sold.				
	North Punjab	13	...					
	South Punjab	46	...					
	N.-W. Frontier Province	29	...					
	Baluchistan . . . . .	...	...			
		119	...	Stolen.				
Sold	United Provinces	45	...					
	North Punjab	469	...					
	South Punjab	139	...					
	N.-W. Frontier Province	65	...					
			708	...				
Stolen	United Provinces . . . . .	...	...			
	North Punjab	1	...					
	South Punjab	3	...					
	N.-W. Frontier Province . . . . .	...	...			
			4	...				
Struck off the Register.	United Provinces	2,015	58					
	North Punjab	5,505	...					
	South Punjab	2,793	...					
	N.-W. Frontier Province	216	...					
	Baluchistan and Sind	5,230	...					
Transferred to Army Remount Department		15,789	58					

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TABLE XI.

IMPERIAL.

Abstract showing number of colts castrated by Veterinary-Assistants and Salutris paid from Imperial and Provincial funds, during 1903-04.

PROVINCE.	HORSE STOCK.		MULE STOCK.		OTHER ANIMALS.		TOTAL.		NUMBER OF DEATHS RESULTING FROM EFFORTS OF CASTRATION.		REMARKS.
	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
United Provinces	294	652	14	100	62	9	370	761	...	...
Rajputana . . . . .	...	...	...	...	...	...	...	...	...	...
Punjab	564	1,000	87	109	238	187	889	1,296	1	4	
Baluchistan . . . . .	...	159	...	1	...	...	...	160	...	...
Sind	41	165	...	1	8	...	49	166	...	...
Deccan	12	10	...	1	...	...	12	11	...	...
Karnatak	7	9	...	...	...	...	7	9	...	...
Guzerat	6	7	...	...	...	...	6	7	...	...
Madras	91	65	...	...	...	...	91	65	...	...
Central Provinces ...	33	10	...	...	...	...	33	10	...	...
TOTAL ...	1,048	2,077	101	212	308	186	1,457	2,485	1	4	

TABLE XII.

IMPERIAL.

Abstract showing average cost of feed, keep, attendants, etc., of Government donkey stallions during 1903-1904.

PROVINCE.	AVERAGE COST PER DONKEY STALLION PER ANNUM.				REMARKS.	
	Year under report.		Previous year.			
	Rs.	A.	P.	Rs.	A.	P.
IMPERIAL CHARGES.						
United Provinces	149	8	4	148	10	9
Rajputana . . . . .	.....			.....
North Punjab	140	6	10	159	10	11
South Punjab	150	6	7	143	14	8
Baluchistan . . . . .	.....			.....
Sind . . . . .	.....			292	7	9
Central India . . . . .	.....			.....
Bengal . . . . .	.....			202	1	10
North-West Frontier Province	147	1	11	153	14	4
General average Imperial Charges	148	6	6	161	9	3
PROVINCIAL CHARGES.						
Deccan . . . . .	.....			.....
Guzerat . . . . .	.....			.....
Cutch . . . . .	.....			.....
General average Provincial Charges . . . . .	.....			.....

TABLE XIII.

IMPERIAL.

Abstract of particulars regarding Horse Fairs and Shows held during 1903-04.

Province.	Number of Fairs or Shows held.		TOTAL NUMBER OF ANIMALS EXHIBIT.		TOTAL NUMBER COMPETING FOR PRIZES.		TOTAL NUMBER OF HORSE STOCK (NOT INCLUDING BRANDED MARKS) EXHIBIT.		NUMBER OF REMOUNTS PURCHASED.			PRICES PAID FOR REMOUNTS.			NUMBER OF MULES PURCHASED.			PRICES PAID FOR MULES.			TOTAL NUMBER OF SALES EFFECTED.			PRIZES AWARDED.					Amount sanctioned by Government of India for next year's Fair or Show.		
	Year under report.	Previous year.	Year under report.	Previous year.	Belonging to breeders.	Belonging to dealers.	For Remount Department.	For Native Cavalry.	For Police.	Total.	Highest price.	Lowest price.	Average price.	By Government.	By others.	Total.	Highest price.	Lowest price.	Average price.	Total number sold.	Highest price.	Lowest price.	Average price.	From Imperial Funds.	From Provincial Funds.	From Local and District Funds.	From private subscription.	Total.		Amount actually awarded.	Number of medals awarded.
United Provinces ...	1	10,514	6,527	120	83						Rs.	Rs.	Rs.	Not available.										100	200			300 0 0	275	1	100
Rajputana ...																															
North Punjab ...	1	766	648	892	154	392	1			1	170	170	170	2	18	21	820	275	282	210	480	10	245	1,200				1,200 0 0	1,090	1	1,200
South Punjab ...	8	2,227	2,256	990	1,141	1,008	45			3					7	7				135				1,550		2,998 0 0		4,548 0 0	2,669		1,550
Baluchistan ...																															
Sind ...																															
Bengal ...																															
Bombay Presidency ...	1	293		293		206	37			7	800	250	280													6,174 14 9	100	6,274 14 9	2,495		
North-West Frontier Province	1	800	753	183	519	188																	1,000		310 0 0		1,310 0 0	935	1	1,000	
TOTAL ...	9	18,920	10,278	1,967	1,896	2,689	83	1		10	11	800	170		9	25	28	820	275	287			3,850	200	6,482 14 9	100	12,632 14 9	7,484	2	2,850	

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TABLE XIV.

IMPERIAL.

Abstract showing the produce of Government stallions that won prizes at Horse Fairs and Shows during 1903-04.

CLASS OF SIZES.	Number of sizes of each class.	NUMBER OF PRIZES AWARDED.					PROPORTION OF PRIZES TO EACH SIZE.				
		1st prize.	2nd prize.	3rd prize.	Other prizes.	Total.	1st prize.	2nd prize.	3rd prize.	Other prizes.	Total.
Thorough-bred English	18	17	10	6	17	60	.9	.5	.8	.9	2.6
Half and three-quarter bred English, Hackney and Norfolk Trotter.	9	7	6	3	10	26	.7	.6	.8	1.1	2.7
Australings	9	9	6	3	9	26	1.1	.6	.8	1.00	2.8
Arabs	29	16	17	12	29	78	.5	.5	.4	1.00	2.4
stud-breds	1	...	...	...	1	1	...	...	...	1.00	1.00

TABLE XV.

IMPERIAL.

Return of Instruction Farm animals for the official year 1903-04.

DETAILS.	FARM STALLIONS.							FARM MARES.							FARM PRODUCE.												
	HORSE.			DONKEY.			Total Horse and Donkey Stallions.	FARM MARES.			PONY MARES.		DONKEY MARES.		Bullocks.	Total Farm animals.	HORSE STOCK.			MULLE STOCK.			DONKEY STOCK.			Total Produce.	
	Amb.	Half-bred and Hackney.	Total.	Persian.	Home-bred.	Total.		Country-bred.	Australian.	Total.	Country-bred.	Total.	Country-bred.	Total.			Colts.	Fillies.	Total.	Colts.	Fillies.	Total.	Colts.	Fillies.	Total.		
Balance on 1st April 1903	1	1	...	...	...	1	10	...	10	1	1	...	...	2	18	3	...	3	1	1	2	...	...	...	5	
Increase {
Purchased in India
Presented as a gift
Foaled during the year
Received from "Donkey Stock"
TOTAL	1	1	...	...	...	1	10	...	10	1	1	...	...	2	18	3	...	3	1	1	2	...	...	...	5	
Decrease {
Died
Destroyed
Sold	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Transferred to Army Remount Dept.	2	2	3	...	3	...	...	...	...	...	...	...	3
Transferred to Hissar Cattle Farm	10	...	10	1	1	11	1	1	2	2	
TOTAL	1	1	1	10	...	10	1	1	2	13	3	...	3	1	1	2	5	
Balance on 31st March 1904

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TABLE XVI.
 IMPERIAL.

Abstract of casualties of Instruction Farm animals during 1903-04.

PROVINCE.	NUMBER DIED.			NUMBER DESTROYED.			TOTAL.			PERCENTAGE DEATHS.			PERCENTAGE DESTROYED.			GENERAL PERCENTAGE.		
	Stallions.	Mares.	Produce.	Stallions.	Mares.	Produce.	Stallions.	Mares.	Produce.	Stallions.	Mares.	Produce.	Stallions.	Mares.	Produce.	Stallions.	Mares.	Produce.
United Provinces																		
Punjab Depot.																		
Total ...																		

TABLE XVII.
 IMPERIAL.

Abstract of sales of Instruction Farm animals, during 1903-04.

Details.	NORTH-WESTERN PROVINCES.		SOUTH PUNJAB.		TOTAL.		REMARKS.
	Number sold.	Average price realized per animal.	Number sold.	Average price realized per animal.	Number sold.	General average price realized per animal.	
Stallions sold to district Boards, etc..	1	Information not furnished.					
Mares unfit for breeding							
Horse stock sold as Remounts . . .							
Mule stock sold as Remounts . . .							
Horse stock not likely to be fit for Remounts.							
Mule stock not likely to be fit for Ordnance or Baggage purpose.							
Donkey stock not likely to be fit for stallion purposes.							
TOTAL	1						

TABLE XVIII.

IMPERIAL.

Statement showing charges debited to Indian Estimates during 1903-04, in connection with the Civil Veterinary Department.

Major Head.	Inspector General.	Imperial Bacteriologist.	Assistant to Inspector General.	Superintendent, United Provinces and Oudh.	Superintendent, North Punjab.	Superintendent, South Punjab.	Superintendent, Baluchistan, and Sind.	Superintendent, Bombay.	Commandant, Central India Horse, Indore.	Superintendent, Civil Veterinary Department, Rajputana.	Superintendent, Bengal.	Superintendent, Government Cattle Farm, Hissar.	TOTAL.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<i>Civil Veterinary Department.</i>													
I. Prizes at Horse Fairs and Shows ...	...	...	...	800 0 0	2,430 0 0	1,705 0 0	1,300 0 0	...	...	...	...	...	6,135 0 0
II. Establishment, officers ...	23,899 12 10	28,089 5 1	7,198 5 8	...	...	...	19,988 2 7	...	...	10,595 10 5	...	9,886 12 5	92,982 0 5
Ditto subordinates ...	4,898 11 9	17,177 2 7	196 7 0	4,548 11 2	484 0 0	...	3,562 2 8	...	...	718 (d) 0 0	...	22,104 11 1	60,642 15 3
III. Travelling allowances, officers ...	2,769 2 7	549 12 0	642 2 10	...	220 4 9	...	1,331 5 0	...	...	1,128 11 0	...	1,347 8 0	8,980 0 2
Ditto subordinates ...	3,605 2 3	805 1 9	65 1 3	605 6 0	42 5 9	...	404 7 0	...	...	20 4 0	...	720 1 4	5,983 0 4
IV. Contingencies ...	7,282 2 4	13,729 6 9	312 14 9	1,433 6 1	...	...	1,462 12 3	...	...	171 5 2	69 5 0	22,137 14 1	46,649 4 5
V. Purchase of Stallions ...	1,121 2 5	8,742 12 0	...	...	-105 0 0	...	...	...	...	...	...	3,600 0 0	17,978 15 5
VI. Stable feed and keep ...	5,290 5 0	9,897 14 4	...	10,224 10 10	14,548 7 8	20,936 7 9	3,472 14 9	9,911 2 3	162 10 0	175 11 0	...	4,705 0 0	94,286 11 6
VII. Road expenses ...	104 2 0	...	834 14 0	2,477 12 4	1,026 9 0	1,189 15 8	807 4 9	...	...	...	...	18,656 6 11	6,379 13 4
Supply and Services ...	667 4 0	...	...	...	...	...	...	...	...	...	...	910 2 0	3,086 2 7
Prizes for the encouragement of cattle breeding.	4,668 7 2	...	...	...	...	...	...	...	...	...	...	1,918 14 7	7,162 7 3
Veterinary Dispensary, Simla ... 165 4 0	2,500 0 0 (a)	...	...	...	...	...	...	...	...	...	...	...	165 4 0
Grain compensation allowance ...		...	...	...	...	...	...	...	...	...	...	...	6 0 0
<i>Instruction Farm.</i>													
VIII. Establishment ...	...	...	...	510 0 0 (e)	179 0 0 (e)	...	...	...	...	...	...	...	689 0 0
IX. Contingencies ...	...	...	...	192 2 9	27 5 2	...	...	...	...	...	...	...	225 2 11
TOTAL ...	64,969 9 5	78,647 8 6	8,775 12 11	26,767 5 2	18,822 2 4	23,921 7 0	25,125 1 0	9,911 2 3	182 10 0	12,919 9 7	69 5 0	80,916 7 5	350,639 2 7

(a) Excess debit will be written back in March 1904 (Fl.).

(b) Purchase of Bulls, etc.

(c) Establishment partly abolished and partly transferred to the Army Remount Department. These amounts represent gratuities granted to men whose services were dispensed with.

(d) Includes scholarships to Veterinary students.

(e) Purchase of Reserve stock.

(f) Purchase of horses and cattle.

(g) Rupees, 1,008-14-7 Repairing Machinery.

(h) Includes Rs. 240 on account of pony allowances to Overseers.

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TABLE XIX.

IMPERIAL.

*Abstract showing main results of the working of the Hissar Cattle Farm, during 1903-04.**Receipts paid into Treasury.*

	Rs.	A.	P.
1. Sale of animals	79,361	4	0
2. Sale of produce	78	8	9
3. Other kinds	21,159	13	11
TOTAL	100,594	10	8

Expenditure.

1. Salaries and Travelling Allowances of officers	14,711	15	2
2. Salaries of subordinate staff	22,455	8	4
3. Cultivation expenses	17,470	2	5
4. Feed of animals including Reserve Fooder	25,302	6	5
5. Purchase of animals	8,658	0	0
6. Other heads	6,488	7	10
TOTAL	95,086	8	2

Number and value of animals issued on book credit.

1. Siege train bullocks	30,000	0	0
2. Army transport bullocks . . . . .	...	
3. Bulls . . . . .	...	
4. Mules and donkeys	21,400	0	0
TOTAL	51,400	0	0

Number and price of animals issued on cash payment.

1. Kind of animals:—Cows, young stock, Bulls, Bullocks, mares, mules, donkeys	} 27,961	4	0
2. Price received			
TOTAL	27,961	4	0

Details of stock on Farm at end of year.

1. Kind	} <i>Vide statement attached marked XIX (a).</i>
2. Number	

TABLE XIX (a).

IMPERIAL.

Statement showing number and price of stock on Farm at the end of the year 1903-04.

Number.	Kind of animal.	RATE PER HEAD.			AMOUNT.		
		RS.	A.	P.	RS.	A.	P.
11	Herd bulls	250	0	0	2,750	0	0
736	Cows	60	0	0	44,160	0	0
395	Male produce	30	0	0	11,850	0	0
513	Female produce	15	0	0	7,695	0	0
191	Castrated produce	125	0	0	23,875	0	0
283	Cultivation bullocks	120	0	0	33,960	0	0
7	Camels	120	0	0	840	0	0
30	Mares	250	0	0	7,500	0	0
287	Mules	267	0	0	76,629	0	0
29	Donkey stallions	300	0	0	8,700	0	0
32	Do. mares	100	0	0	3,200	0	0
1	Farm bred pony colt	50	0	0	50	0	0
2,515	TOTAL . . . . .	...	...	...	2,21,209	0	0
	<i>For Zebrule breeding.</i>						
4	Zebras	1,100	0	0	4,400	0	0
5	Mares	200	0	0	1,000	0	0
1	Donkey mare	80	0	0	80	0	0
10	TOTAL . . . . .	...	...	...	5,480	0	0

TABLE XIX (b).

Statement showing the articles received from cultivation during the year 1903-04.

Month and year.	Oats.	Ensilage.	Hay.	Gram.	Barley.	Missa bhoosa.	Bhoosa.	Mangel versal.	Lucerne.	Weeding grass.	Green grass.	Carrots.	Green jowar.	Impey green.	Oats-in-straw.	Kurby jowar.
	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.
April 1903	617 16 0	5,242 10 0	549 0 0	12 86 0	419 33 0	472 20 0	1,037 9 0	101 0 0	538 30 0	104 12 0	271 26 0	147 20 0	...	...	...	...
May	907 24 0	5,787 6 0	...	...	117 37 0	527 0 0	2,470 28 0	28 0 0	620 20 0	...	620 30 0	51 10 0	1,954 10 0	476 20 0	...	...
June	745 33 0	788 0 0	800 0 0	...	...	45 0 0	2,146 15 0	...	288 20 0	46 20 0	678 0 0	...	15,990 26 0	...	40 0 0	...
July	520 24 0	...	20 0 0	...	...	...	1,144 7 0	...	385 30 0	...	878 30 0	...	14,737 25 0	381 20 0	1,374 0 0	...
August	84 29 0	...	...	...	...	...	582 12 0	...	223 20 0	...	1,543 0 0	...	625 30 0	...	...	...
September	...	...	...	...	...	...	...	...	...	...	1,520 0 0	...	...	...	...	...
October	...	...	...	...	...	...	...	...	...	...	3,713 28 0	...	...	...	482 12 0	340 20 0
November	...	...	99 25 0	...	...	...	...	...	...	...	3,769 22 0	...	1,199 0 0	...	157 8 0	1,387 32 0
December	...	...	343 0 0	...	...	...	...	...	...	...	924 0 0	...	405 0 0	...	...	3,646 10 0
January 1904	165 0 0	17,593 20 0	18,242 30 0	...	...	...	280 0 0	...	215 35 0	...	879 20 0	...	...	...	...	24,918 30 0
February	501 20 0	...	6,736 80 0	...	...	...	1,003 0 0	...	407 20 0	...	671 20 0	...	...	...	...	6,323 10 0
March	...	...	3,599 0 0	...	...	...	633 16 0	...	724 20 0	229 0 0	811 20 0	...	...	...	...	...
TOTAL	3,512 6 0	28,908 36 0	39,399 5 0	12 86 0	537 30 0	1,044 20 0	9,287 7 0	129 0 0	3,382 35 0	379 32 0	15,280 36 0	198 30 0	35,112 10 0	858 0 0	2,408 20 0	36,631 23 0

TABLE XX.

IMPERIAL.

Showing main results of the working of the Bacteriological Laboratory, during 1903-04.

	I. QUANTITY OF SERUM OR ANTI-TOXIN PREPARED AND ISSUED.						II. PRACTICAL INSTRUCTION IN INOCULATION.			III. FINANCIAL RESULTS.									
	DIPHTHERIA SERUM. 1			ANTHRAX SERUM. 2			1. Province.	2. Number of Veterinary Inspectors or Assistants sent to the Laboratory.	3. Number who passed.	REVENUE.				EXPENDITURE.					
	Prepared.	Issued.	Stock in hand.	Prepared.	Issued.	Stock in hand.				Sale of animals.	Sale of garden produce and revenue from reserved forest.	Other miscellaneous receipts.	Total.	Salaries and travelling allowance of officers and subordinate establishment.	Feed and keep of animals.	Purchase of animals.	Cost of chemicals and apparatus.	Other miscellaneous expenditure.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.			
Mubtassar Laboratory	Opening balance 171,669 Prepared during 1903-04 *520,925	871,740†	110,674	400 Prepared during 1903-04 40,018	40,328	80	United Pro. Punjab ... N.-W. F. Dist. Bombay ... Central Provinces. Ajmer (Bajputana), Bengal ...	8 10 2 1 8 2 15	7 8 2 1 8 2 15	395 8 0 719 5 3 5,309 7 0 6,054 4 3	88,910 0 4	10,862 15 8	6,373 0 0	4,469 14 0 1,260 0 0 2,000 0 0	5,676 5 7	70,662 3 7			
Bareilly Depot	.....	.....	.....	.....	.....	.....	United Pro. Punjab ... N.-W. F. ... Native States	2 3 1 3	2 3 1 3	143 0 0 50 0 0 23 10 0 216 10 0	6,936 5 3	1,797 10 10	2,041 11 0	.....	12,765 11 0				
TOTAL	692,594	871,740	110,674	40,418	40,328	80	.....	55	53	468 8 0	769 5 3	5,933 1 0	7,170 14 3	47,836 5 6	12,660 10 6	8,414 11 0	8,749 14 0	5,676 5 7	83,327 14 7

* Includes 7,380 c. c. from returned bottles
† Contains 9,460 c. c. utilized in experiments.

‡ This consists of 1,068 c. c. used in experiments.
§ Includes cost of serum, Rs. 6,896-2-0.

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TABLE I.

PROVINCIAL REPORT.

Return of District Horse, Pony and Donkey Stallions, for the year 1903-04.

DETAILS.	DISTRICT HORSE AND PONY STALLIONS.											DISTRICT DONKEY STALLIONS.											
	HORSES.							PONIES.				Total Horses and Ponies.	Italian.	Cyprian.	Country-bred.	Persian.	Catalonian.	Home bred.	Punjabi.	Arab.	Total.		
	Arab.	Persian.	Country-bred.	N. T.	Hackney.	½ bred.	T. B. E.	Total.	Arab.	Persian.	Country-bred.											Shan.	Deli.	Total.
Balance on 1st April 1903	53	3	1	...	...	...	57	146	1	1	2	2	152	209	15	7	2	3	3	1	...	...	...
Increase {	Purchased in India	...	...	...	...	...	...	3	...	...	...	...	3	3	...	...	...	...	...	...	...	...	...
	Received from Imperial Civil Veterinary Department.	7	...	...	1	1	1	10	...	...	...	...	...	10	26	17	...	1	4	...	10	2	...
	Error in last year's report.	2	...	...	...	...	1	3	1	...	2	...	3	6	...	...	...	...	...	...	1	...	...
TOTAL	62	3	1	1	1	1	70	150	1	3	2	2	158	223	41	24	2	4	7	1	11	2	...
Decrease {	Died	1	...	...	...	1	2	3	...	...	...	...	3	5	...	...	...	...	1	...	...	...	...
	Destroyed	2	...	...	...	...	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
	Sold	5	...	...	...	...	5	4	...	...	...	...	4	9	...	...	1	...	...	...	...	...
	Transferred to Army Remount Department.	27	1	1	...	...	29	63	1	1	...	...	65	94	10	3	...	...	1	1	...	...	...
TOTAL	35	1	1	...	...	1	38	70	1	1	...	...	72	110	10	3	...	1	2	1	...	...	...
Balance on 31st March 1904	27	2	...	1	1	...	32	80	...	2	2	2	86	118	31	21	2	3	5	...	11	2	...
In United Provinces	21	2	...	1	1	...	26	17	...	...	...	...	17	43	3	1	1	...	...	...	1	...	...
„ North Punjab	...	...	...	...	...	...	5	...	1	...	...	...	6	6	5	3	...	...	1	...	2	...	...
„ South Punjab	2	...	...	...	...	...	2	36	...	1	...	...	37	39	18	16	...	3	4	...	8	1	...
„ Baluchistan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ Sind	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ Central Provinces	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ Burma	...	...	...	...	...	...	...	...	...	2	2	...	4	4	...	...	...	...	...	...	...	...	...
„ Madras	...	...	...	...	...	...	...	15	...	...	...	...	15	15	...	...	...	...	...	...	...	...	...
„ Bengal	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
„ North-West Frontier Province	4	...	...	...	...	...	4	6	...	...	...	...	6	10	5	1	1	...	...	...	...	1	...
TOTAL	27	2	...	1	1	...	32	80	...	2	2	2	86	118	31	21	2	3	5	...	11	2	...

TABLE III.

PROVINCIAL REPORT.

Abstract of casualties of District Horse, Pony and Donkey Stallions during the year 1903-04.

PROVINCE.	NUMBER DIED.			NUMBER DESTROYED.			TOTAL.			PERCENTAGE OF DEATHS.			PERCENTAGE DESTROYED.			GENERAL PERCENTAGE.	
	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.
United Provinces	2	...	...	2	...	...	4	...	...	36	...	...	36	...	...	72	...
North Punjab
South Punjab	...	2	...	...	...	...	...	3	...	508	...	...	...	...	...	508	...
Baluchistan
Sind
Central Provinces
Burma
Madras
North-West Frontier Province	1	...	...	...	...	1	...	2000	...	...	...	...	...	...	...
Bengal
TOTAL	2	3	1	2	...	...	4	3	1	35	109	32	35	...	...	701	109

NOTE.— The percentages to be taken on stock existing at the beginning of the year under report.

TABLE IV.

PROVINCIAL REPORT.

Abstract of sales of District Horse and Pony Stallions, during 1903-04.

PROVINCE.	NUMBER SOLD.		AVERAGE PRICE REALIZED.		REMARKS.
	Horse.	Pony.	Horse.	Pony.	
			Rs. A. P.	Rs. A. P.	
United Provinces	5	...	150 0 0	...	Unfit for stud purpose.
North Punjab . . . . .	...	...	...	...
South Punjab . . . . .	...	2	...	380 0 0	Useless for stud purposes.
Baluchistan . . . . .	...	...	...	...
Hind . . . . .	...	...	...	...
Central Provinces	2	2	217 8 0	171 0 0	Ditto.
Burma . . . . .	...	...	...	...
Madras . . . . .	...	...	...	...
North-West Frontier Province . . . . .	...	...	...	...
Bengal . . . . .	...	...	...	...
TOTAL	5	4	177 0 0	275 8 0	

TABLE V.

PROVINCIAL REPORT.

Services and produce of each class of District Horse and Pony Stallions, during 1903-04.

Horse or pony.	PROVINCE.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.		RESULT OF PREVIOUS YEAR'S COVERINGS.			AVERAGE RESULT OF PREVIOUS YEAR'S COVERINGS PER STALLION EMPLOYED AT STUD.			
		Stallions on register.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of produce.	Number not held.	Number not known.	Average of produce.	Average of not held.	Average of not known.
Horse	United Provinces	23	23	27	1,122	1,378	48-78	51-3	497	636	245	18-4	23-5	9-07
	North Punjab . . . . .	...	...	4	...	317	...	79-25	...	...	317	...	...	...
	Central Provinces	2	2	2	27	42	18-59	21-00	9	8	25	4-5	4-00	12-50
	TOTAL	25	25	33	1,149	1,737	45-96	52-63	505	644	587	15-33	19-51	17-7
Pony	United Provinces	18	17	10	903	482	53-1	48-2	162	244	76	16-2	24-4	7-6
	North Punjab	6	6	6	469	485	78-16	81-33	120	238	130	20-00	39-66	21-66
	South Punjab	37	37	40	2,371	2,319	64-08	57-97	769	854	696	19-23	21-35	17-40
	Central Provinces	2	2	2	38	50	19-00	25-00	10	20	20	5-00	10-00	10-00
	Madras	15	15	11	426	322	23-00	32-00	67	149	136	6-09	13-5	12-3
	Bengal	1	1	1	1	...	1	...	...	...	...	...	...	...
	Burma	4	4	4	43	73	10-75	18-25	4	...	69	1-0	...	17-25
	North-West Frontier Province	10	6	6	289	232	48-16	38-66	101	82	49	16-83	13-66	8-16
	TOTAL	93	88	80	4,540	3,996	51-59	49-95	1,233	1,537	1,178	15-41	19-83	14-7
GRAND TOTAL	118	118	113	5,689	5,733	50-34	50-73	17-39	22-31	17-63	15-88	17-4	15-6	

The number of stallions employed at stud work and mares covered last year in the selected districts have been excluded.

TABLE VII.

PROVINCIAL REPORT.

Services and produce of each class of District Donkey Stallion, during 1903-04.

PROVINCE.	Stallions on register.	DONEY STALLIONS ACTUALLY EMPLOYED AT STUD.				NUMBER OF MARES COVERED.				AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.				RESULT OF PREVIOUS YEAR'S COVERINGS.						AVERAGE RESULT OF PREVIOUS YEAR'S COVERINGS PER STALLION EMPLOYED AT STUD.					
		For mule-breeding.		For Donkey-breeding.		Pony mares.		Donkey mares.		Pony mares.		Donkey mares.		Pony mares.			Donkey mares.			Pony mares.			Donkey mares.		
		Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of mule produce.	Number not held.	Number not known.	Number of Donkey produce.	Number not held.	Number not known.	Average of mule produce.	Average of not held.	Average of not known.	Average of donkey produce.	Average of not held.	Average of not known.
United Provinces .	5	2	2	...	...	33	44	...	...	16.5	22	...	...	...	...	44	...	...	...	...	22	...	...	...
North Punjab .	11	1	...	5	5	8	...	52	20	8.00	...	10.40	4.00	...	...	...	1	19	...	...	...	...	20	3.80	
South Punjab .	50	4	4	...	...	171	98	...	...	42.75	24.50	...	...	24	17	57	...	...	6.00	4.25	14.25	...	...	...
Madras .	...	...	4	...	...	...	113	...	...	...	28	...	...	35	15	63	...	...	8.7	3.7	15.7	...	...	...
North-West Frontier Province.	8	2	2	3	3	83	68	110	60	41.50	34.00	36.66	20.00	19	3	46	35	20	5	9.50	1.50	23.00	11.66	6.66	1.66
Central Provinces .	1	1	1	...	...	24	19	...	...	24	19	...	...	1	8	10	...	...	1	8	10	...	...	...
TOTAL .	75	15	13	8	8	319	342	162	80	21.26	26.3	20.25	10.00	79	43	220	35	21	21	6.07	3.3	16.9	4.37	2.62	3.00

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TABLE IX.

PROVINCIAL REPORT.

Abstract showing average cost of feed, keep, attendants, etc., of District Horse and Pony Stallions, during 1903-1904.

PROVINCE.	AVERAGE COST PER STALLION PER ANNUM.				REMARKS.
	HORSE.		PONY.		
	Year under report.	Previous year.	Year under report.	Previous year.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
United Provinces	212 3 3	226 13 11	211 1 6	222 15 5	
North Punjab . . . . .	...	258 10 9	...	248 5 4	
South Punjab	394 7 7	...	...	258 9 7	
Central Provinces	162 14 6	273 3 0	189 0 6	319 6 9	
Burma . . . . .	...	...	422 9 9	321 4 8	
Sind . . . . .	...	...	...	...
Bengal . . . . .	...	...	241 8 0	241 8 0	
Madras . . . . .	...	...	303 11 2	242 2 8	
North-West Frontier Province . . . . .	...	...	241 1 10	228 1 2	
General average	208 13 11	230 6 8	257 4 1	243 2 11	

TABLE XII.

PROVINCIAL REPORT.

Abstract showing average cost of feed, keep, attendants, etc., of District Donkey Stallions, during 1903-1904.

PROVINCE.	AVERAGE COST PER DONKEY STALLION PER ANNUM.		REMARKS.
	Year under report.	Previous year.	
	Rs. A. P.	Rs. A. P.	
United Provinces . . . . .	...	132 12 2	
North Punjab	133 8 8	124 4 8	
South Punjab	143 3 2	135 0 10	
Sind . . . . .	...	...
Madras . . . . .	...	244 2 6	
Bengal . . . . .	...	202 1 10	
North-West Frontier Province	120 11 5	159 8 4	
Central Provinces	154 13 6	242 10 9	
General average	134 2 4	156 6 3	

TABLE XVIII.

PROVINCIAL REPORT.

Statement showing Provincial cost of the Civil Veterinary Department during the official year 1903-04.

MAJOR HEADS.	Superintendent, United Provinces of Agra and Oudh.	Superintendent, North Punjab.	Superintendent, South Punjab.	Superintendent, Civil Veterinary Department, Provincial Circle, Punjab.	Superintendent, Bengal.	Superintendent, Madras.	Superintendent, Civil Veterinary Department, North-West Frontier Province.	Superintendent, Central Provinces and Berar.	SUPERINTENDENT, BOMBAY.		SUPERINTENDENT, BURMA.		REMARKS.
									Local Fund Charges.	Provincial Charges.	Local District Cess Fund.	Provincial Charges.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
I.—Prizes at Horse Fairs and Shows	301 0 0	...	...	...	—300 0 0	...	...	...	9,316 2 6	2,000 0 0	...	3,000 0 0	
II.—Establishment—Officers	19,726 0 0	...	2,128 12 9	12,094 5 6	12,185 7 0	...	...	...	...	9,664 6 4	22,371 12 0	25,422 12 7	
Ditto —Subordinates	21,584 0 0	2,431 13 3	5,136 4 2	26,233 14 8	14,774 8 11	5,033 0 0	3,597 1 0	2,081 3 3	27,288 13 2	16,353 10 1	...	...
III.—Travelling allowance—Officers	1,731 0 0	2,342 8 0	1,180 4 0	2,536 13 0	995 13 6	2,406 12 0	...	1,823 7 0	...	8,076 3 3	...	5,201 8 0	
Travelling Allowance—Subordinates	7,635 0 0	516 8 10	1,176 14 1	3,249 2 4	2,929 6 11	1,751 9 6	1,216 10 8	585 9 0	2,297 5 4	2,979 4 11	3,767 4 0	8,643 5 3	
House-rent allowance	...	...	...	...	...	600 0 0	...	...	...	...	...	...
IV.—Contingencies	8,480 0 0	955 12 11	1,156 4 2	4,161 8 1	26,765 10 8	828 4 8	625 14 9	1,659 5 6	12,883 12 3	4,421 13 1	7,259 5 3	7,887 3 0	
V.—Purchase of stallions	500 0 0	...	...	...	3,582 14 2	...	...	...	...	—315 2 0	...	...
VI.—Stable, feed and keep	13,515 0 0	...	...	...	14,810 12 5	4,627 9 8	...	267 13 0	6,658 15 9	2,156 0 9	...	1,565 13 9	
VII.—Road expenses	149 0 0	...	...	...	1,907 6 0	118 1 3	...	...	...	...	...	...
Allowances to pupils and prizes	...	...	...	...	1,302 8 11	...	...	...	372 0 0	1,709 7 5	...	2,398 2 9	
Medicines and Instruments	...	...	...	...	...	...	...	...	1,087 10 8	20,650 8 11	...	5,097 2 2	
Cattle plague experiments	...	...	...	...	...	...	...	...	...	...	...	783 8 9	
Printing charges	...	...	...	...	...	...	...	...	...	...	...	...
VIII.—Supply and Services	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	75,621 0 0	6,286 11 0	10,778 7 2	48,274 11 7	78,824 9 1	15,365 5 1	5,439 10 5	6,422 5 9	59,854 11 8	68,196 4 9	38,898 5 3	60,009 8 3	

This statement to be furnished by the Accountant General of the Province.

TABLE XIX.

PROVINCIAL REPORT.

Showing number of animals treated by Veterinary Assistants during 1903-04.

Province.	Number of Veterinary Dispensaries.		IN-PATIENTS.															OUT-PATIENTS.						RECOVERIES.			EXPENDITURE.			REMARKS.
	Number of Veterinary Assistants employed as Dispensaries.	Number of Veterinary Assistants employed as Dispensaries.	REMAINING ON 1ST APRIL.			ADMITTED DURING THE YEAR.			TOTAL.			DISCHARGED DURING THE YEAR.			BALANCE ON 31st MARCH.			NUMBER OF CASES TREATED DURING THE YEAR.			AVERAGE DAILY ATTENDANCE.			Per Cent.	Other heads.	Total.	Salaries.	Other heads.	Total.	
			Horses and ponies.	Cattle.	Other animals.	Horses and ponies.	Cattle.	Other animals.	Horses and ponies.	Cattle.	Other animals.	Horses and ponies.	Cattle.	Other animals.	Horses and ponies.	Cattle.	Other animals.	Horses and ponies.	Cattle.	Other animals.										
United Provinces	10	9	164	45	23	853	893	83	787	413	75	757	423	69	30	20	6	1,972	2,318	1,394	5'3	6'8	3'8	768	5,968	6,761	3,066	2,706	5,772	
North Punjab	7	7	11	5	3	739	376	123	760	391	124	739	377	123	11	4	1	5,956	5,860	3,848	6'43	7'10	3'88	629	2,619	3,218	4,824	2,005	7,729	
South Punjab																														
Sind	4	4	13	11	2	315	327	131	227	358	133	317	338	128	10	...	8	1,932	2,187	1,655	5'3	5'9	4'5	2,241	29,384	31,625	10,013	6,514	16,527	
Bengal	22	22	14	9	4	426	340	108	440	889	203	420	380	189	20	9	13	15,079	21,060	10,747	69'13	123'23	43'08	1,066	13,172	14,238	12,622	11,366	23,987	
Bombay	17	18	14	18	9	419	387	165	453	405	177	410	391	176	23	14	1	4,268	16,979	5,236	11'73	46'5	14'3	2,771	26,419	41,190	20,110	18,187	39,207	
Central Provinces	11	18	3	...	...	66	24	7	68	24	7	63	24	7	5	...	...	3,116	6,218	2,347	8'53	17'08	6'43	976	12,545	13,531	10,363	6,339	16,721	
Madras	Particulars	not furnished.																												
Burma	Particulars	not furnished.																												
Bihar	17	17	...	...	...	25	26	3	25	25	3	25	22	3	3	3	...	2,721	9,098	2,343	7'45	24'92	6'41	...	3,522	2,522	7,719	3,631	11,540	
TOTAL	88	96	307	88	39	2,823	1,917	682	2,730	2,005	711	2,629	1,965	695	101	50	28	37,636	113,340	37,760	103'6	310'5	70'05	6,471	104,624	113,095	116,541	90,160	208,641	

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TABLE XX.

PROVINCIAL REPORT.

Abstract showing Provinces where Outbreaks of Cattle disease occurred during 1903-04.

PROVINCE.	RINDERPEST.			ANTHRAX.			FOOT-AND-MOUTH DISEASE.			FLURO-PNEUMONIA.			CHARBON SYMPTOMATIQUE.			OTHER DISEASES.			TOTAL.			REMARKS.
	Number attacked.	Number died.	Percentage of deaths.	Number attacked.	Number died.	Percentage of deaths.	Number attacked.	Number died.	Percentage of deaths.	Number attacked.	Number died.	Percentage of deaths.	Number attacked.	Number died.	Percentage of deaths.	Number attacked.	Number died.	Percentage of deaths.	Number attacked.	Number died.	Percentage of deaths.	
United Provinces	6,278	3,696	58.8	2,419	1,655	68.4	5,836	298	5.1	..	..	..	..	..	..	3,701	1,122	30.3	18,234	6,771	37.1	
North Punjab } Provincial	8,398	1,920	49.28	477	467	97.9	8,494	88	.44	49	14	28.57	805	735	91.3	6,887	5,324	77.3	20,608	8,498	41.23	
South Punjab																						
Central Provinces	1,315	669	50.00	4,565	8,434	75.00	9,108	41	..	9	9	100.00	..	..	..	71	51	71.00	15,068	4,204	29.00	
Berar																						
Bombay Presidency . . . . .	..	..	..	880	255	77.27	2,359	64	2.71	80	26	86.66	4,481	3,956	88.28	450	346	76.88	7,650	4,647	60.75	
Bengal	28,503	14,084	53.14	728	866	50.41	8,436	467	5.53	..	..	..	..	..	..	5,475	1,449	26.46	41,140	16,366	39.78	
Burma . . . . .	..	14,678	..	..	7,651	..	..	5,939	..	..	..	..	..	..	..	..	96,507	..	..	1,24,775	..	Details not furnished.
Madras . . . . .	..	17,655	..	..	16,887	..	..	..	..	..	..	..	..	..	..	..	58,616	..	..	93,158	..	Ditto.
TOTAL	87,992	52,702	58.61	8,517	80,715	72.52	84,228	6,847	2.65	88	49	55.68	5,286	4,691	88.74	16,584	1,68,415	50.00	1,02,695	2,58,419	39.42	

Details furnished by Burma and Madras being incomplete, have not been taken into account in drawing up the percentage of deaths.

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TABLE XXI.

PROVINCIAL REPORT.

Showing the number of animals treated by Veterinary Assistants in villages during the year 1903-04.

PROVINCE.	Number of villages visited.	Number of Veterinary Assistants employed.	NUMBER OF ANIMALS TREATED AND CLASSED ACCORDING TO PRINCIPAL DISEASES.												TOTAL.	REMARKS.
			HORSES AND PONIES.				CATTLE.				OTHER ANIMALS.					
			Sore.	Anthrax.	Glanders.	Other diseases.	Rinderpest.	Anthrax.	Foot and mouth.	Other diseases.	Other diseases.	Rinderpest.	Foot and mouth.	Rabies.		
United Provinces	6,837	48	3	...	...	8,454	5,294	2,891	5,118	10,898	3,334	118	231	...	85,836	
Rajputana	Particulars not furnished.															
North Punjab } Provincial	10,100	49	7	1	...	10,848	787	...	5,585	12,868	3,110	91	275	...	33,517	
South Punjab }																
Central Provinces	1,618	18	...	...	...	...	805	216	7,660	2,731	...	...	...	...	10,912	
Barar	512	17	...	...	...	...	160	13	2,152	299	...	...	...	...	2,624	
Bengal	6,228	38	2	2	282	6,891	14,486	95	22,866	8,511	3,599	3,406	179	22	60,141	
Bombay	319	18	...	...	...	515	...	123	3,318	2,080	556	...	...	...	6,592	
Burma	12,746	82	...	...	...	...	5,474	326	13,899	32,733	...	...	...	...	52,432	
Sind	36	4	...	...	...	32	...	...	...	276	57	...	...	...	365	
Madras	Not furnished.		...	...	...	338	...	...	...	77	363	...	...	...	778	
North-West Frontier Province	Particulars not furnished.															
TOTAL	33,396	264	12	3	282	27,073	26,456	3,164	60,393	70,473	11,019	3,615	685	22	208,197	

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TABLE XXII.

PROVINCIAL REPORT.

Abstract showing Receipts and Expenditure of Veterinary Dispensaries during 1903-04.

Province.	RECEIPTS.						EXPENDITURE.							Balance.
	Last year's Balance.	By Local Fund Grant.	By Government Grant.	By Municipal contribution.	By other sources.	TOTAL.	Pay.	Travelling Allowance.	Medicines, Instruments, etc., etc.	Furniture, land, etc., etc.	Contingencies, stabling, house-rent, etc.	Transferred to Indian Veterinary Dispensary Fund.	TOTAL.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
United Provinces	Particulars not furnished.	...	...	...	648 0 0	648 0 0	493 0 0	...	101 0 0	...	...	...	593 0 0	
North Punjab } Provincial	265 0 6	1,760 0 0	...	138 0 0	504 2 8	2,667 3 0	4,824 3 9	113 2 8	1,748 13 4	183 0 6	888 3 9	...	7,729 8 0	
South Punjab }														
Central Provinces . . . . .	...	11,202 13 0	...	1,340 0 0	977 13 8	13,521 10 8	10,383 2 10	2,263 2 9	2,075 13 0	183 5 9	1,817 5 9	...	16,781 13 1	
Berar . . . . .	...	1,823 8 0	...	1,199 15 1	...	2,511 15 1	7,719 7 7	1,921 14 4	1,007 15 10	350 13 0	574 2 5	...	11,540 5 2	
Bengal . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Burma	Free.	...	...	...	...	...	51,702 0 0	22,973 0 0	5,007 0 0	...	18,637 0 0	...	98,408 0 0	
Bombay	37,343 14 5	15,027 14 6	12,520 7 6	2,189 0 0	11,435 7 4	78,515 11 9	20,085 8 10	1,679 10 6	2,020 14 9	9,085 13 9	5,875 8 1	...	38,337 7 11	
Sind	14,737 4 2	7,800 0 0	8,591 0 0	9,230 0 0	2,277 1 5	31,635 5 7	10,013 0 0	543 13 3	2,453 15 1	189 1 11	2,328 7 3	...	16,527 4 6	
North-West Frontier Province . . . . .	...	737 7 7	...	559 12 8	33 0 0	1,388 4 3	419 0 0	137 5 0	655 1 3	79 0 0	85 14 0	...	1,386 4 3	
TOTAL	52,845 2 11	37,979 6 1	14,101 7 6	8,655 8 9	15,975 9 1	1,20,856 2 4	1,05,639 7 0	29,419 15 6	17,223 8 3	9,056 3 11	29,864 9 3	...	1,91,323 10 11	

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xxx
TABLE XXIII.

PROVINCIAL.

Showing results of preventive inoculation during the year 1903-04.

Province.	AGAINST RINDERPEST.				AGAINST ANTHRAX OR OTHER DISSEMINATED, SPOROZYTING DISEASE UNDER SEPARATE HEADS.					REMARKS.
	Number of outbreaks in which inoculation was undertaken.	Number of animals (if ascertainable) which died un inoculated in course of outbreak.	Method of inoculation followed.	Number of animals inoculated.	Number which died after inoculation.	Number of outbreaks in which inoculation was undertaken.	Number of animals (if ascertainable) which died un inoculated in course of outbreak.	Method of inoculation followed.	Number of animals inoculated.		Number which died after inoculation.
	No.	No.		No.	No.	No.	No.		No.	No.
United Provinces	110	...	Serum-alone	7,718	16	1	...	Serum-alone.	56	...
Rajputana	...	...	.....	...	...	...	...	...	...	...
Punjab	110	1,390	Serum-alone	16,480	24	...	...	...	...	...
Central Provinces	27	...	Do.	1,855	3	...	...	...	...	...
Berar	1	...	Do.	468	5	...	...	...	...	...
Bombay	...	...	.....	...	...	...	...	...	...	...
Bengal	43	...	Serum-alone	9,454	169	...	...	...	...	...
Assam	...	...	.....	...	...	...	...	...	...	...
Burma	99	...	Serum-alone	9,085	51	...	...	...	...	...
Madras	...	...	Do.	2,805	13	47	...	Serum-alone.	6,329	59
TOTAL	360	1,390	.....	47,360	280	48	...	...	6,385	68

* Serum or simultaneous.

TABLE XXIV.

PROVINCIAL.

Showing total strength of Subordinate Veterinary Staff employed during 1903-04.

Province.	Paid from Provincial or District Funds.	Number of Veterinary Inspectors.	NUMBER OF VETERINARY ASSISTANTS.				REMARKS.
			Employed in Veterinary Dispensaries.	Employed in work connected with horse and mule breeding.	Employed in work connected with cattle breeding and cattle diseases.	Employed in the Head Quarter Depot.	
						Total.	
United Provinces	Provincial	3	9	...	43	...	55
Punjab (Provincial)	Provincial	...	7	...	53	...	60
Central Provinces	Provincial	...	1	...	...	...	1
"	Local	1	17	...	...	...	17
Berar	Provincial	3	...	...	...	...	...
"	Local	...	17	...	...	...	17
Bombay	Provincial	...	...	...	1	...	1
"	District	...	18	...	...	...	18
Burma	Provincial	...	...	...	53	2	55
"	District	...	...	...	47	...	47
Bengal	Provincial	3	...	...	7	...	7
"	District	...	17	...	13	...	30
"	Rajkot fund	...	3	...	...	...	3
"	Local Society fund	...	3	...	3	...	6
Madras	Provincial	3	...	...	3	...	6
"	District	1	1	...	...	...	1
"	Courts of ward	1	1	...	...	...	1
Sind	District and local funds.	...	4	...	...	...	4
North-West Frontier Province	Provincial	...	3	3	3	...	7
TOTAL	.....	13	99	3	304	2	408

* Sanctioned strength 85, of which 1 man attached to South Punjab, 3 to North Punjab Office, and 22 posts vacant.

TABLE XXV.

PROVINCIAL.

Showing the main results of Veterinary Colleges and Schools during 1903-04.

VETERINARY COLLEGES AND SCHOOLS.	Name of course of instruction if more than one course followed.	NUMBER OF STUDENTS.										RECEIPTS.			EXPENDITURE.			EMPLOYMENT OF STUDENTS WHO PASSED OUT DURING THE THREE YEARS PRECEDING.					REMARKS.
		ADMITTED DURING YEAR.		Passed out during the year.		REMAINING UNDER INSTRUCTION AT END OF YEAR.		STUDENTS ADMITTED DURING THE YEAR CLASSIFIED BY EDUCATIONAL QUALIFICATIONS.			From Fees.	Others.	Total.	Salaries of instructing Staff.	Others.	Total.	Total No. passed.	NUMBER EMPLOYED.					
		Scholarship holders.	Paying students.	Passed out during the year.	Failed to pass out.	In ordinary course.	Instruction prolonged by reason of failure to pass.	Matriculates or with higher qualifications.	Knowing some English but not matriculated.	Knowing no English or very little English.								In service of Government or Local Boards.	In service of other local Committees or Institutions.	In private practice.	Unemployed in Veterinary work.		
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	No.	No.	No.	No.	No.			
Bombay Veterinary College	Diploma course	8	17	8	5	57	11	7	18	...	3,120	3,644 0 0	5,764 0 0	30,054 7 1	9,326 14 9	39,381 5 10	20	6	7	1	6		
	Salutzi course	27	...	21	14	48	6	...	27	...	...	...	...	...	...	...	59	27	13	...	19
Punjab	3 years course, Urdu.	10	5	24	2	128	15	2	24	28	1,745	3,416 0 0	5,161 0 0	1,11,135 0 0	11,997 0 0	23,132 0 0	104	101	...	...	...
Bengal	3 years course in English.	21	...	8	1	29	5	5	16	...	...	...	11,605 0 0	3,527 2 2	15,132 2 2	30	25	3	...	...	
Rajputana	2 years course, Vernacular.	1	25	21	1	16	(a) 12	...	12	14	6,985	2,877 5 0	9,792 8 3	3,440 0 0	5,380 1 10	8,820 1 10	56	45	8	...	3		
Burma	...	20	...	11	8	8	8	...	...	...	...	...	...	3,000 0 0	2,446 0 0	5,446 0 0	18	18	...	...	...
TOTAL	...	27	47	109	21	281	57	14	97	40	11,850	8,807 5 3	20,717 8 3	59,234 7 1	32,067 2 9	91,901 9 10	287	222	31	1	28		

(a) 2 Failures, 10 detentions not permitted to appear in the examination.

ANNUAL ADMINISTRATION REPORT

OF THE

CIVIL VETERINARY DEPARTMENT IN INDIA

FOR THE OFFICIAL YEAR

1904-1905.



SIMLA:
PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.
1905.

ANNUAL ADMINISTRATION REPORT
OF THE
CIVIL VETERINARY DEPARTMENT IN INDIA
FOR THE OFFICIAL YEAR
1904-1905.

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GOVERNMENT OF INDIA.

ANNUAL ADMINISTRATION REPORT

OF THE

CIVIL VETERINARY DEPARTMENT IN INDIA

FOR THE OFFICIAL YEAR

1904-1905.

GENERAL ADMINISTRATION.

This report is the first which has been submitted on the present lines. **In Preface.** accordance with the recommendations of the Horse and Mule Breeding Commission, certain selected districts were handed over to the Army Remount Department and we have been relieved of all responsibility and control of military stallions in those districts. It was also decided by the Government of India that all diseases of soliped animals occurring in them should be dealt with by that Department. These districts have been coloured dark red in the map which accompanies this report, those under the management of the Civil Veterinary Department have been shown in light red and Veterinary Colleges and Schools, Cattle Farms, etc., are indicated by numbers.

2. But, while all matters connected with horse and mule breeding and the care of equine stock in selected districts have been removed, the Civil Veterinary Department retain control of the cattle breeding and disease and the treatment of other animals in villages and dispensaries. Thus, the operations of the Department extend over the whole of India, with the exception of the Native States, which have been shown white on the map.

3. The forms of tables which accompany this report are now brought into use for the first time. Being new and having been issued late in the year, they have not been furnished in as complete a manner as one would wish: but, it is hoped that by next year they will be more accurately rendered.

The following table gives the names of the officers who held the several appointments in the Civil Veterinary Department during the year under charge.

Appointments.	1st April 1904.	31st March 1905.
Inspector-General	Colonel J. W. A. Morgan ...	Colonel J. W. A. Morgan.
Imperial Bacteriologist ..	Dr. A. Lingard	Dr. A. Lingard.
Assistant Bacteriologist ...	Captain J. D. E. Holmes ...	R. E. Montgomery, Esq.
Superintendent, Government Cattle Farm, Hisar.	Captain J. Farmer	Captain J. Farmer.
Superintendent, United Provinces	Major H. M. Maxwell	Major H. M. Maxwell.
Superintendent, Punjab ... ..	.....	Captain G. K. Walker.
2nd Superintendent, Punjab ...	... ..	E. W. Oliver, Esq.
Superintendent, Sind, Baluchistan and Rajputana.	.....	Captain W. O. Dawson.
Principal, Punjab Veterinary College.	Major H. T. Pease	Major H. T. Pease.
Professor, Punjab Veterinary College.	Captain A. Smith	Captain A. Smith.
Professor, Punjab Veterinary College.	.....	Captain F. S. H. Baldrey.

31GCVD

Appointments.	1st April 1904.	31st March 1905.	
Principal, Bombay Veterinary College.	Lieutenant-Colonel J. Brodie Mills.	Lieutenant-Colonel J. Brodie Mills.	
Assistant Principal, Bombay Veterinary College.	K. Hewlett, Esq. ...	K. Hewlett, Esq.	
Superintendent, Bengal ...	Major F. Raymond ...	Captain A. S. Trydell.	
Superintendent, Bombay ...	Major F. Joslen ...	Major F. Joslen.	
Superintendent, Madras ...	Major W. D. Gunn ...	Major W. D. Gunn.	
Superintendent, Burma ...	Major G. H. Evans ...	Major G. H. Evans.	
2nd Superintendent, Burma ...	T. Rennie, Esq. ...	T. Rennie, Esq.	
Superintendent, North Punjab...	Captain A. S. Trydell	.....	} Appointments either abolished or designation altered.
Assistant to Inspector-General, Civil Veterinary Department.	Captain F. S. H. Baldrey ...	.....
Superintendent, Provincial Circle, Punjab.	Captain G. K. Walker ...	.....
Superintendent, Rajputana ...	Captain W. O. Dawson ...	.....
Superintendent, Central Provinces.	J. S. Jethiji, Esq. ...	J. S. Jethiji, Esq.	
Superintendent, South Punjab	E. W. Oliver, Esq. ...	.....	} Designation of appointment altered.
On probation in Punjab ...	.....	M. H. Sowerby, Esq.	

4. During the year, the following officers were either absent on or returned from leave: Major Pease, Captain Baldrey, Captain Walker, Doctor Lingard, Major Raymond and Mr. Rennie.

5. Captain J. D. E. Holmes was deputed to England for a course of training in Bacteriology from 18th September 1904, and Major H. T. Pease was detailed on special duty in the United Provinces and Punjab for 3 months to investigate "Dourine".

6. The staff of Imperial Officers has received a small addition by the appointment of two new men from home. Mr. R. E. Montgomery, who has been temporarily posted as Assistant Bacteriologist at Muktesar, and Mr. M. H. Sowerby to the Punjab for training. The strength of the cadre has thus been brought up to 22 (including the Imperial Bacteriologist) which is still far below requirements.

Inspector-General's tour. 7. With regard to my tours of inspection, I attended the Rawalpindi Horse Show, visited Peshawar to inspect donkey stock collected for sale, inspected the Muktesar Bacteriological Laboratory, purchased mares for zebbrule breeding, purchased mule and donkey stock for Hissar Farm, attended Amritsar and Sonepore Fairs, attended purchasing Committees for Arab and Australian stallions, visited Burma and toured through some of the principal centres, visited Pusa and also the Central Provinces, toured through the Haryana District and purchased cows for Hissar Farm, and attended Gujrat Horse Show. The distances travelled by me during the year were 14,087 miles by rail, 132 miles by road and 1,592 miles by sea.

PART A.—PROVINCIAL ADMINISTRATION.

I.—VETERINARY INSTRUCTION.

Veterinary Colleges and Schools.

8. Table I shows the main results of Veterinary Colleges and Schools. From this it will be seen that there were six of these institutions working during the year. Of these, Bombay, Bengal and Madras were teaching up to the graduate course in English and the Punjab up to the same standard in Urdu. In addition to this, Bombay had a salutri course of two years as had also Ajmer, and Burma had a special vernacular course.

9. The results of the year's work in all these institutions have been satisfactory. Fifty-seven men passed the final examination of the three years' course, of which 34 were from the Punjab, 15 Bombay and 8 Bengal. The percentage of passes was, Punjab 82.05, Bengal 80.00, and Bombay 78.94.

10. Madras is a new college of great promise and is making satisfactory progress. The result of the year's work is very good, 20 students having passed the first yearly examination held by the Principal. Twenty new students have been admitted.

11. Ajmer, Bombay and Rangoon turned out 48 salutris.

12. There were 331 students remaining under tuition at the various colleges at the end of the yearly examinations and 262 new students were admitted.

13. Both the Ajmer School and the salutri class at the Bombay Veterinary College have been closed. The students and native teachers of the former have been transferred to the Punjab Veterinary College which is being enlarged and equipped for the training of 250 men. A European Gazetted Officer has been appointed as Professor of Sanitary Science and the building necessary for the accommodation of the extra men erected. Considerable improvement has also been made in the Bombay College. It has been decided that the residential and educational buildings should be gradually erected in the grounds of Government House, Parel. The teaching equipment is also being much augmented. These improvements were sorely needed.

14. The development of the Bengal Veterinary Institution has necessitated the acquisition of a site for the extension of the college premises and the erection of additional buildings. This has been purchased for a sum of Rs. 2,15,948.

15. Besides the teaching of veterinary students, classes of transport dressers were held at the Punjab and Bombay Colleges, 40 men being trained at the former and 29 at the latter during the vacations.

16. Three men attended a post graduate course at the Punjab College and 9 Transport Officers were trained in the diagnosis of Surra in the camel.

17. A text book on shoeing has been written in Urdu by Major Pease and one of Hygiene by Prabhu Lall. The vernacular Veterinary Journal has been kept going.

18. All these improvements will tend to increased efficiency and a greater number of men will, it is hoped, be passed out to meet the demand which exists at present for trained men which is greatly in excess of supply especially for Punjab men.

II.—TREATMENT OF DISEASE.

19. Table II shows the reported mortality from the contagious diseases therein named, in the various Provinces. The Army Remount Department deal with contagious diseases of equines in the selected districts.

Contagious
disease amongst
solipeds, out-
breaks, mor-
tality, etc.

20. *Glanders*.—There has been a great increase in the number of cases of this serious disease dealt with in the non-selected districts. The total number of cases is 508 against 295 last year. Of these, no less than 447 occurred in Bengal against 282 last year and 50 in Bombay against 13 last year.

21. The disease is not very prevalent in the Punjab and Burma but is serious in Bombay and Bengal. In Bombay, it has been more prevalent than for years past and this is attributed to the fact that the disease exists at Bussorah whence all the Arabs are imported. It has been recommended that an Inspector be posted to Bussorah during the exporting season. In Bengal, 413 cases were diagnosed in the district of 24-Parganas alone (93 cases at the Belgachia College Hospital and 320 cases at the Sodepur Pinjrapole). It is believed that when the Glanders and Farcy Act is in working order in Calcutta even more cases will come to light.

22. *Anthrax*.—Only 47 cases have been reported in equines from the whole of India and 36 of these are from Madras.

23. *Surra*.—Fifty-two cases in the whole of India and Burma.

24. *Dourine*.—Three cases only reported.

25. The figures for the above diseases are absolutely unreliable. "Surra." is widespread in a great number of tracts of country almost every year and the mortality amongst soliped animals is very considerable as all attacked die. This disease has been scheduled under the Glanders and Farcy Act XIII of 1899.

26. "Dourine" is probably not very widespread in the non-selected districts but the mortality has surely been greater than 3 in the whole of India. I have seen more stallions than this destroyed or dead myself.

27. *Other contagious diseases.*—455 horses are reported to have died from other contagious diseases not specified. Of these, the most common appears to have been Strangles which is, in some parts, very severe and fatal owing to complications. Two cases only of Epizootic Lymphangitis have been reported in our districts so far, which is curious, considering that the Imperial Bacteriologist reports having examined 124 specimens, the greater number being pus from cases of Epizootic Lymphangitis. We cannot, however, hope with our present staff to get reliable information in regard to prevalence of disease but a very sharp look out must be kept for this which is a most insidious and dangerous one. Horse pox has been found prevalent and a report submitted on it, by Major Pease and Captain Baldrey which will be printed and circulated. A very fatal disease, Hæmorrhagic Septicæmia in foals which is causing serious losses in private studs is also being investigated by the latter officer.

28. The number of actual outbreaks of contagious diseases amongst cattle reported cannot be ascertained from the reports. The new rules for the preparation and submission of Annual Reports by the Officers of the Department were only issued in March 1905 and as the information on which the reports are based was maintained according to the old procedure, much difficulty has been experienced in the compilation of the new Tables. It has not been practicable in some cases to furnish the required information, although every effort has been made to do so. The supervising and executive staff of the Department is still far below requirements and consequently the machinery employed for the collection of statistics has been insufficient to ensure even approximate accuracy. Time is required for this to be possible. Altogether 2,09,799 head of cattle are reported to have died from contagious diseases (Table II) against 95,000 last year. This great apparent increase is doubtless due to better registration but no doubt the returns are still very incomplete and the total loss is greater than represented.

Contagious disease in Bovine outbreaks, preventive inoculation, mortality, &c.

29. Table III shows the number of outbreaks in which preventive inoculations were undertaken.

30. In the case of protective inoculation, information regarding the number of animals attacked and died uninoculated in the course of outbreaks is not available in United Provinces and Burma.

31. Protective inoculations against Rinderpest and Anthrax in cattle were carried out in the United Provinces, Sind, Bengal, Madras, Central Provinces, Burma, North-West Frontier Province and the Punjab. None in Rajputana and Bombay.

32. *Rinderpest* alone accounted for 92,090 head against 52,702 last year. It was most virulent in Burma where 51,977 cattle perished against 14,678 last year. There was also a slight increase in Madras. 480 outbreaks of this disease were attended and preventive inoculation carried out. In these it was ascertained that in those Provinces in which records could be obtained, 1,03,082 died uninoculated during the course of the outbreaks. This does not include deaths which occurred in the United Provinces where the information is not available. 69,124 were inoculated and only 370 died of the disease after having been inoculated. It will be seen that considerable progress has been made in this direction, 90 more outbreaks being attended and 21,764 more cattle protected than last year.

33. The serum has continued to be very efficacious in preventing spread of the disease and saving life. I am glad to be able to report that the opposition to its use is fast disappearing and in most places the agricultural community now welcome inoculation as a preventive measure.

No. 1745-138 Pm.

Address—SIMLA.

Office of Inspector General,
Civil Veterinary Department. 29

Dated, 28 November 1905.

FROM COLONEL J. W. A. MORGAN, I. C. V. D.,
INSPECTOR-GENERAL, CIVIL VETERINARY DEPARTMENT.

To
The Editor
of the Indian Social Reformer,
Bombay.

SIR,

I have the honor to advise despatch of one copy
of the Annual Administration Report of the Civil Veterinary
Department in India, for the official year 1904-1905.

I have the honor to be,

Sir,

Your most obedient servant,



Personal Assistant,

for Inspector-General,

Civil Veterinary Department.

34. Bombay reports that no cases of Rinderpest occurred in that Presidency during the year and that no case of the disease could be found, although every enquiry has been made with the view of finding out whether it existed or not.

35. *Anthrax*.—The returns (Table II) show only 33,317 deaths from this disease in the whole of India and Burma during the year. I am afraid that with our present system of registration the time has not yet arrived when we can gain even an approximate idea regarding the prevalence of this disease in India. The symptoms in cattle are obscure and in some cases diagnosis can only be certain after a microscopical examination, so that if it be not diagnosed by a professional man and great care exercised, there is no certainty of the correctness of the diagnosis. In the United Provinces, and Burma and, I think, most other Provinces, villagers and headmen are unable to distinguish between Black Quarter, Hæmorrhagic Septicæmia and Anthrax, so that until a sufficiently great number of Veterinary Assistants are available, we are left in doubt.

36. Eighty outbreaks were attended in all and 6,126 animals inoculated with protective serum, with the result that the outbreaks ceased and only one death occurred after inoculation. Only 48 outbreaks were attended last year but 6,385 animals were immunised. The mortality was 33 after inoculation.

37. *Hæmorrhagic Septicæmia*.—During the year a protective serum has been prepared at the Laboratory and has proved efficient in laboratory experiments. It has been recently issued to Superintendents for trial in the field, but so far no reports have been received and no results can be recorded.

38. As before noted, the returns from some Provinces do not show the number of deaths from this affection. Punjab records the greatest mortality—8,573, and Central Provinces 689. The total deaths shown is 10,083. This does not represent anything like the number of deaths due to this malady which is very common and fatal in most Provinces. It will be some years before any idea can be formed of the approximate number of animals which die.

39. *Black Quarter—Charbon Symptomatique*.—The returns (Table II) of deaths from this disease show a mortality of 9,590 of which 7,683 cases occurred in Madras. The disease is a common one in most parts of India and these figures do not I am sure show even approximately the mortality from it. Rajputana and Sind show none and in the United Provinces and Burma the deaths are included under Anthrax. In the Punjab, some attempt was made at protective inoculation by the use of a well known prophylactic from the Continent on a small scale and was very successful. The method was popular and applications were received from the zemindars in some districts for its use but, in accordance with Government of India orders, it was discontinued until a serum could be prepared at the Laboratory; this however has not yet been found possible.

40. *Foot and Mouth disease*.—The reported deaths from this disease are 17,029, of which 9,065 occurred in Burma and 3,460 in the United Provinces. The disease is generally very widespread but the mortality is comparatively not very great, animals excepting young calves usually only dying from complications. The people seldom report it. In Burma, it is more serious than in the dry parts of India. This is a disease in which medical treatment is of great value and numbers of cattle can be saved by Veterinary Assistants.

41. *Other contagious diseases* are reported to have accounted for 47,681 deaths. Amongst these, United Provinces have included Hæmorrhagic Septicæmia and Black Quarter. Other very common diseases are Tick Plague (*Pyrosoma begeminum*), Fluke disease (*Distoma augusta*), Pleuropneumonia Contagiosa, Tuberculosis and trypanosomiasis; but probably these figures do not represent anything like the number of deaths due to these diseases. Tubercle and Tick Plague are common enough diseases but deaths occurring in few cases at a time attract but little attention and are not reported. I have every reason to believe that Tuberculosis is widespread and causes very serious losses amongst cattle and it is probable that Tick Plague and trypanosomiasis do so also.

42. It will be seen from Table IV, that 1,42,450 cases of contagious disease, nature not specified, were treated by Veterinary Assistants on tour, of these 406 were in equines, 1,38,090 in Bovines and 3,954 in others.

43. *Contagious disease amongst other animals.*—No reliable returns have been received in regard to the prevalence of contagious disease amongst animals other than horses and cattle. It is well known of course that considerable numbers of camels must have died from Surra, and, similarly, a great number of dogs from Rabies, which is very prevalent in the north of India at any rate. Municipalities are beginning to take some steps to reduce the numbers of stray dogs in towns, but it is more difficult to cope with this disease in country places. In the course of time we may, however, hope for an improvement in this direction.

Other disease.

44. Table IV gives, in addition to "contagious disease", the number of castrations performed, number of animals treated for other disease, villages visited and number of Veterinary Assistants employed on tour. This Table shows 1,14,928 cases of non-contagious disease were treated by Veterinary Assistants on tour. Of these 30,090 were equines, 75,136 bovines and 9,702 other animals, in addition to the number treated for contagious disease and castrated.

45. Many animals suffering from ordinary non-contagious maladies are, unless properly treated, rendered useless. Touring in villages and rendering help in this direction is, I consider, a very important part of a Veterinary Assistant's duties, as it brings him in contact with the people and shows them the benefits to be derived from our methods. The number of Veterinary Assistants employed at present, however, is too few to do very much in this direction.

46. The number of animals castrated by Veterinary Assistants on tour was 1,088, of which, 636 were equines against 1,048 last year. The decrease is due to the fact that a number of districts containing the greater part of the horse stock have been handed over to the Remount Department. Three hundred and five oxen were operated on.

Veterinary Hospitals and Dispensaries.

47. Table V shows the number of animals treated at Veterinary Hospitals and Dispensaries. I am glad to be able to report a very substantial increase in the number of these most useful institutions during the year. The last year's report shows that, excluding Burma and Madras, there were 88 hospitals and dispensaries in the whole of India. The present returns show that excluding the two Provinces noted above, we have 182, whilst in Burma there are 82 and in Madras 5, giving a total of 269. There has been an increase in every Province, but the most marked advance is noticeable in the Punjab where there was last year only 7 and this return shows 80, chiefly dispensaries. This reflects credit on the two Superintendents employed in this Province.

48. The total number of in-patients treated was 4,760 equines, 3,030 bovines and 1,376 other animals, or a total of 9,166 against 2,523 equines, 1,917 cattle and 682 other animals, or a total of 5,122 last year. The numbers of out-patients treated are 54,459 equines, 159,249 bovines and 20,462 other animals or a total of 244,170 against 37,835 equines, 113,340 bovines and 27,760 other animals, or a total of 178,935 last year. Many of these dispensaries and hospitals have been only very recently opened, a gradual increase having occurred during the whole year under report, so that the increase in cases treated is very material and satisfactory.

49. The receipts were Rs. 1,82,229 against Rs 1,13,095 last year, and the expenditure Rs. 3,19,378, against Rs. 2,03,641 in 1903-04. This shows an increase in receipts of Rupees 69,134 and an increased expenditure of Rupees 1,12,737. Burma shows no receipts. The Punjab, Rajputana and North-West Frontier Province show a profit on working. These institutions are of the utmost value and will be increased in numbers as greatly as possible. This is, I think, an important step in developing the Department and it is here that the people will first realise the benefits of our work, as cases can be properly treated under our system. The great difficulty is that Local Bodies are, in many cases, too poor to be able to build, equip and finance them. So that very often, no matter how willing they may be, they are unable to start them. Doubtless, funds will be made available from the new grant to assist in starting and improving these useful institutions, as has already been done by the Government of the Central Provinces which devoted the sum of Rs. 25,000 to this purpose.

III.—BREEDING OPERATIONS.

(1)—BOVINES.

50. Table VIII shows the number of stud bulls employed and obtained during the year. From this it will be seen that the Punjab is the only province in which any real progress has been made in this important matter. The subject has received attention from District Boards and Municipalities in that Province for a long time past and spasmodic efforts have been made to supply good bulls. The Hissar Cattle Farm has been in existence for many years and it has supplied bulls to District Boards on payment but these have not in all cases been suitable, though many districts have been glad to obtain them. Stud bulls and their produce.

51. The bulls from the Farm are now greatly improved by careful breeding and selection but will not of course be suitable for any but good big cows such as exist in many Northern districts. Conditions vary so greatly in the different districts that it is only by careful enquiry and assiduous touring in them that we can decide what measures are best to adopt to assist the people by supplying them with suitable stud bulls. So long as Superintendents have huge Provinces to deal with, it cannot be hoped that this can be done as owing to pressure of other work very little real knowledge can be gained of the local requirements. With the increase in numbers of Superintendents, however, it will be possible in time to divide up the provinces into workable charges, so that Officers can gain an intimate knowledge of their districts and ascertain what it is possible to do in the way of providing suitable stud bulls. Most provinces realize the necessity for action in providing bulls but are handicapped by the fact that suitable animals cannot be obtained for the purpose.

52. Table IX shows the main results of the working of the Provincial Cattle Farms. This will show that, so far, there are only two in existence, *vis.*, one at Nagpur (Tilunkheri) and the other at Hoshangabad (Pawarkhera) in Central Provinces. Both these have been very recently started. At Nagpur (Tilunkheri Farm) where there are 43 cows, there are 2 male stock two years old, 15 yearlings, 14 calves, 8 yearling heifers and 22 calves, so that some progress is being made. The other Farm is too young to allow of an opinion being formed as to its success or otherwise, but the Superintendent reports an increase of 19 head. Bull-rearing and breeding Farms and Depots.

53. In the Punjab it has been decided to establish a bull breeding farm at Sargodha in the Jhelum Canal Colony for the purpose of breeding bulls of the Dhanni type which will be suitable for the Northern districts of that Province.

54. In Bombay, a farm is to be established at Sholapur. There is one at present at Chharodi in the Ahmedabad district conducted by the Gujarat Cattle Preservation Association under the presidency of the Commissioner, Northern Division.

55. In Bengal there are farms at Pusa and Hathwa Raj.

(2) EQUINES (UNDER LOCAL BODIES).

56. Table X gives the number of horse, pony and donkey stallions under Local Bodies. There were 35 horses, 96 ponies and 75 donkeys at the beginning of the year and the numbers remaining at the end were 43 horses, 85 ponies and 68 donkeys. 18 horses and 3 ponies were added by purchase and transfer during the year and 10 horses, 14 ponies and 7 donkeys died, were destroyed or transferred, leaving a total of 128 horse and pony stallions and 68 Jacks against 118 and 75 last year. Horse, pony and donkey stallions.

57. All stallions are now maintained by District Boards. The importance of providing sufficient stallion power in those districts not selected by the Remount Department where mares are plentiful and also to replace Government stallions removed when horse-breeding was abandoned in them, as well as the necessity of fostering mule breeding to maintain the supply for the Transport Department, has been realized by Government and sanction given for the purchase of 6 stallions in the United Provinces and 20 horse and pony and 16 donkeys in

the Punjab, the Imperial Government contributing Rs. 22,000 towards the cost. Every effort is made to conduct the breeding operations as cheaply as possible and no staff is maintained for branding or the collection of statistics. Doubtless, much good will result from the methods adopted, in the way of improving indigenous stock and in mule breeding—an important, popular and profitable industry in some parts of the country.

58. The number of coverings is shown in Table XI, from which it will be observed that the average number of mares covered to stallions employed has increased all round and especially is this noticeable in regard to donkey stallions which in the Punjab covered an average of 71:1.

59. The average cost of feed, keep and attendance is given in Table XII. There is a satisfactory decrease all round in the Punjab.

60. Table XIV gives the abstract of particulars regarding Cattle Fairs and Shows. Seventy-two were held during the year. Rs. 7,166 from Imperial funds, Rs. 6,544 from Provincial, Rs. 11,972 from Local funds, and Rs. 3,175 from other sources, were distributed as prizes.

61. Government have decided to continue the grant of Rs. 9,000 for another three years, as many of the Shows are new and in an experimental stage.

62. The most successful Shows were those held in the Madras Presidency, where the competition for prizes was very keen and the attendance very good. Now, that some attention is given to cattle breeding, more interest will be aroused in the subject and doubtless very good Shows will in time be found in the best breeding districts.

IV.—SUBORDINATE ESTABLISHMENT.

63. Table VII gives the strength of the subordinate staff employed which consists, at present, of 383 Veterinary Assistants supervised by 25 Inspectors, against 308 Veterinary Assistants and 13 Inspectors, last year. This increase is satisfactory. The subordinate staff can only be increased gradually, as qualified men are only available in comparatively few numbers. The numbers of graduates from the Colleges will, under the present arrangements, increase, but it will be some time before a Veterinary Assistant will be available for every Tahsil.

64. Of the men employed, 198 are at work in hospitals and dispensaries and the remainder at district and other work. It has been decided to ensure better supervision by appointing, when suitable graduates become available, a higher inspecting class to be named Deputy Superintendents, who will be specially trained by undergoing a post-graduate course at one of the Veterinary Colleges.

65. The Superintendents have reported well on the work done generally by the subordinate staff during the year. With the better education and supervision now provided, the efficiency of this establishment must gradually improve.

PART B.—IMPERIAL ADMINISTRATION.

BACTERIOLOGICAL LABORATORY.

66. The following papers were published by Dr. Lingard, Imperial Bacteriologist, during the year under report :—

- (i) Resistance against Rinderpest and other infectious diseases, published in *Centralblatt für Bacteriologie, etc., Originale, Band XXXVII, 1904, Heft 2.*
- (ii) A short account of the various trypanosomata found to date in India in the blood of some of the lower animals and fish—*Indian Medical Gazette, Volume XXXIX, No. 12, December 1904.*
- (iii) A preliminary note on a pyroplasmiasis found in man and some of the lower animals—*Indian Medical Gazette, Volume XXXIX, No. 5, May 1904.*

- (iv) Observations on the Filarial Embryos found in the general circulation of the Equidæ and Bovidæ and their probable pathological significance. "Fasiculus I. Bursati", published by Adlard and Son, London.
- (v) The significance of the pyriform and globular bodies present in the circulation, organs and tissues in various forms of disease, in man and animals, respectively, with suggestions regarding their identification and classification.

67. *Table XV.*—Considerable progress has been made in all the more important subjects dealt with at this institution and its scope of usefulness has been enlarged by the addition of classes for officers of the Army and Civil Veterinary Departments who desire instruction in Comparative Pathology and Bacteriology. Four have been trained during the year. Sixty-seven subordinates have also been trained in inoculation work at Muktesar and Bareilly.

68. There have been considerable, though unavoidable, changes in the staff, but fortunately this has not interfered with the work which has been kept continuous during the year.

69. No difficulty has been experienced with regard to the fodder and supply, and most of the sanctioned buildings were completed.

70. In addition to the manufacture of sera, the rough programme of research work to be carried out was on the following diseases :—

- (a) Rinderpest.
 (b) Piroplasmosis, Trypanosomiasis and Malignant œdema occurring as secondary diseases.
 (c) Anthrax.
 (d) Hæmorrhagic Septicæmia.
 (e) Surra.
 (f) Charbon Symptomatique.
 (g) Dourine.

71. The following sera were prepared : Antirinderpest, Anthrax and Anti-hæmorrhagic Septicæmia, also Mallein.

72. *Sera preparation.*—There is a marked increase in the amount of protective sera prepared. 813,352 c.c. of anti-rinderpest serum against 520,925 c.c. last year. Anthrax serum 137,355 c.c. against 40,018 c.c. last year.

73. *Rinderpest.*—The amount of anti-rinderpest serum prepared is equivalent to 151,855 doses against 122,061 in 1903-04. It is worthy of note that the demand this year for this serum exceeded that of last year by 16,012 and that in the last two years the demand has increased by 43,019 doses.

74. The results of the application of the serum to the suppression of outbreaks have been exceedingly good as will be seen from the following table :—

Presidency.	No. of outbreaks.	No. of cattle inoculated.	No. of cattle died of the disease after inoculation.	Death-rate.
Bengal	182	13,006	180	1.38%
Punjab	82	17,248	11	0.06%
United Provinces	129	11,041	4	0.003%
Central Provinces and Berar	48	2,632	26	0.98%
Madras	109	8,261	1	0.01%
Burma	22	2,727	41	1.50%
Assam	18	1,578	—	—
TOTAL	590	56,483	263	0.43%

75. In addition to the ordinary liquid serum, 3,538 doses of serum in powder were prepared and issued to Bengal and Burma for trial in the field. The experiments were not very conclusive as to its efficacy compared with the ordinary serum, but, in any case, unfortunately, it is not so well suited to our purposes as the latter, on account of the fact that no Carbolic or other antiseptic can be added to it and the powder must be used 24 hours after it has been made up into solution. It is considered inadvisable to trust Veterinary Assistants in this particular work in the field as it requires considerable care. Notwithstanding, therefore, the bulk and trouble in carriage, it is only in exceptional cases, such as those in which qualified Veterinary Officers are employed, that this dry serum can replace the ordinary liquid form as at present prepared in the Laboratory.

76. *Anthrax*.—Protective serum against Anthrax was prepared during the year: 137,355 c.c. against 40,018 c.c. or 27,471 doses against 8,003 during last year. It will be observed that 14,326 more doses were indented for by the Superintendents during the year. The results of its use appear to be very good indeed. The returns show the following :—

Province.	Outbreaks.	No. of cattle inoculated.	No. died after inoculation.
Madras	103	12,437	..
United Provinces	70	4,602	..
Punjab and North-West Frontier Province	12	2,124	..
Assam	2	124	..
TOTAL ...	187	19,287	..

Thus, it will be seen that in 187 outbreaks, 19,287 animals were inoculated against Anthrax without a single death.

77. *Hamorrhagic Septicæmia*.—A serum has been prepared during the year and 3,133 doses have been issued for trial in the field.

78. *Mallein*.—This material has been prepared for the first time in the Laboratory and 1,514 doses made up and tested and 675 doses issued. In addition, 563 doses of English and 170 of French, were issued.

79. It has been found that the virulence of Rinderpest decreases when passed from animal to animal through a long series of hill cattle, showing the great care necessary in ascertaining that blood used for testing is as virulent as possible. The virus of disease varies in its behaviour, some becoming more virulent when passed through a succession of susceptible animals, others losing virulence when so treated. Rinderpest, apparently, belongs to the latter and the necessity for obtaining fresh virulent material in order to ensure the potency of the serum prepared is very great. As Dr. Lingard remarks, the discovery is of importance and great care will be exercised in the selection of the material used in future.

80. Experiments in regard to the susceptibility of Camels to Rinderpest were also undertaken. It has been proved some years ago that the disease was inoculable to Camels in Russia and the experiments conducted at the Laboratory with Indian Camels are valuable. They show that the inoculated disease does not, as a rule, produce very serious results in this animal.

81. Experiments regarding the possibility of conferring immunity against *Hæmorrhagic Septicæmia* were undertaken and Dr. Lingard has succeeded in producing a serum from hyperimmunized bovines and buffaloes which has,

in Laboratory experiments, proved capable of accomplishing this. He has prepared 3,133 doses of this material which is now being tested in the field, and it is hoped will be found efficient. This disease causes very heavy annual losses and anything which tends to decrease it will be much valued by the people. Experiments are now being conducted with a view to ascertaining the length of time for which the conferred immunity lasts.

82. Dr. Lingard has continued his experiments with Surra and has endeavoured to produce immunity by means of a prophylactic or curative serum, by attenuating the trypanosoma by means of cultures and by passing it through bodies of animals other than equines. In addition to this, treatment with Trypanrot and arsenate of Soda have been tried. Unfortunately, none of these methods are of much practical value and we are still, after years of patient work, not only in our own Laboratory but in many others in America and on the Continent, as far off as ever from an efficient prophylactic or curative agent for this deadly and widespread disease.

83. Charbon Symptomatique has by its prevalence in certain parts of the country claimed a share of attention. It has unfortunately been so far found impossible to cultivate the Bacterium at Muktesar. Successful inoculations had been carried on in the Punjab by Captain Walker and Mr. Oliver last year with a protective vaccine prepared by Arloing, Cornevin and Thomas, but this was discontinued pending the preparation of a serum at the Laboratory. Owing to failure of obtaining culture we are again issuing this and it will be available during the coming year. I consider this very desirable as the inoculations so far made have been successful and the people are asking that their young stock may be protected by the method.

84. *Dourine*.—Cases of this disease have been kept under observation during the year.

85. Cases of Piroplasmosis, Trypanosomiasis and Malignant oedema have been found complicating Rinderpest in serum producing animals at Muktesar.

86. Altogether 124 specimens have been sent to the Laboratory for examination and report, the greater number being pus from cases of Lymphangitis Epizootica.

87. On reference to Table XV, the average cost of preparation of different sera in this Laboratory is calculated at Re. 0-8-4 per dose during the past year, and if the total expenditure, *viz.*, Rs. 98,268-6-3 is put against the total output of sera which is 187,511 doses (including Mallein), it will be seen that a sum of about Rs. 89,243 would have been saved to Government, should such articles be available in the market and paid for, even at the rate of one rupee per dose, a sum only two-thirds of the price charged in South Africa.

88. The Laboratory work done during the year has been very heavy and successful and it reflects great credit on the Imperial Bacteriologist and his Assistants. The scope of the rough programme of work sketched is enormous and really too great to be dealt with by one Bacteriologist and the limited staff at present employed.

GOVERNMENT CATTLE FARM, HISSAR.

89. Tables XVI and XVII. This Farm has now been in our charge for six years and has continued to show satisfactory results during the year under report. The breeding herd consisted of 782 cows and 18 bulls and the number of calves born was 620, of which 297 were males and 323 females. The percentage 79·28 is considered very good. Thirteen cows died, 1 was destroyed and 26 were cast as unsuitable, whilst 46 of the best cows of the Harriana breed procurable in the districts were added to the herd as well as 80 first class heifers produced on the farm and carefully selected and valuable stock. The herd at the close of the year therefore numbered 828 cows against 736 the previous year. As stated last year, we aim at maintaining a herd of 1,100 cows to enable us to meet present demands for Ordnance bullocks and bulls for our own and district use. Suitable cows are, however, difficult to obtain in the districts and can only occasionally be procured. There are on the Farm 747 female young stock and 624 young male stock.

90. One hundred and fifty Ordnance bullocks were supplied, thirty-six bulls were sold to the Punjab for work in the districts and two to Native States. The class of bull turned out was good and there is now a considerable demand for them. I consider that by steadily pursuing the policy of careful weeding out of unsuitable animals and selection of the best types, we shall be able to produce stock such as cannot be obtained anywhere else in India. The change effected is already very marked. The castings during the year only amounted to 26 cows, 8 female young stock and 1 herd bull which were all unsuitable.

91. *Mules.*—There were 248 mules present on the 31st March against 287 last year. Fifty-five were purchased during the year and ten were born on the Farm. Fifty-three were supplied to the Remount Department and issued to the Kashmir Service Artillery and forty were issued to the Supply and Transport Corps for Maxim gun work. The General Officer Commanding, Sirhind Brigade, reports that they are of unusually good stamp and quite the best he had yet seen and of a different class from those obtainable in the market. Eight mules were sold by auction as they grew too big for Mountain Battery work. The mules supplied from the Farm are fit for hard work and not fed up for sale and soft like those purchased from dealers.

92. *Donkey stallions.*—Eleven donkey stallions were present on the 31st March. Six Punjabis, which had been purchased young in the districts and reared on the Farm, were sold to the Remount Department who have reported very well on them. Two were sold to districts and one, an Italian, cast and sold as unfit. There are remaining at present, 2 Italians and 1 American, used as sires, and 8 Punjabis being reared for sale.

93. Thirty-one mares are at present employed for donkey breeding and are all doing well, being either in foal or having a foal at foot. Two mares which did not hold were cast and sold during the year. Seven donkey colts were born on the Farm bringing the total number present up to thirteen, and eight fillies were born making a total of eleven present at the end of the year. These are all of good stamp. The donkey breeding experiments are very encouraging. The demand for donkey stallions is great and the stamp of animal bred very good and we have been able to supply them at an average of Rs. 400. Suitable mares are, however, difficult to obtain so progress will be, for a time, somewhat slow.

94. *Zebras.*—The experiment of breeding Zebra hybrids is now making some progress. The four Zebras received last year were at first very wild but after six months' careful treatment and handling, three of them have become tame: the fourth, in trying to break out of his box, killed himself. Only one has covered donkey mares so far but will doubtless soon cover pony mares now. There are 19 pony mares and one donkey employed in this experiment.

95. *Sheep.*—An experiment in sheep-breeding has just been commenced, a small flock of 25 ewes and 3 rams have been collected.

96. *Cultivation.*—Considerable progress has been made in the extension of cultivation, 100 acres of new land having been thoroughly cleaned, levelled and brought under irrigation. Roads and water-courses have been improved and pucca masonry bridges made. The "Stabling" cultivation has been enclosed in a 6 feet wall. Unfortunately, owing to failure of the rains, the whole of the Barani crop was lost and a great deal of reserve fodder had to be used up. We have adopted a system to provide green fodder all the year round, which has proved very beneficial to the stock.

97. Table XVIII shows the expenditure of the Farm for the year under report to be Rs. 1,12,838-14-1 and the receipts Rs. 85,790-7-10 against Rs. 95,086-8-2 and Rs. 1,00,594-10-3 respectively in the previous year. The increases in "Expenditure" are chiefly under the heads of Cultivation, Purchase of Reserve fodder, and Purchase of animals. The decreases in "Receipts" appear under sale of animals.

98. Under orders of the Government of India, contained in Revenue and Agricultural Department letter No. 298-9-2, dated 20th February 1905, it has

been arranged with the Examiner of Local Fund Accounts, Punjab, to audit the accounts of the Hissar Cattle Farm about the end of September 1905, and to submit for the approval of the Government of India a revised set of account forms to be adopted in view to having the financial results of the Farm correctly shown in future.

99. In compliance with the request contained in Government of India, Revenue and Agricultural Department, letter No. 615-44-1, dated 13th April 1905, a special report will be submitted in October 1905 on the working of the Hissar Cattle Farm since the transfer of its control to the Civil Veterinary Department.

100. To the zeal and ability of Captain Farmer, the Superintendent of the Farm, is due, in a great measure, the very good results obtained and I consider that very great credit is due to him for the work done during the year under report.

PART C.—GENERAL.

101. Table XIX shows the total cost (Imperial and Provincial) of the Department during 1904-05 amounting to Rs. 10,82,352-11-0 against Rs. 8,24,319-13-7 of the Department. This table embodies the figures furnished by the Comptroller, India Treasuries, as regards Imperial contributions, as well as those received from the several Accountants General as affecting Provincial expenditure. Of the latter it has, however, to be noted that the Superintendent, Civil Veterinary Department, Punjab, has reported that as the present Table is a new form this year there has been some trouble experienced in the Accountant General's Office in supplying the desired particulars. It appears that the Accountant General can readily supply the Provincial figures but difficulty arises over the Imperial and Local expenses. In future years it is to be hoped the expenditure incurred under the different sources, will be more accurately rendered.

102. The principal headings of expenditure under which increases appear, as compared with the figures of the previous year, are salaries of officers and Establishment, Travelling allowances of officers, purchase of stallions, and Veterinary Colleges and Schools. These increases are due to the extension and expansion of the Department.

103. Much correspondence has taken place on the subject of the reorganization rendered necessary by the transfer of the selected districts and proposals have been made regarding the development and expansion of the subordinate staff and the establishment of cattle breeding and rearing Farms, etc. Considerable advance has been made in almost every Province in the establishment of a Subordinate and supervising Veterinary Staff as the need has arisen and the men become available.

104. Great progress has been made in every Department of our work. The Veterinary Colleges have been improved and enlarged: improvement has been made with the Hissar Farm and in the establishment of breeding farms, and many new Veterinary dispensaries have been opened. There has been a considerable increase in the number of cattle inoculated against contagious disease.

105. Horse and mule breeding in the non-selected districts under the control of this Department, are very popular and results during the year are good.

106. The investigations into the prevalence, means of spread and methods of limiting or stamping out "Dourine" amongst breeding stock which will save Government a considerable sum, as well as the discovery of Horse Pox (the last named causing symptoms closely resembling Dourine) is due to the energies of Major H. T. Pease, to whom the thanks of the Government of India are due for having brought to light the existence of a disease so seriously affecting the horse breeding interests of the country. "White Scour" has been found among foals at the Probynabad Stud Farm and other private studs and is being investigated by Captain Baldrey. A new preventive serum for Hæmorrhagic Septicæmia has been prepared by Dr. Lingard and satisfactory work is generally noticeable in almost every branch. The cost of the Department has somewhat increased, as compared with last year's expenditure, but this must be expected with corresponding expansion and development.

SIMLA; } J. W. A. MORGAN, Colonel,
The 30th September 1905. } Inspector-Genl., Civil Veterinary Department.

TABLE I.

Showing the main results of Veterinary Colleges and Schools during 1904-05.

1 VETERINARY COLLEGES AND SCHOOLS.	2 Name of course of instruction if more than one course followed.	3 NUMBER OF STUDENTS.									4 STUDENTS ADMITTED DURING THE YEAR, CLASSIFIED BY EDUCATIONAL QUALIFICATIONS.			5 RECEIPTS.			6 EXPENDITURE.			7 EMPLOYMENT OF STUDENTS WHO PASSED OUT DURING THE THREE YEARS PRECEDING.					23 REMARKS.
		8 ADMITTED DURING THE YEAR.		9 Passed final examination during the year.		10 REMAINING UNDER INSTRUCTION AT END OF YEAR.		11 Matriculated with higher qualifications.	12 Knowing some English, but not matriculated.	13 Knowing no English or very little English.	14 From fees.	15 From other sources.	16 TOTAL.	17 Salaries of Instructing Staff.	18 Other expenses.	19 TOTAL.	20 Total number passed.	21 In service of Government or Local Bodies.	22 In service of other bodies or institutions.	24 In private practice.	25 Number unemployed.				
		3 Scholarship-holders.	4 Paying students.	5 No.	6 No.	7 No.	8 No.																		
		No.	No.	No.	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	No.	No.	No.	No.	No.					
Bombay Veterinary College	Diploma course.	6	35	15	4	74	12	8	35	...	3,840	2,841	6,484	30,141	16,174	55,315	29	12	7	...	10				
Ditto ditto	Salutri course.	...	...	22	1	20	4	...	...	...	...	...	65				28	13	...	24		
Punjab Veterinary College	Diploma course Urdu.	...	78(a)	34*	7	108	18	6	42	30	2,209	3,022	5,331	37,805	17,370†	55,244	00	84	4	...	...	*Including 2 men passed in June 1904.	
Ajmer Veterinary School	3 years course vernacular.	3	13	19	2	20	2	...	...	15	6,610	11,081	17,691	4,580	5,992	10,572	61	37	6	...	17	† Including Rs. 3,920 on account of stores from England.	
Madras Veterinary College	Diploma course.	25	...	...	...	...	...	37**	8	...	...	...	4,698	...	4,698	...	...	...	...	...	...	** The college was organised only in January 1904.
Rangoon Veterinary School	Vernacular.	23	...	7	1	...	1	...	...	24	...	...	...	3,000	1,841	4,841	7	7	...	...	...	
Bengal Veterinary College	3 years course English.	34	...	8	2	64	13	5	59	...	...	...	...	12,395	2,209	14,604	25	21	1‡	1	...	2 died. ‡ Cooch Behar State.
TOTAL	...	90	126	105	17	281	50	56	137	69	12,659	17,347	30,008	1,01,817	43,595	1,45,412	277	189	31	1	51				

(a) Of these 42 receive Scholarships.

** Including 2 First Arts.

TABLE II.

Showing number of Deaths from Contagious Diseases amongst Animals during the year 1904-05.

Province.	EQUINES.						BOVINES.						OTHERS.						REMARKS.					
	Glanders.	Anthrax.	Surra.	Dourine.	Other contagious diseases.	TOTAL.	Rinderpest.	Foot and mouth disease.	*Hemorrhagic septicæmia.	*Black quarter.	Anthrax.	Other contagious diseases.	TOTAL.	Rabies.	Purro Pneumonia.	Anthrax.	Other Contagious diseases.	Distemper.		Rider pest.	Influenza.	Hemorrhagic septicæmia.	TOTAL.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
United Provinces	4	...	...	2	3	9	3,798	3,460	...	...	8,392	1,790	17,440	...	...	...	...	...	...	...	...	...	...
Punjab	1	3	11	...	6	21	997	330	8,573	677	268	32	10,877	...	...	...	333	...	33	...	...	...	371
Sind	6	1	1	...	3	11	48	...	10	2	60	23	155	*394	571	*In goats.
Rajputana	...	...	...	...	...	...	...	140	...	...	19	...	159	...	...	...	280	...	...	...	...	...	280
Bengal	447	1	5	1	46	500	11,363	1,132	773	58	904	878	15,108	31	...	...	4	19	...	21	...	...	84
Bombay	50	...	2	...	2	54	...	66	...	330	184	276	1,336	...	...	...	...	...	...	...	...	...	...
Madras	...	36	...	...	263	299	19,772	2,767	...	7,683	14,996	44,653	89,871	...	...	...	...	...	...	...	...	...	...
Central Provinces	...	...	23	...	13	36	4,183	69	689	342	167	50	5,500	2	...	...	7	14	...	...	...	...	23
Burma	...	6	10	...	119	(a)135	51,977	9,065	...	...	8,302	...	69,344	...	...	...	...	...	...	...	...	...	...
North-West Frontier Province	...	...	...	...	...	...	...	...	...	...	95	...	95	...	...	...	...	...	...	...	...	...	...
TOTAL	503	47	52	3	455	1,065	92,090	17,029	10,033	9,590	33,317	47,681	209,790	55	155	394	629	33	33	21	9	1,329		

(a) No system of registration in force in Burma. Military Police register 16 deaths, 6 anthrax, 10 surra and other diseases 119. These diseases are not differentiated by villagers or headmen but are considered as different manifestations of anthrax and so are included under this heading.

TABLE III.

Showing results of preventive inoculation during the year 1904-05.

Province.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.	
				Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
United Provinces...	Anthrax ...	Serum-alone method.	70	Information	...	...	...	4,602	...	...	...	...	...
.....	Rinderpest		129	not available	...	...	...	...	11,043	...	...	4	...	...
Sind (a) ...	Anthrax ...		1	...	...	394	...	...	...	60	...	...	1	...
Rajputana ...	...		...	...	...	...	...	...	...	...	...	...	...	...
Bengal ...	Rinderpest		182	...	11,180	...	...	...	13,276	...	...	183	...	...
Bombay ...	...		...	...	...	...	...	...	...	...	...	...	...	...
Madras ...	Rinderpest and Anthrax.		...	299	89,871	...	...	...	20,688	...	...	118	...	...
Central Provinces...	Rinderpest		58	...	1,211	46	...	...	3,770	3	...	12	1	...
Burma ...	Rinderpest		24	...	...	...	...	...	2,727	...	...	41	...	...
North-West Frontier Province.	Anthrax ...		5	...	95	...	...	...	644	...	...	...	...	...
Punjab ...	Rinderpest		87	...	820	...	...	...	17,620	...	...	12	...	...
	Anthrax ...		4	...	79	...	...	...	820	...	...	...	...	...
	Black quarter.		2	...	46	...	...	...	79	...	...	1	...	...
Total ...	...		...	562	299	1,08,302	440	...	75,269	63	...	371	2	...

(a) 162 equines were subjected to "Mallein" test for Glanders of which 6 reacted and died.

TABLE IV.

Showing the number of Animals treated and castrated by Veterinary Assistants on tour during 1904-05.

PROVINCE.	Number of villages visited.	Number of Veterinary Assistants employed.	CASTRATIONS PERFORMED.				TREATED FOR CONTAGIOUS DISEASES.				TREATED FOR NON-CONTAGIOUS DISEASES.				Total number of cases treated and castrations performed.	REMARKS.
			Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
United Provinces	9,481	47	214	83	84	281	29	31,094	2,172	33,295	8,994	10,977	2,999	22,970	56,798*	* This includes 252 cases treated in the Gonda district, of which no details have been furnished. † Veterinary graduates.
Punjab	12,804	71	312	152	63	527	167	17,639	632	18,438	7,577	11,311	2,296	21,184	40,149	
Sind	141	5†	11	...	4	15	...	3	1	4	265	156	627	1,048	1,087	
Rajputana	534	2	5	2	...	7	...	312	280	592	173	287	64	524	1,123	
Bengal	4,795	37	41	115	37	193	124	33,740	343	34,207	9,275	13,802	2,635	25,718	60,118	
Bombay	391	20	...	...	...	...	7	3,174	116	3,297	346	1,853	513	2,717	6,014	
Madras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Central Provinces	8,555	44	...	3	...	3	30	10,432	118	10,580	429	5,876	146	6,451	17,034	The chief work of Veterinary Assistants was inoculation.
Burma	14,828	37†	2	...	...	2	30	41,425	26	41,481	2,543	30,224	243	33,020	74,503	‡ Includes 5 casualties, and 2 employed in office.
North-West Frontier Province	968	5	51	...	9	60	19	271	266	556	433	650	163	1,301	1,917	
TOTAL	47,492	313	636	305	147	1,088	406	1,38,090	3,954	1,42,450	30,090	75,136	9,702	1,14,928	2,58,718	

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TABLE VII

Showing total strength of Subordinate Veterinary Staff employed during the year 1904-05.

Province.	How occupied.	Whether paid from Provincial or Local Funds.	Veterinary Inspectors.	Veterinary Assistants.	REMARKS.
1	2	3	4	5	6
			No.	No.	
United Provinces.	In Dispensaries ...	Provincial...	3	1	
		Local ...		11	
	On other work ...	Provincial...		1	
		Local ...		46	
Punjab ...	In Dispensaries ...	Provincial ...	...	9	
	On other work ...	Ditto ...	6	81	
North-West Frontier Province.	In Dispensaries ...	Provincial ...	...	3	One unqualified Salutri employed by Dera Ismail Khan Municipality not included.
		Local ...	...	1	
	On other work ...	Provincial ...	...	4	
Sind ...	In Dispensaries ...	Local ...	...	5	
Rajputana ...	In Veterinary School ...	Local ...	...	3	
	In Dispensaries ...	District Board ...	...	2	
Bengal ...	In Veterinary College ...	Provincial ...	5	2	*1 Assistant Principal and 4 Lecturers.
	In Dispensaries ...	Local ...	...	21	† 1 Hospital Surgeon and 1 Veterinary Overseer.
	On other work ...	Provincial...	2	8	
		Local ...	...	16	
Bombay ...	In Veterinary College ...	Provincial ...	...	7	
	In Dispensaries ...	Provincial and Local.	...	20	
	On other work ...	Provincial ...	...	1	
Madras ...	In Veterinary College ...	Provincial ...	3	...	
	In Dispensaries ...	Provincial 1	...	4	
		Local 3 ...		4	
	On other work ...	Provincial ...	2	4	
‡ Central Provinces.	In Dispensaries ...	Provincial ...	...	2	
	Ditto ...	Local Fund ...	...	38	
	On other work ...	Provincial ...	4	1	
	Ditto ...	Local Fund ...	...	10	
Burma ..	In School and College ...	Provincial ...	...	1	§ One attached to office.
	In Dispensaries ...	Ditto ...	...	38	
	Ditto ...	Local ...	...	43	
	TOTAL ...		25	393	

‡ Including Berar.

TABLE VIII.

Return of Stud Bulls for the year 1904-05.

PROVINCE.	PROPERTY OF GOVERNMENT.					PROPERTY OF LOCAL BOARDS.					REMARKS.
	Number on 1st April 1904.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March 1905.	Number on 1st April 1904.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March 1905.	
		Number.	Average price paid.				Number.	Average price paid.			
1	2	3	4	5	6	7	8	9	10	11	12
United Provinces	3	...	...	1	2	2	...	...	...	2	
Punjab	65	...	...	5	60	177	53	177	34	196	
Sind ... ..	...	...	...	...	...	1	...	...	...	1	
Rajputana ... ..	...	...	...	...	...	...	...	...	...	...
Bengal	5	...	...	...	5*	...	...	...	...	...
Bombay	Information not received	...	...	...	...	3	1	72	1	3	
Madras ... ..	...	...	...	...	...	...	...	...	...	...
Central Provinces	2	...	...	...	2	...	...	...	...	...
Burma ... ..	...	...	...	...	...	...	...	...	...	...
North-West Frontier Province ... ..	...	...	...	...	...	3	3	116	...	6	
TOTAL	75	...	...	6	69	186	57	362	35	208	

* These bulls are not shown in the Superintendent's Table VIII, but are alluded to in paragraph 14 of his report.

TABLE IX.

Showing main results of the working of Provincial Cattle Farms during the year 1904-05.

PROVINCE.	Name of farm.	RECEIPTS.				EXPENDITURE.						VALUATION OF STOCK, GRAIN AND FODDER REMAINING AT CLOSE OF YEAR AS DETAILED ON REVERSE.				REMARKS.	
		Sale of animals.	Sale of Produce.	Other heads.	TOTAL.	Salaries of establishment.	Feed and keep of animals	Cultivation expenses.	Purchase of animals.	Other heads.	Total.	Cattle.	Grain.	Fodder.	TOTAL.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
United Provinces	...	Particulars not furnished.															
Punjab	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sind	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rajputana	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bengal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bombay	Northcote Gowshalla at Chharodi.	4,908	138	168	5,209	1,408	1,202	816	...	276	3,197	21,105	...	6,000	27,105		
Madras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Central Provinces	Nagpur (Tilunkheri)	...	...	...	...	207	585	...	...	1,933	2,725	6,580	...	9	6,589		
Ditto	Hoshangabad (Pawarkhera).	...	...	...	...	49	168	...	...	1,845	1,562	1,151	51	...	1,202		
Burma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	...	4,908	138	168	5,209	1,659	1,955	816	...	3,554	7,484	23,886	51	6,009	34,896		

Note.—See reverse for details of stock in hand at close of year.

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1904-05.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.		Rs.	Rs.	
CENTRAL PROVINCES.					
<i>Cattle.</i>					
4	...	Bulls ...	{ 3 @ 200 1 @ 75 }	675	
68	...	Cows ...	{ 43 @ 50= 25 @* =	2,150 632	23 at 25 575 1 at 30 30 1 at 27 27
5	...	Male Stock, 2 years old	{ 2 @ 150= 3 @ 50=	300 150	
22	...	Ditto 1 year old	{ 15 @ 100= 7 @ 20=	1,500 140	25 632
28	...	Ditto calves ...	{ 14 @ 75= 14 @ 8=	1,050 112	
...	...	Female Stock, 2 years old	...	...
12	...	Ditto 1 year old	{ 8 @ 30 = 4 @ 6 =	240 24	
28	...	Ditto calves	{ 22 @ 20= 6 @ 3=	440 18	
1	...	Stud Bull ...	...	300	
168	...	Total	...	7,781	
<i>Grain and Fodder.</i>					
...	39	Gram, Fodder (cotton seed)	1-5	51	
...	3,000 pooas.	Hay ...	{ 3 per 1,000 pooas. }	9	
...	...	Kirby, etc. ...	...	...
...	...	Total	...	60	
BOMBAY.					
<i>Cattle.</i>					
6	...	Bulls ...	100	600	
229	...	Cows ...	40	9,160	
60	...	Male stock 2 years old and above	35	2,100	
23	...	Ditto 1 year old	20	680	
10	...	Ditto calves	10	100	
166	...	Female stock 2 years old and above	40	6,640	
68	...	Ditto 1 year old	15	1,020	
14	...	Ditto calves	10	140	
<i>Buffaloes.</i>					
2	...	Bull Buffaloes	15	80	
3	...	She Buffaloes	30	90	
3	...	Bull Buffalo-calves	5	15	
7	...	Heifers	15	105	
7	...	Bullocks	75	525	
604	...	Total	...	21,105	
<i>Grain and Fodder.</i>					
...	...	Gram	...	...
...	55,680 lbs.	Hay	{ Rs. 9 per 1,000 lbs. }	5,000	
...	20,000 bundles	Kirby, etc.	{ Rs. 5 per 100 bundles }	1,000	
...	...	Total	...	6,000	
GRAND TOTAL				27,105	

TABLE X.

Return of Horse, Pony and Donkey Stallions under Local Bodies for the year 1904-05.

Details.	HORSE AND PONY STALLIONS UNDER LOCAL BODIES.													Total Horses and ponies.	DONKEY STALLIONS UNDER LOCAL BODIES.						
	HORSES.							PONIES.							Italian.	Cyprian.	Country-bred (Punjab).	Persian.	Catalonian.	Arab.	Total.
	Arab.	Persian.	Thorough-bred English.	N. T.	Hackney.	Australian.	Total.	Arab.	Persian.	Country-bred.	Deil.	Shan.	Total.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Balance on 1st April 1904 ...	30	2	1	1	1	...	35	89	...	3	2	2	96	131	31	21	13	3	5	2	75
Increase { Purchased in India	13	...	1	...	...	1	15	8	...	...	...	...	3	18	...	...	...	...	...	...	...
{ Received by transfer	8	...	...	...	...	...	8	...	...	...	...	...	...	8	...	...	...	...	...	...	...
Total ...	46	2	2	1	1	1	53	92	...	3	2	2	99	152	31	21	13	3	5	2	75
Decrease {	Died ...	3	...	...	...	...	3	3	...	...	...	...	3	6	3	...	...	...	...	...	3
	Sold ...	...	...	...	1	1	2	2	...	...	...	...	2	4	...	...	...	...	...	...	...
	Destroyed ...	1	1	...	...	...	2	6	...	...	...	...	6	8	...	1	...	...	...	...	1
	Transferred	3	...	...	...	...	3	3	...	...	...	...	3	6	1	...	2	...	...	...	3
Total decrease ...	7	1	...	1	1	...	10	14	...	...	...	...	14	24	4	1	2	...	...	...	7
Balance on 31st March 1905	39	1	2	...	...	1	43	78	...	3	2	2	85	128	27	20	11	3	5	2	68
United Provinces ...	29	1	2	...	...	...	32	14	...	...	...	...	14	46	3	1	2	...	...	...	6
Punjab ...	2	...	...	...	...	...	2	84	...	2	...	...	86	88	20	18	8	3	5	1	55
North-West Frontier Province.	4	...	...	...	...	...	4	4	...	...	...	...	4	8	4	1	1	...	...	1	7
Bombay ...	4	...	...	...	...	1	5	11	...	1	...	...	12	17	...	...	...	...	...	...	...
Bengal ...	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...
Madras ...	...	...	...	...	...	...	...	14	...	...	...	...	14	14	...	...	...	...	...	...	...
Burma ...	...	...	...	...	...	...	...	...	...	...	2	2	4	4	...	...	...	...	...	...	...
TOTAL ...	39	1	2	...	...	1	43	78	...	3	2	2	85	128	27	20	11	3	5	2	68

TABLE XI.

Services and Produce of each class of Horse, Pony, and Donkey Stallions, under Local Bodies during 1904-05.

Horse, Pony, or Donkey.	Provinces.	Stallions on Register on 31st March 1904.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE NUMBER OF MARES COVERED PER STALLION EMPLOYED AT STUD.		REMARKS.
			Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
1	2	3	4	5	6	7	8	9	10
Horse ...	United Provinces ...	32	26	23	1,251	1,122	48.1	48.7	
	North-West Frontier Province.	4	4	..	224	..	56.0	..	
	Punjab ...	2	2	..	128	..	64.0	..	
	Bombay ...	5	3	4	141	171	43.3	34.31	
	TOTAL ...	43	35	27	1,744	1,293	49.8	47.8	
Pony ...	United Provinces ...	14	17	17	928	903	54.5	53.1	
	North-West Frontier Province.	4	4	6	271	289	67.7	48.1	
	Punjab ...	36	38	43	2,604	2,840	68.5	66.0	
	Bengal ...	1	..	1	..	1	..	1	
	Bombay ...	12	9	6	302	113	31.1	18.5	
	Madras ...	14	14	15	356	426	25	28	
	Burma ...	4	4	4	56	43	14	10.7	
TOTAL ...	85	86	92	4,517	4,615	52.5	50.1		
Donkey ...	United Provinces ...	6	6	2	285	38	47.5	16.5	
	North-West Frontier Province.	7	7	5	390	193	55.7	38.6	
	Punjab ...	55	57	10	4,054	231	71.1	23.1	
	TOTAL ...	68	70	17	4,729	457	67.5	26.8	

TABLE XIII.

Abstract of particulars regarding Horse Fairs and Shows held in non-selected districts during the year 1904-05.

Province.	Number of Horse fairs and Shows held.		TOTAL NUMBER OF ANIMALS PRESENT.		TOTAL NUMBER COMPETING FOR PRIZES.		TOTAL NUMBER OF HORSE STOCK (NOT INCLUDING BRANDED MARES) PRESENT.		NUMBER OF REMOUNTS PURCHASED.				PRICE PAID FOR REMOUNTS.			NUMBER OF MULES PURCHASED.			PRICE PAID FOR MULES BY GOVERNMENT.			PRIZES AWARDED.						Amount sanctioned by Government of India for next year's Fair or Show.	REMARKS.
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29			30	31
United Provinces ...	1	7,742	10,914	45	129	Information not available	...	10	3	13	375	230	301	...	...	...	...	...	...	13	100	...	200	...	300	235	...	...
Punjab ...	6	3,000	2,189	1,214	908	1,567	46	...	...	...	...	...	...	...	33	33	...	...	...	707	1,150	...	2,382	...	3,532	3,221	8	1,500
Sind ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rajputana ...	1	1,141	782	173	213	33	1,108	2	...	1	9	262	152	208	...	6	6	...	...	568	...	500	...	...	500	493	...	...
Bengal ...	5	5,001	4,816	...	...	...	...	...	...	Information not available	...	...	...	...	...	...	...	...	...	No prizes awarded	...	...	...	...	...	...	...
Bombay ...	1	589	293	577	274	25	125	...	...	1	1	250	...	250	...	...	...	...	...	No give	400	800	750	530	2,480	2,165	1	600
Madras ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Central Provinces ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burma ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North-West Frontier Province.	1	951	763	716	512	621	...	...	...	5	5	265	190	215	...	1	1	...	...	12	1,000	...	1,000	...	2,000	1,982	1	1,000
TOTAL ...	15	49,424	19,147	2,723	2,035	2,466	1,274	2	10	10	22	375	152	243	...	40	40	...	...	1,300	2,650	1,300	4,332	530	8,812	7,076	5	3,100

On account of plague the Fony shows were abandoned.

TABLE XIV.

Abstract of particulars regarding Cattle Fairs and Shows held during the year 1904-05.

PROVINCES.	Number of Cattle Fairs and Shows held.	TOTAL NUMBER OF STOCK PERCENT.							AVERAGE PRICE OF ANIMAL SOLD.					Amount realized in fees.	Total number of animals that competed for prizes.	PRIZES AWARDED.					Number of medals awarded.	REMARKS.		
		Bulls.	Bullocks.	Cows.	Young stock.	Buffaloes.	Camels.	Others.	Bulls.	Bullock.	Cows.	Buffaloes.	Camels.			From Imperial funds.	From Provincial funds.	From Local funds.	From other sources.	Total.			Amount actually awarded.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
United Provinces	...	7	598	797	708	588	62	...	100	Information not furnished.	...	...	...	...	...	295	2,000	...	1,250	...	3,350	2,765	5	
Punjab	...	26	16,716	149,782	47,684	26,338	100,394	5,132	8,973	41	410	235	342	487	88,900	2,186	2,000	...	7,964	...	9,954	8,680	10	
Sind	
Rajputana	...	2	...	2,270	48	...	89	2,242	...	...	116	10	15	...	...	...	...	...	...	...	...	...	...
Bengal	...	10	128	60,668	2,322	769	2,332	189	2,969	...	295	205	120	330	...	256	668	293	1,680	524	3,571	3,571	10	
Bombay	...	3	...	9,108	2,184	...	1,727	...	20,533	...	18	7	12	...	2,023	322	668	...	282	...	945	945	2	
Madras	...	11	...	...	*100,909	...	...	...	...	Information not available.	...	...	...	...	1,381	1,000	...	...	2,200	3,300	3,155	3		
Central Provinces	...	10	21	10,234	17,368	893	6,154	5	2,242	80	325	63	149	75	4,026	745	...	795	400	168	1,353	1,062	...	
Burma	...	6	76	258	51	14	159	...	269	...	...	...	...	...	828	635	5,456	200	293	6,584	4,048	5		
TOTAL	...	72	17,536	2,33,043	1,71,286	28,602	1,19,868	7,568	85,092	85	233	104	127	297	90,549	5,981	7,166	6,544	11,973	3,175	28,857	23,318	35	

* Includes bulls, bullocks, etc., no details given.

TABLE XV.

Showing main results of the working of the Bacteriological Laboratory during 1904-05.

QUANTITY OF SERA OR ANTI-TOXIN PREPARED AND ISSUED.							INSTRUCTION IMPARTED.						FINANCIAL RESULTS.										
1	2	Opening balance.	Prepared during the year.	Total.	Issued during the year.	Stock in hand at end of year.	8	NUMBER ATTENDING CLASSES.		NUMBER PASSED.		REVENUES.					EXPENDITURE.						
		3	4	5	6	7		9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
		C. C.	C. C.	C. C.	C. C.	C. C.	Department or Province.	Veterinary Officers.	Veterinary Inspectors and Assistants.	Veterinary Officers.	Veterinary Inspectors and Assistants.	Sale of animals.	Sale of sera (both for cash and on book credit).	Sale of garden products and revenue from Forests.	Other miscellaneous receipts.	Total.	Salaries and travelling allowances of officers and subordinate establishment.	Feed and keep of animals.	Purchase of animals.	Cost of chemicals and apparatus.	Other miscellaneous expenditure.	Total.	
												Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Muktesar Laboratory.	Rinderpest serum.	110,674	813,353	924,026	564,428	359,608	Civil Veterinary Department.	1	...	1	...												
	Rinderpest in powder.	...	3,539 doses	3,539 doses	1,344 doses	2,194 doses	Army Veterinary Department.	3	...	3	...												
	Anthrax serum	90	137,355	137,445	111,953	25,493	United Provinces.	...	5	...	5	304 8 0	5,392 2 0	550 8 11	20 8 0	6,267 5 11	41,390 3 10	15,517 4 2	9,838 0 0	10,643 11 0	6,755 1 7	4,144 4 7	
	Hæmo. Septicæmia serum.	...	15,665	15,665	...	15,665	Punjab & N.W. Frontier.	...	20	...	19												
	Mallein	...	1,514	1,514	817	697	Central Provinces & Berar.	...	8	...	8												
Bareilly Depot.	...	...	...	...	...	...	United Provinces.	...	4	...	6											
	...	...	...	...	...	...	Punjab & N.W. Frontier.	...	15	...	13											
	...	...	...	...	...	...	Bengal.	...	8	...	8	44 0 0	...	157 0 0	4 0 0	205 0 0	10,151 6 0	1,472 11 8	2,500 0 0	...	...	14,124 1 8
	...	...	...	...	...	...	Central Provinces & Berar.	...	8	...	8											
...	...	...	...	...	...	Burma	...	1	...	1												
TOTAL	110,764	957,886 3,539 doses	1,078,650 3,539 doses	677,197 1,344 doses	401,453 2,194 doses	...	...	4	66	4	67	343 8 0	5,392 2 0	707 3 11	24 8 0	6,472 5 11	51,541 9 10	16,990 15 10	12,338 0 0	10,643 11 0	6,755 1 7	82,268 6 3

BIGVD

* Chemicals ... 4,988 9 0
 Library ... 1,247 10 0
 Dr. Maynard's machine and appliances ... 3,757 8 0
 Bottles ... 650 0 0
 10,643 11 0

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TABLE XVI.

HISSAR FARM.

Return of animals for the official year 1904-05.

Details.	Bulls.	Cows.	Male produce.	Female produce.	Castrated produce.	Cultivation bullocks.	Camels.	Mares for mule breeding.	Donkey mares.	Mules.	Donkey stallions.	Zebras.	Donkey mares for sebrule breeding.	Mares for sebrule breeding.	Ordnanoe bullocks.	Donkey colts.	Donkey fillies.	Pony filly.	Pony colt.	Rams.	Ewes.	Total.	REMARKS.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Balance on 1st April 1904 ...	11	736	395	513	191	283	7	30	32	287	29	4	1	5	...	...	...	1	...	...	...	2,525	
Increase ... { By birth ...	...	...	297	323	...	...	...	...	...	10	...	...	...	...	...	7	8	1	...	...	...	646	
" purchase ...	...	46	6	16	...	34	1	...	5	55	...	...	...	14	...	...	...	...	...	3	25	205	
" transfer ...	47	86	...	...	...	...	...	...	...	...	...	...	...	...	150	9	4	...	...	...	...	296	
TOTAL ...	58	868	698	852	191	317	8	30	37	352	29	4	1	19	150	16	12	1	1	3	25	3,672		
Decrease ... { Died ...	2	13	21	10	3	5	1	...	...	3	...	1	...	...	...	3	1	...	...	...	...	63	
Destroyed ...	...	1	3	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	6	
Sold ...	38	26	8	8	...	21	2	8	2	101	9	...	...	...	150	...	...	...	1	...	...	369	
Transferred ...	...	...	47	86	91	59	...	29	4	...	9	...	...	...	...	...	...	...	...	...	...	298	* Sent to Bareilly.
TOTAL ...	40	40	74	105	94	85	8	11	6	104	18	1	...	...	150	9	1	...	...	...	...	786	
Balance on 31st March 1905 ...	18	828	624	747	97	282	5	19	31	248	11†	3	1	19	...	13	11	1	...	3	25	2,936	† Also 1 at Goons and 1 at Allahabad.	
Valuation—	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rate per head ...	250	80	30	15	120	120	120	250	100	267	300	1,100	80	200	...	100	40	50	...	1 @ 50	3	...		
TOTAL ...	4,500	66,240	18,720	11,205	11,640	27,840	600	4,750	3,100	66,216	3,300	3,300	80	3,800	...	1,300	440	50	...	100	75	227,356		

TABLE XVII.

HISSAR FARM.

Results of Donkey, Mule and Zebrule breeding during 1904-05.

Details.	Stallions on Register at close of year.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.		RESULT OF PREVIOUS YEARS COVERINGS.		AVERAGE RESULT OF PREVIOUS YEARS COVERINGS PER STALLION EMPLOYED AT STUD.			REMARKS.
		Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of produce.	Number not held.	Average of produce.	Average of not held.	Average of mares recently covered.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Donkey breeding	3	3	2	34	17	11.33	8.6	15	2	7.5	1.0	...	
Mule breeding	3	3	2	30	21	10	10.5	10	4	5.0	2.0	...	
Zebrule breeding	3	3	...	...	...	Nil	...	...	...	...	...	...

TABLE XVIII—Imperial.

Abstract showing main results of the working of the Hissar Farm during the official year 1904-05.

						Rs.	A.	P.
<i>Receipts paid into Treasury :—</i>								
Sale of animals ...	...	...	...	...	...	*64,141	0	0
Sale of Produce ...	...	...	...	...	...	96	15	0
Other Heads ...	...	...	...	...	...	21,552	8	10
Total ...						85,790	7	10
<i>Expenditure :—</i>								
Salaries and travelling allowance of Officers ...	...	...	...	...	...	13,491	14	0
Ditto ditto ditto of Subordinate Staff ...	...	...	...	...	...	23,035	8	2
Cultivation expenses ...	...	...	...	...	...	18,154	3	8
Feed of animals including Reserve Fodder (Rs. 2,853-15-2) ...	...	...	...	...	...	28,867	4	9
Purchase of animals ...	...	...	...	...	...	20,913	4	0
Other Heads ...	...	...	...	...	...	8,376	11	6
Total ...						112,838	14	1
<i>Value of animals issued on Book Credit :—</i>								
Siege Train Bullocks ...	...	...	...	...	...	18,000	0	0
Army Transport Bullocks ...	...	...	...	...	...	.....
Bulls ...	...	...	...	...	...	7,000	0	0
Mules and Donkeys ...	...	...	...	...	...	33,700	0	0
Total ...						58,700	0	0
<i>Valuation of animals, grain and fodder on hand at end of year :—</i>								
Valuation of animals as per Table XVI ...	...	...	...	...	...	227,256	0	0
Ditto grain ...	...	...	...	...	...	1,596	4	6
Ditto fodder ...	...	...	...	...	...	18,271	15	3
Total ...						247,124	3	9

* Include "value of animals issued on Book Credit."

Statement showing total charges during 1904-05 in connection with Civil Veterinary Department.

Major Heads	Inspector General.	Imperial Bacteriologist.	Superintendent, Civil Veterinary Department, United Provinces.	Superintendent, Civil Veterinary Department, North Punjab.	South Punjab.	North-West Frontier Provinces.	Bombay.	Baluchistan and Sind.	Bengal.	Rajputana.	Cattle Farm, Hissar.	Madras.	Central Provinces.	Berar.	Burma.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
<i>Civil Veterinary Department.</i>																
Salaries, Officers	22,044 8 8	22,337 9 0	16,568 0 8	16,017 10 5	...	...	20,467 0 5	...	33,207 6 9	10,200 0 0	10,062 8 0	17,775 0 0	6,960 0 0	...	29,201 0 0	2,07,630 11 6
.. Establishment	12,842 0 0	22,168 12 7	26,480 12 8	33,507 12 8	...	2,267	12,140 0 11	2,528 5 4	20,522 2 0	431 15 8	22,058 1 4	12,713 6 5	16,458 15 9	11,139 4 0	55,082 0 0	2,52,325 6 6
Travelling allowance, Officers	3,228 10 0	1,317 0 0	2,767 2 0	15,219 12 9	...	...	2,384 5 6	...	2,883 12 0	528 2 0	1,116 4 0	1,698 4 0	1,534 6 9	...	3,461 0 0	87,071 11 0
.. .. Establishment	3,195 11 9	681 8 0	3,563 1 9	...	...	752	2,420 9 6	617 10 6	2,068 9 6	51 12 8	789 3 8	2,607 9 10	4,229 3 5	2,276 12 11	20,095 0 0	44,678 7 8
Contingencies	12,102 3 9	7,235 15 7	4,745 6 11	4,686 2 2	...	...	1,978 1 6	730 11 0	13,406 12 5	389 0 9	1,969 7 5	784 11 0	4,427 14 6	4,502 15 10	17,996 0 0	74,766 8 10
Purchase of Stallions	3,870 8 7	12,479 15 6	...	...	...	...	...	...	...	...	35,068 14 4	...	...	...	...	51,419 6 5
Stable Feed and Keep	1,862 10 6	13,028 11 4	442 3 1	1 7 8	-1 0 0	...	1,120 6 7	-107 15 0	...	...	51,154 12 10	...	...	...	...	66,421 0 0
Road Expenses ... ..	...	...	179 15 4	2 9 0	...	...	...	...	...	...	1,471 10 2	...	...	...	...	1,654 2 7
Supplies and Services... ..	701 8 0	7,621 14 0	28,922 12 5	...	...	2,910	8,445 5 6	...	35,000 7 10	19 0 0	804 15 11	4,868 6 1	2,535 7 4	726 4 9	6,166 0 0	99,648 2 10
Prizes for encouragement of cattle breeding	5,612 14 6	...	688 8 0	10,619 15 5	...	1,962	20,639 10 1	...	2,047 0 0	...	...	1,000 0 0	...	...	...	42,568 0 0
Veterinary Dispensary, Simla	23 0 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22 0 0
Prizes at Horse Fairs and Shows ... ..	...	...	...	19,169 0 10	800 0 0	...	...	...	1,500 0 0	...	...	...	...	...	...	15,500 0 10
Other allowances ... ..	...	...	4,174 2 4	...	...	5	...	...	5,203 5 2	...	...	600 0 0	...	1,245 4	1,888 0 0	12,115 10 11
Prevention of disease ... ..	...	...	...	14,808 0 0	...	772	66,444 8 6	...	...	...	...	...	...	...	539 0 0	82,563 6 6
Schools and Colleges ... ..	...	...	...	...	...	...	56,820 14 10	...	19,174 1 0	...	...	14,128 14 7	...	...	...	85,922 14 5
Total	66,397 11 9	89,666 1 0	88,530 2 4	1,10,023 6 11	699 0 0	8,698	1,93,651 10 4	3,968 11 10	1,39,003 8 9	11,609 14 2	1,24,495 14 4	58,144 8 11	37,145 12 9	19,690 7 10	1,34,428 0 0	10,82,352 11 0

* Officers and subordinates.
G. O. Press, Simla.—No. 2 I. G. C. V. D.—25-9-05.—300.—U.C.W.

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ANNUAL ADMINISTRATION REPORT
OF THE
CIVIL VETERINARY DEPARTMENT IN INDIA

FOR THE OFFICIAL YEAR

1907-08.

3



SIMLA :
GOVERNMENT CENTRAL BRANCH PRESS,
1908.

ERRATUM.

Page 7—paragraph 41.

In line 11 for the word "*casual*" read "*causal*".

Page 16—paragraph 106.

In first line read "*spirochaetosis*" for "*spirochoetosis*".

Page 17—paragraph 113.

In first line read "*Table VIII*" for "*Table VII*".

Page 25—paragraph 163.

In line 4 for the word "*quantity*" read "*quality*".

Page 31—paragraph 199.

Alter number of paragraph from "*299*" to "*199*".

Page 33—paragraph 223.

In line 2 read "*the*" for "*he*".

Page 40—Table V.

In column 23, opposite Bengal read "*166*" for "*1'66*".

Page 52—Table XV.

Against foot-note (g) read "*Rs. 1,250*" for "*£1,250*".

ANNUAL ADMINISTRATION REPORT
OF THE
CIVIL VETERINARY DEPARTMENT IN INDIA
FOR THE OFFICIAL YEAR
1907-1908.

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GOVERNMENT OF INDIA.

ANNUAL ADMINISTRATION REPORT
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CIVIL VETERINARY DEPARTMENT IN INDIA
FOR THE OFFICIAL YEAR
1907-1908.

GENERAL ADMINISTRATION.

A coloured Map which accompanies this Report, shows, in light red, the Preface. districts under the control of the Civil Veterinary Department. The usual Tables are also appended.

2. Colonel J. W. A. Morgan held the appointment of Inspector-General, Civil Veterinary Department, up to 16th August 1908 on which date he retired from the service. He was succeeded by Colonel H. T. Pease, C.I.E., who assumed charge of his duties on 3rd September 1908, Mr. C. A. Innes, I.C.S., Under-Secretary to the Government of India, Department of Revenue and Agriculture, held charge of the current duties of the office in the interval between 16th August and 3rd September 1908.

3. The table given below gives the names of the officers who held the several appointments in the Department during the year under report:— Officers in charge.

Appointments.	1st April 1907.	31st March 1908.	REMARKS.
Inspector General	Colonel J. W. A. Morgan	Colonel H. T. Pease, C.I.E.	
Imperial Bacteriologist	Dr. A. Lingard	Captain J. D. E. Holmes, M. A., D. Sc.	
Assistant Bacteriologist	G. D. Martin, Esq.	H. E. Cross, Esq.	
2nd Assistant Bacteriologist	H. E. Cross, Esq.	Abolished.	
Superintendent, Government Cattle Farm, Hisar.	Captain J. Farmer	C. W. Wilson, Esq.	
Superintendent, United Provinces.	Major H. M. Maxwell	Major H. M. Maxwell.	
2nd Superintendent, United Provinces.	E. W. Oliver, Esq.	G. D. Martin Esq. (lent temporarily).	
Chief Superintendent, Punjab...	Captain G. K. Walker	Captain G. K. Walker.	
Superintendent, North-West Frontier Province and North Punjab.	Y. de V. H. Woodley, Esq.	Y. de V. H. Woodley, Esq.	
Superintendent, South Punjab...	.....	.....
Superintendent, Sind, Baluchistan and Rajputana.	* K. Hewlett, Esq.	Major A. S. Trydell	* Mr. Hewlett held charge in addition to his duties as Superintendent, Bombay.
Principal, Punjab Veterinary College.	Major H. T. Pease	Captain A. Smith.	
Professor, Punjab Veterinary College.	Captain A. Smith	Captain W. O. Dawson.	
Professor, Sanitary Science, Punjab Veterinary College.	S. H. Gaiger, Esq.	S. H. Gaiger, Esq.	
Principal, Bombay Veterinary College.	Major F. Joslen	Major F. Joslen.	

Appointment.	1st April 1907.	31st March 1908.	REMARKS.
Assistant Principal, Bombay Veterinary College.	M. H. Sowerby, Esq. ...	M. H. Sowerby, Esq.	
Superintendent, Bombay ...	* K. Hewlett, Esq. ...	K. Hewlett, Esq. ...	* Also Superintendent, Sind Baluchistan and Rajputana in addition.
Principal, Bengal Veterinary College.	Lieutenant-Colonel F. Raymond.	Lieutenant-Colonel F. Raymond.	
Superintendent, Bengal ...	D. Quinlan, Esq. ...	D. Quinlan, Esq.	
Superintendent, Eastern Bengal and Assam.	.....	W. Harris, Esq.	
Superintendent, Madras ..	Lieutenant-Colonel W. D. Gunn.	Lieutenant-Colonel W. D. Gunn.	
Superintendent, Burma ...	Major G. H. Evans ...	Lieutenant-Colonel G. H. Evans.	
2nd Superintendent, Burma ...	T. Rennie, Esq. ...	T. Rennie, Esq.	
3rd Superintendent, Burma ...	.....	.....
Superintendent, Central Provinces.	J. S. Jethiji, Esq. ...	J. S. Jethiji, Esq.	
Veterinary Officer investigating camel diseases.	.....	A. S. Leese, Esq.	

4. The following officers have been confirmed in their appointment and definitely posted to the Department:—

Messrs. E. W. Oliver, T. Rennie and J. S. Jethiji.

5. During the year under review, Colonel J. W. A. Morgan, Inspector-General, Civil Veterinary Department, and Lieutenant-Colonel J. Brodie-Mills, Principal, Bombay Veterinary College, retired from the service. The under-mentioned officers joined the Department and have been posted for training as follows:—

Mr. G. Taylor to the Punjab,

Mr. S. Carless, to the Punjab,

Mr. F. Ware, to the Bombay Presidency.

Mr. R. Branford, to the Muktesar Laboratory.

Mr. A. S. Leese, who also joined the Department during the year, has been appointed as Veterinary Officer investigating camel diseases. Messrs. Aitchison and Cameron who were placed for training in Madras and Burma, respectively, have not yet been substantively posted. Captain F. S. H. Baldrey was in Europe undergoing a course of training in bacteriology, and the following officers were on leave in England at the close of the year:—

Captain J. Farmer.

Mr. E. W. Oliver.

6. The rules applicable to the officers of the Army Veterinary Department who have elected for permanent service in this Department, have been amended to bring them into line with the Royal Warrant Army Order No. 180 of 1903.

Inspector-General's tour.

7. Colonel J. W. A. Morgan visited the Rawalpindi and Amritsar Horse and Cattle Shows; inspected the Bacteriological Laboratory at Muktesar; and proceeded to Bombay to hand over charge of the office of Inspector-General, Civil Veterinary Department, on retirement.

8. Colonel H. T. Pease, O.I.E., took over charge of the Office of Inspector General, Civil Veterinary Department, on 3rd September 1907. He inspected the Bacteriological Laboratory at Muktesar, Punjab Veterinary College at Lahore and the Government Cattle Farm at Hissar; attended the Dewali

Cattle Show at Amritsar; inspected Veterinary Dispensaries at Gurdaspur, Ludhiana, Jullunder, Umballa, Delhi, Ahmedabad and Surat; inspected the Cattle Farm at Chharodi and attended the Pushkar Fair. Served as President of the Board of Examiners at the Bombay, Madras, Bengal and Punjab Veterinary Colleges. Attended as a Member of the Board of Scientific Advice at Calcutta. Served as Chairman of the Veterinary Conference held at Calcutta and visited Bombay to purchase stallions for District Boards. Attended the Rawalpindi Horse Show; inspected the Veterinary Dispensary there, and the Bacteriological Depôt at Bareilly.

9. Colonel Morgan travelled 2,241 miles by rail and 58 miles by road. Colonel Pease travelled 10,484 miles by rail and 74 miles by road.

PART A.—PROVINCIAL ADMINISTRATION.

1.—VETERINARY INSTRUCTION.

10. The main results of the work done in the Veterinary colleges in the Punjab, Bengal, Bombay and Madras, as well as in the Burma School, are given in Table I.

Veterinary
Colleges and
Schools.

11. I have been able to inspect all these colleges during the year and to act as President of the Board of Examiners, and am glad to be able to report that, taking all things into consideration, the results of the work done are satisfactory. The Punjab College has the strongest teaching staff and the greatest facilities for teaching. Bengal comes next, followed by Bombay and Madras. Both in Bombay and Madras, which are growing institutions, the staff is small and the facilities for the practical teaching of contagious diseases are unsatisfactory; but the question of providing suitable laboratories and segregation wards, where animals suffering from the various contagious maladies can be kept in isolation, for teaching purposes is under consideration. Without such conveniences it is difficult to see how the students, who after passing out of the College are to be entrusted with the important duty of dealing with epizootics, which will form by far the more important part of their duties, can be thoroughly trained in this important subject.

12. In regard to staff, the want of officers specially qualified for research work, such as are considered absolutely necessary by the Advisory Committee of the Royal Society before any college can be considered to be properly equipped, is badly felt at most colleges, but we have been unable to supply them, owing to paucity of officers.

13. The inadequacy of the teaching staff has been brought forward by the Government of Madras where the Principal of the College is also Superintendent of the Provincial Veterinary Department which has in addition to deal with outbreaks of disease, and cattle and pony breeding over a large province. As has previously been pointed out, it is quite impossible for an officer, placed in such a position, to do justice to either of his important charges. We were, however, unable, notwithstanding the evident urgency of the case, to obtain sanction for the appointment of an extra officer to the cadre and have been obliged, in order to spare one from our meagre sanctioned establishment, to abolish the training post so that it will be impossible to continue the system of specially training officers in bacteriology in Europe.

14. It is satisfactory to note that the necessity for providing accommodation and equipment at all the colleges is recognised by the Local Governments and great progress has been made in providing the buildings, etc., already sanctioned whilst new projects are under consideration. Punjab has added six stalls and a postmortem room in the segregation ward and administrative sanction has been given to the provision of a students' work room and other additions to the laboratory building. I regret to find, however, that owing to the great difficulty experienced in acquiring land for the purpose, no progress has been made with the anatomical rooms already sanctioned. Two hundred students are being taught anatomy at the college and as the present building is partly dismantled and far too small, the inconvenience experienced is very great. It is hoped, however, that the rooms may be ready by the beginning of this cold weather. No progress has been made with the hostel scheme which I am afraid will have to be dropped on account of the exorbitant prices demanded for land.

15. In Bengal, good progress has been made. A splendid new hostel capable of accommodating 156 students has been provided. A postmortem room, Hospital Surgeon's quarters, quarters for married and unmarried overseers have been built, and the laboratory accommodation has been extended by the addition of a room for photomicrography and a dark room.

16. In Bombay, continued improvement is being made. A hostel with accommodation for 76 students was completed and occupied. Native professors' quarters have been provided. The new college building is nearing completion and will probably be ready for occupation this year. The pharmacy has been extended and the postmortem room improved. A new cattle operation shed has been built and the dog ward reconstructed. It is proposed to add a very badly needed contagious disease ward and dissection and post-mortem rooms in the new compound of the Government Veterinary College, and the Society for the Prevention of Cruelty to animals is to build a new operation shed.

17. There have been a few changes in the Imperial staff at the colleges during the year. Major A. Smith has been appointed Principal and Captain W. O. Dawson, Professor of Surgery at the Punjab College. In Bengal, Mr. Brand has replaced Mr. E. Burke who did good work there and who has been transferred as a Deputy Superintendent to the Hissar Cattle Farm. Mr. Aitchison has been employed in the Madras College. Mr. Sowerby officiated as Principal and Mr. Ware as Assistant Principal at the Bombay College during Major Joslen's absence on three months' leave. We have lost by retirement the faithful services of one of the Pioneers of veterinary teaching in Khan Bahadur Dr. Amir Shah of the Punjab College. He will be greatly missed as he did exceptionally good service and was held in great respect by teachers, students and the outside public. Much remains to be done in the direction of strengthening the teaching staff in the younger institutions and this will be effected as officers become available in the Imperial staff.

18. The total number of students who completed the courses in the various classes during the year was 629. The number of students who graduated from the colleges was 143 against 120 last year. From the Punjab College 71 or 91.02 per cent., Bengal 37 or 88.09 per cent., Bombay 23 or 79.31 per cent., and Madras 17 or 73.91 per cent. Four passed from the Burma Veterinary School against 19 last year.

19. The reports of the Boards of Examiners were favourable in all cases and great improvement is noticed in Madras.

20. With a view to improving the method of examination and securing more uniformity, endeavours are being made to establish a more permanent Board. For the convenience of teachers, students and examiners, I am trying to fix the dates for the examinations at the different Colleges and to allot subjects to each Examiner.

21. There were 485 students remaining under instruction at the Colleges and 63 in the Burma School at the end of the collegiate year, against 530 and 40, respectively, last year.

22. With regard to students, the demand for admission to the Punjab and Bengal Colleges is still far in excess of the accommodation and a good selection can be made. In Bombay and Madras, however, this is not the case; but few candidates for the Government Scholarships were forthcoming at the former, and the standard of examination for entrance had to be lowered at the latter.

23. The question of the standard of the educational qualifications of the students admitted to the Colleges during the year is one which is worthy of attention. It is very necessary for students in Madras, Bombay and Bengal to have a really good knowledge of English in which their training has to be carried out. It was noticed by the Examiners that in some cases the students did not possess a sufficiently good knowledge to express themselves in this language. These students were admitted some time ago. This subject is receiv-

ing attention at the various Colleges. The sanction of the Secretary of State to the formation of a Provincial and pensionable subordinate service in Bengal will materially assist in obtaining men of fair education and it is a matter for congratulation that 11 matriculates joined that College this year against 3 last year. Bombay is also devoting more attention to this subject and the proportion of matriculates who joined during the year is still good, *i.e.*, 16 out of 49 against 17 out of 49 last year. In Madras, 20 matriculates joined out of 29 against 16 out of 23 last year. The Board of Examiners remarked that the material was distinctly good and my own experience is that the students who presented themselves at the final examinations were very intelligent. Although, therefore, Madras is still on the same footing as other Colleges in regard to the standard of education required for admission, we have pretty strong evidence that the starting pay and the general prospects of the Department are not sufficient there to attract a class of men with really good educational qualifications.

24. In Burma, a good deal of difficulty is experienced in obtaining men with the required educational qualifications for local reasons.

25. In addition to the training of Veterinary Graduates, classes for transport drivers were held. In the Punjab, 65, in Bombay 10, and in Bengal 8 men received a three months' course of dressing and first aid during the College vacations. Nine nabunds were trained at Lahore and 2 in Bengal.

26. A course of 48 lectures in Veterinary Hygiene and Cattle breeding and rearing were delivered to 23 agricultural students of the Civil Engineering College in Calcutta.

27. In the research laboratories attached to the Punjab and Bengal Veterinary Colleges, the sphere of work has extended in various directions. Punjab is the only one where a half time officer has been employed and he has this year, for the first time, been able to submit a report on the work which has been done. This has been :—

- (a) The demonstration to the final year's class of the various contagious diseases likely to be met with in India.
- (b) Treatment of, or destruction and disposal of, all cases of contagious disease which occur in the College practice.
- (c) The examination of and reporting on all pathological specimens sent in from various quarters for the purpose.
- (d) Investigation in new fields. This has been carried out as far as possible when other work admitted of it.

28. In Bengal too, material comes in connected with the Glanders and Farcy Act. The rapid method of the diagnosis of Rabies has been carried out. Bacteriological examinations of samples of bone meal and investigation into a cattle disease not hitherto observed in India, are being conducted and some preliminary work on the treatment of Surra is being done.

29. At the Bombay College, the present Patho-Bacteriological Laboratory only admits of diagnostic work being attempted and this has been performed.

30. It is hoped that some temporary assistance may be given to Bengal and that Bombay and Madras will soon have laboratories and segregation wards suitable for teaching purposes.

31. The demand for Veterinary Graduates still continues to be far in excess of the supply. There are none unemployed in Bengal, Punjab, Madras or Burma, but 17 graduates of Bombay are shown as unemployed, 11 of them having only recently graduated. It has been ascertained that the demand for vernacular trained men is very great indeed and that when the sanctioned establishments are filled the college will not be able to meet half the annual requirements. The question of establishing another vernacular college is being considered.

32. It will be seen that considerable progress continues to be made in developing the resources of all our Veterinary Colleges and placing them on a better footing in regard to buildings and equipment. The younger Colleges are steadily making progress in this direction. We cannot at present complete the Imperial staff of teachers but when officers become available for the purpose this will be done.

II.—TREATMENT OF DISEASE.

Contagious
disease amongst
solipeds,
Outbreaks,
Mortality, etc.

33. The reported mortality from contagious diseases amongst the animals named therein is shown in Table II. The Army Remount Department deals with all cases of contagious disease amongst equines occurring in the districts selected for horse breeding under their Department and we have no record of them.

34. The same remarks as were made last year in regard to their accuracy, apply equally this year. The figures relate only to cases which have been brought to the notice of the staff and do not in any way represent the total mortality from contagious diseases in our districts.

35. *Glanders*—The number of deaths reported from this disease is much smaller than last year, 420 against 960, the principal decrease being noticed in Bengal which only returns 259 against 875 last year. Good progress was made in the arrangements for the working of the Glanders and Farcy Act in Calcutta. Work was started systematically in the middle of November. The area under the Notifications Nos. 3581-T. R., and 3582-T. R., dated 29th September 1905, is divided into 6 districts, each in charge of a Veterinary Inspector, who has a constable of the Veterinary Preventive Force to accompany him. The Chief Inspector supervises the work. Lieutenant-Colonel Raymond, who is in charge of the operations, visits the stables of the large horse dealers and shippers and no animal is seized under the Act until it is inspected by him or by the Chief Inspector. A good deal of tact is required in working a newly applied Act as this is, because the people must be gradually accustomed to its provisions. The question of a grant of compensation to the owners of horses slaughtered under the Act was, on Colonel Raymond's recommendation, considered favourably. No doubt, cases of hardship occur when the horses of people with limited means are killed. A small sum of Rs. 434-10-8 was given as compensation in 20 such cases.

36. Two thousand nine hundred and twenty four (2,924) stables were inspected and Glanders was detected in 58. The total number of horses admitted into the contagious disease hospital was 120. Of these, 72 were fully developed cases of glanders. I think Lieutenant-Colonel Raymond deserves credit for the manner in which he has arranged for the application of the Act.

37. There were 259 cases reported by district officers in Bengal. A serious outbreak occurred in Champaran in the stables of two planters in which seven horses were destroyed. The proposal to extend the Glanders and Farcy Act to the whole of Bengal and to grant compensation for animals destroyed, is under consideration.

38. In Bombay, the total number of horses destroyed for Glanders by the Glanders and Farcy Department was 29 of which 8 belonged to dealers, and 17 of the horses destroyed were Arabs. The disease was also found in 6 Australians, 4 Persians, and 2 Country-breds.

39. In Eastern Bengal and Assam, the Act is now in force in the following towns and districts. The district of Comilla, the towns of Dacca, Mymensingh, Chittagong, Rungpur, Gauhati, Shillong, and on the whole length of the Gauhati-Shillong road (a distance of 63 miles). A proposal to extend the Act to all plains districts is under consideration. There has been a large increase in the number of cases, 49 having occurred.

40. The disease was not very prevalent in other Provinces. There were 6 cases (at Allahabad, Benares and Gorakhpur) in the United Provinces, 2—one Sialkot and one at Lahore—in the Punjab, 2 at Karachi in Sind and 1 at Peshawar in the North-West Frontier Province.

41. *Surra*.—There was again a very severe outbreak of this disease on the Kathgodam-Naini Tal road in the United Provinces. 83 cases occurred amongst the Tonga ponies and 24 cases amongst the baggage and ekka ponies. An account of this outbreak has been already published in the Journal of Tropical Veterinary Science. We were able to detail a Veterinary Officer to work at the disease on the road but, unfortunately, not until late in the outbreak and after the disappearance of the *Tabanidæ* which are credited with the spread of the disease. Certain points connected with the later stages appeared to indicate that the disease may be transmitted by *Stomoxys* and mosquitoes but the evidence was not decisive. A point of interest in the outbreak is the fact that experiments proved the existence of the parasite which is the casual agent in the blood of bullocks working on the road. One positive case was found in the only five examinations by inoculating blood from bullocks into guinea pigs which the owners would allow us to carry out. This points to the fact that the bullock may have formed the reservoir of the virus. A number of cases were selected for treatment with Atoxyl and Perchloride of Mercury as well as with Tartar emetic, but no success attended the attempt, all the ponies dying from the disease. Arrangements have been made to post a specially selected Veterinary Assistant on the road from the 1st April till the 1st November. We ought of course to be able to post an officer on duty before the surra season to make careful collections of all the biting flies and test their power of transmitting the disease but, unfortunately, our staff is too small to allow of this being done. It had been intended to post Mr. Martin for this duty, but he became ill and proceeded to England on sick leave.

42. The disease was detected in six districts of Eastern Bengal and Assam, *i.e.*, Sylhet 43 cases, Khasi and Jaintia Hills 15 cases, Kamrup 32, Darrang 6 and Goalpara and Sibsagar 1 each. The largest outbreak was amongst the Tonga ponies on the Gauhati-Shillong road where there were 47 cases. The majority of these cases were diagnosed by microscopical examination. All infected horses were destroyed to prevent spread.

43. In the Bombay Lazaretto at Sewri 73 cases were detected and destroyed, 59 being Arabs, 27 Australians, 1 Persian and 6 Country-breds. In addition to this, 12 cases occurred in Ahmedabad and 13 were reported to have died in the Thana district.

44. In the Punjab a serious outbreak occurred in the Hoshiarpur district along the banks of the river Beas in the Dasuya tahsil, where 66 animals died. There were 11 cases reported from Gurdaspur district, also a badly infected one, 5 from Ludhiana and 8 from Lyallpur.

45. In the North-West Frontier Province, one case was detected in Dera Ismail Khan and one in Kohat. The disease was very rife amongst the horses of the Northern Waziristan Militia and the Border Military Police in the Dera Ghazi Khan district. The disease was dealt with by the authorities concerned.

46. In the Central Provinces, the disease was reported on the Betul-Itarsi pony dak line when half the ponies were already dead of the disease, only 32 remaining on the line. Of these, 13 were infected and 7 suspected. The act is not in force in this province, but arrangements were eventually made with the mail contractor to destroy the affected ponies in the blood of which parasites were present, and the suspected ones were segregated until found free from the disease. The measures taken were successful in stopping the outbreak and it was possible to keep the line open with new ponies which escaped infection. One case of the disease was discovered in Seoni and one case was reported from Sukkur in Sind. It was also seen in horses in Manipur.

47. Endeavours are now being made to gradually map out the areas in which Surra is enzootic and prevalent and Provincial Superintendents have been asked to carry out this work, noting the character of the areas, whether the disease has been diagnosed microscopically and whether it is of frequent occurrence or not. If this be carefully done, we shall in the course of some years be able to get some sort of idea as to distribution and incidence.

48. *Anthrax*.—Only 78 cases were reported to the Department in the whole of India. Of these, 50 occurred in Eastern Bengal and Assam, 15 in Madras and 13 in Bengal.

49. The disease was reported from eight districts and caused 50 deaths in Eastern Bengal and Assam. The outbreaks at Dacca, Sylhet and Sibsagar were confirmed by microscopical examination of material submitted to the Superintendent.

50. In Bengal, 4 cases have been reported from Saran and 9 from Champaran, but the diagnosis was not apparently confirmed. There should not be any difficulty in arranging to obtain material for diagnostic purposes now that the graduates are trained to collect it and a laboratory is available in Calcutta.

51. There is no record of where the 15 cases in Madras occurred or whether the diagnosis was confirmed.

52. *Dourine*.—One case is reported from Balasore and one from Ferozabad in the Agra district. It is not stated whether the Balasore case was confirmed so possibly it may be one of mistaken diagnosis. It is probable that the disease does still exist to a slight extent in the Agra district as this was badly infected in the late outbreak. The Dourine Bill is still under consideration but it is hoped will soon be brought into force.

53. *Epizootic Lymphangitis*.—Very few cases were detected during the year. One horse belonging to the Bombay Electric Supply and Tramway Co., was found suffering from the disease and destroyed at the Sewri Lazzaretto; and three cases were diagnosed in Calcutta by the Glanders and Farcy Department and destroyed. No other cases are recorded either from Colleges or districts, so that the disease cannot be very prevalent.

54. *Other contagious diseases*.—351 cases of other contagious diseases, nature not specified, are reported in the whole of India. These were chiefly due to Strangles and Tetanus.

Contagious
disease in
Bovines.
Outbreaks, pre-
ventive inocula-
tion, mortality,
etc.

55. The question of the collection of statistics regarding the mortality from contagious diseases amongst cattle is an exceedingly difficult one owing to the fact that there is practically no agency which could be utilised where the officials have not already sufficient work to keep them fully employed. It is practically impossible for the Subordinate Veterinary Department to do the work as the areas under their charge are so large and in many provinces only a very small proportion of the sanctioned establishment has so far been appointed. Whatever agency is employed is therefore a non-professional one, unable to correctly diagnose the disease which may occur. It has already been noted in previous reports that the figures do not in any way represent the total mortality from contagious diseases and specific instances have been adduced to prove this. The Central Provinces Government have represented this and have, with the sanction of the Government of India, discontinued the submission of figures in table II.

56. No doubt, as the work of the Department extends and the subordinate staff is increased in strength, the people will realise that it is to their advantage to get outbreaks reported and obtain assistance; and for the present it is quite sufficient for our purposes that the number of outbreaks so reported are in most provinces far greater than can be attended to by the staff available for the purpose.

57. A revised scheme for obtaining early information regarding outbreaks has been introduced in the Punjab lately and is apparently working smoothly and satisfactorily. Under this arrangement the village headmen inform Patwaris of all outbreaks in their Circle and the latter send information direct to the Veterinary Assistant of the tahsil on post cards supplied for the purpose. The Veterinary Assistant deals with the outbreak and at the end of the month the Patwaris submit returns to the Sadar Kanungo who passes them on to the itinerating Veterinary Assistant of the district and they are compiled.

58. Table III shows the number of outbreaks which have been dealt with by means of protective inoculation. The serum alone method has been utilized against Rinderpest in all provinces and 295,953 cattle and 220 other animals have been inoculated during the year against 213,933 last year.

Orders have recently been issued to all Superintendents to exercise their judgment in fixing the dose required in the various stages of outbreaks with a view to a sufficiently large dose being employed. They are also to decide what cattle are to be inoculated.

59. *Rinderpest*.—Is reported to have accounted for 181,940 deaths during the year against 141,810 last year.

60. *Madras*.—The mortality has been heaviest in Madras where 97,244 deaths occurred against 31,611 in the previous year. The districts which suffered most were South Arcot 21,544, Chingleput 14,430, and North Arcot 12,202 deaths. The subordinate establishment is still very small and all that could be done was to post a Veterinary Assistant to each of these districts to treat animals and at the same time to carry out preventive inoculation when possible. It cannot be expected of course that one Veterinary Assistant could do anything in the way of controlling outbreaks of this magnitude and the utmost that can be expected is that he would be able to show such people as he came in contact with the benefits of protective inoculation. Until more graduates become available and it is possible to concentrate sufficient assistants to deal with outbreaks, we cannot hope that much impression will be made on epidemics. The disease was also apparently present in 14 other districts but no information is forthcoming on the point. Protective inoculation was carried out in 643 outbreaks in 17 districts and 28,788 bovines and 126 other animals are reported to have been inoculated with good results.

61.—*Eastern Bengal and Assam*.—Rinderpest is always more or less prevalent throughout the entire Province and cases were reported from every district during the year. The number of outbreaks and the mortality show a considerable increase, 32,823 deaths having been reported from 23 districts against 20,873 from 16 districts last year. The districts in which the mortality was heaviest are Sibsagar 10,681, Lakhimpur 6,317, Kamrup 4,868, Sylhet 2,905 and Darrang 2,020. The year has apparently, however, been much healthier in some districts than the preceding one. There was no outbreak in Bogra, Dinajpur and Rajshahi, the number of reported outbreaks have been few and the mortality has not been heavy. Protective inoculation was carried out in 249 outbreaks in 22 districts and 55,782 cattle were inoculated with good results.

62. *Bombay*.—As was expected when Bombay was first invaded by Rinderpest, the disease has spread over the whole of the Presidency and the mortality since its first introduction has been very heavy. With the very small staff available it was impossible to do anything to limit spread.

63. Reports of outbreaks have during the year been received from all the districts of the Presidency and the disease has been prevalent in the island of Bombay itself. The reported number of cases and deaths has been 41,598 and 19,413 respectively, against 50,144 attacks and 25,416 last year. The severity of the outbreak appears to have slightly decreased. The number of deaths did not exceed 2,000 in any district except Kanara where it was 2,274, out of 4,132 attacked. In the districts of Ahmedabad, Panch Mahals, Kaira, Surat, Thana, Kolaba, Dharwar, Belgaum, Satara, Sholapur and Ahmednagar the reported deaths are over 1,000 and in the remaining districts below that number. The number of outbreaks in which protective inoculation was carried out is only 16 and 26,459 cattle were inoculated. It is hoped that when the sanctioned scheme is brought into force, more attention will be given to dealing with outbreaks in the districts. The staff at present seems to be chiefly employed in dispensaries.

64. *Burma*.—The year has been a very favourable one as regards Rinderpest. In Lower Burma, in nearly all the Divisions, the mortality has been very slight. In the Arakan Division, with the exception of Myohaung township in the Akyab district, it may be said that no Rinderpest existed. The Pegu and Irrawaddy Divisions also were practically free. In the Tenasserim Division the disease occurred in all but two townships of the Amherst district and was especially prevalent and severe in the Ye and Mudon townships.

65. *Upper Burma*.—The past year has again been one of exceptional immunity from contagious cattle disease, a mortality of only 1,000 head from Rinderpest was reported from two districts during the year. In the Pakokku district in the township of Gangaw, the disease continued from last year and nine outbreaks occurred. In the Lower Chindwin District the disease was confined to the Monywa sub-division and some 600 cases were treated. In the Shwebo district the disease was prevalent in the Ye-u township and 22 outbreaks were attended between April and July when it gradually died out. In Mandalay and Yamethin districts, outbreaks were reported and the disease was said to be spreading rapidly. An outbreak was reported from Wetwun and Zibingyi in the Mandalay district but was, happily, quickly stamped out. The Wuntho township, Katha district, experienced a sharp outbreak but it was checked.

66. *Shan States*.—There was considerable loss in the North-eastern sub-division, the disease being prevalent in the Mong-Nawng, Mong-Sit Keshi-Mansam and the Kenlun States, as well as later on in Mong-Kung, Laihka and Mong-Pawn. In the Kengtung sub-division it occurred in virulent form in Mong-Yawng and Mong-Yu lasting from April to September. Towards the close of the year it occurred in virulent form at Ken Lap and to a lesser extent in Pa-li-ao and Mong-Yawng and also in Trans-MeKong State of Mong-Sin. It is stated that in the Ken Lap State the loss of stock was so heavy that the carcasses were too numerous to bury. In the western sub-division the disease broke out in the Mawang and Loimaw States but soon subsided.

67. *Northern Shan States*.—Rinderpest was reported from five circles of the South Hsenwi State but was not of a severe type. From here it spread to Hsumsai sub-State and Bawlaing.

68. Protective inoculation does not appeal to the people of Burma and segregation, etc., has to be adopted in dealing with outbreaks. Nevertheless, in 45 outbreaks it was possible and 3,552 cattle were inoculated.

69. *United Provinces*.—Rinderpest was reported from 29 out of 47 districts. The total reported mortality was 7,854 against 1,254 in the previous year. It broke out in epidemic form in the Jhansi district where it invaded 176 villages and continued throughout the year causing 4,488 deaths. There were 1,544 deaths in the Naini Tal district, 435 in Kheri and 406 in Banda. The remainder of the outbreaks were very slight.

70. Protective inoculation was undertaken in 460 outbreaks and 123,977 animals were injected with serum. Some little difficulty was experienced at the commencement of the outbreak in getting the people to have their cattle inoculated but as satisfactory results became clearly demonstrated this soon passed away. The number of cattle inoculated in the Jhansi district alone was 98,097 and would have been greater had the supply of serum been equal to the demand. It is interesting to note that out of 90 villages where the cattle were inoculated at the beginning of the outbreak, recrudescence only occurred in 4 and in those the disease did not appear until after a lapse of 3 to 9 months. From enquiries made in 161 villages where the inoculation was carried out, it appears that the mortality after inoculation has been very small and the results most satisfactory. But for inoculation there is every probability that the disease would have swept onward and much heavier loss would have occurred, and I consider that the staff deserve credit for the result achieved.

71. *Central Provinces*.—Rinderpest was very prevalent in both Divisions of the Northern part of the Province, particularly in the Jubbulpore Division whence as many as 1,311 reports of outbreaks were received. It was also severe in the Nerbudda circle whence 583 outbreaks were reported. In Nagpur Western and Eastern Berars, however, it was not severe. The subordinate staff is not yet very strong and is chiefly under local bodies and so not mobile and with the few Provincial men at present available the Superintendent was only able to deal with 260 outbreaks of the disease by means of protective inoculation and 30,918 cattle were injected with serum. It was not so difficult in the Berars where outbreaks were not numerous and 83 per cent. of the

applications for assistance could be met, or in Chhatisgarh where half the outbreaks were attended. In Jubbulpore, however, and in Narsingpur, Hoshangabad and Chindwara districts of the Nerbudda Division, where the disease was present in epidemic form and widespread, notwithstanding that all the available staff was deputed, the disease could not be dealt with effectively. In the Jubbulpore Division only 272 out of 1,311 outbreaks could be attended and in the Nerbudda Division only 86 out of 543.

72. A scheme for converting the veterinary subordinate staff into a Provincial service has been under consideration and has since received the sanction of the Secretary of State and no doubt this will place the Superintendent in a better position to provide for emergencies.

73. *Punjab*.—Happily, the Punjab was comparatively free from Rinderpest during the year, only 3,531 cases being reported with a mortality of 1,714 against 15,890 and 7,971 respectively, in the previous year. Small outbreaks occurred in 21 districts but the disease was not of a very virulent type and did not spread. The worst outbreak was in the Montgomery district but the type was mild and only 593 deaths were reported, recoveries being numerous. There were 213 deaths in Ambala and 135 in the Lahore district. The mortality in the remainder of the districts was very small.

74. Protective inoculations were undertaken in 70 outbreaks and 14,815 animals were injected with serum. There were a few instances of opposition to inoculation but in the majority of cases it was easily overcome. The people in some of the districts of the South Punjab and in other out of the way places are averse to the method but on the whole it is yearly becoming more popular.

75. *North-West Frontier Province*.—Rinderpest appeared in the districts of Dera Ismail Khan and the Kohat and Kurrum Agency, of which Dera Ismail Khan suffered the most, 263 deaths being reported. There were 98 deaths in the Kurrum Agency. 5,484 animals were inoculated with serum in 22 outbreaks. The method is achieving popularity year by year and the opposition to inoculation which previously existed is rapidly disappearing.

76. *Rajputana and Sind*.—138 deaths are reported from Rajputana and 8 from Sind. It is hoped that some progress may be made in the latter Province in the near future.

77. *Bengal*.—It appears that Rinderpest occurred in the districts of Darjeeling, Hoogly, Sonthal Parganas, 24 Parganas, Angul, Burdwan, Saran, Muzaffarpur, Hazaribagh and Sambalpur. The most important outbreak appears to have occurred in the Sonthal Parganas, 1,003 deaths; and in Sambalpur 731, whilst smaller outbreaks occurred in 28 districts out of 33, causing a total reported mortality of 6,095 cattle. Protective inoculation was carried out in 58 outbreaks and 5,978 cattle were injected with serum.

78. It is noted that timely and reliable information of the existence of outbreaks is still difficult to obtain, but with the advent of 2 Veterinary Assistants in each sub-division and the cooperation of members of the Agricultural Associations and it may be added with the appointment of a separate Provincial Superintendent, more may be done to lessen the mortality.

79. *Hæmorrhagic Septicæmia*.—This is a most troublesome disease and one with which it is very difficult to deal effectively. It causes great loss amongst young buffaloes especially and is severe in parts of the Punjab. The figures received show that, excluding Burma, the Central Provinces, and Rajputana, 16,153 cases occurred in the rest of India. Of these, 7,351 cases were in the Punjab where it occurred in 25 districts, of which Kangra and Lahore suffered most. In Eastern Bengal and Assam, 4,604 deaths are reported from 10 districts, the heaviest mortality being in Kamrup. In Bombay, 1,464, in Bengal 620 and in the North-West Frontier Province 192.

80. In regard to protective inoculation, it may be said that very little is really known about this disease, which wants working out. We know that it attacks preferably young buffaloes and is most prevalent in lowlying lands at certain times of the year. But, owing to the fact that it appears very suddenly

causes death in a day or two and then disappears to appear again in the same way some time later, it is very difficult to see how we are to effectively combat it by means of a serum, which is not very strong and gives very fugitive passive immunity. The serum used was tested in the laboratory against the virus as well as by Wright's method in the Punjab laboratory and the results obtained were not such as to justify its continued use in the field so I stopped the issue in December last. It had only been issued for experimental use in the field and owing to the smallness of the staff and the nature and course of the disease it was very difficult to ascertain whether good results were being obtained or not. Captain Walker, who has taken great interest in this subject, states that in some places the people had confidence in it. Altogether 82,849 incontact animals were inoculated up to December. In the Punjab 44,236, United Provinces 32,206, Eastern Bengal and Assam 2,129, North-West Frontier Province 1,793, Central Provinces 1,207, and Madras 1,179. The disease is now being studied in the Punjab Veterinary College laboratory and work with a view to obtaining either a stronger serum or a safe and effective vaccine is being done at the Imperial Bacteriological Laboratory.

81. *Anthrax*.—The figures given for this important disease are of no value whatever. It is rapidly fatal and generally occurs more or less sporadically, so that the majority of cases are not likely to be reported. It is very difficult to diagnose from the clinical symptoms and the non-professional agency employed in the collection of statistics could not possibly do it. Even the subordinate veterinary staff would not in most cases be able to do so. That the disease does exist to a considerable extent in some parts of India there can be no doubt whatever, for we are frequently unpleasantly reminded of its presence by the fact that cases of the disease occurred in other countries in the human subject from handling hides and wool exported from India, and it is said that oilseeds and cake as well as bone meal from this country introduce it into animals in England and New Zealand. The Department is a very young and growing one, the subordinate staff is necessarily small and the supervising staff is still very weak. In these circumstances, it will be many years before we can hope to do much with it. I do not think we are in a position to deal with the disease at all except in some rare cases.*

82. The figures are given for what they are worth in the absence of any confirmation of the diagnosis. They show that, excluding Burma, the Central Provinces and Rajputana, 15,728 cases were reported from the whole of India. Of these 10,977 were in Madras, 2,682 in Eastern Bengal and Assam, 839 in Bengal, 685 in the United Provinces, 240 in the Punjab, 235 in Bombay, 61 in Sind and 9 in the North-West Frontier Province.

83. In regard to protective inoculation against this disease, I think we have gone too fast and that it is advisable to call a halt. I think that before we are justified in using the serum alone or any other method of protecting animals against this disease in the field, we must be in possession of far more accurate information regarding its prevalence and the zones in which it is enzootic. This can only be obtained by careful observation and particularly by the confirmation of the diagnosis by either a microscopical or bacteriological examination of material from the cases. This work cannot be carried out to any extent by the present staff. The Veterinary Assistants are not sufficiently qualified to do it and the superior staff cannot get to outbreaks. Take Madras for instance, where this year the only outbreak of contagious disease which the Superintendent visited was one of Rinderpest in Madras Town. In adopting the serum alone or any other method against Anthrax in the districts on a clinical diagnosis of the disease made by Veterinary Assistants and not subsequently checked by examination of material by a properly qualified officer, we are working in the dark and doubtless in many cases wasting material. Before we can expect therefore to be able to cope with Anthrax in this country, we must have a much better knowledge of its prevalence and importance, a larger and better qualified staff, and a local research laboratory at the College in each Province, where the necessary confirmation of the diagnosis could be carried out.

84. With regard to the method of dealing with the disease by the serum alone method, I am well aware that it is not an ideal or very effective one; but in the presence of infection or suspected infection, when cure of the animal is sought, it is useful. It may also be used at the commencement of an epizooty with benefit, as it undoubtedly does confer a certain amount of passive immunity to the disease. We are in possession of serum which is capable of giving a passive immunity to the disease and this has been more or less freely used in various reputed outbreaks. Knowing as we do that the immunity is passive and lasts a comparatively short time, whilst the causal agent of Anthrax remains living in the form of spores in infected zones for a very long time and that no rigorous hygienic measures can be adopted in this country, it does not seem likely that much good would result from the use of the serum in the field, because the animals if kept under the same conditions would take the disease again if exposed to the infection a short time afterwards. My opinion, therefore, is that attempts to deal with outbreaks of reputed but undiagnosed Anthrax should be stopped and steps be taken to obtain more accurate information. In outbreaks where the diagnosis is confirmed we may use serum at first and later the simultaneous method, when we have men sufficiently highly trained to apply it safely.

85. I do not advocate the use of any known vaccine by the present subordinate staff as I am of opinion that it would be likely to do far more harm than good. We cannot, at the present stage, afford to make use of any method which is liable to be followed by inoculation mortality as the people are only yet being educated in the use of prophylactics and deaths from inoculation would most undoubtedly shake their confidence and hinder the expansion of Rinderpest inoculation. This is a point of very great importance in this country. We must be very sure of our ground and firmly established before we can venture on the use of methods which do undoubtedly give greater and more lasting immunity than serum alone does, but which may be followed by inoculation mortality. In new localities such deaths in previously apparently healthy cattle would probably put a stop to inoculation for any disease. In order to be prepared with a known reliable method of conferring more lasting immunity which will be available for use in outbreaks where skilled assistance can be obtained and the necessity is proved, we are examining various methods and are so far in favour of the simultaneous method.

86. Recent observations which have been communicated by Professor Dr. Sobernheim on the combined inoculation against Anthrax of serum and culture by the simultaneous method which has been carried out on great number of animals during 1904-05 in the Argentine Republic and Uruguay, furnish a proof of the great value of anti-anthrax inoculation when it can be properly applied. They further confirm the favourable results which have previously been communicated and show that the method is an effective obstacle to infection in a region where contagion is severe and persistent. In 500,000 animals inoculated not a single death due to inoculation is recorded in South America and the statistics show that it led to total suppression or a considerable reduction of the number of cases of the disease. This result is particularly good in a country where, as in India, hygienic measures are applied with difficulty and where other epidemics are prevalent. Whilst Pasteur's methods have not been followed by favourable results, the simultaneous method has frequently met with success. This is in accord with the view of Marai who does not consider Pasteur's inoculation to be certain in its action, and who considers that the defective method of culture of attenuated virus in Paris is responsible for this. The advantage this method possesses over all other inoculations with culture products is that the protection it gives lasts over a year, and it may be carried out at once and immunity be obtained in 12 days. This is the method employed in Germany and in other parts of Europe and according to the observations published up to date, both the preventive and curative inoculations

have given excellent results. As a curative, serum alone is employed in large doses (50 to 100 c. c.). The intravenous method with 30 to 50 c. c., of serum is especially recommended. The serum kept in a cool place, away from light, is said to remain good for years. If the inoculation is carried out at the beginning of the attack especially when administered intravenously, we may be practically certain of a favourable result.

87. We may, in addition, at the commencement of the epidemic immediately carry out a serum alone inoculation with 10 to 15 c. c., which confers a certain amount of immunity. It is true that this immunity does not persist for long and after a few weeks the simultaneous method should be carried out.

88. Experiments are being made in the Muktesar Laboratory by this method and the results obtained in cattle are very encouraging. I think, so far as can at present be seen, that this will be the most suitable method for use in India; but we must know far more about the prevalence of the disease in our districts, be able to obtain early information of outbreaks which must be confirmed by microscopical and bacteriological examination, and ascertain where the disease is enzootic and justifies the simultaneous method being adopted, before any steps are taken to use it for general use in the field. Moreover, should it be found advisable to carry it out, we shall require local provincial laboratories with well trained Bacteriologists in charge of them and a more highly trained subordinate native establishment.

89. It is evident that we cannot afford to entrust the materials in the hands of inexperienced men nor can we afford to inoculate unless the diagnosis is confirmed. Before a decision is come to, therefore, we must have the reputed enzootic zones carefully examined, the disease correctly diagnosed and the losses to which it gives rise recorded. This will take some time to carry out. Full reports will be required dealing with the question from all points of view. I have asked Superintendents to map out this disease gradually, especially noting outbreaks where the diagnosis has been confirmed and have advised in the meantime that serum be only used in undoubted outbreaks and the results be carefully watched.

90. The serum has been adopted this year in 123 outbreaks and 6,327 cattle and 6 horses have been inoculated in the United Provinces, 8,461 in Madras and 10,148 bovines and 105 horses in Eastern Bengal and Assam, the results being reported to have been good.

91. *Black Quarter*.—This disease causes considerable loss of young stock but owing to the more pressing demand of dealing with other work in the greater part of India, it does not so far attract much attention. In the Punjab and North-West Frontier Province, however, enquiries are being made regarding its incidence and importance. Owing to the small staff employed, progress must be slow. The total number of deaths brought to the notice of this Department—omitting Burma, the Central Provinces, Sind and Rajputana—is 8,314. In the Punjab and North-West Frontier Province protective inoculations were undertaken in villages where the prevalence of the disease was found to justify them. In the Punjab 1,655 head of young stock in 33 villages were protected by means of Blacklegoids. The results in all cases were found satisfactory so far as can be ascertained at present. Vaccinations will continue to be performed in infected places and the results closely watched. In the North-West Frontier Province 3,030 young stock were vaccinated in 23 villages of the Kurrum Valley and Peshawar district where the disease regularly occurs. The results of the vaccinations are being carefully watched.

92. *Foot and Mouth disease*.—As usual, this disease was very widespread but it causes but little loss comparatively. The total mortality is reported to be, exclusive of the Central Provinces, 21,780. The disease causes the greatest mortality in Provinces like Eastern Bengal and Assam 9,074, Burma 4,603,

Madras 3,544, and Bengal 2,976. We can do nothing so far to cope with the spread of this disease and have to confine ourselves to treating the worst cases.

93. *Surra*.—Everything points to the fact that cattle and buffaloes are attacked by this disease but that they possess very high tolerance and no important mortality results from the presence of the *Trypanosoma* in the blood. We have not, up till now, had the staff available to go into the question but some effort may now be made to ascertain the incidence of the disease in cattle. There is no doubt that in some parts of India the percentage of infection is pretty high. The figures reported, in regard to Indian cattle imported into America, show, in apparently perfectly healthy cattle, somewhat over 30 per cent. of tolerant oxen whose blood contained the trypanosome. *Surra* is also reported to have been carried by Indian cattle into the Federated Malay States. It is important therefore to remember that cattle in *Surra* zones or where biting flies are prevalent are a source of great danger to horses and camels, as they carry the trypanosome in their blood and so form a reservoir of the virus.

94. *Piroplasmosis*.—The same may be said of piroplasmosis. Cases of Redwater are met with in some parts of India and doubtless the disease causes a small amount of loss but it does not appear to be very serious. Indian cattle appear to have great immunity or tolerance, carrying the *Piroplasma* in the blood for a long time and showing little ill effect.

95. *Other contagious diseases*.—The number of deaths amongst cattle from other contagious diseases is reported to have been 47,306 but no details are forthcoming in regard to the nature of these. They are chiefly from Madras 34,921 and Eastern Bengal and Assam 11,671, and are probably simply cases which the reporting unprofessional agency has been unable to classify.

CONTAGIOUS DISEASE AMONGST OTHER ANIMALS.

96. *Camel*.—The only animal dealt with satisfactorily under this head is the camel and observations have only been carried out during the latter part of the year. Investigation into the diseases of this animal has now been undertaken on definite lines. *Surra* is the most prevalent and fatal disease from which camels suffer and causes very heavy mortality amongst them and with a view to limiting it as far as possible, the following line is being pursued:—

We know that *Surra* requires for its spread:—

- (i) a reservoir of the virus, *i.e.* a camel or other animal suffering from the disease and carrying in its blood the parasite which is the causal agent.
- (ii) a means of transmitting the disease from sick to healthy animals. This is supplied by biting flies.
- (iii) a susceptible animal, *i.e.*, one which will take the disease if the parasite be inoculated into its blood.
- (iv) There is a *surra* season which corresponds to the presence of biting flies.
- (v) These flies are most prevalent and dangerous in certain zones which we call "*Surra* or fly zones".

97. With this knowledge before us, considering that no cure has so far been discovered for the disease, all we can do to avoid it is (a) to carefully diagnose the disease by microscopical examination of the blood and remove all diseased camels from healthy ones so that they may not work or graze with them in the *surra* season in *surra* zones, (b) to ascertain and demarcate by degrees the "*Surra* or fly zones" so that they may be avoided during the dangerous time, (c) to find out where *Surra* is not prevalent and where camels may live in safety, graze and breed. It is by this means that we may hope to limit the mortality. Good work has been done in this direction by Mr. Leese who has submitted a report on the preliminary work done.

98. Other diseases said to be contagious have also been observed :—

Wail.—A disease with symptoms resembling those of Surra is attributed to the attacks of a Strongyle which possesses a bursa closely resembling that of *Strongylus cervicornis* except that the posterior ribs have an additional lobe of their own.

Tuberculosis.—Has also been met with and definitely diagnosed.

Mange.—Is the subject of experimental treatment by means of crude oil emulsion, with a view to obtaining a dressing the dilution of which before use is so high as to render a large quantity easy to transport, a great point for transport work.

99. The other diseases noticed are an acute infectious pulmonary disease, Anthrax, Jhoolak, a peculiar form of skin disease, Camel pox, Swollen throat and Filariasis.

100. A very good beginning has been made in the five months during which Mr Leese has been at work. It has been represented that another officer is badly required to work at the treatment of Surra and when it is considered that Mr. Leese's work has necessitated his travelling 1,001 miles by road and 6,711 by rail in five months, it will be evident that it is not possible for him to carry out experimental treatment as well.

101. Five hundred camels exported to Western Australia are reported to have carried Surra with them, causing serious dislocation of traffic as all the other States quarantined the Western State. All the animals were segregated and the diseased destroyed.

102. The Dog.—*Rabies*—The most serious disease met with during the year in this animal is Rabies which is very prevalent and widespread. No measures are so far practicable but the destruction of ownerless mongrels and pariahs is carried out in some of the towns.

103. *Piroplasmosis.*—This disease due to *Piroplasma canis* has been found to be fairly prevalent in the country and causes great mortality when it attacks imported dogs. It has been found in pariah dogs by Dr. Christophers in Madras but does not cause such serious disease in them as they appear to be tolerant of the parasite. The disease is carried from diseased to healthy dogs by the common dog tick of the country *Rhipicephalus sanguineus*. Measures to be taken against it are to be directed against the attacks of the tick, a difficult matter in hunting dogs. The whole of the Madras hounds were carried off by this disease, an account of which has been published in the Journal of Tropical Veterinary Science, Volume III. It is also prevalent in the Punjab, Bombay and Central India.

104.—*Dysentery.*—A very fatal form of dysentery also attacks dogs and is very prevalent. Its true nature has not so far been ascertained.

105.—*Distemper.*—Is widespread and very fatal.

106. *Fowls.*—Fowl spirochaetosis has been found to be very prevalent in fowls. It is due to a parasite in the blood and is carried from the diseased to healthy birds by the common fowl tick of the country, the *Argas persicus*. A note has been published on the subject by Mr. Montgomery in the Journal of Tropical Veterinary Science, Volume III. Measures of prevention consist in care to avoid ticks in fowl houses, by either building them tick proof or thoroughly cleansing and coating them with hot tar and filling up all cracks and crevices with it occasionally. Care in introducing fresh birds from infected localities and on which larvæ may be present is necessary.

Other diseases. 107. Table IV gives the number of animals treated and castrated by Veterinary Assistants on tour during the year. The 403 Veterinary Assistants employed visited 52,827 villages, castrated 2,227 animals of which 1,153 were equines, 940 bovines and 134 others. They treated a total of 295,205 cases of which 136,481 were for contagious diseases, i.e. 1,757 in horses, 131,904 cattle and 2,820 others. They also treated 156,497 animals for non-contagious disease, i.e., 32,480 horses, 115,190 cattle and 8,827 others. This is an increase in the

total number of cases treated of about 55,000 which may be regarded as satisfactory, especially as it represents in many cases work carried out for only a part, in some cases only a few months of the year.

103. The number of these institutions, the Veterinary Assistants employed and the cases treated is given in Table V. There has been an increase of 21 Veterinary Hospitals and Dispensaries during the year and the number of Veterinary Assistants employed was 342 against 317 last year.

109. In the United Provinces, 6 new dispensaries have been opened, *i.e.*, one each at Aligarh, Mainpuri, Etah, Basti, Banda and Bijnor. In Eastern Bengal and Assam—one at Rangpur and one at Maldah. A generous contribution of Rs. 4,000 was contributed towards the Rangpur dispensary by Srimati Bhabasundari Debya Choudhurani, in memory of her late husband the Zamindar of Pirgacha. This contribution is the more appreciated as the want of veterinary aid was previously badly felt in the district. In Bengal, one has been opened at Arrah and two are under construction—one at Chapra and the other at Bhagalpur. The donor of the latter, Babu Ramoni Mohun Singh, deserves praise for his public spirit. The hospital has been equipped with every surgical appliance and has cost over Rs. 10,000. These two gifts show a practical appreciation of the benefits the people are reaping from Veterinary Science. In the Central Provinces, 7 new dispensaries were opened, *i.e.*, 3 in the Raipur district, one each in the Betul, Balaghat and Wardha districts and one at Raj Nandgaon. Of these, 4 are dispensaries for itinerating men. Four new dispensaries were opened in the Bombay Presidency, *i.e.*, 1 at Ahmednagar, 1 in Poona and 2 in Kolaba. In Madras, 5 were opened, *i.e.*, 1 each in the towns of Vellore, Coimbatore, Pudukotta, Vizianagram and Vizagapatam. In the North-West Frontier Province, a new hospital has just been opened at Bannu. In addition to these, a number of dispensaries have either been sanctioned or are under construction in the various Provinces.

110. The total number of in and outpatients treated in these hospitals shows a satisfactory increase in all provinces. The numbers have increased by 67,480, *i.e.*, from 267,555 to 335,035. There has been an increase of 1,323 horses, 1,740 cattle and 455 other animals treated as in-patients and 18,876 horses, 37,361 cattle and 7,682 other animals as outpatients.

111. It is very difficult to fairly estimate the work done at these institutions. Some of them have only been working for part of the year and being new the numbers of cases are few, as the people have not yet had time to get confidence in them. Also, when epidemic diseases are prevalent, the tahsil Veterinary Assistants have to leave their hospitals and unless there is a good compounder who can carry on the work temporarily, they have to be closed. This difficulty will no doubt be met in the future by providing 2 assistants in each tahsil. The time has probably arrived when it is advisable to class as "Hospitals" those institutions which have proper accommodation for in-patients and where a stationary assistant is posted, and as "Dispensaries" those which are in charge of an Assistant who is liable to be sent out to attend ordinary cases of disease. This would enable us to form a much better idea of the work done. The value of dispensaries is very great in most provinces, in others, especially where Rinderpest is very prevalent and the staff small, doubtless the first duty is to concentrate all the available staff on outbreaks of contagious disease which are far more important.

112. Table VI shows the receipts and expenditure on Veterinary dispensaries during the year.

III.—BREEDING OPERATIONS.

(1).—BOVINES.

113. Table VII gives the number of stud bulls, the property of Government and of local Boards, during the year. It will be seen that there is a small but steady increase in numbers, the total number of bulls the property of Stud bulls and their produce.

Government being 30 against 20 and of Local Boards 458 against 386. The increase is nearly entirely confined to the Punjab 87 and United Provinces 32. In Madras 13 were added. In the North-West Frontier Province 4, in Rajputana 2 and in the Central Provinces 1.

114. The progress in the Punjab and United Provinces is satisfactory and as a definite scheme has been adopted in the former province we may look for a steady increase annually. The year has not been a very favourable one for turning bulls out and only 69 out of 95 the sanctioned number were requisitioned from Hissar as it was not advisable to turn them out in the districts, when great scarcity prevailed. The Dajil breed will be supplied in future to the Muzaffargarh district.

115. In Bombay, the scheme initiated for providing stock bulls for villages in the Ahmednagar district by giving conjoint "tagai" for the purpose of purchasing them proved a success and 39 more Khillari bulls were obtained at the Maswad Fair. This scheme, which appears a good one, might perhaps be extended with benefit. These bulls are not shown in the return.

116. In the United Provinces, in addition to the 32 bulls obtained, there was a considerable demand which could not be met.

117. In Bengal, requests were received from many District Boards, Government estates, etc., and Eastern Bengal and Assam to provide them with bulls for improving the breed of cart bullocks, but the serious shortage of suitable animals for the purpose has prevented the Superintendent from complying with them, except in the case of Ranchi, Midnapur, Angul and Belgachia to which 10, 8, 2 and 4 were supplied.

118. It is noted that Brahmini bulls are being taken away by butchers from Eastern Bengal and Assam and the lower districts of Bengal. If they only took the useless ones perhaps complaints would not arise, but it is reported that the evil is assuming such proportions that it is likely to have a serious effect on cattle breeding. Branding with a Government brand and taking over by Government would put a stop to this, as I believe at present the bulls are no ones property. In Madras, 8 young bulls of the Ongole breed were purchased by Government and turned loose in the herds.

* 119. The maintenance of small herds of really good representative animals of the best local breeds and the distribution of bulls to their villages would do a great deal towards improving cattle breeding in India and is worthy of the consideration of the landed gentry. Good cattle cost no more to keep than bad ones and are of infinitely more service.

Bull rearing
and breeding
Farms and
Depots.

120. Table IX gives the main results of the working of the Provincial Cattle Farms which were working at Chharodi in Ahmedabad district, Pusa and Siripur (Hathwa Raj) in Bengal, Tilankheri (Nagpur) Powar Kheri (Hoshangabad) in the Central Provinces, and Upper Shillong in Eastern Bengal and Assam. Besides these, two others have been at work in the Court of Wards Estates at Jetpur on the borders of Nagpur and the Chhindwara district and another at Kindri started by the Deputy Commissioner in the Mandla district. Another is working at Kalimpong in Bengal but no details are available in regard to it.

121. *Bengal.*—Pusa—It has been found necessary to somewhat modify the restrictions in regard to the class of cow to be used in this herd and it is now hoped that some progress will be made. At the beginning of the year, there were 41 cows, 77 young stock and 1 bull on the farm. 14 cows were purchased from Sonapore and Balia. At the end of the year, the herd numbered 50 cows, 3 bulls and 54 young stock. A suitable young stud bull has not yet been procured. No bulls have been distributed from the farm so far but three will be available next year. There are 6 head of two years old male stock and 12 of yearlings. It is hoped that this herd may be extended as the numbers at present are too small to do much good.

Siripur.—Progress in connection with this farm is satisfactory. The herd consists of 40 cows and is totally inadequate for the needs of even the large

Hathwa Raj estate alone. The cattle are of the local breed and the young stock are most promising. No bulls have so far been distributed but seven will be available next year.

122. *Bombay*.—*Chharodi*.—This is the largest of the Provincial Cattle Farms; the herd consisting of 298 animals of which 140 are breeding cows and 5 bulls. The object of the farm is to produce suitable bulls of the pure Kankreji breed for sale to the cattle breeders of Guzarat and thus supply a want. At the beginning of the year, the herd consisted of 3 stud bulls, 110 cows, 88 heifers, 17 heifer calves, 3 yearling bulls and 22 full calves, and at the close had increased to 5 bulls, 140 cows, 82 heifers, 24 heifer calves, 14 two year old bulls, 17 yearlings and 16 calves. Two stud bulls were bought. Thirteen bulls will be ready for issue next year. I visited this farm during the year and was favourably impressed by the way it is managed. The site is not a particularly good one, being rather lowlying and the grasses seemed inferior for fodder purposes. The herd which was collected during the last famine has been recently heavily weeded and it appears to me that more weeding if it were possible, would be advantageous.

123. *Central Provinces*.—*Tilau Kheri*, appears to be in a thriving state, the herd of the Gaolao breed having increased from 55 to 60 cows and the total stock from 149 to 176. There are 57 head of young male stock against 51 last year. Nine bulls will be ready for issue next year.

124. *Powar Kheri*.—This farm is reported not to be flourishing as the type of animal used for breeding is not very good. The Superintendent reports that at least a quarter of the animals should be cast and more typical specimens bought in their place, as without a radical change in the herd, there is little hope of much progress being made. The herd is small, only numbering 71 of which 27 only are cows whilst there are five bulls and 21 male stock. Three bulls have been sent out for breeding and there were 17 rejections which is a large percentage.

125. *Jetpur*.—This is reported to be one of the oldest cattle breeding farms in existence. It is now under the Court of Wards. The cattle are of the true Gaolao breed. The herd consists of 94 cows, 2 bulls and 106 young stock. Many of the cows are really very fine animals but some weeding is reported to be necessary, and the bulls especially were not of good caste. A suitable one has now been obtained. The Deputy Commissioner is taking a special interest in this herd and it will no doubt flourish.

126. *Kindri*.—This farm was established by the Deputy Commissioner of Mandla and a good start has been made in the way of grazing grounds and buildings. The stock is of the pure Kamgarh breed of Mandla cattle which are considered to be the best in that part of the country. The cows on the farm, though only 12 in number, are the best obtainable. The bull is also a typical specimen and doubtless the herd will grow and prosper.

127. In addition to these farms, others are known to have been started in the Jubbulpore and Raipur districts but they have not been visited by the Superintendent yet.

128. *Eastern Bengal and Assam*.—*Shillong*.—The herd at this farm is reported to consist of 94 animals, of which 86 are cows, 1 bull, 4 young bulls, 16 bull calves, 21 heifers, 14 heifer calves, and 2 plough or cart bullocks. The cows are of the following breeds—pure Patna, pure Kashi, pure Bhutia, Patna-Kashi cross and Patna-Bhutia cross. The Patna-Kashi cross show an all round improvement in height, strength and general conformation. They give more than double the milk of the Kashi. The demand for young Patna stock is increasing.

129. *United Provinces*.—The scheme for starting a bull rearing depot on an experimental scale is still under consideration in the United Provinces, as land cannot be obtained at the place which was originally selected and alternative sites have to be examined.

130. *Punjab*.—The scheme for a bull breeding farm on the Jhelum Colony is also delayed pending a decision regarding the grazing rights on the Drema and Risala Rakhs.

Sheep breeding.

131. A considerable amount of information has been collected in this office regarding the attempts which have already been made in different parts of India to improve the breed of sheep for both mutton and wool.

132. *North-West Frontier Province.*—The two merino rams supplied to the Kurram Agency in February last were transferred to the Tochi Agency at the beginning of the year as their services were not appreciated by the people of Kurram. Out of 5 merino rams supplied to the Hazara district, one died in March. These rams are much liked by the people. They are kept in Kagan in the summer and come down to Hariapur for the cold season which seems rather unnecessary. Twelve more merino rams have been indented for from Australia for this province and arrangements made to land them in India about October 1908.

133. *Punjab.*—With a view to improve the quality of the wool in the Kangra district, it has been decided to import 25 merino rams as an experiment. The New Zealand Alp rams are to be tried in this district and arrangements have been made to import them. It is rather unfortunate that at the time we require them they are somewhat difficult to obtain. We cannot well land them in India in the hot weather and there is consequently some difficulty in obtaining suitable flock rams. These rams require careful treatment when they are first brought out and should be rested for about six months to get accustomed to their surroundings in new conditions.

134. *United Provinces.*—Enquiries are being made in the United Provinces regarding the possibility of improving the sheep and a survey of the sheep of the plains, particularly of Mirzapur and Bundelkhand, is under consideration with a view to ascertain where there are pure strains on which the work of improvement can be hopefully undertaken.

(2)—EQUINES (UNDER LOCAL BODIES).

Horse, pony and donkey stallions.

135. In Table X will be found the number of horse, pony and donkey stallions under local bodies in the districts under this Department. The numbers present at the beginning of the year were 59 horses, 112 ponies and 65 donkeys. During the year, 23 horses, 7 ponies and 44 donkeys were brought on to the strength and 16 horses, 13 ponies and 10 donkeys were removed from the rolls by death, sale, and transfer. The total strength at the close of the year therefore stood at 66 horses, 106 ponies, and 99 donkeys. These were distributed as follows:—45 horses, 8 ponies and 14 donkeys in the United Provinces; 5 horses, 59 ponies and 67 donkeys in the Punjab; 8 horses, 10 ponies and 18 donkeys in North West Frontier Province; 12 ponies in Bombay; 1 pony in Bengal, 13 in Madras and 3 in Burma.

136. As noted in last year's Annual Report, the supply of donkey stallions has received attention and Major J. Farmer was deputed to Cyprus and the Continent of Europe to purchase the number required. He found scarcely any in Cyprus and was only able to obtain 2. In Italy and Sicily they were difficult to obtain, but in Sicily he was able to purchase 13. In Spain he obtained 44 Catalonians. Major Farmer submitted a short and concise account of the capabilities of the various countries he visited of supplying future demands. This has been published. He showed great judgment in his purchases and sent us out a very good lot of Jacks. These arrived in India in January and were distributed as follows:—North-West Frontier Province 9, Punjab 24, United Provinces 9, Army Remount Department for Native States 13, Hissar Farm 2, and 2 died—one on the voyage out and the other on arrival at Bombay.

137. The original sanctioned grant was greatly exceeded but as the donkeys received were of far higher stamp than the Cyprians, they are well worth the extra expenditure. In addition to these, 4 were supplied from the Hissar Farm and went to the Punjab districts.

138. Table XI gives the services and produce of horse, pony and donkey stallions. Altogether 172 horse and pony stallions were on the register at the end of March 1908, and of these, 162 were employed at stud during the year. The number of mares covered was 7,803 against 7,003 last year, the average number of mares covered per stallion employed being 51.86 for horses and 45.22

for ponies against 50 and 39.45 respectively last year. The services of the horse stallions were in great demand in the United Provinces 53.9, Punjab 56, and North-West Frontier Province 57.25, whilst in Bombay 43.39 was the average per stallion employed. The average for pony stallions was also good in the first three Provinces, 52.2, 52 and 48.2, respectively. But in Bombay it only reached 30.61, Burma 23.2, Madras 21, whilst the stallion in Bengal did not cover a single mare. Of the 99 donkeys on the register, 62 were employed at stud during the year and covered 3,435 mares or an average of 55.4 per stallion against 50.5 last year.

139. Mule breeding is a most important industry and it is hoped that the addition of the new Jacks to the registers will result in an increase of useful mules in Northern India. There has been an all round improvement in horse, pony and mule breeding which may be taken as an indication that the industry is in a satisfactory condition.

140. The average cost of feed, keep, attendance, etc., of horse, pony and donkey stallions is given in Table XII. There has been an all round increase, except in Bengal and Madras, which is attributed to the rise in price of forage during the year.

141. Table XIII gives the abstract particulars regarding Horse fairs and Shows held in the non-selected districts. It has been a particularly bad year for the success of these gatherings owing to the dearness of forage and, in some cases, the prevalence of plague. It has consequently only been possible to hold 14 Fairs; those at Karnal, Ludhiana and Muzafargarh in the Punjab, and Ahmedabad in Bombay had to be abandoned. There were no Fairs held in the United Provinces, Sind, Bombay, Madras, Central Provinces or Burma.

142. The attendance was comparatively small, only 11,629 animals being present. The greatest falling off appears to have occurred in Bengal where, although only one Fair less was held, the attendance fell from 28,035 to 6,402. There was a considerable fall in the number attending the two Fairs in the North-West Frontier Province, viz., 593 against 1,159. In the Punjab and Rajputana, the attendance was about normal. The number competing for prizes was 1,907 and 7 medals and Rs. 4,692 out of Rs. 7,267 actually available, were awarded as prizes.

143. Table XIV gives the abstract particulars regarding Cattle Fairs and Shows. 72 were held against 73 last year. The amount actually awarded in prizes was Rs. 30,385-11-6 out of the available Rs. 33,801-13-0. Fifty three medals were also distributed. The number of animals competing for prizes was 14,731 against 11,077 last year. The total number of stock present is reported to have been 763,835 against 836,067 last year. The amount realized in fees was Rs. 1,19,670-14-5 against Rs. 1,36,989-11-6 last year.

144. As a rule the Shows are held in connection with Fairs at which large numbers of animals are brought for sale by breeders and dealers. In Madras, however, a number of real Cattle Shows are held by the Agricultural Associations of Madura, Coimbatore, Ganjam, Godaveri, Vizagapatam and Guntur. These Shows were held this year in Madura, Tiruppur, Behrampur, Coconada, Kottavalsa and Ongole. They appear to have proved a success and to be worthy of substantial encouragement. From the breeders point of view, the Ongole and Tiruppur shows were a very great success and great interest appears to be taken in them. The exhibits were good and there is no doubt that the gatherings are of considerable benefit in exciting emulation amongst local breeders and tending towards the production of better stock.

145. The Ongole breed is decidedly a good one and the large purchases of the best young stock for foreign countries cannot be overlooked. If a good market is created and prices rule high, as they do, the effect on the breeding of superior stock should be good. With the object of providing the best available Ongole bulls for the breeders in the district, it is satisfactory to note that Government have recognised the advisability of purchasing some of the best male stock exhibited each year, and eight young bulls were purchased and turned loose this year. The highest price paid for a young bull was Rs. 350.

IV.—SUBORDINATE ESTABLISHMENT.

Numbers, supervision and work performed.

146. Table VII gives the strength of the subordinate establishments as they stood at the end of the year. Very important progress has been made in the reorganization of the subordinate Civil Veterinary Department during the year. It has been made provincial and pensionable in Madras, Bengal and Eastern Bengal, and a scheme for placing it on the same footing in the Central Provinces is under consideration. The old system was found in these provinces, now that the importance of dealing with epidemics has been recognised, to be too slow in developing and to be too inelastic to allow of proper concentration of forces being made. It is obvious that to cope with an epidemic of rinderpest for instance, extensive preventive inoculations must be made as soon as possible otherwise it will go on spreading. If we cannot concentrate a sufficient number of Veterinary Assistants to inoculate the incontact animals it is not likely that we shall limit spread. The difficulties previously experienced will now to a great extent be obviated. The Department will develop more rapidly and owing to the establishment being more mobile, the necessary concentration of forces will, when a sufficient number of Assistants is forthcoming, be more easily made. In the United Provinces too sanction to the expansion of the Department has been accorded and the pay of Veterinary Assistants has been improved. The pay of the establishment has been improved in the North-West Frontier Province, bringing it into line with the Punjab.

147. The following table will show at a glance the sanctioned establishment of the various Provinces, the numbers added and the strength at the end of the year :—

Provinces.	SANCTIONED SCALE.			NO. EMPLOYED DURING 1907-08.			INCREASE DURING 1907-08.		
	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.
Punjab ... ..	...	24	170	...	12	116	...	...	4
North-West Frontier Province ... ..	...	2	26	...	2	20	...	...	6
United Provinces	2	20	210	...	9	96	...	1	17
Bengal	9	80	229	...	10	50	...	1	10
Bombay	4	24	215	...	...	32	...	...	5
Madras	3	15	192	...	1	27	...	1	12
Central Provinces and Berar ... ..	...	8	120	...	6	65	...	2	5
Burma	5	12	120	...	10	90	...	3	18
Eastern Bengal and Assam	2	8	120	...	2	25	...	1	14
Sind, Baluchistan and Rajputana ... ..	...	...	2	...	...	9	...	...	1
IMPERIAL.									
Government Cattle Farm, Hissar	1	...	2	1	...	2	1	...	...
Bacteriological Laboratory ... ..	...	2	6	...	2	4	...	...	...
Veterinary Officer Investigating camel diseases ... ..	...	...	1	...	...	1	...	...	...
Total	26	145	1,353	1	51*	537*	1	9	92

* In addition to this number, 24 were employed during the year on the teaching staff at Veterinary Colleges and Schools.

148. It will be seen that some Provinces are practically at full strength whilst others are only just making a beginning and progress is slow in them. Doubtless, now that the services have been placed on a more solid basis, improvement in recruiting in Bengal and Eastern Bengal and Assam will take place. In Bombay it is very slow at present and it is possible that the starting pay of veterinary Assistants will need revision. The progress made in recruiting has been satisfactory, excepting in Bombay. It is stated that the graduates of all other colleges have obtained employment. There are therefore no more graduates obtainable until the Colleges can turn them out. The supply is at present very limited and it will take many years before the sanctioned strength can be reached. The demand for graduates trained in the vernacular College is out of all proportion to the supply and it has been ascertained that Lahore will be unable to supply more than half the requirements to replace vacancies when the civil establishments are at their full strength.

149. In order to assist Burma, sanction has been obtained to the training of Inspectors and Deputy Superintendents for that Province at the Bengal Veterinary College where a few United Provinces students are also trained. To promote education in veterinary science in Coorg, scholarships have been granted to students natives of the province at the Madras College.

PART B.—IMPERIAL ADMINISTRATION.

BACTERIOLOGICAL LABORATORY.

150. It has been found necessary to alter the form of the Imperial Bacteriologist's report this year, as it was unsatisfactory from several points of view. With the sanction of the Government of India the portion of the report dealing with the purely administrative work of the Laboratory will be reviewed here and all purely scientific work done will be published separately in the form of Memoirs which will be issued from time to time, properly illustrated and in handy form, as sufficient material becomes available. This is a much more satisfactory arrangement for all concerned as the Annual Administration Report dealing as it does with administration, does not form a suitable medium for the publication of details of scientific work.

151. Dr. A. Lingard continued to act as Imperial Bacteriologist until the end of August 1907, when he retired under the age clause of the Civil Service Regulations. His retirement was a great loss to the Department as he has rendered valuable services as a Pioneer and it is no doubt owing to his patience and pertinacity that we find the Laboratory in the position in which it is today. Progress was for many reasons slow and tedious for many years and there are few men who would have had the patience to stick to the work and bring it to a successful issue. His services have, I am glad to record, been recognised by the grant of an extra pension of £ 50 per annum.

152. We have been fortunate at this stage to find an efficient successor in Captain J. D. E. Holmes, M. A. D. Sc., who had previously undergone a special course of training in Bacteriology in Europe and was appointed Imperial Bacteriologist on Dr. Lingard's retirement.

153. During the year it was found advisable to post a Physiological and Pathological Chemist to Muktesar and to this sanction was obtained and a suitable candidate for the post is now being sought for. But the condition on which the appointment received sanction is that we must dispense with one of the Assistant Bacteriologists and to this we have had to agree.

154. Mr. G. D. Martin held the office of the Assistant Bacteriologist up to the 8th February 1908 on which date he was transferred and Mr. H. E. Cross held the appointment during the remainder of the year.

155. Mr. R. Branford on his first appointment to the Department was posted to the Laboratory for training and joined on the 30th of November 1907.

156. Mr. Kriebel, Head Laboratory Assistant, has been on leave during the whole year. His duties have been very satisfactorily performed by Mr. Keiller, 2nd Laboratory Assistant, who has been found most reliable and capable.

157. The insufficiency of the superior staff for the purpose of research in addition to the very heavy work entailed by the preparation of serum, has already been brought to notice. It has been found impossible to undertake very necessary research work in the field on account of the lack of trained officers on the laboratory staff. Such research work as it has been found possible to carry out in the laboratory has been small, but no opportunity has been missed to do what was possible.

158. Some revision of the subordinate establishment maintained at the Laboratory has been carried out. An important and very necessary matter which has received attention during the year is the improvement of the library. The Government of India have sanctioned the sum of Rs. 20,000 for the purchase of books and sets of journals and a library allowance of Rs. 2,500 per annum.

159. *Preparation of Sera. Rinderpest Anti-Serum.*—During the past year 1,907, 466 c.c. or 4, 82, 833 doses have been prepared as against 1,779,876 c.c. or 4, 67, 993 doses during the previous year. The serum issued during the year amounted to 4,40,585 doses against 4,58,661 doses during 1906-07.

160. The following shows the Anti-Rinderpest serum injections carried out in the field collated from the respective returns received in this office :—

Provinces.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			Remarks.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab ...	70	...	792	...	...	14,815	...	
North-West Frontier.	22	...	322	...	...	5,484	...	
Bengal ...	58	...	748	...	...	5,977	62	
Eastern Bengal and Assam.	60	...	1,885	31	...	12,795	259	The Veterinary Officer, Cachar and Sylhet, finds that the villagers are now realizing the value of inoculation.
United Provinces of Agra and Oudh.	418	...	5,404	...	...	123,977	...	The Superintendent, United Provinces finds the returns of his Province unreliable.
Central Provinces	833	...	5,998	...	...	27,648	...	
Madras ...	643	...	10,929	93	...	28,508	126	
Bombay ...	...	...	1,176	...	...	21,705	...	
Mysore ...	5	...	211	...	...	1,614	...	The Inspector of Cattle Diseases remarks "that serum treatment for Rinderpest has become very popular in Mysore State and that my experience in the work for 6 months shows that the results have been very favourable."
Burma ...	45	...	270	...	...	3,552	...	
Sind, Baluchistan and Rajputana.	1	...	8	...	...	200	...	
Total ...	1,655	...	27,743	124	...	246,275	447	

161. The serum method has proved very satisfactory and is daily growing in favour.

162. The preparation of the Rinderpest serum has been carried out under full pressure throughout the year and I am convinced that under the most

favourable circumstances a maximum of more than 5 lacs doses cannot be exceeded at present. This amount represents the maximum output that the staff and machinery can cope with, and it is further confirmed by the limitation of fodder and water supply and also by the available supply of Hill Bulls.

163. During the months of January, February and early part of March it was found that Hill Bulls were lost owing to severe weather on the road, also experience has proved that the serum prepared at this time is of very inferior quantity. For these reasons, the serum preparation work will be reduced as far as possible during this period. The question, therefore, of establishing another laboratory for the manufacture of serum in Southern India is under consideration.

164. *Anthrax Anti-Serum*.—During the year 80,455 c. c. or 16,091 doses of this serum were prepared as against 76,402 C. C. or 15,230 doses and 38,772 doses were issued against 11,814 doses, during the previous year.

165. I have already made some remarks regarding the protection of animals against anthrax by means of serum alone and the lines on which it may be used in future. The method of serum alone is certainly not an ideal one but our staff is not sufficiently trained to allow of other known methods being adopted even if we had enough information regarding the prevalence and importance of the disease to decide when and where it would be necessary to have recourse to extensive inoculation.

166 The following table shows the injections carried out in the field with Anti-Anthrax serum :—

Provinces.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			Remarks.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
United Provinces of Agra and Oadh.	37	...	247	...	6	6,027	...	
Madras	45	...	482	...	...	8,461	9	
Eastern Bengal and Assam	4	6	312	...	39	894	...	
Total	86	6	1,041	...	45	15,382	9	

167. The demand for this serum increased this year somewhat but in the new conditions is likely to decrease considerably. As the protection afforded by the use of this serum is of short duration it was decided to endeavour to raise the potency and for this purpose many experiments are being made. Most of the serum made during the latter part of the year was of this nature and has been used in the Laboratory for testing purposes. Experiments are also being made by the simultaneous method.

168. *Hæmorrhagic Septicæmia Anti-Serum*.—During the year under report 1,88,796 doses were prepared as against 88,875 doses and 112,713 doses issued against 57,375 doses for the last year.

169. Statement of injections carried out in the field :—

Provinces.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			Remarks.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab	151	...	1,622	...	...	44,236	...	
North-West Frontier ...	2	...	21	...	...	1,793	...	
United Provinces of Agra and Oudh.	451	...	1,181	...	...	32,206	...	
Central Provinces ...	9	...	85	...	...	647	...	
Madras	12	...	57	...	...	1,179	...	
Total	625	...	2,966	...	...	80,661	...	

170. A careful examination of this serum by laboratory tests showed that owing to the short immunity conferred and to the nature of the disease it was not likely to prove of much service in the field and the issue has been discontinued since 22nd December 1907, the balance in hand on that date being discarded. Endeavours are being made to discover a more suitable protective and with this view 39,066 c. c. of Hæmorrhagic Septicæmia Anti Serum has been prepared by various processes for experimental work and been used in the Laboratory. I am afraid that with a serum it will be difficult to deal with any but actual outbreaks, whilst the disease is prevailing, and those in present circumstances are not often met with.

171. *Charbon Symptomatique*.—Three hundred doses of a single vaccine were prepared for experimental purposes.

The total issues of the 1st and 2nd vaccines amounted to 2,100 doses during the year, as against 930 doses in the previous year.

172. Blacklegoids have been largely used in giving protection against this disease by the United Provinces, Punjab, and North-West Frontier Province Superintendents. This method of single vaccination is undoubtedly successful and easy of operation and more suitable to the requirement of the country at present, than any other known method. Numerous experiments have been conducted during the past six months with a view to preparing a single vaccine in pillule form at the laboratory.

Provinces.	Number of villages in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			Remarks.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab	31	...	...	...	...	1,635	...	Blacklegoids.
North-West Frontier ...	23	...	...	...	...	3,080	...	Do.
Government Cattle Farm, Hisar.	2	...	9	...	...	20	...	Do.
Central Provinces ...	4	...	83	...	...	176	...	Injections with vaccine prepared at Muktesar.
Total	60	...	92	...	...	4,911	...	

173. *Mallein*.—During the year 1906-07, 3,753 doses of Mallein were prepared as against 11,276 during the previous year. Last year's balance being sufficient to meet the demands, the output was in proportion to the requirement. This material is now very extensively used in the Army Remount Depots and Imperial Service Troops as well as in Civil Veterinary hospitals. The total issue during the year being 7,926 doses against 3,583 during 1906-07.

174. *Tuberculin*.—During the year under report 34 doses of Tuberculin were prepared. The total issue for the year amounted to 75 doses.

175. *Tetanus Anti-Toxin*.—In view of the remarks made by the Advisory Committee on the subject of the preparation of this Anti-toxin, I have gone into the question of the desirability of preparing this serum in India. From the available information regarding the prevalence of Tetanus in both animals and man it appears that there are very few places where its use as a protective could be justified. It is of very doubtful value as a curative agent for obvious reasons. It does not retain its properties for very long in India and the experience of the Medical Profession who have abandoned the preparation of the Anti-toxin in this country is that it is better to obtain at intervals and maintain a sufficient supply of it from Europe.

176. The cost of preparation is considerable here, the result not always good, and the wastage from age of the serum considerable. It would therefore appear better, should a justifiable demand arise, to adopt the policy of the Medical Department and to obtain at intervals, and maintain a sufficient supply of fresh Anti-toxin from Europe.

177. It may be noted that 18,309 c. c. of the Anti-toxin was prepared at the end of last year and that the demand having been very limited the majority of the serum was wasted and I have therefore ordered that no more be prepared for the present.

178. *The use of Protective Sera in Native States*.—It is a matter for congratulation that several large Native States are adopting our methods of dealing with such of the contagious diseases as Rinderpest and Glanders. In several of the large States the subject of providing a Veterinary Staff for this purpose has received attention. Mysore, Hyderabad, Jodhpur, Alwar, Indore, Bhopal, Baroda and Dhar have commenced work and other States are enquiring whether serum will be supplied. The fact that they have been supplied with 11,450 doses of Anti-Rinderpest Serum and 1,518 doses of Mallein shows that they are awakening to the importance of dealing with animal plagues and to the benefits derived from our methods.

179. *Specimens examined*.—During the year under report, 69 specimens were submitted to the Laboratory for examination, which were promptly attended to and the persons interested were informed of the results of examination with the least possible delay.

180. *Training of Veterinary Officers and Veterinary Assistants*.—For want of accommodation in the Civil Veterinary Department Officers' Quarters (as they were occupied by Mr. Cross during the last year) only one officer of the Army Veterinary Corps attended the course during the months of June to September 1907. Mr. Gaiger carried on research work at the Laboratory during the summer vacations of the Lahore Veterinary College. As the present staff of the Laboratory is quite insufficient to cope with the work of administration, sera preparation, research and education, the course for training of Veterinary Officers has been discontinued as a purely educational one. Officers wishing to be engaged in research work will still be deputed to the Laboratory and afforded all facilities and help. As officers should have already undergone a Post Graduate course of training before joining the Department and as Military Veterinary Officers also take the course before coming to India, the present arrangement by which they will, when available, be able to take up research on any subject will be very advantageous.

181. During the year under review, 38 Veterinary Assistants were trained at Muktesar and 46 at Bareilly making a total of 84 against 49, during the year 1906-07.

182. During the year under review the following doses of sera were prepared and issued from the Muktesar Laboratory :—

Serial No.	Name of sera.	Opening balance.	Prepared doses.	Total out-put.	ISSUED.													Total issue.	Balance in hand.	
					Punjab.	South Punjab.	North West Frontier and North Punjab.	United Provinces of Agra and Oudh.	Bengal.	Eastern Bengal and Assam.	Central Provinces.	Madras.	Bombay.	Sind Baluchistan and Rajputana.	Native States.	Military Department.	Foreign Countries.			Used in experiment at the Laboratory.
1	Einderpest	40,823	462,633	632,656	80,000	10,000	...	152,561	25,500	74,116	42,500	42,000	85,562	1,000	11,450	3,285	2,100	9,672	440,585	92,071
2	Anthrax	26,914	18,091	43,005	...	...	...	10,500	200	13,450	2,000	9,000	500	1,000	...	2,000	...	122	33,772	4,233
3	Hæmorrhagic Septicæmia	21,500	182,798	220,298	16,000	80,000	8,000	39,000	500	4,100	5,500	1,700	...	...	...	...	...	7,913	112,713 and 92,120 discarded	†15,453
4	Charbon Symptomatique	13,100 vaccine 3,839 serum	800	17,239	...	...	...	100	...	...	1,920	...	...	...	...	...	...	80	2,100 and 2,439 discarded	11,300
5	Mallein	9,218 170 (returned from Saharanpur)	3,753	12,186	60	...	24	...	‡232	25	...	...	‡127	90	†1,518	5,779	32	29	7,926 and 2,444 Pseudo mallein discarded	3,166
6	Tuberculin	44	34	78	20	...	...	...	...	...	...	...	5	...	...	30	...	20	75	3

* Serum in Powder form now discarded not included.

‡ 12 doses by cash sale.
12 " "
40 " "

† Retained for experimental purposes at this Laboratory.

183. *Research*.—I have already referred to the difficulties in the way of doing much research work under the present conditions. The following is a short summary of the nature of the work engaged in during the year.

184. *Anthrax*.—The following questions have been studied:—

- (1) Susceptibility of the horse, cattle and sheep of India to experimental inoculation.
- (2) The practical value of the use of Anti serum alone.
- (3) Various methods of preparing a serum of high protective power.
- (4) The immunizing properties of dead bacilli and other products of Anthrax cultures.

This investigation is being continued.

185. *Hæmorrhagic Septicæmia*.—A similar consideration of the points mentioned above under heading of Anthrax has been and is still in progress.

186. *Charbon Symptomatique*.—The single vaccine prepared in pillule form by Messers Parke Davis & Co., has proved a method extremely suitable to the conditions of the country, and has met with the approval of the Superintendents who have had occasions to deal with this disease. After numerous experiments Captain Holmes has succeeded in preparing a single vaccine in pillule form to be injected by means of an automatic Trochar and canula. The laboratory tests of this vaccine have been very satisfactory as no casualties occur after its use and an active immunity against the disease is established in from two to three weeks.

A full report on this subject will be shortly submitted.

187. *Surra*.—An outbreak of this disease on the Kathgodam-Naini Tal road was investigated and experiment on the value of treatment of ponies and other animals by means of various drugs completed. A report of this investigation was published in the Journal of Tropical Veterinary Science, Volume III, No. 2. Experiments on the treatment and prophylaxis of surra are being continued.

188. As there was no officer available for field work and owing to want of requisite material, no work was done on the following subjects included in the programme of Research for 1907-08:—

- (1) An investigation into the etiology, course and prevalence of "Kumri" or Paralysis among horses.
- (2) Trypanosomiasis.
 - (a) The Natural History of the Trypanosome.
 - (b) The identity or otherwise of the Trypanosome infecting the horse, ox and camel.
 - (c) The role played by biting flies in the spread of the disease, with a study of such flies.
 - (d) The course of the disease in the camel.
 - (e) More definite information regarding the nature and extent of the tracts in which the disease is prevalent.
- (3) Piroplasmosis.
- (4) The study of the effects and result of the use of the various protective sera in the field.

189. *Cattle Lymphangitis*.—In August 1907, a request was received from the Senior Veterinary Officer, Bengal Command, to investigate the course of an affection which had appeared among the transport bullocks at Calcutta and Dum Dum. The result of the work on this subject has been published in the Journal of Tropical Veterinary Science.

190. *Rat Virus*.—The practical value of a rat virus "Ratin" supplied by the Ratin Bacteriological Laboratory, London, was tested against house and field rats by the Imperial Bacteriologist and Mr Gaiger and a report of the result of these tests was submitted to Government.

191. *Field experiments*.—Owing to the inadequacy of the staff, no officer for field work was available.

192. *Administration*.—Owing to the unusually dry season, the crops on the cultivated area were a failure. Also very little grass was obtained from the forest. The fodder supply had to be purchased from Contractors.

193. *Forests*.—The maximum yield of fuel which can be removed from each *coupe* of the year is 10,000 maunds, in addition to dead and fallen trees which are now all used up. These compartments are worked according to prescribed Working Plan. Up to the last year, the areas marked by the Forest officer for fuel and charcoal were within a mile's radius of the laboratory, but now these supplies will have to be conveyed from a distance of 3 to 4 miles. A nursery with a small number of deodar and walnut plants is kept at Ritani. This is being extended and eucalyptus and various kinds of pines will be tried with a view to replanting areas close to the Laboratory.

194. *Bareilly*.—Work at the Branch Laboratory was conducted throughout the winter months. Forty-six Assistants received their course of instruction here. This Laboratory is a very necessary adjunct to Muktesar, both for the purpose of testing the Rinderpest Anti-serum and for carrying out other experiments which cannot be done during the severe weather experienced at the latter place throughout January, February and March. In addition to this, it offers facilities for confirming experiments on Plains cattle under normal conditions. Unfortunately, the Laboratory area is too confined and the cattle sheds are not sufficient. The present sheds could not be used, as they are situated close to the neighbouring village and are separated from that by a few lines of wire only. Consequently, the danger of spreading infectious diseases outside the Laboratory boundary prevented our sheds from being used for any but healthy cattle. Temporary grass sheds were erected for cattle under experiment, but these were of necessity so close to each other that infection spread from one to another causing considerable loss of time and cattle. The question of improving the Branch Laboratory is being considered.

195. As usual the work done has been very important and heavy. Captain Holmes has carried on the duties very successfully and has worked very hard indeed. The Laboratory staff are deserving of praise for the hard work they have done during the year. The staff is very small and every man has been worked to his full capacity. It must be realized that Gazetted holidays cannot be observed and that Sundays are not free from routine duties and the monotony and lack of amusement due to the isolated position of the Laboratory add to the strain of continuous hard work.

196. Captain Holmes wishes to bring to notice, especially, the long and valuable services of Mr. D'Souza, Native Laboratory Assistant who has served continuously for 17 years, or ever since the first Laboratory was started at Poona. Also the good service rendered by Veterinary Inspector Wazir Mahomed who has for the past 3 years satisfactorily performed all the operations of the hyperimmunizing process of preparing Anti-Rinderpest Serum.

GOVERNMENT CATTLE FARM, HISSAR.

197. The year has from some points of view been a very unfavourable one for the Hissar Cattle Farm. The barani crops were a complete failure as no rain fell after the sowing time. There was very little reserve fodder in hand at the beginning of the year and grain was at famine prices. Fortunately, however, there was a fair crop of grass on the bir land and it was possible, notwithstanding the difficulty in obtaining labour, to make 25,000 maunds of hay. The irrigated land also did not produce anything like an average crop as water was far from plentiful and our cuts had silted up a good deal so that we did not obtain much more than half the amount of kirby and green

jowar we did last year. Hail also damaged the oat crop considerably. It is satisfactory to note, however, that notwithstanding all the difficulties we have been able to carry on and maintain the stock in excellent condition during the year and have 59,000 maunds of dry fodder in hand.

198. Foot and mouth disease was very troublesome and two outbreaks occurred during the year. It was very mild but caused some deaths in calves. Blackleg was also prevalent causing considerable loss; and arrangements have now been made to inoculate all the young stock with vaccine as a preventive. The disease has been enzootic on the farm for many years and as the virus is so tenacious of life, is a constant danger and source of loss. It is hoped that by means of inoculation we shall be able to reduce the mortality very considerably.

199. *Breeding herd—Herd Bulls.*—The number of herd bulls at the beginning of the year (Table XVI) was only 19 which, allowing for sickness and casualties, was insufficient. None were obtained from outside as they can only be bought in exceptional circumstances. Six of the most promising of the male farm bred stock were selected and three of these are now with the herds. This brings the number up to 22 which is still insufficient. There are some splendid bulls amongst them but others are not so good. The question of making suitable provision for obtaining the very best possible bulls for the herds in the future is a most important one and with a view to meeting the requirements, a system has now been introduced by which any particularly promising young bull calf out of the best of the cows will be set apart at an early age so that he will receive a little extra care and attention and have every chance of developing into a good herd bull. A start has already been made and the scheme will do much to obviate the difficulty.

200. *Cows.*—The herd at the beginning of the year consisted of 1,038 cows, and 177 farm bred heifers were added by transfer. The herd was very carefully examined with the result that 98 old, barren, or otherwise useless cows were weeded out. 18 died and 2 were destroyed during the year, leaving the number in the herd 1,097 at its close. It is therefore somewhat short of the number, 1,200, which is considered to be the maximum.

201. *Male produce.*—The number of male produce rose from 799 to 900. There were 292 births bringing it up to 1,091 of which 127 were transferred to supernumerary bulls, 21 were sold as unfit and 43 died chiefly from Blackleg and Foot and mouth disease.

202. *Female produce.*—There was a slight decrease in the number of female produce. At the beginning of the year, there were 736 and 285 cow calves were born, bringing the number up to 1,021. Of these, 177 were transferred to the breeding herd, 37 died, 2 were destroyed and 106 were cast and sold as unfit. The number of casting was considerable but in a herd of this description where the blood of the stock with which we started operations was so mixed and where our object is to obtain a more or less uniform type, it is impossible to avoid careful and extensive weeding out of all unsuitable female produce showing great deviation from the type we are aiming at. The result of this heavy weeding is that the number of female produce has fallen to 699. The rejections should, however, be far less next year as the herds were most carefully examined so as to remove all bad ones found.

203. It has been found necessary with a view to ascertaining which cows were throwing unsuitable stock and which the best, to start a herd book. It was found under the old system, impossible to ascertain which cows were suitable for retention and which not as the parentage of the stock was not known.

204. *Calves.*—577 calves were born during the year against 582 last year. This may be considered very satisfactory when the insufficiency of our herd bulls is taken into consideration.

205. *Supernumerary Bulls.*—Of these, owing to famine conditions prevailing, only 69 were issued to districts and 9 were sold to other Provinces.

206. *Cultivation bullocks.*—It was found that there were a number of very old, feeble and useless animals amongst the 257 present at the beginning of the year. These animals were worse than useless as they were so slow that they prevented others from getting on with the work. It was deemed advisable to get rid of them and purchase young and suitable animals of smaller, more active and compact stamp, and 41 of the old lot were cast and sold, 4 destroyed and 7 died during the year. Eighty-one new animals were purchased, 23 transferred from the farm bred stock, so that we have now 309 bullocks for cultivation work on the farm.

207. *Mules.*—This branch of the work of the farm is one in which there seems to be little hope of our ever carrying out the scheme laid down by the committee. The factors which militate against success are:—(i) The selected districts have been practically closed against us for purchasing and rightly so as, if the Army Remount Department can find room for rearing them at their Depôts, they should obviously control the market in their own selected districts. (ii) When the horse and mule breeding operations were transferred from this Department, all suitable donkeys were taken over by the Army Remount Department and nothing really good was left for the non-selected districts. The consequence has been that mule breeding has suffered very greatly in our districts and it is not found possible to purchase the class of young mule we require. These are the chief reasons why we find difficulty in working anywhere near the standard laid down when the selected districts were open to us. The result is that the number of mules has again fallen very considerably, *i. e.*, from 226 to 137 and it has been found impossible for the Superintendent to obtain more than 11 by purchase during the year.

208. Now that a considerable number of good jacks have been obtained from Europe, we may hope to be able to get a few more of the stamp required in time. The undertaking does not pay us, especially in a year like this with grain at 11 seers 13 chittacks a rupee and bran at Rs. 2-8 a maund; but of course it is to the advantage of the Army to have as many good mules as possible available and Hissar is a very suitable place in which to rear them.

209. One hundred and six mules were sold during the year and of these 101 were taken over by the Military Department, but only 38 judged by tape and measuring standard were accepted for Ordnance. The farm lost considerably owing to the fact that the remainder went to Transport at Rs. 225 per head, a price almost reached by rejected animals at auction. Five mules were sold by auction.

210. If we fail to obtain sufficient mules to justify the retention of mule rearing, the question of its abolition will be considered.

211. *Donkey stallions.*—There are at present 9 donkey stallions at Hissar, *i. e.*, five received from Europe for issue to the Punjab Government, two young Catalonians purchased for the farm and two transferred from donkey colts.

212. *Donkey mares.*—Four were transferred from the zebroid breeding experiment and three farm bred fillies have been added to the brood mares, bringing the strength from 79 to 85, one death having occurred.

213. *Donkey colts.*—There were 25 births during the year and no purchases were made. This brought the number up to 78. Fifteen of these were sold to the Military Department and others, 2 transferred to donkey stallions, 2 died and 1 was destroyed, leaving a balance of 58 present at the end of the year.

214. *Donkey fillies.*—At the commencement of the year, 16 were present and 26 were born during the year, making a total of 42; of which 3 have been transferred to the brood mares leaving a balance of 39. The donkey breeding has been very successful, the percentage of foalings being 62·2 per cent.

215. *Zebroid and zebrule breeding.*—The details of this experiment were gone into and it became evident that it had been very unsuccessful. After three years only two zebrule fillies had been born, the expenditure having amounted to over Rs. 13,000. With the sanction of the Government of India the experi-

ment was discontinued and the mares either transferred or sold. The zebra stallion will be sold.

216. *Pony mares for mule-breeding.*—The number has been increased by transfer from 35 to 38. The results have not been very satisfactory during the year, only 9 mules having been born. The question of the retention of this branch of the farm will be carefully considered next year after the result of an improved system has been noted.

217. *Sheep.*—Progress has been made with sheep-breeding, the total amount of stock having increased from 356 to 486 during the year. Experiments will be continued with the Merino. This will not prove expensive as sheep cost very little to feed and are very profitable to keep. The farm could very well bear a much larger flock and make money out of them. The price of wool, the world over, has fallen considerably during the year and the price realised from our wool fell to Rs. 36-13-3 per maund.

218. *Cultivation.*—The clearing of Sully and Kharwan cultivation lands has been gradually taken in hand and the water courses cleaned out. The Sully Minor canal has been silt cleaned and the banks cleared of jungle and repaired. The communications are gradually being improved, roads being made up with kunkur and properly raised.

219. *Machinery.*—This is in fair order. A large indent for component parts has been sent in and when they arrive the whole of our machines will be put into good working order. New carts are being made up, the whole of the old ones being worn out. The buildings are in good repair.

220. Taking all things into consideration, the results of the year's work at Hissar are distinctly good and it may be looked on, from the point of view of the new system of accounts, as a self-supporting institution. This is the first year in which this system of account has been working and we have not yet received any report from the Examiner who went through them.

221. Table XVIII shows the expenditure on the farm to have been Rs. 1,13,321-13-10, the receipts Rs. 74,058-7-1 and the valuation of the stock, etc., Rs. 3,67,879-0-3, against an expenditure of Rs. 1,16,190-15-10, receipts Rs. 91,357-3-7 and valuation of stock of Rs. 2,64,850-4-6, respectively, last year. An examination of these figures will show that the increased value of stock in hand is greater than the excess of expenditure over receipts by Rs. 3,765-5-0. Considering the great difficulties which have had to be contended with, the results obtained appear highly satisfactory especially when it is considered that many improvements have been effected in making roads, tree-planting, etc., which have not been taken into account.

222. I consider that Mr. Wilson has worked exceedingly well at Hissar as have also the European staff employed, and that they deserve credit for the results achieved.

PART C. GENERAL

223. Table XIX has been omitted from this report as the information regarding the expenditure of the Department has not been received from the Accounts Officers. When necessary particulars come to hand Table XIX will be furnished as an addendum. Expenditure of the Department.

224. Substantial progress has been made in nearly every Department of our work which is increasing rapidly in every direction and out of all proportion to the staff available to cope with it. In a young and growing Department this is inevitable. It is obvious that the amount of European supervision required for 50 Veterinary Assistants will not suffice for 100 and, starting as we did in many cases with very small establishments, the proportion of Imperial officers asked for was correspondingly small. As the Department expands, therefore, it becomes necessary to increase the staff of officers so that proper supervision General Remarks.

may be exercised and efficiency maintained. The want of a few more officers is therefore now becoming acutely felt. In the circumstances, the work has fallen very heavily on the staff and I consider that they deserve great credit for the manner in which they have attempted to cope with it during the year.

225. We have been unable for want of officers to appoint Pathologists to the College laboratories although we fully recognise the necessity for doing so. Research work has been much hindered for want of properly qualified officers especially for field work, as the Laboratory staff has its hands full with the preparation of serum at present.

226. The reorganization of the various subordinate establishments will render progress as rapid as is possible in filling up the sanctioned posts. We can only employ Assistants as they graduate from the Colleges and as the number available is limited, it will take a good many years before the sanctioned strength can be reached in many provinces.

227. The appointment of Inspectors is reported to have resulted in considerable improvement in the work in districts. Wherever it has been possible, officers have visited more outbreaks of disease in districts, but in some cases little has been done in this most important matter.

228. The time has now arrived when every effort should be made to check the inoculation work reported by the subordinate staff in the field and to obtain more reliable information regarding the results in the field.

229. With reference to the remark made in the review of last year's Annual Administration Report regarding the training of an indigenous staff qualified not only for administrative work but also for research, there can be no doubt whatever that in the future, when we begin to attempt to control diseases by means of living vaccines, we shall require a far more highly trained native agency for the purpose than we at present possess, and it will be necessary for us to train them in this country. But, in the meantime, the Department being a young and growing one, the demand for the services of such an agency does not justify the establishment of a special College for this purpose. I should be very glad indeed to see such a College started if sanction to a staff of well qualified teachers were obtained and if the graduates could be given work when they qualified. But I do not see how this could possibly be done at present, as the total strength of our cadre of Imperial officers is only 31 and the number of Deputy Superintendents sanctioned only 26. The demand for men to replace casualties would therefore be very small indeed and would certainly not justify the establishment of a properly equipped college for the purpose. The only method of obtaining men for research work would be to train them at home which would take 5 or 6 years and be a very costly process, besides which, it would be impossible to decide beforehand whether they would have the particular bent and ability required in a research officer.

230. A Veterinary Conference composed of the senior Veterinary officers, the Inspector General of Agriculture, and the various Directors of Agriculture, was held in Calcutta in February last to discuss various questions connected with the establishment of a Board of Veterinary Science. Research, veterinary education, publications, cattle export, etc., were discussed and the Proceedings duly submitted. The Conference was productive indirectly of much good as it gave Directors and Veterinary officers an opportunity of meeting together and discussing various questions in which we are all vitally concerned.

231. There can be no doubt that the important work performed by the Department is being daily more recognised, both by Provincial Governments and by the people. A number of new hospitals and dispensaries have been opened, horse and mule breeding continues to improve, the work done in the laboratory has been very satisfactory, more outbreaks of disease have been dealt with and incontact animals inoculated and the serum treatment of Rinderpest is making steady headway. Considerable progress has been made in the study of camel diseases during the short time Mr. Leese has been employed

on the work. Moreover, our methods are appealing to Native States in the following of which small Veterinary Departments exist or are being started :—

Mysore, Hyderabad, Kotah and Jhalawar, Junagadh, Rajpipli, Baroda, Dhar. This is most gratifying as it is entirely spontaneous and is a proof, I think, that our work is seriously appreciated.

SIMLA.

H. T. PEASE, Colonel,

The 30th September 1908. } *Inspector-General, Civil Veterinary Department.*

TABLE I.

Showing the main results of Veterinary Colleges and Schools during 1907-08.

1	2 Name of course of instruction if more than one course followed.	3 NUMBER OF STUDENTS.						4 STUDENTS ADMITTED DURING THE YEAR, CLASSIFIED BY EDUCATIONAL QUALIFICATIONS.			5 RECEIPTS.			6 EXPENDITURE.			7 EMPLOYMENT OF STUDENTS WHO PASSED OUT DURING THE THREE YEARS PRECEDING.					23 REMARKS.	
		8 ADMITTED DURING THE YEAR 1908.		9 Passed final examination during the year.		10 REMAINING UNDER INSTRUCTION AT END OF YEAR.		11 Matriculated with higher qualifications.	12 Knowing some English, but not matriculated.	13 Knowing no English or very little English.	14 From fees.	15 From other sources.	16 TOTAL.	17 Salaries of instructing staff.	18 Other expenses.	19 TOTAL.	20 Total number passed.	21 In service of Government or Local Bodies.	22 In service of other bodies or institutions.	23 In private practice.	24 Number unemployed.		
		3	4	5	6	7	8																9	10	11	12	13	14	15	16	17	18	19	20	21	22
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
Bombay Veterinary College	...	17	32	23	6	52	14	16	38	...	5,400	2,500	7,900	81,700 7 11	26,088 6 7	56,010 0 8	1,12,803 14 9	53	(d) 21	(e) 10	5	17	*Cost of building new college in part.
Punjab Veterinary College...	Diploma or 3 years course in Urdu.	18	71	(a) 71		205	(b) 56	7	41	38	7,289	6,450	13,719	46,420 0 0	21,220 0 0	67,640 0 0	165	(c) 151	13	NIL.	NIL.		
Bengal	3 years course in English.	41	21	37	5	75	12	11	51	NIL.	No college-fee is charged for instruction.		25	15,550 15 11	8,025 2 5	18,562 2 4	49	43	4	1	NIL.	Case of 1905 is dead.	
Madras	Diploma course 3 years in English.	10	19	17	6	68	5	20	9	...	...	...	6,886 9 8	8,280 0 0	9,976 9 8	29	20	8	...	...	
Burma	Senior A Senior B Junior	70	...	4	1	62	1	...	...	(f) 70	...	...	...	...	...	...	27	27	...	...	...
TOTAL	...	151	143	152	25	460	88	54	184	106	12,729	8,975	21,704	1,00,364 1 6	1,08,638 9 8	2,00,002-10 9	328	262	34	6	17		

(a) Includes eight who passed in June 1907.

(b) Those who were dismissed from the college after failure are excluded.

(c) Two are known as dead.

(d) 8 are in temporary employment.

(e) 1 in temporary employment.

(f) Qualifications of 95 of these are not known as they were admitted previous to April 1907.

TABLE III.

Showing results of preventive inoculation during the year 1907-08.

PROVINCE.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBERS OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.
				Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
United Provinces ...	Rinderpest.	Serum alone.	460	...	5,404	...	...	1,23,977	...	...	46	...	
Punjab ...			70	...	792	...	...	14,815	...	...	16	...	
Sind ...			1	...	8	...	...	200	...	...	...	...
Rajputana ...			...	...	...	...	...	...	...	...	...	...
Madras ...			643	...	10,929	...	...	28,788	126	...	119	...	
Bengal ...			58	...	748	...	...	5,978	62	...	20	...	
Bombay ...			16	...	4,666	50	...	26,459	...	...	238	...	
Central Provinces ...			260	...	3,831	...	...	30,918	...	...	9	...	
Burma ...			45	...	272	...	...	3,552	...	...	83	...	
North-West Frontier Province ...			22	...	322	...	...	5,434	...	...	4	...	
Eastern Bengal and Assam ...			249	...	5,818	...	...	55,782	32	...	391	...	
Total ...	...	...	1,824	...	32,788	50	...	2,95,953	220	...	926	...	
United Provinces ...	Anthrax.	Serum alone.	37	...	247	...	6	6,327	...	...	...	...
Punjab ...			...	...	...	...	...	...	...	...	...	...
Sind ...			...	...	...	...	...	...	...	...	...	...
Rajputana ...			...	...	...	...	...	...	...	...	...	...
Madras ...			45	...	482	...	...	8,461	...	...	79	...	
Bengal ...			...	...	...	...	...	...	...	...	...	...
Bombay ...			...	...	...	...	...	...	...	...	...	...
Central Provinces ...			...	...	...	...	...	...	...	...	...	...
Burma ...			...	...	...	...	...	...	...	...	...	...
North-West Frontier Province ...			...	...	...	...	...	...	...	...	...	...
Eastern Bengal and Assam ...			41	27	597	...	105	10,148	...	2	28	...	
Total ...	...	...	123	27	1,316	...	111	21,936	...	2	107	...	
United Provinces ...	Hemorrhagic Septicæmia.	Serum alone.	451	...	1,131	...	...	32,206	...	...	...	...
Punjab ...			152	...	1,622	...	...	44,236	...	...	30	...	
Sind ...			...	...	...	...	...	...	...	...	...	...
Rajputana ...			...	...	...	...	...	...	...	...	...	...
Madras ...			12	...	57	...	...	1,179	...	...	...	...
Bengal ...			...	...	...	...	...	...	...	...	...	...
Bombay ...			2	...	...	...	...	99	...	...	...	...
Central Provinces ...			9	...	192	...	...	1,207	...	...	...	...
Burma ...			...	...	...	...	...	...	...	...	...	...
North-West Frontier Province ...			2	...	21	...	...	1,793	...	...	4	...	
Eastern Bengal and Assam ...			4	...	56	...	...	2,129	...	...	11	...	
Total ...	...	...	632	...	3,129	...	...	82,849	...	...	45	...	
Punjab ...	Black Quarter	Blacklegoid.	33	...	9	...	...	1,655	...	...	...	...	* Villages.
North-West Frontier Province ...			23	...	...	...	...	3,080	...	...	1	...	
Central Provinces ...			...	...	...	...	...	270	...	...	...	...
Total ...	...	...	56	...	9	...	...	5,005	...	...	1	...	
GRAND TOTAL	...	...	2,635	27	37,242	50	111	4,08,743	220	2	1,379	...	

TABLE IV.

Showing the number of Animals treated and castrated by Veterinary Assistants on tour during 1907-08.

PROVINCE.	Number of villages visited.	Number of Veterinary Assistants employed.	CASTRATIONS PERFORMED.				TREATED FOR CONTAGIOUS DISEASES.				TREATED FOR NON-CONTAGIOUS DISEASES.				Total number of cases treated and castrations performed.	REMARKS.	
			Equines.	Bovine.	Others.	Total.	Equines.	Bovine.	Others.	Total.	Equines.	Bovine.	Others.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
United Provinces	14,086	70	220	50	18	288	186	22,089	889	23,114	7,029	11,986	2,002	20,967	44,869	* Includes stationery men who have to treat animals out of head-quarters.	
Punjab	6,784	105*	560	460	12	1,032	862	15,766	908	17,036	7,811	10,816	2,192	20,819	88,887		
Sind	56	4	11	...	...	11	20	803	...	823	684	466	828	2,123	2,457
Rajputana	674	2	4	2	3	9	...	1,085	...	1,085	82	141	4	177	1,271		
Bengal	8,663	40	56	93	18	167	151	85,856	157	85,864	10,279	14,110	1,504	25,893	61,724		
Eastern Bengal and Assam	8,826	29	28	58	84	115	906	16,713	518	18,137	2,725	13,978	1,001	17,102	85,854		
Bombay	1,605	28	1	18	1	15	22	5,632	41	5,695	804	5,966	801	7,070	12,780		
Madras ... ..	...	11	119	182	...	301	...	...	...	...	...	...	...	...	301
Central Provinces	3,999	12	11	19	2	32	2	11,979	54	12,035	547	5,194	123	5,864	17,931		
Burma	17,210	(a) 91	2	3	...	5	13	21,954	15	21,932	1,547	50,969	69	52,585	74,572 (b)		
North-West Frontier Province	924	11	141	65	48	253	95	1,027	288	1,410	1,372	2,217	808	4,897	6,059		
TOTAL	52,827	403	1,153	940	184	2,227	1,757	1,81,904	2,820	1,86,481	82,480	1,15,190	8,827	1,56,497	2,95,205		

(a) Includes one casualty and one Assistant removed.

(b) In addition to these 4,851 cases were treated by Inspectors and 168 by Assistants in Northern Shan States.

TABLE V.

Showing number of Animals treated at Veterinary Hospitals and Dispensaries during the year 1907-08.

Province.	Number of Veterinary Dispensaries.	Number of Veterinary assistants employed at Dispensaries.	IN-PATIENTS.															OUT-PATIENTS.						TOTAL NUMBER OF IN AND OUT-PATIENTS TREATED DURING THE YEAR.				Receipts.	Expenditure.		
			REMAINING ON 1st APRIL 1907.			ADMITTED DURING THE YEAR.			TOTAL.			DISCHARGES DURING THE YEAR.			BALANCE ON 31st MARCH.			NUMBER TREATED DURING THE YEAR.			AVERAGE DAILY ATTENDANCE.			Total.							
			Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
United Provinces ...	28	29	37	16	7	1,294	585	234	1,331	601	241	1,360	594	228	31	7	5	7,069	5,401	3,802	21'01	14 7	9 8	9,000	6,003	3,843	18,845	33,798	0 0	28,704	0 0
Punjab ...	77	77	41	22	18	2,196	1,109	362	2,237	1,131	380	2,135	1,069	363	102	62	28	36,368	42,492	12,224	...	...	...	40,493	48,561	12,576	96,630	1,48,739	0 0	1,39,812	0 0
Sind ...	6	6	11	6	4	467	551	206	478	557	209	465	554	200	18	8	9	4,114	4,112	2,376	...	...	...	4,592	4,669	2,585	11,846	41,944	8 9	24,767	8 10
Rajputana ...	2	2	1	1	...	6	5	1	7	6	1	7	6	1	...	...	...	267	368	198	...	...	...	274	374	199	847	2,702	11 5	1,191	15 11
Bengal ...	25	25	67	209	4	1,329	2,999	191	1,399	3,208	195	1,315	2,889	188	81	810	7	9,184	31,063	4,122	78	1'66	29	10,530	36,876	4,317	49,723	22,533	6 10	27,719	2 9
Eastern Bengal and Assam.	18	13	...	15	(a)	72	227	29	72	302	31	68	284	30	4	18	1	2,351	6,588	1,011	1'8	6'6	1'3	2,423	6,640	1,642	13,005	13,034	11 2	12,695	0 4
Bombay ...	24	24	40	31	7	775	963	207	815	994	214	791	956	210	24	36	4	6,970	26,207	6,227	...	...	...	7,765	29,291	6,441	43,517	60,669	2 5	60,799	3 11
Madras ...	11	14	(b)	(A)	(A)	1,288	924	789	1,325	987	943	1,261	911	695	84	(c)	(f)	8,558	12,051	3,904	12'3	10'4	55'2	9,583	13,618	4,747	28,249	19,517	5 10	32,039	13 9
Central Provinces...	47	47	11	7	...	101	208	31	202	275	31	191	270	28	11	5	3	9,890	25,228	8,261	...	...	...	10,092	25,501	8,292	43,885	44,733	3 2	62,301	10 9
Burma ...	69	91	(b)	91	...	...	...	...	...	...	...	...	...	...	...	...	...	1,779	8,511	291	4'87	23'31	7'9	1,779	8,511	291	10,581	.....	1,14,855	0 0	
North-West Frontier Province.	14	15	(a)	9	(a)	1,081	161	130	1,090	161	136	708	159	129	22	2	6	6,280	6,318	3,056	...	...	...	7,348	6,475	3,165	17,0'8	4,672	14 8	4,671	4 8
TOTAL ...	386	342	254	350	101	8,689	7,862	2,179	8,953	8,202	2,280	8,551	7,694	2,084	352	500	94	68,370	1,74,880	45,872	...	...	...	1,04,199	1,82,718	46,118	2,35,036	4,01,939	0 8	5,16,496	11 11

(a) Correct figures reported this year.
 (b) Includes one casualty and one assistant removed.
 (c) In addition to these 689 cases were treated by Inspectors and 564 by Assistants in Northern Shan States.
 (d) This does not include the balance on 31st March 1908.
 (e) Excluding 10 deaths.
 (f) Excluding 8 deaths.
 (g) Excluding 117 deaths.
 (h) The opening balances in columns 4, 5 and 6 do not agree with closing balances in columns 16, 17, 18 of last year's report.

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TABLE VI.

Abstract showing Receipts and Expenditure of Veterinary Dispensaries during 1907-08.

PROVINCE.	RECEIPTS.							EXPENDITURE.						Balance.	REMARKS.
	Last year's balance.	By Local Fund grants.	By Government grants.	By Municipal contribution.	By fees.	By other sources.	Total.	Pay.	Travelling allowances.	Medicines, instruments, etc.	Furniture, etc.	Contingencies.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.
United Provinces ...	4,740 0 0	24,341 0 0	841 0 0	1,782 0 0	870 0 0	1,206 0 0	88,798 0 0	17,869 0 0	2,038 0 0	8,954 0 0	986 0 0	1,807 0 0	28,704 0 0	4,984 0 0	
Punjab ...	...	61,841 0 0	72,376 0 0	6,490 0 0	7,108 0 0	828 0 0	1,48,738 0 0	26,177 0 0	...	26,708 0 0	6,800 0 0	78,440 0 0	1,86,812 0 0	...	
Sind ...	18,664 8 0	10,180 0 0	5,423 4 6	3,100 0 0	4,000 3 0	207 14 3	41,044 8 9	14,001 2 0	685 9 6	3,408 4 5	1,736 6 4	4,741 0 7	24,707 8 10	16,876 15 11	
Rajputana ...	1,728 9 5	360 0 0	...	551 2 0	...	68 0 0	2,702 11 5	998 0 0	51 4 6	12 8 0	...	62 5 11	1,232 2 5	1,365 2 5	
Bengal ...	5,502 8 10	20,598 9 2	4,106 7 9	4,833 0 0	2,111 2 3	5,402 15 10	42,638 6 10	15,763 15 5	3,576 11 9	6,012 18 0	3,528 0 4	7,647 10 3	87,719 2 9	4,814 4 1	
Eastern Bengal and Assam, ...	935 1 9	7,804 10 8	2,422 0 0	1,531 0 0	116 14 6	215 0 3	13,034 11 2	6,169 9 7	1,901 2 10	2,560 7 9	409 5 6	1,074 6 8	12,065 0 4	839 10 10	
Bombay ...	46,381 9 7	28,573 8 7	18,012 13 3	2,451 0 0	3,927 11 5	14,665 8 7	1,14,012 8 5	32,300 11 5	5,718 13 10	9,713 1 3	1,079 13 8	29,313 14 5	78,726 6 2	85,285 13 3	
Madras ...	...	5,895 4 7	2,055 10 8	...	11,068 8 1	795 14 6	19,517 5 10	20,504 1 0	433 0 6	4,376 13 9	1,731 8 11	4,979 5 7	32,039 13 9	(d)	
Central Provinces...	...	24,312 5 11	4,400 0 0	14,916 2 9	982 9 0	62 1 6	44,733 3 2	33,233 14 7	5,040 14 11	10,829 8 7	8,047 11 9	5,090 8 11	62,301 10 9	-17,668 7 7	
Burma ...	...	...	Nil.	Nil.	...	...	...	1,07,943 0 0	39,706 0 0	9,973 0 0	24 0 0	24,432 0 0	1,82,081 0 0	...	
North-West Frontier Province.	...	1,515 10 3	2,375 1 6	780 8 11	...	1 10 0	4,072 14 8	2,809 11 3	46 1 0	1,666 6 5	34 6 0	184 12 0	4,071 4 8	...	
TOTAL ...	77,955 11 7	1,85,092 1 2	1,12,174 5 8	36,324 13 8	30,291 0 3	23,514 0 11	4,65,362 1 3	2,77,738 1 3	59,406 10 10	81,230 15 2	24,567 6 1	1,58,742 0 4	6,01,760 1 8	...	

(a) These figures differ from the closing balance as given in the report for 1906-07, as they have been subsequently corrected.
 (b) The unexpended amount Rs. 140 being the balance lapsed on the termination of the official year.
 (c) Correct figures reported this year.
 (d) The opening and closing balances are not reported.
 (e) Visiting fee paid to the Veterinary Assistant out of collections made from private parties.

TABLE VII.

Showing total strength of Subordinate Veterinary Staff employed during the year 1907-08.

PROVINCE.	How Occupied.	Whether paid from Provincial or Local Funds.	Veterinary Inspectors.	Veterinary Assistants.	Subordinate Teaching Staff.	REMARKS.
1	2	3	4	5	6	7
United Provinces	In Schools and Colleges	
	In Dispensaries	Local	...	£1	...	Includes 1 in charge Civil Veterinary Department Depot Moradabad. † Includes 2 seconded Muktesar, paid from Imperial Funds. ‡ Attached to the office of Superintendent of Veterinary Department Lucknow.
		Provincial	...	2	...	
		Private	...	2	...	
On other work	Local	...	70†	...		
Punjab	In Dispensary and other work	Provincial	9	2	...	
		Local	...	1	...	
	In Schools and Colleges	.....	...	...	9
Bombay	In Dispensaries	Provincial	...	77	...	
	On other work	Provincial	12	39§	...	
	In Schools and Colleges	Provincial	...	...	4
North-West Frontier Province.	In Dispensaries (Hospitals)	Provincial and Local	...	(a) 59	...	
		Provincial	...	2	...	
	On other work	Provincial	2	(b) 11	...	
Burma	Vacancies on 31st March 1908	Provincial	...	5	...	
	In Schools and Colleges	Provincial	...	1	1	
		Provincial	45	...
Rajputana	In Dispensaries	Local Funds	...	45	...	
		Provincial	10	...	...
	On other work	Provincial	...	2	...	
Sind	In Dispensaries	Local Fund	...	6	...	
	On other work	.....	...	1 (Temporary)	...
Bengal	In Schools and Colleges	Provincial	...	(d) 2	(c) 6	
		Local	...	20	(e) 2	
	On other work	Provincial	(f) 10	(g) 6	...	
Madras	College work	Local	...	16	(h) 4	
		Provincial	...	...	(i) 4
	Hospital	Local Funds	...	6	...	
Berars	Itinerating and attending cattle fairs and shows.	Rajahs	...	3	...	
		Private (l)	...	1	...	
	In Schools and Colleges	Provincial	1	17	...	
Central Provinces	In Dispensaries	Provincial	...	1	...	
		Local Fund	...	31	...	
	On other work	Provincial	2	...	...
Eastern Bengal and Assam	In Dispensaries	Local Fund	...	1	...	
		Provincial	...	2	...	
	On other work	Local Fund	...	25	...	
Eastern Bengal and Assam	In Dispensaries	Provincial	...	4	...	
		Local	...	6	...	
	In Hospitals	Provincial	...	1	...	
	On other work	Local	...	10	...	
	On other work	Provincial	2	...	...
		Local	...	2	...	
	TOTAL	...	63	556	30	

(a) Includes 12 Saltries and 17 Dressers.

(b) 1 Reserve, 1 attached to office at Rawalpindi, 9 Itinerating.

(c) Teaching staff, one Assistant and five Lecturers.

(d) One Hospital Surgeon and Veterinary Overseer.

(e) Two Veterinary Assistants employed by the Durnraon and Hathwa Raj States.

(f) Two Departmental and 8 Glanders Inspectors.

(g) One Veterinary Assistant employed in the Khurda Government Estates, one by the Deputy Commissioner of Angul and four Staff Veterinary Assistants.

(h) Two employed by Pinjrapole Societies of Calcutta and Haveribagh and two by Calcutta Municipality.

(i) One Assistant Principal and 3 Lecturers.

(l) Society for the Prevention of Cruelty to Animals, Bolly.

TABLE VIII.

Return of Stud Bulls for the year 1907-08.

PROVINCE.	PROPERTY OF GOVERNMENT.					PROPERTY OF LOCAL BOARDS.					REMARKS.
	Number on 1st April 1907.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March 1908.	Number on 1st April 1907.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March.	
		Number	Average price paid.				Number.	Average price paid.			
1	2	3	4	5	6	7	8	9	10	11	12
United Provinces	5	...	...	...	5	9	32	57	4	81	
Punjab .. ..	...	...	...	...	...	356	87	..	64	379	
Sind .. ..	...	...	...	...	...	...	...	..	...	...
Rajputana ... ..	...	...	...	...	...	...	2	141-8-0	...	2	
Bengal ... ..	...	...	...	...	...	...	...	..	...	...
Bombay ... ..	...	...	...	...	...	11	...	..	1	10	
Madras	6	13	Rs. 108	...	19	...	...	..	...	...
Central Provinces	8	1	...	4	5	...	...	..	...	...
Burma ... ..	...	...	...	...	...	...	...	..	...	...
North-West Frontier Province ... ..	...	...	...	...	...	11	4	123-12-0	4	11	
Eastern Bengal and Assam	1	...	...	...	1	25 (a)	...	...	...	25	
Total	20	14	Rs. 08	4	30	408	125	68-0-0	73	458	

(a) 20 bulls were omitted by District Boards last year.

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TABLE IX.

Showing main results of the working of Provincial Cattle Farms during the year 1907-08.

PROVINCE.	Name of farm.	RECEIPTS.				EXPENDITURE.						VALUATION OF STOCK, GRAIN AND FODDER REMAINING AT CLOSE OF YEAR AS DETAILED ON REVERSE.				REMARKS.
		Sale of animals.	Sale of produce.	Other heads.	TOTAL.	Salaries of establishment.	Feed and keep of animals.	Cultivation expenses.	Purchase of animals.	Other heads.	TOTAL.	Cattle.	Grain.	Fodder.	TOTAL.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.	Rs.	Rs. A. P.	
Bombay (Gujarat Ahmedabad) ...	Northcoote Cattle Farm at Chbarodi.	515 0 0	...	63 0 0	608 0 0	3,208 0 0	7,799 7 8	1,568 4 5	792 8 0	2,718 9 4	16,101 8 0	18,805	729 4 0	3,854	18,888 4 0	
Bengal ...	Pusa (Government)	1,156 0 0	...	...	1,156 0 0	842 4 0	2,920 0 0	...	818 5 6	...	4,080 9 6	3,401	...	...	3,401 0 0	
	Bripur (Hathwa Raj).	851 0 0	510 0 0	325 0 0	1,686 0 0	702 0 0	9,915 12 7	...	548 4 9	1,410 7 8	12,579 9 0	10,155	...	...	10,155 0 0	
Central Provinces ...	Telan Kheri Cattle-breeding Farm, Nagpur.	120 0 0	..	...	120 0 0	576 0 0	2,638 0 0	...	...	1,129 0 0	4,343 0 0	11,645	...	...	11,645 0 0	
Ditto ...	Powar Khera Cattle-breeding Farm, Hoshungabad.	629 5 0	...	...	629 5 0	252 15 2	1,232 11 3	...	237 12 0	39 3 6	1,762 9 11	1,506	438 10 0	53	1,997 10 0	
Eastern Bengal and Assam ...	Upper	60 Cattle.	1,838 15 9	...	1,898 15 9	873 12 0	2,410 7 4	828 0 5	...	...	3,612 8 9	6,160	28 10 0	...	6,188 10 0	
	Shillong	44 Figs.	...	...	44 0 0	...	...	...	...	...	...	...	...	...	...
TOTAL ...	...	3,375 5 0	1,843 15 9	418 0 0	5,637 4 9	5,454 15 2	26,916 6 5	2,411 4 10	2,396 9 3	5,207 4 6	42,478 8 2	46,673	1,196 8 0	3,907 0 0	51,775 8 0	

NOTE.—See reverse for details of stock in hand at close of year.

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1907-08.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
	Mds.	NORTHCOTE CATTLE FARM, CHHARODI.	Rs.	Rs.	
		<i>Cattle.</i>			
5	...	Bulls ...	200	1,000	
140	...	Cows ...	50	7,000	
19	...	Heifers, five years old	50	950	
5	...	Do. four do.	35	175	
13	...	Do. three do.	25	325	
13	...	Do. two do.	20	260	
32	...	Do. one do.	15	480	
24	...	Female calves	10	240	
14	...	Male stock, two years old	60	840	
17	...	Do. one do.	30	680	
16	...	Do. Bull calves	30	480	
11	...	Bullocks	125	1,375	
309	...	Total Cattle		13,805	
		<i>Grain and Fodder.</i>			
...	235	Guvar crushed	Rs. s. p. 1 12 0 per maund.	Rs. s. p. 411 4 0	
...	8	Bajri	2 4 0	18 0 0	
...	100	Sundhia jowari for seed	3 0 0	300 0 0	
...	5,000 bundles	Kirby	5 0 0	250 0 0	
...	6,00,000 lbs.	Hay	per 100 bundles 6 0 0	3,600 0 0	
...	24	Guvar and Kirby chaff.	per 1,000 lbs. 6 maunds per rupee.	4 0 0	
		Total Grain and Fodder		4,583 4 0	
		GRAND TOTAL		18,388 4 0	
		MUSA FARM.			
		<i>Cattle.</i>	Rs.	Rs.	
3	...	Bulls ...	{ 1 at 100 1 at 75 1 at 50 }	225	
50	...	Cows ...	45	2,250	
6	...	Male Stock, 2 years old	25	270	
13	...	Ditto, 1 year old	22	264	
13	...	Ditto, calves	12	156	
1	...	Female Stock, 2 years old	20	20	
8	...	Ditto, 1 year old	13	104	
14	...	Ditto, calves	8	112	
107	...	Total		3,401	
		<i>Grain and Fodder.</i>			
...	...	Gram			
...	...	Hay			
...	...	Kirby, etc.			
		Total			
		GRAND TOTAL		3,401	
		KIRIPUR FARM.			
		<i>Cattle.</i>			
3	...	Bulls ...		330	
63	...	Cows { 40 Deaf Cows 23 Montgomery		5,530	
10	...	Male Stock, 2 years old		680	
8	...	Ditto, 1 year old		440	
27	...	Ditto, calves		530	
6	...	Female Stock, 2 years old		400	
5	...	Ditto, 1 year old		360	
18	...	Ditto, calves		355	
2	...	Jamnari goats		40	
28	...	Castrated calves		1,400	
170	...	Total		10,155	
		<i>Grain and Fodder.</i>			
...	...	Gram			
...	...	Hay			
...	...	Kirby, etc.			
		Total			
		GRAND TOTAL		10,155	

Grain and fodder purchased every month for feed, therefore there is no stock of anything on the Farm.

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1907-08.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
	Mds.	TELAN KHERI CATTLE BREEDING FARM, NAGPUR.			
		<i>Cattle.</i>			
1	...	Bull ...	300	300	
60	...	Cows ...	50	3,000	
25	...	Male Stock, 2 years old	150	3,750	
17	...	Ditto, 1 year old	100	1,700	
15	...	Ditto, calves	75	1,125	
23	...	Female Stock, 2 years old	40	920	
15	...	Ditto, 1 year old	30	450	
20	...	Ditto, calves	20	400	
176	...	Total	...	11,645	
		<i>Grain and Fodder.</i>			
...	...	Gram ...	...	...
...	...	Hay ...	...	...
...	...	Kirby, etc.	...	...
...	...	Total	...	...
		GRAND TOTAL	...	11,645	
		POWAR KHERA FARM, HOSHANGABAD.			
		<i>Cattle.</i>			
5	...	Bulls ...	75	375	
27	...	Cows ...	25	675	
2	...	Male Stock, 2 years old	50	100	
5	...	Ditto, 1 year old	20	100	
14	...	Ditto, calves	10	140	
5	...	Female Stock, 2 years old	10	50	
9	...	Ditto, 1 year old	6	54	
4	...	Ditto, calves	3	12	
71	...	Total	...	1,506	
		<i>Grain and Fodder.</i>			
...	159½	Gram ...	Rs. a. p. 2 12 0	Rs. a. p. 438 10 0	
...	26,500	Hay ...	500 poodas per rupee.	53 0 0	
...	...	Kirby, etc.	...	...
...	...	Total	...	491 10 0	
		GRAND TOTAL	...	1,997 10 0	
		EASTERN BENGAL AND ASSAM.			
		<i>Cattle.</i>			
1	...	Bull ...	...	200	
86	...	Cows ...	100	3,600	
1	...	Male Stock, 2 years old	100	100	
3	...	Ditto, 1 year old	50	150	
16	...	Ditto, calves	35	560	
9	...	Female Stock, 2 years old	60	540	
12	...	Ditto, 1 year old	40	480	
14	...	Ditto, calves	25	350	
2	...	Plough or Cart Bullocks	90	180	
94	...	Total	...	6,160	
	Mds. Srs.	<i>Grain and Fodder.</i>			
...	1 20	Matl Kalal	Rs. a. p. 5 12 0	Rs. a. p. 8 10 0	
...	1 0	Oil cake	4 0 0	4 0 0	
...	1 0	Salt	4 0 0	4 0 0	
...	2 0	Rice	6 0 0	12 0 0	
...	5 20	Total	...	29 10 0	
		GRAND TOTAL	...	6,188,10 0	

Return of Horse, Pony and Donkey Stallions under Local Bodies for the year 1907-08.

DETAILS.	HORSE AND PONY STALLIONS UNDER LOCAL BODIES.													DONKEY STALLIONS UNDER LOCAL BODIES.									
	HORSES.						PONIES.							Total Horse and Ponies.	Italian.	Cyprian.	Country-bred (Punjab).	Persian.	Catalonian.	Arab.	American.	Sicilian.	Total.
	Arab.	Persian.	Thorough bred English.	Country bred.	Australian.	Total.	Arab.	Persian.	Country-bred.	Deli.	Shan.	Total.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Balance on 1st April 1907	54	1	1	2	1	59	(a)102	...	6	2	2	112	171	15	18	20	3	5	2	3	...	...	65
Increase	14	...	...	1	...	15	5	...	...	...	...	5	20	...	...	2	...	...	...	...	...	...	2
By transfer	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Purchased in India	5	...	1	2	...	8	2	...	...	...	...	2	10	...	...	4	...	...	...	...	...	...	4
Received from Europe by purchase	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	25	...	...	10	...	38
Total	78	1	2	5	1	82	109	...	6	2	2	119	201	15	20	27	8	30	2	2	10	...	109
Decrease	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2
Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Sold	...	...	...	...	...	...	8	...	1	...	...	4	4	2	...	...	...	...	...	...	...	...	2
Destroyed	1	1	...	...	...	2	2	...	...	...	1	3	5	1	2	...	1	...	...	...	...	...	4
Transferred to	13	...	...	1	...	14	6	...	...	...	...	6	20	...	...	2	...	...	...	...	...	...	2
Total decrease	14	1	...	1	...	16	11	...	1	...	1	18	29	4	8	2	1	...	...	...	...	...	10
Balance on 31st March 1908	59	...	2	4	1	66	98	...	5	2	1	106	172	11	17	25	2	30	2	2	10	...	89
United Provinces	42	...	2	1	...	45	8	...	...	...	...	8	53	...	...	3	...	9	...	2	...	...	14
Punjab (a)	5	...	...	...	...	5	(a)55	...	4	...	...	59	64	8	15	19	2	15	1	...	7	...	87
North West Frontier Province	3	...	...	...	...	3	10	...	...	...	...	10	18	3	2	3	...	6	1	...	3	...	18
Bombay	4	...	...	3	1	8	11	...	1	...	...	13	20	...	...	...	...	...	...	...	...	...	...
Bengal	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...
Madras	...	...	...	...	...	...	13	...	...	...	...	13	13	...	...	...	...	...	...	...	...	...	...
Burma	...	...	...	...	...	...	...	...	...	2	1	3	3	...	...	...	...	...	...	...	...	...	...
Total	59	...	2	4	1	66	98	...	5	2	1	106	172	11	17	25	2	30	2	2	10	...	89

(a) Last year 1 Arab was through a mistake shown as country-bred.

47

70

TABLE XI.

Services and Produce of each class of Horse, Pony, and Donkey Stallions, under Local Bodies during 1907-08.

1	2	3 Stallions on Register on 31st March 1908.	4 STALLIONS ACTUALLY EMPLOYED AT STUD.		6 NUMBER OF MARES COVERED.		8 AVERAGE NUMBER OF MARES COVERED PER STALLION EMPLOYED AT STUD.		10 REMARKS.
			4 Year under report.	5 Previous year.	6 Year under report.	7 Previous year.	8 Year under report.	9 Previous year.	
Horse ...	United Provinces ...	45	37	37	1,995	1,980	53.9	53.5	
	Punjab ...	5	5	5	283	209	56	42	
	North-West Frontier Provinces.	8	8	8	458	362	57.25	45.25	
	Bombay ...	8	5.07	5.23	220	222	43.39	42.45	
	TOTAL ...	66	55.07	55.23	2,956	2,773	51.66	50	
Pony ...	United Provinces ...	8	9	13	470	483	52.2	37.1	
	Punjab ...	59	60	55	3,176	2,594(a)	52	47	
	North-West Frontier Province.	10	10	10	482	316	48.2	31.6	
	Bengal ...	1	...	...	...	...	...	...	No mare brought in during the year.
	Bombay ...	12	11.17	11.23	342	407	36.61	36.24	
	Madras ...	13	13	14	284	315	21	22	
	Burma ...	3	4	4	93	115	23.2	28.7	
	TOTAL ...	108	107.17	107.23	4,847	4,230	45.22	39.45	
Donkey ...	United Provinces ...	14	5	3	224	132	44.8	44	
	Punjab ...	67	47	52	2,633	2,638	56	51	
	North-West Frontier Province.	18	10	10	572	512	57.2	51.2	
	TOTAL ...	99	62	65	3,435	3,282	55.4	50.5	

(a) The increase is due to the fact that last year the number of mares covered in the Gurgaon district was 57 instead of 15.

TABLE XII.

Showing average cost of feed, keep attendance, etc., of Horse, Pony and Donkey Stallion during the year 1907-08.

Province.	HORSE.		PONY.		DONKEY.		REMARKS.
	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
1	2	3	4	5	6	7	8
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
United Provinces ...	...	..	...	...	...	...	..
Punjab ...	305	278	312	256	158	160	
Sind ...	...	...	...	...	...	...
Rajputana ...	...	...	...	...	...	...
Bengal ...	...	..	131 8 0	131 4 0	...	...
Bombay ...	497	445	475	446	...	...
Madras ...	...	...	280 10 0	298 6 4	...	...
Central Provinces ...	...	...	...	...	...	...
Burma ...	...	...	294 10 6	292 6 10	...	...
North West Frontier Province.	295 3 0	319 1 4	325 12 5	300 12 11 (a)	164 1 3	175 14 11	
TOTAL ...	...	...	...	...	...	...

(a) Pay of the syces was not included in the figures for the year 1906-1907.

TABLE XIII.

Abstract of particulars regarding Horse Fairs and Shows held in non-selected districts during the year 1907-08.

PROVINCE.	Number of Horse fairs and shows held.	TOTAL NUMBER OF ANIMALS PRESENT.		TOTAL NUMBER COMPETING FOR PRIZES.		TOTAL NUMBER OF HORSE STOCK (NOT INCLUDING BRANDED MARKED HORSES) PRESENT.		NUMBER OF REMOUNTS PURCHASED.				PRICE PAID FOR REMOUNTS.			NUMBER OF MULES PURCHASED.			PRICE PAID FOR MULES BY GOVERNMENT.			Total number of animals sold.	PRIZE MONEY PROVIDED.						Amount sanctioned by Government of India for next year's fair or show.	REMARKS.	
		Year under report.	Previous year.	Year under report.	Previous year.	Belonging to breeders.	Belonging to dealers.	For Remount Dept.	For Native Cavalry.	For Police.	TOTAL.	Highest price.	Lowest price.	Average price.	By Government.	By others.	TOTAL.	Highest price.	Lowest price.	Average price.		From Imperial Funds.	From Provincial Funds.	From Local Fund.	From other sources.	TOTAL.	Amount actually awarded.			No of medals awarded.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
United Provinces	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Punjab	6	3,612	(a) 3,409	688	(a) 1,016	1,499	...	...	...	...	...	...	...	...	88	88	...	...	...	1,828	1,050	...	2,102	...	3,242	2,105	3	...	(b) Paid from general funds of mela.	
Sind	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rajputana	1	1,022	1,155	421	679	...	1,022	...	...	...	...	...	...	...	7	7	45	16½	24	408	...	...	500	...	500	...	...	...	...
Bengal	5	6,402	28,035	259	321	184	1,010	...	...	...	...	...	...	...	...	...	...	...	...	1,906	15	150	177	(b) 253	595	595	(c) 3	150	(c) One gold, two silver.	
Bombay	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Central Provinces	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North West Frontier Province	2	593	1,159	522	859	388	...	1	...	2	3	800	140	246	1	1	2	240	70	155	5	1,000	1,800	690	...	2,930	1,902	1	1,800	
TOTAL	14	11,629	38,848	1,907	2,905	2,041	2,022	1	...	2	8	800	140	246	1	41	42	240	16½	53	3,647	2,065	1,450	3,469	253	7,237	4,692	7	1,950	

(a) No fairs having been held this year at Karnal, Ludhiana and Mussafargah, last year's figures have not been included.

TABLE XIV.

Abstract of particulars regarding Cattle Fairs and Shows held during the year 1907-08.

PROVINCE.	Number of Cattle Fairs and shows held.	TOTAL NUMBER OF STOCK PRESENT.							AVERAGE PRICE OF ANIMAL SOLD.					Amount realized in fees.	Total number of animals that competed for prizes.	PRIZE MONEY PROVIDED.						Number of medals awarded.	REMARKS.	
		Bulls.	Bullocks.	Cows.	Young stock.	Buffaloes.	Camels.	Others.	Bulls.	Bullocks.	Cows.	Buffaloes.	Camels.			From Imperial Funds.	From Provincial Funds.	From Local Funds.	From other sources.	Total.	Amount actually awarded.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
									Rs.	Rs.	Rs.	Rs.	Rs.	Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
United Provinces
Punjab ...	80	(a)	92,786	(b)	1,10,900	10,006	9,731	...	...	...	...	...	...	1,07,697 0 0	4,502	500 0 0	250 0 0	11,251 0 0	925 0 0	12,926 0 0	11,516 0 0	15	
Sind ...	8	176	696	93	36	85	...	108	220	70	45	...	...	...	1,168	...	...	2,010 0 0	60 0 0	2,070 0 0	1,589 8 0	...	
Rajputana ...	1	...	2,910	...	...	...	2,560	...	...	38	...	...	68	...	28 Bullocks 40 Camels.	...	...	62 0 0	...	62 0 0	62 0 0	...	
Bengal ...	11	842	92,964	4,769	24,310	10,007	380	26,461	...	...	...	...	...	2,420 0 0	2,458	...	1,600 0 0	2,089 0 0	1,325 0 0	5,019 0 0	4,211 0 0	6	
Bombay ...	2	916	4,899	700	501	705	6	15,207	125	100	65	115	60	1,904 0 0	569	...	1,000 0 0	600 0 0	...	1,600 0 0	1,317 0 0	...		
Madras ...	9	465	62,470	630	1,518	1,359	...	843	206	...	...	75	...	878 8 0	4,065	2,300 0 0	...	3,045 12 0	604 0 0	6,089 12 0	7,326 12 0	25	
Central Provinces ..	10	180	61,270	5,124	3,529	14,110	6	1,527	...	...	...	...	...	7,212 6 5	822	...	695 0 0	704 0 0	187 1 0	1,586 1 0	1,084 9 0	...	
Burma ...	1	28	57	20	20	168	...	94	...	...	...	...	...	...	397	100 0 0	1,245 0 0	...	...	1,345 0 0	1,147 0 0	...	
Baluchistan ...	2	146	202	63	...	2	...	...	...	...	...	...	...	...	99	500 0 0	...	...	...	500 0 0	500 0 0	2	
North West Frontier Province...	3	274	176	268	23	208	22	56	...	...	...	...	...	...	1,001	...	1,700 0 0	00 0 0	...	1,700 0 0	1,682 0 0	5	
TOTAL ...	72	2,997	4,16,508	1,04,772	29,937	1,27,629	16,959	52,527	...	...	...	...	...	1,10,670 14 5	14,731	3,400 0 0	6,400 0 0	20,720 12 0	3,191 1 0	33,601 12 0	30,325 14 6	53	

(a) Includes Bulls also.

(b) 92,786 including young stock also.

TABLE XV.

Showing main results of the working of the Bacteriological Laboratory during 1907-08.

1	QUANTITY OF SERA OR ANTI-TOXIN PREPARED AND ISSUED.						INSTRUCTION IMPARTED.				FINANCIAL RESULTS.											
	Names of sera or anti-toxins.	Opening balance.	Prepared during the year.	Total.	Issued during the year.	Stock in hand at end of year.	Department or Province.	NUMBERS ATTENDING CLASSES.		NUMBERS PASSED.	RECEIPTS.					EXPENDITURE.						
								Veterinary Officers.	Veterinary Inspectors and Assistants.		Veterinary Officers.	Veterinary Inspectors and Assistants.	Sale of animals.	Sale of sera (both for cash and on book credit).	Sale of garden products and revenue from reserved forests.	Other miscellaneous receipts.	TOTAL.	Salaries and travelling allowances of officers and subordinate establishment.	Feed and keep of animals.	Purchase of animals.	Cost of chemical and apparatus.	Other miscellaneous expenditure.	TOTAL.
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Doses.	Doses.	Doses.	Doses.	Doses.						Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Muktesar Laboratory.	Rinderpest ...	49,823	492,653	542,476	440,585	92,071	Army Veterinary Corps.	1	...	1	...	...	...	...	...	...	...	...	...	...	...
	Rinderpest serum in powder.	2,183	...	2,183	(a) 2,183	...	United Provinces.	...	1	...	1	...	...	...	...	...	...	...	...	...	...
	Anthrax serum...	26,914	16,091	43,005	88,772	4,233	Punjab ...	...	12	...	12	...	...	...	...	...	...	...	...	...	...
	Hæmorrhagic septicæmia.	31,800	168,796	200,596	112,713	15,453	Central Provinces.	...	9	...	9	...	...	...	...	...	...	...	...	...	...
	Mallein ...	9,213 170 (c)	9,753	13,136	7,926 2,444 (d)	8,166	Bengal ...	...	15	...	15	...	...	...	...	...	...	...	...	...	...
							Bombay	1	...	1	1,240 14 0	336 3 0	485 18 7	440 11 10	3,003 10 5	63,415 1 7	57,988 5 0	20,502 7 9	5,555 0 7	32,069 5 11	1,73,530 8 10
	Charbon Symptomatique.	18,100 8,839 germ.	800	17,332	2,100 (e) 3,639	11,800 vaccine.	Eastern Bengal and Assam.	...	1	...	1	...	...	...	...	...	...	...	...	...	...
	Tuberculine ...	44	84	79	75	8	Native States	...	2	...	2	...	...	...	...	...	...	...	...	...	...
							United Provinces.	...	9	...	9
							Punjab	10	...	10
						Bengal ...	...	8	...	8	65 0 0	...	225 0 0	3 0 0	262 0 0	5,569 0 2	2,499 3 5	1,990 4 6	...	...	10,078 8 1
						Central Provinces.	...	5	...	5	...	...	...	...	...	...	...	...	...	...	...
						Bombay ...	...	9	...	9	...	...	...	...	...	...	...	...	...	...	...
						Madras ...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...
						Native States	...	4	...	4	...	...	...	...	...	...	...	...	...	...	...
TOTAL	186,766	691,807	828,593	702,367	126,326	...	1	84	1	84	1,805 14 0	936 3 0	650 13 7	442 11 10	8,835 10 5	68,004 1 9	60,467 8 5	23,492 11 8	5,555 0 7	33,059 5 11	1,88,598 11 11

(a) Rinderpest serum in powder form discarded.
 (b) H. S. Serum 92,130 doses discarded.
 (c) Returned from Baharanpur.
 (d) Pseudo Mallein discarded.

(e) Charbon Symptomatique serum discarded.
 (f) Does not include Mr. Kriebel's pay drawn at the Home Treasury during combined leave.
 (g) Includes £1,250 for Library and Rs. 20,000 for books of which Rs. 15,000, were received from the Inspector-General, Civil Veterinary Department.

TABLE XVI.

HISSAR FARM.

Return of Animals for the official year 1907-08.

	Bulls.	Cows.	Male produce.	Female produce.	Castrated produce.	Cultivation Bullocks.	Camels.	Mares for mule-breeding.	Donkey Mares.	Mules.	Donkey Stallions.	Zebra.	Donkey mares for sub-roid breeding.	Pony mares for sub-roid breeding.	Ordinance Bullocks.	Donkey colts.	Donkey fillies.	Pony fillies.	Pony colts.	Pony stallion.	Rams.	Ewes.	Male lambs.	Female lambs.	Wethers.	Total.	REMARKS.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
Balance on 1st April 1907	19	1,088	799	780	...	257	7	35	79	226	5	1	4	18	...	53	16	2	...	1	4	246	52	58	...	3,956		
INCREASE	By Births ...	...	...	292	285	...	...	...	...	9	...	...	...	...	...	25	26	...	...	...	...	...	146	129	...	912	
	By Purchase ...	...	...	...	...	81	...	...	...	11	7	...	...	...	...	...	...	...	...	...	...	6	5	...	...	110	
	Transferred... 126	177	...	...	23	23	...	10	7	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	42	410	
Total ...	145	1,215	1,091	1,021	23	361	7	45	86	246	14	1	4	18	...	78	42	2	...	1	10	251	199	187	42	5,088		
DECREASE	Died ...	1	18	43	37	7	...	...	1	3	...	...	...	...	...	2	...	...	...	...	8	8	21	21	...	165	
	Destroyed ...	...	2	...	2	4	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	2	...	18	
	Sold ...	81	98	21	106	1	41	...	6	...	106	2	...	9	...	15	...	1	...	...	8	4	45	6	42	537	
	Transferred... 41	...	127	177	4	...	...	...	...	...	...	...	4	9	...	2	3	1	...	...	...	...	42	...	...	410	
Total Decrease ...	123	118	191	322	5	52	...	7	1	109	2	...	4	18	...	20	9	2	...	...	6	18	108	29	42	1,175	
Balance on 31st March 1908.	22	1,097	900	699	18	309	7	38	85	137	(a) 12	1	...	...	...	(b) 58	39	...	...	1	4	238	90	158	...	3,918	
Valuation--	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rate per Head	
VALUE RUPEES ...	4,840	94,865	60,660	26,610	1,800	29,370	450	3,660	3,980	29,300	3,425	866	...	...	...	6,710	1,410	...	...	166	170	487	105	400	...	2,74,774	

(a) Five of these belong to Punjab Government. Their value is not taken into account.
 (b) One at Goona.

53

73

TABLE XVII.

HISSAR FARM.

Results of donkey, mule and Zebrule-breeding during 1907-1908.

1	Stallions on Register at close of year.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.		RESULT OF PREVIOUS YEAR'S COVERINGS.		AVERAGE RESULT OF PREVIOUS YEAR'S COVERINGS PER STALLION EMPLOYED AT STUD.		REMARKS.
		Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of produce.	Number not held.	Average of produce.	Average of not held.	
	2	3	4	5	6	7	8	9	10	11	12	13
Donkey-breeding	12 (a)	6	7	73	75	12.16	10.1	51	24	7.28	3.42	
Mule-breeding	12 (a)	5	5	38	38	7.6	7.6	9	29	1.8	5.8	
Zebrule-breeding (c)	1	1	1	...	5	...	5	...	5	...	5	
Zebrule-breeding (b) ... ..	...	...	...	...	23	...	23	...	23	...	23	

(a) Five of these donkey stallions belong to the Punjab Government.

(b) Some of the mares were covered by Zebra Stallion "Monkey" in the beginning of the year, but on the abolishment of Zebrule-breeding, these were either sold or transferred to pony mares for mule breeding.

(c) All the donkey mares for Zebrule-breeding were transferred to donkey mares for donkey-breeding on the abolishment of Zebrule-breeding.

TABLE XVIII.

Abstract showing main results of the working of the Hisar Farm during the official year 1907-08.

					B. A. P.
<i>I.—Receipts paid into Treasury.</i>					
1. Sale of animals (a) ...	...	...	...	...	61,286 10 0
2. Sale of produce ...	...	...	...	...	165 1 9
3. Other heads ...	...	...	...	...	13,606 11 4
Total					74,058 7 1
<i>II.—Expenditure.</i>					
1. Salaries and travelling allowances of officers ...	...	...	...	...	14,052 10 1
2. Ditto ditto of subordinate staff ...	...	...	...	...	27,865 4 6
3. Cultivation expenses ...	...	...	...	...	16,969 9 11
4. Feed of animals } Including reserve fodder }	...	...	...	...	39,927 3 4
5. Purchase of animals ...	...	...	...	...	8,648 0 0
6. Other heads ...	...	...	...	...	5,859 2 0
Total					1,18,321 13 10
<i>III.—Value of animals issued on book credit.</i>					
1. Siege-train bullocks ...	...	...	...	...	...
2. Army transport bullocks ...	...	...	...	...	...
3. Bulls ...	...	...	...	...	...
4. Mules and Donkeys ...	...	...	...	...	33,775 0 0
Total					33,775 0 0
<i>IV.—Valuation of animals, grain and fodder on hand at end of year.</i>					
1. Valuation of animals as per Table XVI ...	...	...	...	...	2,74,774 0 0
2. Ditto of grain ...	...	...	...	...	2,695 14 7
3. Ditto of fodder ...	...	...	...	...	30,409 1 8
Total					3,07,879 0 3

(a) Includes "valuation of animals issued on Book credit."

Addendum to Annual Administration Report of the Civil Veterinary Department for the official year 1907-08. To be inserted after Table XVIII.

TABLE XIX.

Statement showing total charges during 1907-1908 in connection with Civil Veterinary Department.

	Inspector General	Imperial Bacteriologist	Hissar Cattle Farm.	United Provinces.	Punjab.	Bengal.	Madras.	Central Provinces.	Bombay.	Burma.	North West Frontier Provinces.	Eastern Bengal and Assam.	Stnd. Baluchistan and Rajputana.	Camel Specialist.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Superintendence ...	59,399 10 10	...	...	2,32,284 10 3	63,563 0 0	84,471 5 0	41,620 3 2	17,420 0 0	9,011 4 0	5,882 15 6	5,807 14 0	10,463 0 0	...	...	5,21,938 14 9
2. Veterinary Instruction ...	...	...	...	169 10 6	60,727 0 0	1,44,795 1 0	27,387 12 6	363 0 0	62,135 4 11	10,962 6 0	...	1,838 0 0	...	...	3,08,368 3 2
3. Subordinate Establishment ...	...	...	...	67,910 0 0	1,24,478 0 0	19,550 0 11	8,628 12 10	13,351 0 0	65,365 13 2	1,05,952 14 11	11,538 14 5	89,632 0 0	...	...	4,56,408 9 0
4. Hospital and Dispensaries ...	...	...	...	7,051 5 4	6,322 0 0	23,893 13 4	8,014 8 9	52,967 0 0	88,311 1 5	8,902 8 3	9,142 2 8	7,561 0 0	...	...	1,62,095 5 9
5. Breeding Operations ...	7,533 4 6	...	1,19,913 10 2	18,558 8 11	43,447 0 0	10,403 11 1	6,747 6 6	...	(a) 27,898 12 6	...	9,386 14 2	1,124 0 0	6,701 14 0	...	2,51,205 1 10
6. Prizes ...	661 0 0	...	...	...	...	100 0 0	(c) 2,100 0 0	...	(b) 12,956 2 2	...	...	...	...	...	15,517 2 2
7. Fairs and Shows ...	...	...	...	...	22,784 0 0	339 8 0	...	...	...	...	5,681 15 8	3,893 4 0	...	...	32,578 7 8
8. Bacteriological Research ...	...	1,89,267 8 10	...	3,760 0 7	...	...	...	...	...	...	...	...	...	...	1,92,027 9 5
9. Camel Specialist ...	...	...	...	...	...	...	...	...	...	...	...	...	...	8,238 12 3	8,238 12 3
10. Other charges ...	...	...	...	...	...	...	...	...	...	1,689 13 9	...	...	...	...	1,689 13 9
Total Rs. ...	61,493 15 4	1,89,267 8 10	1,19,913 10 2	3,28,704 4 4	3,21,201 0 0	2,39,563 7 5	64,469 9 11	84,131 0 0	2,15,168 3 2	1,62,080 10 5	40,967 12 11	64,511 0 0	6,701 14 0	8,238 12 3	18,50,422 15 9

(a) Horse, Mule and Donkey breeding operations ... 16,873 5 2
 Cattle breeding operations ... 10,715 7 4

Total Breeding operations ... 27,388 12 6

(b) Horse, Fairs and Shows ... 10,771 1 10
 Cattle Fairs and Shows ... 2,195 0 4

Total ... 12,966 3 2

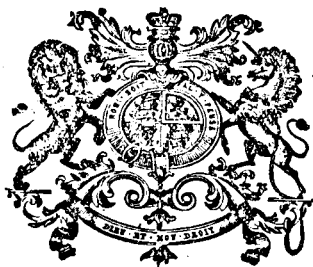
(c) Amount debited to the minor head—
 "Public Exhibition and Fairs".

ANNUAL ADMINISTRATION REPORT
OF THE
CIVIL VETERINARY DEPARTMENT IN INDIA

FOR THE OFFICIAL YEAR

1908-09.

(4)



SIMLA:
PRINTED AT THE GOVERNMENT CENTRAL BRANCH PRESS
1909.

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GOVERNMENT OF INDIA.

ANNUAL ADMINISTRATION REPORT
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FOR THE OFFICIAL YEAR
1908-1909.

GENERAL ADMINISTRATION.

A coloured Map which accompanies this Report, shows, in light red, the Preface districts under the Civil Veterinary Department. The usual Tables are appended.

2. The table noted below gives the names of the officers who held the several appointments in the Department during the year under report:— Officers in charge.

Appointments.	1st April 1908.	31st March 1909.	REMARKS.
Inspector General ...	Colonel H. T. Pease, C.I.E.	Colonel H. T. Pease, C.I.E.	
Imperial Bacteriologist ...	Captain J. D. E. Holmes, M.A., D.Sc.	Captain J. D. E. Holmes, M.A., D.Sc.	
Assistant Bacteriologist ...	H. E. Cross, Esq.	H. E. Cross, Esq.	
Physiological Chemist ...	.....	.....	Mr. Hartley joined on 16th April 1909.
Superintendent, Government Cattle Farm, Hissar.	C. W. Wilson, Esq.	Major J. Farmer.	
Superintendent, United Provinces.	Major H. M. Maxwell	E. W. Oliver, Esq.	
2nd Superintendent, United Provinces.	G. D. Martin, Esq.	C. W. Wilson, Esq.	
Chief Superintendent, Punjab	Captain G. K. Walker	Captain G. K. Walker.	
Superintendent, North-West Frontier Provinces and North Punjab.	V. de V. H. Woodley, Esq.	V. de V. H. Woodley, Esq.	
Superintendent, South Punjab	.....	G. Taylor, Esq.	
Superintendent, Sind, Baluchistan and Rajputana.	Major A. S. Trydell	Major A. S. Trydell.	
Principal, Punjab Veterinary College.	Captain A. Smith	Major A. Smith.	
Professor, Punjab Veterinary College.	Captain W. O. Dawson	Captain W. O. Dawson.	
Professor, Sanitary Science, Punjab Veterinary College.	S. H. Gaiger, Esq.	S. H. Gaiger, Esq.	
Principal, Bombay Veterinary College.	Major F. Joalen	M. H. Sowerby, Esq.	Acting.
Assistant Principal, Bombay Veterinary College.	M. H. Sowerby, Esq.	F. Ware, Esq.	Acting.
Superintendent, Bombay	K. Hewlett, Esq.	K. Hewlett, Esq.	
Principal, Bengal Veterinary College.	Lieutenant-Colonel F. Raymond.	Colonel F. Raymond.	

Appointments.	1st April 1908.	31st March 1909.	REMARKS.
Superintendent, Bengal ...	D. Quinlan, Esq. ...	D. Quinlan, Esq.	
Superintendent, Eastern Bengal and Assam.	W. Harris, Esq. ...	W. Harris, Esq.	
Superintendent, Madras ...	Lieutenant-Colonel W. D. Gunn.	Lieutenant-Colonel W. D. Gunn.	
Superintendent, Burma ...	Lieutenant-Colonel G. H. Evans.	Lieutenant-Colonel G. H. Evans.	
2nd Superintendent, Burma ...	T. Rennie, Esq. ...	T. Rennie, Esq.	
3rd Superintendent, Burma ...	.....	C. J. N. Cameron, Esq.	
Superintendent, Central Provinces.	J. S. Jethiji, Esq. ...	Major F. S. H. Baldrey.	
Veterinary Officer, Investigating Camel diseases.	A. S. Leese, Esq. ...	A. S. Leese, Esq.	

3. I regret to say that the death of Mr. J. S. Jethiji was reported on the 25th August 1908. Only one officer, Mr. J. G. Cattell, joined the Department and was posted for training at the Muktesar Laboratory. Mr. Hartley the Physiological Chemist joined the Department on 16th April 1909. Mr. Cattell will shortly be posted to the Punjab for training in district work.

4. Colonel F. Raymond was granted an extension of service for three years and promoted to the rank of Colonel.

5. The following officers were on leave in England at the close of the year under report:—

Lieutenant-Colonel F. Joslen.

Major H. M. Maxwell.

Mr. G. D. Martin.

Inspector General's tour.

6. Colonel H. T. Pease, C.I.E., served as President at the Board of Examiners at the Punjab, Bombay, and Madras Veterinary Colleges. He attended the Amritsar and Lyallpur Cattle Fairs. Inspected the Simla-Kalka also the Rawalpindi-Srinagar Dak lines. Inspected Veterinary Dispensaries at Umballa, Sialkot, Ferozepore, Ajnala, Gurdaspore and Amritsar. Visited the Dairy Farms at Umballa and Rawalpindi. Inspected the Imperial Bacteriological Laboratory at Muktesar and the Branch Depot at Bareilly. Inspected all the Veterinary Colleges and the Government Cattle Farm at Hissar on three occasions. Attended as Member of the stallion purchasing Committee at Bombay and Madras, and visited Sohawa to inspect site for proposed Laboratory for treatment of camel diseases.

He travelled 9,293 miles by rail and 542 miles by road.

PART A.—PROVINCIAL ADMINISTRATION.

I.—VETERINARY INSTRUCTION.

Veterinary Colleges and Schools.

7. *Table 1.*—Gives the main results of the work done in the Veterinary Colleges and Schools. Arrangements were concluded during the year for permanent boards of examination and subjects allotted to each Examiner. The dates of the examinations were fixed.

8. I was able to attend as President at the Boards of Examination at the Bombay, Madras and Punjab Colleges but was prevented by illness from going to Bengal. I have already remarked on the capabilities of the various teaching institutions and have little to add to what has already been said on the subject. Punjab still leads the way both in strength of teaching staff, facilities for teaching and

outturn of graduates, accomplishing more than three times as much as any of the other Colleges. Bengal comes next but is weak in European teaching staff. Bombay next and Madras the youngest of the institutions, last.

9. The staff at the Punjab College remained unchanged. This college is at present much overcrowded there being no less than 109 students in the final year class and 73 in the second year. The Board of Examiners remark in their report that: "the technical subjects contained in the 3rd year course require far more individual tuition than it is possible to give to such a great number of students." As a matter of fact the classes are far too large to be well taught and I have strongly recommended the Principal to reduce them to more workable limits. The demand for admission is very great and Government nominations fill up the class before any private students can be admitted. In the circumstances and considering the very great demand which exists for trained men there is a great temptation to admit too many students.

10. Considering the very large classes and the general prevalence of Malaria in the autumn, the results of the examinations must be considered very good as 69 out of 109 were successful in passing the final test, whilst 59 out of 67 passed the first, and 62 out of 73 the second year's tests.

11. The receipts from fees, etc., were Rs. 14,223, and 6,525 patients were treated in hospital.

12. I regret to say that it has been found impossible to complete the very necessary additions to the Anatomical rooms which have already received the sanction of Government but for which the land required has not yet been acquired. I understand that the additions to the laboratory will shortly be made and that the erection of a hostel for the students only awaits the acquisition of the site which has already been decided on.

13. In Bengal, Colonel F. Raymond has been relieved of the charge of the Provincial Department and appointed Principal of the Bengal Veterinary College and is in charge of the administration of the Glanders and Farcy Act in Calcutta, Howrah, Alipore and the 24 Parganas. This is a move in the right direction. The results of the year's work are good, 38 out of 51 students passed the first year's, 37 out of 48 the second, and 25 out of 29 the final year's test. 5,144 cases were treated in hospital, and Rs. 16,392-7-6 realized as fees for treatment. No new work of improvement was carried out during the year for want of funds, but His Honor the Lieutenant-Governor was pleased to signify his intention to sanction, if funds became available, a reappropriation for the conversion of the Assistant Principal's quarters into a hospital for students.

14. This College now trains men for Bengal, Eastern Bengal and Assam and Burma and some for the eastern districts of the United Provinces

15. *Bombay*.—Mr. Sowerby took over charge of the College in July, Major Joslen having proceeded on leave in May. Mr. Ware was appointed Assistant Principal at the same time. The remainder of the teaching staff was unchanged. The Board of Examiners in their report state that they consider the results of the year's work satisfactory; 24 out of 35 students passed the first year's test, 26 out of 37 the second and 17 out of 23 the final examination. 4,06½ cases were treated in hospital and Rs. 7,900 were received as fees, etc. A very great and necessary improvement has been made in the buildings and equipment of this college which although the oldest was until recently the most backward in India.

16. The new College building was taken over from the Public Works Department and formally opened by the Hon'ble J. L. Jenkins, C.S.I., and it is, as that official remarked in his opening speech, the finest and best college building in India. There are only a few more conveniences required to render it a thoroughly efficient teaching institution and these are a contagious disease ward, Anatomical and post mortem rooms. General plans and a rough estimate of cost for building these very necessary additions have been drawn and submitted to Government and it is hoped will shortly receive their sanction.

17. In regard to hospital improvements Mr. Framji Bomanji Jeejibhoy has given a donation of Rs. 3,000 for a colic box and the work is in hand. The hospital authorities have built a new road in their compound adjoining the road of the new Veterinary College. The question of building an operating theatre has been again referred to Government for a fresh plan and estimate to be prepared by the Executive Engineer, Presidency.

Steps have been taken to place the library on a proper footing.

18. *Madras*.—This young institution has suffered severely from the fact that it has, so far, had no whole-time Principal to look after it and although it has been nominally in charge of the Superintendent the fact that he was also responsible for the work of the Provincial Veterinary Department rendered it impossible for him to give the necessary attention to the training of the students. I have on several previous occasions pointed out what an impossible position this is and how both the duties must suffer in consequence of it. The result has been that practically all the teaching work, as well as the charge of the college and hospital, have been thrown on to the shoulders of the Assistant Principal and native staff.

19. The Madras Veterinary College has many advantages and with a good staff and sufficient teaching accommodation should be able to turn out very good Veterinary Graduates. The students are intelligent, have a good knowledge of English and are good material to work on. There is the makings of a good practice which a skilled Veterinary officer should easily double or treble and plenty of accommodation is available for the few extra buildings which are required.

20. Sanction has been accorded to the appointment of a whole time Principal and it is hoped that he will be able to improve matters and obtain a better class of student than is now joining the College. The Board of Examiners remark in their report: "we regret to notice a falling off both in numbers and quality of the students in A. and B. but especially in A. class and we do not consider that the material in this class can in any way compare with that in class C."

21. All things considered the results are good, 12 students out of 15 passed the first year's test, 16 out of 20 the second and 24 out of 29 the final examination. 2,873 cases were treated in hospital and Rs. 11,462 realized in fees.

22. No improvements in the facilities for teaching are reported but I am informed that the question of erecting more stables, providing a pharmacy room and a small laboratory and contagious disease ward are under the consideration of the Government.

23. *Burma*.—At the Burma Veterinary School the staff has remained unchanged during the year. The removal of the school to Insein in November caused a break in the studies. 25 out of 28 students passed the final examination.

24. *General*.—The total number of students who completed the courses in the various classes during the year was 590 against 629 last year. The total number of students who graduated from the Colleges was 160 against 148 last year. From the Punjab College 69 or 63 per cent, Bengal 25 or 86.20 per cent, Madras 24 or 83.9 per cent, Bombay 25 or 73.91 per cent. 25 students passed out of the Burma Veterinary School against 4 last year.

25. There were 505 students remaining under instruction at the Colleges and 24 in the Burma school at the end of the year against 485 and 63 in the previous year.

26. With regard to the demand for admission it is very great indeed in the Punjab, considerable in Bengal and Madras, but not so good in Bombay.

27. The demand for vernacular trained men is still enormous and in order to meet it and to relieve the congestion and overcrowding at the Punjab College, proposals have been submitted to the Government of India for the establishment of a new vernacular college which is absolutely necessary. Even with two colleges working at full pressure the demand for trained men will scarcely be met.

28. The demand for Bengal and Madras graduates is good, only 6 men at the former and 3 at the latter being unemployed, but 10 Bombay men have not succeeded in finding employment.

29. The number of matriculates who joined the Colleges has considerably decreased this year. Bengal has again dropped to 3, Madras to 7, Bombay maintains its average, 16 out of 43, while the Punjab which is a Vernacular College shows a slight improvement, *i.e.*, 10 against 7 last year.

30. In addition to the training of Veterinary Assistants, classes for transport drivers were held and 62 men were trained at the Punjab College, 4 in Bengal, and 17 in Bombay.

31. Sixteen ralhands were under training at the Punjab College and of these 9 passed the farriers examination. Two men were trained as ralhands in the Bengal College.

32. I am very glad to be able to report that more use has been made generally of the laboratories at the various Colleges where they exist, and that although we have been unable to carry out the recommendation of the Advisory Committee of the Royal Society to post a qualified Pathologist at each college laboratory, a good deal has been done with the staff at our command. Arrangements have been made at the request of the Quarter Master General in India for assistance to be given to Army Veterinary Officers by the examination of material submitted by them for diagnostic purposes and advantage has been taken of this. Arrangements are also being made generally for the submission of material from Provincial Veterinary Assistants for the same purpose. In addition to the examination of specimens for diagnostic purposes and the practical demonstration of the various contagious diseases occurring in the country, arrangements have now been made for the teaching of the theory and practice of rinderpest and other inoculation work so as to save the trouble and expense of sending men to the Bacteriological laboratory at Muktesar. This has, so far, only been found possible in the Punjab and Bengal Colleges where facilities exist. Bombay has no conveniences for the purpose and neither has Madras. It is hoped, however, that this will shortly be remedied.

33. In the Punjab College contagious ward the work being done is as follows:—

- (i) Teaching the subject of contagious and parasitic diseases of animals in India.
- (ii) The practical demonstration to the final year's class of all cases of contagious disease which it is practicable to show them.
- (iii) Examining and reporting on all material sent in for the purpose.
- (iv) Teaching the theory and practice of inoculation work as it is performed in the districts for Rinderpest, Black quarter and Hæmorrhagic Septicæmia and the practical application of the Mallein and Tuberculin tests.
- (v) Original work on Indian diseases.

34. The amount of material sent in for diagnosis continually increases as the benefits of having a centre for this purpose become more widely known amongst Military and Civil Departments. Specimens of blood and pus from suspected cases of Surra, Dourine, Piroplasmiasis, Hæmorrhagic Septicæmia, Anthrax, Glanders, Strangles and Epizootic lymphangitis have been reported on during the year. Diseased organs, and tumors as well as animal parasites such as worms, ticks, flies, lice, etc., and food grains and grasses suspected of causing poisonous symptoms have been examined and reported on. The sources from which material is received are by no means confined to the Punjab but extend as far as Hong Kong. Over 300 specimens have been reported on during the year or twice as many as last year.

35. The officer in charge of the laboratory has prepared and submitted a most interesting report. Unfortunately, owing to the fact that there

are no funds available for the purpose, it has been found impossible to publish it entire, but the more important and interesting portions of it will appear in the pages of the Journal of Tropical Veterinary Science. The work done comprises:—

- (i) The experimental treatment of Surra in horses and camels chiefly with Atoxyl and Orpiment, from which it may be concluded that Equine Surra is amenable to treatment, two cases of naturally contracted disease having been cured in the horse.
- (ii) That Atoxyl and Orpiment as recommended by Laveran and Thiroux are the most successful drugs yet employed for the purpose and that the method is the most practicable yet discovered.
- (iii) That it is not of any use in the camel.

36. A very useful piece of work on Hæmorrhagic Septicæmia about which little is so far known, has been done. A check list of animal parasites has been prepared in addition to notes on some parasites previously not described in India.

37. From Bengal too, a short report has been submitted. Colonel Raymond is in charge and is assisted by two Bengali Assistants. The laboratory is well equipped and is used extensively for diagnostic purposes, especially in regard to Rabies by the rapid method, Glanders and other diseases. The usual teaching work, including the instruction of the final year's students in the use of anti-Rinderpest, Black Quarter and other protective media, is carried out. The facilities for teaching contagious diseases are good, cases of Glanders, Epizootic lymphangitis, Surra, Rinderpest, Hæmorrhagic Septicæmia, Foot and Mouth disease, Anthrax, Tuberculosis, Strangles, Rabies, Distemper and Black Quarter having been admitted during the year.

38. A study of some staining peculiarities of the Anthrax bacillus was made and reported in the Journal of Tropical Veterinary Science. A note on Rabies was also prepared and published. An outbreak of Lymphangitis in cattle has been investigated. Colonel Raymond concluded that it differs very little from the lymphangitis observed and reported by M. Vryburg in Sumatra, being due to a bacillus. This observation differs from that of Holmes who describes the disease as a Streptotrichosis.

39. Samples of bone meal were examined at the request of the New Zealand Department of Agriculture, but no Anthrax was found in them. The work done in this laboratory shows a great advance which, it is hoped, will continue.

40. In Bombay the Patho-Bacteriological laboratory has been in constant use for diagnostic purposes but the Provincial Department is very backward. With its development we may in time learn something about the plagues which exist in the Bombay Presidency of which, at present, practically nothing is known.

41. In Burma 400 specimens were examined and reported on. Some investigations into the animal parasites of cattle in Burma were made and the results published in the Journal of Tropical Veterinary Science.

42. In Madras this work has not yet been commenced but when the laboratory is built and equipped, progress will undoubtedly be made.

43. It will be seen from the above that good progress has been made in the Veterinary Colleges.

44. It is very satisfactory to note that the teachers in Bengal have been brought into the Deputy Superintendent's grade and that the three senior Professors at the Punjab Veterinary College have been similarly treated. They well deserve the concession.

II.--TREATMENT OF DISEASE.

Contagious
disease amongst
solipeds, Out-
breaks, morta-
lity, etc]

45. The reported mortality from contagious diseases amongst the animals named therein is shown in table II. The Army Remount Department deals

with all cases of contagious disease amongst equines occurring in the districts selected for horse-breeding under their Department, and we have no record of them.

46. The same remarks as were made last year regarding their accuracy, apply equally this year. The figures relate only to cases which have been brought to the notice of the staff, and do not in any way represent the total mortality from contagious disease in our districts.

47. *Glanders*.—The Glanders and Farcy Act now applies to Glanders and Farcy, Epizootic Lymphangitis, Surra and South African Horse sickness. Two hundred and eighty cases of Glanders were reported from the whole of India, and these were distributed as follows.

48. In Calcutta and the suburbs, the equine population of which is estimated at 13,000, four thousand and seven stables were inspected in 90 of which Glanders was detected.

49. Two hundred and ninety-six animals were admitted into the contagious disease hospital, and of these 146 were found to be glandered and were destroyed, and 4 died in hospital.

50. One hundred and forty horses which had been in contact with the diseased, were subjected to the Mallein test and discharged free from the disease, whilst 4 remain under observation.

51. The Act has been somewhat more strictly applied this year. Six prosecutions were instituted and in five cases the owners were convicted and fined. Rs. 1,000 were sanctioned for the payment of compensation, and of this sum only Rs. 495-4-0 was awarded in cases where owners were very poor. This has been the means of saving much hardship to poor people.

52. In the districts of Bengal, 26 deaths from Glanders were reported by the District Officers, and 132 cases occurred in the Sodepur Pinjrapole. There was an outbreak in Hooghly in the month of September in the stables under the jurisdiction of the Hooghly, Serampore and Bally Municipalities. Of 27 suspicious cases tested with Mallein, 11 reacted and were destroyed.

53. Another outbreak occurred in the Tewara Factory in the Muzaffarpore district. Fifteen ponies were tested with Mallein and three proved to be infected and were destroyed.

54. In Bombay 57 horses were admitted to the Lazaretto at Sewri: of these 2 were well marked cases of Glanders, 40 were suspicious cases and 15 contacts. Of these 25 were proved to be infected with Glanders: so that 27 horses were destroyed altogether, of which 24 were Arabs, 2 Persians and 1 Australian.

55. In the Punjab 33 cases were reported, 6 from the Lahore, 9 from the Sialkot, and 18 from the Rawalpindi district, and were destroyed. No information regarding in-contacts or how they were dealt with is forthcoming.

56. In Eastern Bengal and Assam the Glanders and Farcy Act which previously was only enforced in certain towns and areas, has been extended to all the plains districts of the province. To facilitate the working of the Act and to neutralise active opposition a scheme for compensation has been drawn up and is now under the consideration of Government.

57. Twenty-one cases were reported, 11 from Rangpur, 4 from Khashi and Jaintia Hills, 3 from Lakhimpur and one each from Sibsagar, Sylhet, and Mymensingh. The most serious outbreak was amongst the Gariwala's horses at Rangpur, where there was some opposition to the testing of in-contacts. Compensation will efface this.

58. In the North-West Frontier Province, three cases occurred in Peshawar and two in Kohat, of which four were destroyed and one died. No further cases were found in contact animals.

59. In the United Provinces two cases of Glanders were detected on the Naini Tal-Kathgodam d&k line. They were destroyed and the usual precautions to prevent spread adopted.

60. In the Madras Presidency two cases are reported but no further information is given.

61. *Surra*.—As the Department extends new centres of this fatal and troublesome disease come to light, and there seems little doubt that it prevails all over India where conditions are favourable for its spread. The figures show 487 deaths this year amongst equines, but this does not give any adequate idea of the real mortality.

62. The majority of the deaths occurred in the Bombay Presidency whence 231 are reported: of these 82 were reported from Bombay City, 79 of which were destroyed under the Act, and the remainder died. In the Thana district 103, in the Panch Mahals 36, in Ahmedabad 9, and in Poona 1, deaths occurred. The disease has been brought under the Glanders and Farcy Act in Thana and Kolaba districts.

63. In the Punjab 163 deaths were reported. There was a serious outbreak in the Montgomery district where 120 deaths occurred. Thirty-two deaths occurred in Hoshiarpur and 11 in Ludhiana.

64. In Eastern Bengal and Assam the disease was confined to five districts, causing 70 deaths. In Kamrup 25, Khashi and Jaintia Hills 23, Sylhet 19, Sib-sagar 2 and Cachar 1. All but two of these cases were diagnosed microscopically.

65. In the North-West Frontier Province six cases died in Bannu, four in Dera Ismail Khan and one in Peshawar.

66. The Superintendent, Civil Veterinary Department, Central Provinces, remarks that Surra has been serious in many cases, especially on Mail Tonga routes, and has been very virulent on the Betul and Yeotmal lines. Suppressive measures were adopted. A somewhat serious outbreak occurred amongst police horses in Nagpur. The disease also occurred in Mandla and Raipur. No figures are available.

67. The areas in which the disease is enzootic are gradually being mapped out. The most important matter in connection with Surra as it occurs in horses, which has come to light, is that it is a curable disease. Many cases have been successfully treated by a modification of Laveran and Thiroux's method by means of Atoxyl and Orpiment at the Muktesar laboratory and the Punjab Veterinary College. Final reports are not yet forthcoming, but there can be no doubt whatever that it is possible to cure a fair percentage of cases by means of drugs. The Bombay Presidency offers a very good field for such experimental application of the curative treatment, but unfortunately the Department there is still in the incubative stage and there seems at present little hope of its being organised in the near future.

68. *Anthrax*.—Only 68 cases have been reported during the year, and of these 36 occurred in Eastern Bengal and Assam; 11 in Sibsagar, 1 in Dacca, and 5 in Sylhet were diagnosed microscopically. The remainder, 5 in Lakhimpur, 9 in Darrang, 2 in Goalpara, and 3 in Dinajpur were not confirmed.

69. Eighteen cases are reported from Madras, but no details are given; evidently they were not confirmed.

70. Eight cases were reported from Bengal, but were not confirmed. Five from the Punjab and one from the North-West Frontier Province.

71. *Dourine*.—It is satisfactory to be able to report that no cases of this disease have been reported from the whole of the Horse-Breeding Department for the last three years. No cases have occurred in the non-selected districts. Fourteen cases are reported to have occurred in Bengal in the Sonthal Parganas

and one in Madras. In regard to the former it is stated that they were reported from the Thanas and were not seen by any one having any acquaintance with veterinary matters. The same is true of the case reported from Madras. It is practically certain that no cases of Dourine actually occurred in either district and I think we may safely say that Dourine has ceased to exist in the country and that we may congratulate ourselves on the efficient measures which were adopted to stamp out the disease.

72. The Dourine Bill is still under consideration and will be proceeded with so as to ensure proper powers of dealing with the disease should it reappear in the country.

73. *Epizootic lymphangitis*.—Six cases of Epizootic lymphangitis occurred in the whole of India and Burma in the Civil districts, and of these two were detected and destroyed in Bombay, two in Calcutta and two in Burma. The disease has been fairly common in military animals but does not appear to exist to any extent in the districts.

74. *South African Horse sickness*.—Several severe outbreaks of this disease have occurred in Aden and it has been deemed advisable to schedule it under the Glanders and Farcy Act so as to allow of any animal landing in the country from Aden or Arabia affected with this disease, being at once destroyed and disposed of to prevent the introduction of the disease into the country which would be little short of a calamity.

75. *Other contagious diseases*.—Two hundred and ninety-five deaths from other diseases are reported. Equine piroplasmiasis is found to be a widespread and important disease in the horse in this country, but the information so far collected goes to show that it is not very important in indigenous horses although it is serious and often fatal in imported animals.

76. Table II shows the number of deaths from contagious diseases among cattle which have been reported during the year. The same remarks as were made in previous years regarding accuracy, still hold good.

Contagious disease in Bovines. Outbreaks, preventive inoculation, mortality, etc.

77. No figures are available for Baluchistan and the Central Provinces.

78. The total number of deaths reported is 401,139 head, of which 238,374 were from Rinderpest, 26,472 from Foot and Mouth disease, 34,124 from Hæmorrhagic Septicæmia, 10,299 from Black Quarter, 17,790 from Anthrax, and 74,080 from other contagious diseases.

79. Table III shows the number of outbreaks which have been dealt with by means of protective inoculation.

80. *Rinderpest*.—Is reported to have accounted for 238,374 deaths against 181,940 last year. The reporting therefore seems to be improving somewhat every year and doubtless, as knowledge extends, this will continue to be the case.

81. The number of outbreaks of Rinderpest which have been dealt with by means of protective inoculation by the Serum alone method, is 2,582 against 1,824 last year, and 291,960 animals were inoculated against 296,173 last year. The results are reported to have been excellent where the inoculations could be properly carried out.

82. *Burma*.—The year has been a favourable one as regards Rinderpest in Burma, and the mortality is less than last year, *i.e.*, 13,729 against 16,290 in the previous year.

83. In Lower Burma there was a severe outbreak in the Kyauktaw township, lasting from May to August; and moderately severe outbreaks at different times in the Myohaung township. Isolated outbreaks occurred in the Ponnagyun township but the disease was localised and the mortality small. The insignificance of the loss, 2,067 animals in the Arakan Division is accounted for by the precautions taken by the District Authorities and the assistance given by a batch of additional Veterinary Inspectors and Assistants which enabled them to stamp out the disease at an early stage.

84. The Pegu Division had practically no disease; the few isolated outbreaks which did occur being promptly attended to and inoculation carried out as far as possible.

85. The Irrawaddy Division has also been very free from disease. At the close of last year it existed in a mild form in Bassein but was kept under control by the strenuous efforts of the local staff; the total mortality being only 294.

86. In the Tenasserim Division, Rinderpest continued with some severity in the Amherst district during the early part of the year, but it gradually abated and died out in October. The people in this district are reported to have been extremely careless and quite indifferent to any arrangements made for the protection of their stock.

87. *Upper Burma.*—Here also the mortality from contagious disease has been extremely low. Only three districts, Bhamo, Katha and Yamethin reported a death rate of over a thousand. The disease was severe in all the sub-divisions of the Bhamo district and was also present in the Yamethin district, but was successfully dealt with and stamped out without serious loss. The villagers in this district appear to have grasped the value of segregation and generally carried it out themselves.

88. In the Mogòk District outbreaks occurred and were dealt with by serum injection with generally satisfactory results.

89. *Shan States*—The disease prevailed to some extent in the Southern Shan States but did not assume the same degree of virulence as last year, nor was the mortality so high. It occurred in the Loilong, Yengan, Kyauk-ku, Pwela, Hsamonghkam and Loi-Ai States.

90. In the North Eastern Division the general health of the herds was considerably better than last year.

91. The Northern States were practically free from the disease during the year.

92. *United Provinces.*—Rinderpest was very prevalent in these Provinces; no less than 34 districts being affected against 29 last year; but only 6,662 deaths were reported against 7,854 in the previous year. There is very little possibility of organization in this Province owing to the Veterinary Assistants being very few and scattered widely apart, so that at present operations are very difficult. It will be remembered that great opposition to the use of Serum was experienced at first; a very great change has now taken place and it is significant that it was possible to apply preventive inoculation in 22 districts to 1,024 outbreaks and that 86,667 cattle were inoculated. There is still a good deal of opposition in some districts.

93. From enquiries subsequently made in those localities where inoculations were carried out, the results appear to have been highly satisfactory and the mortality small. It is reported that the satisfactory results attending this work are gradually overcoming the prejudices of the people, and that in most districts very little opposition is met with, in fact, during the past year many applications were received from cattle owners in infected localities praying that inoculators might be sent to deal with their animals.

94. The districts which suffered most severely were Banda, Jhansi, Agra, Hamirpur, Naini Tal and Jalaun.

95. *North-West Frontier Province.*—Rinderpest appeared in the districts of Peshawar, Hazara, Dera Ismail Khan and in the Kurram Agency, but the outbreaks were small and localised; only 403 deaths occurring. Preventive inoculation was undertaken in 13 outbreaks and 4,380 contact animals were inoculated. The method proved very efficacious and is yearly becoming more popular, so that outbreaks are reported more promptly.

96. *Punjab.*—In this Province 8,739 deaths from Rinderpest were reported. The districts most severely affected being, Mianwali, Lahore, Gujranwala and

Ferozepore: in the remaining districts the outbreaks are reported to have been small, and the mortality insignificant.

97. Contact animals were inoculated in 270 outbreaks and 60,258 cattle were treated. In one case there were 567 deaths after inoculation out of 12,671 animals, or 4.5%, but investigation shows that these were due to inter-current disease.

98. Opposition to preventive inoculation work is reported to be still met with in out-of-the-way places. The Superintendent, however, considers that this will decline to a minimum as the method is usually attended by most successful results and is uniformly appreciated.

99. *Eastern Bengal and Assam.*—The disease has been prevalent throughout the entire Province and with the exception of Sibsagar and Cachar all show an increased mortality. It was especially severe in Barisal, where great numbers of both bullocks and buffaloes died. Heavy mortality was also reported from Goalpara 5,405; Nowgong 6,741; Kamrup 6,296; and Darrang 4,679; whilst in Sibsagar and Sylhet the mortality was considerable. In the remaining 16 districts the loss was comparatively small.

100. Inoculation by the Serum alone method was undertaken in 359 outbreaks in 27 districts and 50,194 cattle were inoculated. The falling off in numbers is due to fewer animals having been inoculated by the Special Officer employed in the Surma Valley. There was an actual increase of 15,829 inoculations carried out by this Department.

101. *Central Provinces.*—It is reported that the disease has not been so virulent as usual and the losses were small. The total number of deaths reported is only 2,515. The inoculation of serum was undertaken in 194 outbreaks, and 18,056 cattle were inoculated. The greatest number of outbreaks visited were in Raipur 39; Bilaspur 20; Mandla 20; Amraoti, 18; Saugor 17. The inoculations have been generally satisfactory but in some cases the serum has not been properly stored and consequently deteriorated. Arrangements are under consideration for the building of Tahsil serum pits.

102. *Bengal.*—The disease was prevalent more or less throughout the entire Province, but especially so in the districts of the Burdwan, Orissa and Bhagalpur Divisions. The greatest number of deaths occurred in the Sonthal Parganas, 24 Parganas, Sambulpur, Midnapur and Balasore. In the remaining 21 districts the loss was small.

103. Inoculation was undertaken in 72 outbreaks and 11,659 cattle were inoculated. All reports were attended to either by the local Veterinary Assistants or by Inspectors deputed for the purpose.

104. *Madras.*—Outbreaks of a virulent type were reported from South Arcot with 23,393 deaths; Madura 23,049; North Arcot 15,693; Coimbatore 15,519; Tinnevely 11,715; and Chingleput districts 10,242. The total mortality due to this outbreak was 149,666. The Department is only just beginning and the number of Veterinary Assistants available for duty is totally insufficient to attempt to deal with outbreaks of this magnitude. With a view, however, of showing the people the method, as many men as possible were posted to the infected districts.

105. Preventive inoculation was undertaken in 21 districts in 574 outbreaks, and 50,487 animals were inoculated. It is satisfactory to note that the method is coming to be generally recognised as a useful prophylactic, and there is certainly plenty of scope for inoculators in the Presidency.

106. *Bombay.*—The Superintendent reports that the disease was prevalent in all the districts of the Presidency (except Sholapur) as well as in the City of Bombay. The worst affected districts being Kanara, Broach, Bijapur, Dharwar, Ahmedabad, Kaira, Thana, Kolaba, and Belgaum. The accuracy of the reported numbers of animals affected is far from satisfactory. It is stated that inoculation has not met with any marked success in preventing the spread of, or limiting the mortality from the disease, owing to the ignorance and objections of the people, and it is stated that in order to overcome the people's

ignorance of and prejudices against inoculation, pamphlets are being issued. As a matter of fact the conditions existing in the Bombay Presidency are no more unfavourable for the extension of inoculation against Rinderpest than those which exist in many other parts of India. The Director does not seem to realize that better results have been obtained in some Native States, where prejudices are surely as deep rooted. No attempt whatever, worthy of the name has so far been made to deal with the serious animal plagues which exist in the Presidency. There are 35 Veterinary Assistants employed of which 33 are engaged in Dispensary work under local bodies. There are obviously too few men to attempt to cope with outbreaks of Rinderpest, and there has been so far absolutely no organisation whatever. It is hopeless to expect to make any headway in these circumstances, and the amount of success achieved is not less than might have been expected.

107. It is reported that 41 outbreaks were attended to, and 7,009 cattle were inoculated.

108. *Anthrax*.—This disease was dealt with more or less fully in my last Annual Report and I have little to add to the remarks therein made. The orders in regard to this disease are that every effort should be made to obtain accurate information regarding its prevalence and importance. Arrangements are being made in the more advanced Provinces to do this, and material is being sent in either to Head Quarters or to one or other of the College Laboratories for diagnosis. It is hoped that the tracts in which the disease occurs may be mapped out in the course of time and an idea obtained as to what steps should be taken in regard to it. But this will necessarily take a long time and meanwhile as it is impossible to adopt any of the known methods of prevention by living vaccines, we have to content ourselves with the use of Serum in the course of such outbreaks as are definitely diagnosed by competent persons.

109. So far as the present figures show, Madras is the only Presidency where there is much Anthrax, but I am very doubtful about the figures as there has been no confirmation of the diagnosis. Only 17,790 cases were reported from the whole of India and of these Madras contributed 12,511. The best progress in diagnosis has been made in Eastern Bengal and Assam, whence the Superintendent reports that there were 37 outbreaks in 5 districts where preventive inoculation was carried out during the year. The diagnosis was confirmed in the outbreak at Dacca, two outbreaks in North Sylhet and one at Sibsagar. All the outbreaks in Cachar and Sylhet are reported to have been diagnosed microscopically. Two hundred and thirty-four horses, 7,126 cattle and 88 other animals were inoculated, and of these 8 horses, 26 cattle and 2 others died.

110. The Superintendent of the Madras Presidency reports that inoculations for Anthrax were carried out in five districts and 2,353 animals were inoculated, but no details regarding diagnosis are forthcoming.

111. *Black Quarter*.—Enquiries are being made in those Provinces which are sufficiently advanced regarding villages where this disease is serious enough to warrant the adoption of preventive measures. Owing to the manner in which it appears and the rapidity with which deaths result, reports are seldom made to this Department. Only 10,299 cases were reported during the year.

112. The method of inoculation against this disease is that by a single vaccine, and we have until recently, been using Blacklegoids which have generally given good results. During the year the Imperial Bacteriologist has prepared a single vaccine which he claims to be superior to the Blacklegoids. It is now being tried in the field.

113. Only 6,211 inoculations were performed during the year. 2,606 in the Punjab and 3,605 in the North-West Frontier Province. Major Walker reports that the results have been most satisfactory, and Mr. Carless states that his inoculations were carried out in 24 villages where the disease occurs regularly, and that the results are being carefully checked.

114. *Hæmorrhagic Septicæmia*.—As our knowledge of the diseases of animals in this country extends, it becomes more and more evident that this

disease ranks next in importance to Rinderpest. It is satisfactory to note therefore that a contribution to the study of the malady has been made by Mr. Gaiger of the Punjab Veterinary College which is being published in the *Journal of Tropical Veterinary Science*. Nothing definite regarding the manner of spread in the field has been discovered, but it appears pretty certain that the virus is not taken in through the digestive system but that it is a wound infection.

115. The Imperial Bacteriologist has also studied the disease from the point of view of obtaining a method of giving protection against it. He claims to have discovered a vaccine which will confer solid immunity up to at least three months, and this is as much as we can expect from a dead vaccine. The details of this work are published in his *Memoir No. 1*. The vaccine is now being issued for trial in the field. If it confer the immunity claimed, it will be of great use in the districts, for if used in young buffaloes during the rains it will carry them through the dangerous season and many will have a chance of getting the immunity which animals naturally acquire against this disease as they grow older. A vaccine which gives the immunity claimed for this one, is a great advance on anything we previously possessed, and the various Superintendents who so earnestly desire a means of protection should be glad to give it a fair trial.

116. Hæmorrhagic Septicæmia is reported to have caused 34,124 deaths; the great majority of which occurred in the central inundated districts of the Punjab—20,822 deaths.

117. Eastern Bengal and Assam report 8,040 deaths but in the other Provinces the staff has been too small to collect much information.

118. The new vaccine has been given a trial in the Punjab and United Provinces, and as far as can be ascertained at present the results have been satisfactory in the latter. It is, however, too early to allow of a definite conclusion being arrived at. The issue of the old serum was stopped last year but a certain amount which was in hand was used in the Punjab at the special request of the people who had faith in it. This accounts for the number of inoculations shown in that Province.

119. *Foot and Mouth disease*.—This disease has been exceedingly prevalent practically all over India and 26,472 deaths were reported to this Department. The figures are very inaccurate as deaths are not usually reported. The disease sweeps as a huge wave over a large extent of country and practically nothing can be done to prevent spread owing to its extremely contagious nature. Fortunately, as the very great majority of cases are amenable to treatment, many lives can be saved by the adoption of simple remedies, and the Veterinary staff do very good service in treating or advising treatment for animals suffering from it. The simplest bazaar medicines are useful and many animals which would otherwise die or become useless are cured.

120. The Superintendent, Eastern Bengal and Assam remarks:—"On two occasions this year I have seen animals suffering from Foot and Mouth disease dying at the rate of 35 per cent. Through carelessness and ignorance the wounds had been allowed to become contaminated by flies and the animals were really dying from blood poisoning." This shows what may happen when skilled assistance is not forthcoming.

121. *Piroplasmosis*.—This disease exists to some extent in certain parts of the country, but so far as can at present be ascertained by the small staff at our disposal, it does not cause any serious loss. It is mentioned in the reports of Bombay, Punjab, and the United Provinces.

122. In the United Provinces a few cases have been brought to the notice of the Department and there is no doubt that the disease is responsible for a certain amount of mortality.

123. Some cases have been observed in the Central Provinces but the disease was, as a rule, of a mild type and it was only when it was complicated with some other infection, that loss occurred. It is, however, said to be responsible for emaciation and debility.

124. An outbreak of the disease occurred at the vaccine depôt at Belgaum, but no details are given as to mortality, &c.

125. *Other contagious diseases.*—The number of deaths amongst cattle from other contagious diseases which have been reported to this Department was 74,080; the majority being from Madras, 44,988; whilst 17,939 were from Eastern Bengal and Assam and 8,895 from the Punjab. No satisfactory information is forthcoming regarding the rest of the contagious diseases known to affect stock in this country, nor of the numerous parasitic diseases from which they suffer. As the Department expands we may expect more work to be done in this direction.

Camel. 126. *Contagious disease amongst other animals.*—Mr. Leese, the Officer investigating Camel diseases, has submitted an able and detailed report of the work carried out on Camel diseases during the year. He was engaged from the 27th April to September at Mohand on experiments and observations in connection with the rôle played by biting flies in the transmission of Surra. A detailed report of this work has been submitted to Government. The experiments are of considerable interest on account of the proof which has been obtained that the *Tabanus*, *Hæmatopota* and also *Stomoxys* are all capable of transmitting the disease mechanically. It appears certain that the importance of the various flies as factors is not equal: the larger *Tabanidæ* are the commonest and most potent factors in the spread of Surra in the camel. The *Hæmatopota* are next, and the *Stomoxys* is only an occasional agent. This agrees with the observations made in other countries and explains how it is that a few cases of Surra often occur in an outbreak after the disappearance of all but the *Stomoxys*.

127. Unfortunately, conditions were not suitable for the prosecution of experiments to ascertain whether the trypanosoma of Surra undergoes any development in a particular fly. Recent observations in Africa seem to show that there is a great probability that a Tsetse fly does act as a definitive host for *T. gambiense* and *T. brucei*, and a trypanosome of the *T. dimorphon* type. There do not, however, appear to be the same grounds for suspecting that the theory applies to Surra; in fact the evidence so far available points in the other direction, and the only conclusion so far justifiable appears to be that biting flies simply transmit the disease mechanically.

128. Mr. Leese found it impossible to keep the *Tabanus* alive. His experiments with Mosquitoes appear to furnish evidence against a cycle of development of the trypanosome in the Mosquito and he did not obtain any evidence in support of any cycle of development in *Stomoxys*; there was a good deal of evidence, on the other hand, against it.

129. Mr. Leese has worked very hard in collecting information regarding the Surra zones in the grazing grounds, and the knowledge so far gained cannot fail to be of the greatest possible benefit to the State.

130. Surra has been very severe in Camels this year, partly owing to the heavy rain-fall and partly to some of the Corps having taken part in the Frontier expedition and worked in fly zones during the Surra season. There is much valuable information in Mr. Leese's report on this subject.

131. The treatment of Surra in the Camel has received attention both at the Lahore College and by Mr. Leese. Atoxyl, Orpiment and Emetic have been tried but the results so far obtained have been negative; and although it has, in some cases been found possible to keep the trypanosomes out of the blood, they have invariably returned when the treatment was discontinued. Mr. Leese's experiments were much hampered for want of proper accommodation. He makes the following remarks in addition to the report already submitted on the Prophylaxis of Surra:—

"(i) That hill-camel breeding should be encouraged in the North Punjab in the areas which were mentioned and on the lines suggested in the report on Camel breeding sent to Government in February 1908. This would provide Surra-free remounts, suitable for

Frontier work for the 3 Corps which draw their men from north of the Salt Range and would set free a large number of camels to help to remount other corps and to check the increasing prices.

- “(ii) That as the camel grazing country of the Punjab is by extension of canals in certain districts, becoming so limited, and as this is acting so injuriously to the health of camels in the plains, sacrifices should be made in the healthier districts in which sufficient grazing is available, so that corps camels may remain in safety from Surra during the dangerous season; this would cause a greatly decreased death-rate in the camels, and relieve the strain on the camel supply. These sacrifices would be the opening of some of the rakhs in and to the north of the Salt range which have been closed for years to camel browsing. The closure of these rakhs has resulted in a great decrease in the breeding and supply of hill camels from healthy districts, and an enhanced price. It is a matter of great urgency.
- “(iii) That where military requirements will allow it, the rest period of the corps camels should be adjusted so as to cover more fully the worst part of the Surra season, which in the Punjab is the rains and the following six weeks. In some corps the rest period begins on 1st June and ends on 31st August, and in these cases, from the Surra standpoint it would be much better if the rest period were made to begin about 30 days later.
- “(iv) The Surra season will even then slightly overlap the rest period. As far as possible no concentrations or parades of camels should therefore be made which would cause them to march through irrigated or riverine areas or the foot-hills of the Himalayas before the 15th of October. If movements are necessary before that date, double marches are desirable through extensive irrigated districts, or night marching across narrow belts of irrigation (such as occur in Shahpur or Lahore districts) or (where possible) across belts of land subject to inundation from rivers and nullahs (such as the Deg Nullah); the camps should be made on high-lying land well away ($\frac{1}{2}$ mile) from standing water but protected from cold wind and in the foot-hills it would be safer, before about 15th October, to give rations than to send out to graze, provided the camping ground is well chosen. (These rations however should include a full missa bhusa ration.)
- “(v) In May and June before the true “Surra season” a fair number of Tabanus are to be found in some Surra zones where there is a constant supply of standing water; the worst instances of this are to be found here and there in the foot-hills below the Himalayas, and certain localities on the North-West Frontier. In a corps containing much surra, these flies may spread infection and cause new cases and precautions similar to those given in paragraph (iv) are advisable when working camels there, for as a rule it is impracticable to avoid these zones in May and June.
- “(vi) The examination of the blood of camels for surra should be part of the routine of a camel corps. The best time theoretically for this routine would be the rainy season; but owing to the conditions this is as a rule hardly practicable. The next best time is at the inspections at the end of the rest period; at this time every camel (in those corps which have a high mortality) should have its blood examined irrespective of its condition or temperature; most of the cases are of a few months or weeks duration and are showing trypanosomes pretty often. There is not the same ease in picking out cases after the end of the year because as the surra cases get older they do not show trypanosomes so often.

"This routine should be as far as possible repeated at inspections throughout the year. In these routine examinations, two things are of vital importance:—

"(1) Thorough disinfection of the scissors between the testing of each camel (for the disease is easily spread by inoculation).

"(2) The Commandant himself should see that when trypanosomes are found, the blood containing them has been taken from the right camel.

"All cases of fever, mange or debility on the sick list should have their blood tested daily. To do this work, each corps should have at least two microscopes (about 80 rupees each) instead of one, and each regiment to which camels are attached should have one.

"(vii) In my opinion there is room for improvement in the matter of using the microscope when purchasing camels. The method of diagnosis is of course an imperfect one, as sometimes the blood, is free from trypanosomes for days together; until a better means of diagnosis is discovered, however, the microscope should in every case be used, and will prevent a great deal of trouble, especially in the last two months of the year. That very many camels with surra are purchased by camel corps annually is a fact.

"To insist on first class condition is a considerable (though not an absolute) safeguard when purchasing especially at the end of the cold weather; and in this connection the condition of the hump can only properly be estimated by actually feeling it with the hand. This year has been exceptionally dangerous for the risk of purchasing surra camels, because of the exceptional rains. Purchasing is becoming very difficult in many districts; and no great improvement is likely to occur until grazing is opened on a large scale for camel-breeding in healthy districts."

132. A report has also been submitted and published on Camel pox, and work has been commenced on the study of Tuberculosis, Jhoolak, Anthrax, Foot and Mouth disease, Wail, Mange, Filariasis and parasitic diseases.

133. In regard to Foot and Mouth disease, it appears probable that, contrary to the opinion expressed by such European and American authorities as Law, Friedberger and Frohner, Theiler, Gray and Steel, the disease is by no means common, if it occurs at all, in the Indian camel. Mr. Leese states that he has been constantly on the look-out for this disease which is such a great scourge to other ruminants in the Punjab, but has never found nor heard of a case. He has camped for months and kept from 20 to 25 camels grazing in localities in which Foot and Mouth disease in cattle has been at its height but no case has occurred in his camels. His attempts at transmission from the ox to the camel have failed.

134. If these observations be confirmed by further enquiry, it will prove that the camel has an added value in being little susceptible to Rinderpest (Lingard) and Foot and Mouth disease, two of the most widespread cattle plagues of India.

135. Every effort has been made to disseminate practical knowledge of Surra amongst officers and others working amongst camels, and a short pamphlet, written in simple language, is being printed for circulation amongst those who are interested in the matter.

136. Proposals have been submitted for the erection of a small hospital and laboratory for the study of camel diseases at Sohawa in the Punjab. When this is ready the work will be greatly facilitated and many points which cannot now be taken up will be worked out.

137. It is of great importance, for instance, to definitely decide on the susceptibility of the camel to the various contagious diseases which affect other stock

in this country. It is hoped that sanction may soon be obtained for the erection of the necessary buildings at Sohawa, so that work may make more rapid progress.

138. *Rabies*.—Still continues to be exceedingly prevalent and some suggestions have been made to attempt to limit its spread. This may be possible in certain favoured places, but as a rule the local conditions are such that it is impossible to do much. Cantonments and Municipalities may doubtless do a little by imposing a dog tax and making it compulsory to register dogs, and making them wear a collar and tag. The destruction of as many ownerless dogs as possible, is very desirable from many points of view as they not only carry rabies but also some parasitic diseases, and arrangements are generally made by Municipalities to see that this is carried out.

The dog.

139. *Dysentery*.—A very fatal form of contagious Gastro-enteritis exists amongst dogs in India. It is extremely fatal to dogs in Lahore where it is reported to have wiped out, at least, one-third of the imported dogs during last winter. The pariah seems to be immune, or carries the disease in a chronic form. The purer bred the dog the more liable he is to the disease, and the sooner he succumbs when attacked. The chief symptoms are those denoting Gastritis and Dysentery. A note on the subject has been prepared by Mr. Gaiger and is being published in the Journal of Tropical Veterinary Science. It appears probable that the disease is carried by Ticks.

140. *Piroplasmiasis*.—The disease due to *Piroplasma canis* and carried by the Tick *Rhipicephalus sanguineus* appears from further enquiries to be a widespread and fatal one to imported dogs, and to cause very serious losses in them. The Karachi hounds suffered severely during the year. The chief interest which attaches to this disease is the announcement made by G. F. H. Nuttall and S. Hadwen of the successful drug treatment of the malady. They have discovered that Trypanblau and Trypanrot are highly efficient remedies in the treatment, and that the drugs exert a direct and observable effect upon the parasites (a) by causing the pyriform parasites to quickly disappear, and (b) in most cases, by causing the total disappearance of the parasites from microscopic observation in the peripheral blood.

141. The disappearance of the parasites from the blood is usually temporary, as they re-appear in small numbers after an interval of 9 to 12 days but the dogs, as a rule, show no symptoms, and gradually progress towards recovery. In 21 dogs of all ages and varieties of breeds, many of them highly susceptible puppies, 12 were subjected to curative treatment and 8 acted as controls. Out of 10 dogs treated with Trypanblau 7 made a good recovery, and 3 small wormy puppies died. Six of the controls out of seven, died of Piroplasmiasis 7—12 days after inoculation. The dose of the drug used varied with the weight of the dog. One dose sufficed, $4\frac{1}{2}$ c. c. of a saturated solution of Trypanblau were given to a dog weighing 18 lbs.; 5.5 to one of 20 lbs.; 10 c. c. to one weighing 57 lbs., and 1.5 c. c. of a 1 per cent solution to a puppy of $1\frac{1}{2}$ lbs.

142. The only drawback to the treatment appears to be that the drug, being a dye, causes a distinct blue coloration of the skin and mucous membranes of the animals which have been subjected to it; and this coloration persists for some time. This, however, is a small matter against saving the life of a valuable dog. I have mentioned this treatment in the hope that it may be given a fair trial in this country, and that it may be the means of saving the lives of valuable dogs. I have no means of trying it myself but should be glad to hear the results obtained by those who are in a position to do so.

143. A full account of the experiments will be published in the Journal of Tropical Veterinary Science.

144. *Surra*.—Further proof of the natural infection of dogs with surra, has been forthcoming during the year; the whole of the Foxhounds belonging to the Lahore Hunt having been wiped out by the disease. The peculiar feature of the disease was that it was discovered on the 1st of March, or immediately after the cold weather when there are no biting flies. It appears most probable

that the disease was contracted, in the first instance, by a jackal which had eaten an animal dead of surra, and had been subsequently pulled down by the hounds and eaten by them. Both fleas and lice were found on the affected animals and as these insects have been conclusively proved to be capable of transmitting surra from dog to dog, rat to rat, and rat to dog, it seems highly probable that they spread it amongst these hounds, every one of which contracted the disease and died from it.

145. Musgrave and Clegg's experiments regarding the transmission of the disease by fleas, were carefully conducted and all sources of error were eliminated. They placed dogs in an area covered by sand and protected from insects by screens: a dog proved to be free from surra by animal experiment was separated from a surra dog by means of a screen to prevent them from touching each other, but at the same time allowing free passage to fleas. The healthy dog developed the disease on the 6th day. The experiment was repeated a number of times with positive results. All animals were then removed from the flea infected area and only healthy ones introduced after periods varying from 24 hours to 4 weeks. Although the fleas in the sand remained quite plentiful no infection occurred. It seems improbable therefore that the transmission is other than mechanical; there certainly being no evidence of distant transmission or of a life cycle in the flea.

The Fowl.

146. *Fowls*.—Fowl spirochætosus is widespread, and causes much loss in imported fowls. Information is gradually being collected in regard to distribution. The attention of the public has been directed to the importance of getting rid of the Ticks *Argas persicus*. An article on the subject has been published in the Journal of Agriculture.

147. *Chicken-pox*.—Attention has also been directed to the extremely contagious nature of *Epithelioma contagiosum*, and the persistence of the infective material in infected fowl runs. The necessity for disinfection and destruction of dead birds is urgent as the disease is common and causes considerable loss in chickens.

148. *Other diseases*.—Table IV gives the number of animals treated and castrated by Veterinary Assistants on tour. The number of Veterinary Assistants employed was 472 against 403 last year. They visited 64,380 villages against 52,827 last year; treating 342,247 cases, of which (excluding 2,550 castrations) 189,124 were of contagious diseases and 150,573 non-contagious maladies, against 136,481 and 156,497 respectively last year. This increase of 46,719 may be regarded as very satisfactory.

Veterinary Hospitals and Dispensaries.

149. Table V gives the number of these institutions, the Veterinary Assistants employed, and the number of cases treated.

150. From this it will be seen that there are 380 of these institutions now at work in the whole of India and Burma against 336 last year; or an increase of 44. There has been an increase of 5 in the United Provinces; 9 in the Punjab; 2 in Bengal; 3 in Bombay; 5 in Madras; 1 in the Central Provinces, and 3 in the North-West Frontier Province. The number in Burma shows an increase of 15.

151. The total number of in and out-patients treated is 428,402 against 335,035 last year. The increase in the Punjab is very great, 48,252 more than last year. The work of providing suitable accommodation in that province is progressing satisfactorily. Out of the 56 Veterinary Hospitals 54 are built according to the standard plan which provides excellent accommodation.

152. Of the remainder, 7 are accommodated in suitable buildings and the others are in temporary quarters. With the help of the Government grant supplemented in some cases from local funds, it is hoped that suitable accommodation will in time be provided for all. This is one of the few provinces, which has placed a reasonable proportion of the special grant made by the Government of India for the development of Agriculture and Veterinary Services, at the disposal of the Superintendent, Civil Veterinary Department for Veterinary purposes. I understand that a lac of rupees has been sanctioned for five

years for this purpose, and I think that both the Director and Major Walker have every reason to congratulate themselves on the results, as the institutions are generally appreciated by the people and are indeed a very great success in every way.

153. In the United Provinces, 5 Dispensaries have been opened; Agra, Farrukhabad, Fatehpur, Ballia and Azamgarh; and others are to be started at Moradabad, Bareilly, Meerut and Saharanpur. This province, where the inferior institutions provided are doing excellent work, is greatly hampered by the lack of funds, but it is hoped that in the near future a substantial portion of the special grant may be set aside for the purpose of building a well equipped hospital on the standard plan at each head-quarters of a district. It has been abundantly demonstrated that where properly controlled and in the charge of capable Veterinary Assistants the educative effect of these institutions is very great indeed, and they have a very good effect in inducing the people to report outbreaks of contagious disease and have them dealt with by proper methods. There can now be no doubt whatever that the people of the United Provinces thoroughly recognise the benefits derived from the Veterinary Department and that they are anxious to have the operations of the Department extended. The great drawback is that the local bodies have not the funds at their disposal to erect really good and well equipped hospitals.

154. In the North-West Frontier Province a new hospital was opened at Abbottabad and a Dispensary at Hangu.

155. In the Central Provinces the buildings for the Nagpur hospital were completed and occupied.

156. In Bengal two new dispensaries were opened at Chapra and Bhagalpur, and the one at Khulna was closed. Proposals were made by the Chairmen of the District Boards of Hooghly and Champaran and Sub-Divisional Officer at Bettiah for dispensaries.

157. In Madras six new hospitals were opened, i.e., one each in Cocanada, Rajamandry, Trichur, Ellore, Tirrivannamalai and Tanjore. There has been an increase in the number of animals attending, which has this year averaged 2,348 per hospital, and the Superintendent thinks that they are becoming more widely recognised and popular.

158. In Bombay 4 new dispensaries were opened during the year; two in the Satara district, and one each in the Thana and Kanara districts. The buildings of the new City dispensary in Poona have been completed and this has been greatly assisted by the liberality of Rao Bahadur Shet Ram Narayan Amarchand, who contributed Rs. 12,000 towards the cost of the buildings: a fact which rather indicates that these institutions are appreciated by the people. The average of cases treated is over 2,266 per dispensary, and as some of them have been recently started, and the Veterinary Assistants in charge do other work, the number is satisfactory. A large proportion of the animals treated are the property of cultivators and the cultivating classes generally are reported to be availing themselves of the benefits of these institutions more and more from year to year. The Superintendent remarks that "the general utility of the dispensaries has been recognised by Government for some years past and their growing popularity tends to show that they are appreciated by the people. In addition to their ordinary function of providing treatment, they act as centres from which a correct knowledge of the care and rational treatment of live stock can be spread. The educative side of the dispensary is often overlooked." I can only say that in other Provinces where dispensaries are numerous they have been eminently successful in this direction, and have brought the existence of the Veterinary Department to the notice of the people. I consider that they are absolutely necessary to bring the Veterinary Assistants in touch with the people. One or two Veterinary Assistants in a district with no hospital or any other visible sign of their existence are not likely to get much in touch with the hundreds of thousands of inhabitants spread over a large area; whereas the provision of a good hospital immediately attracts attention and is a subject of conversation in the surrounding country.

Thus hospitals in the tahsil towns are a very valuable means of spreading knowledge amongst the people.

159. Table VI shows the receipts and expenditure on Veterinary hospitals during the year. In some provinces fees are levied on Income-tax payers, cultivators' animals being treated free of charge. The fees are very small. In the Punjab the income from this source has risen from Rs. 7,198 last year to 12,444 this year. The Veterinary hospital at Simla shows a small profit to be credited to Provincial funds after paying the salary of the Veterinary Assistant and the interest on the capital cost of the buildings.

III.—BREEDING OPERATIONS.

(1).—BOVINES.

160. Every endeavour has been made during the year to draw attention to the important subject of cattle breeding and in some provinces with a good deal of success. Serious consideration must be given to this matter if we are to avoid infinite trouble and inconvenience in the future. Notwithstanding the comfort which may be derived from the perusal of the census reports which generally tell a flattering tale, there can be no doubt whatever that there has been a serious decline in the breeding industry proper in most provinces on account of the decrease in grazing available, while on the other hand cultivation has greatly extended and the demand for plough bullocks has correspondingly increased. The extension of cultivation tends to destroy the cattle breeding industry. The growing of crops is generally a far more profitable occupation than is the breeding of cattle. When profitable cultivation is possible and grazing non-existent the cultivator does not want to be bothered with cows for breeding purposes as he finds it difficult enough to obtain a sufficient amount of fodder to feed his plough cattle. Stall feeding is far too expensive a business to allow of his breeding nor are the conditions suitable for the industry. If wealthy enough he will keep a cow buffalo in preference to a cow for milch purposes because it will give double the amount of milk from which he can obtain double the yield of *ghee*. In highly cultivated tracts therefore it is the general rule to find good bullocks but not many cows worth anything for breeding purposes. The ideas held by some people that much good would be done in such tracts by inducing the cultivators to set aside cultivated land from which they are now deriving a good income, as grazing grounds and inducing the people to grow fodder crops for breeding stock is purely Utopian at the present time and not in any way a practical suggestion. It is far more likely and indeed occurs far more frequently for the grazier to become a cultivator than for a cultivator to become a grazier. There do exist districts in which cultivation has not so far extended as to entirely destroy all the grazing grounds and in such places a certain amount of breeding does go on and could be encouraged. Our present efforts should be devoted so far as possible to bettering the condition of the grazier, to preserving, so far as may be, existing grazing grounds, assisting the smaller graziers who have partially taken the place of the older breeders by providing them with really good well bred bulls for their herds. It will be found that in the highly cultivated tracts the majority of the cattle are purchased from outside and at present this outside supply must be fostered and encouraged.

161. Much good may be accomplished by encouraging breeders by the supply of good bulls in such tracts in cultivated districts as contain grazing. It is very evident to the most superficial observer that many of our best breeds of Indian cattle are deteriorating or in some cases absolutely dying out and that their places are being taken by inferior cattle. It is our obvious duty to preserve good bulls of such breeds in Government Farms. What is more necessary than anything as a beginning is to carry out the instructions contained in the Department of Revenue and Agriculture Circular No. 30—102-2, dated 21st September 1906, and to have a careful

survey of the country made in regard to its suitability or otherwise for cattle breeding. This survey of the breeding industry or survey of cattle is the first step to be taken. Whenever the question is discussed amongst those officials who are supposed to direct such work the chief thing that strikes one is the appalling ignorance which exists on this subject of the supply of and demand for agricultural cattle and of the breeding industry generally. As a matter of fact until such knowledge is forthcoming it is impossible to know what can be done. The Government of India have fully realized the necessity for this survey and it is for local Governments to take measures to get it carried out. Cattle breeding is one of the duties which is supposed to be dealt with by this Department but we have no staff and local Governments have so far taken no measures to provide any. Much can be done to improve matters and the conferences which it is proposed to hold on the subject in the United and Central Provinces will have a good effect; the only drawback to them will probably be the lack of collected information from each district which should form the basis of the deliberations. There can be no doubt whatever that if Provincial Governments take up this matter seriously much can be done to save the situation and to postpone the unhappy day when more serious deterioration has taken place, good bulls and cows have further decreased in numbers and when the supply will have become too small for the requirements of the cultivator in plough bullocks and when it will become imperative for breeding to be carried on with stall fed cows. Under present conditions good cattle are becoming scarce and the prices of such animals are increasing by leaps and bounds. All cattle are rapidly rising in value and the quality generally is deteriorating. What the price of good plough bullocks would be in the circumstances so complacently looked forward to by those who talk of land coming back from cultivation to grazing as a more profitable pursuit or of breeding from stall fed cows for which fodder has to be grown, may be easily imagined. There are of course tracts where cultivation yields so uncertain a profit that grazing might do as well but the land must be practically useless also as grazing land. This Department, excepting in so far as it is nominally responsible for cattle breeding, has no complaint whatever against the rise in value of agricultural stock because the scarcer and more expensive they become the greater will be the demand for our services to prevent them being carried off by plagues or to treat them for ordinary ailments. This appreciation of the services rendered is already growing rapidly and is greater than seems to be generally recognised. Conferences on the subject of cattle breeding cannot fail to be of service in every province. District Committees of men qualified to give valuable advice on the subject might well be formed and the question carefully studied. Such Committees will be in a good position to advise the Provincial Officers as to what if anything can be done to improve cattle breeding. Wealthy Zamindars should be encouraged to maintain herds of the best local cattle. Courts of Wards, Jails, Agricultural Farms, Agricultural Colleges, etc., should all maintain good herds and act as distributing centres. Whilst district farms in suitable areas should be inaugurated:

162. Table VIII gives the number of Stud bulls, the property of Government and of local boards during the year. The information given under this head is in some cases very meagre and there are probably many more such bulls employed than are shown in the table. There is still a small but steady increase in number but it is somewhat insignificant, i. e., 38 Government bulls against 30 and 536 Local Board bulls, against 458, last year; of these no less than 437 are in the Punjab and 40 in the United Provinces, the numbers in the remainder of the provinces being very small. The Punjab has a declared policy and in pursuance of it 117 bulls were obtained during the year—a very satisfactory increase. The grant for Veterinary improvements enabled districts to buy more bulls than they would otherwise have been able to afford. Here again the wisdom of making a fair distribution of this grant between Agriculture and Veterinary is evidenced.

Stud bulls and their produce.

163. Major Walker remarks "District Boards were reminded that they are practically in entire charge of cattle breeding and that arrangements for

“seeing that stud bulls are properly looked after are purely a district concern. This Department has laid down general principles but local conditions vary and the subject should be very interesting to rural members. In localities where bulls are appreciated and used intelligently the young stock show signs of great improvement since selected bulls have been more liberally supplied. With the rise of prices of bullocks cattle breeding on intelligent lines requires to be fostered by local interest.” Local committees in other words would be best entrusted with this duty.

164. In the United Provinces the same lack of funds for advancing Veterinary work stands in the way of much improvement being effected in the supply of bulls and although some of the district boards are now becoming alive to the necessity of doing something towards improving the class of cattle in their districts and bulls are wanted, they cannot afford to buy them. No doubt the forthcoming conference will help to put matters on a more satisfactory footing in this respect. Most of the bulls are at present the property of Court of Wards estates where interest is being shown in the question of cattle improvement.

165. In the Central Provinces a great deal of attention has been given to the subject especially in the eastern part of the province where the cattle are extremely poor and badly cared for. A special report has been made to the Hon'ble the Chief Commissioner. As the question is of the utmost importance from an agricultural point of view, it is hoped that the enquiry may result in some improvement in the present deplorable condition of the working cattle of the province.

166. In Bengal there have been many demands for bulls from various public bodies and private persons but only ten could be distributed. The question of providing strong, well made, low sized *desi* bulls for the improvement of stock is receiving attention and provision has been made in next year's budget for the purchase of young bull calves. The want of bulls in most parts of the province, especially in Muzaffarpur, Champaran, Durbhanga, Purnea and Shahabad, where good cattle are reared is very keenly felt; wherever the farm bred bulls have been sent the ryots have appreciated them. Arrangements are being made by this Department to purchase some Delhi buffaloes for the Hathwa Raj with a view to improving the milking capacity of the local breed.

167. In Eastern Bengal and Assam a good type of Brahmini bull has been obtained for Dacca, Bakarganj, Rangpur, Cachar and Sylhet. Two Patna bulls have been bought for the Khasi and Jaintia Hills.

168. In Madras eight Nellore bulls were purchased at the Ongole fair, bulls of this breed are now distributed to the districts of Tinnevely, Madura, Madras, Guntur and Vizagapatam. This breed commands a ready sale to purchasers from foreign countries and this year breeders disposed of no less than 472 head to purchasers from the Phillipines, Java and Brazil at high prices. It is estimated that Rs. 60,000 changed hands on this deal alone. It is hoped that every encouragement may be given to breeders in this tract and that the foolishness of selling the best of their cows may be forcibly impressed on them. The ready market and good prices obtained should stimulate cattle breeding in the Nellore district but local prices will of course rise in sympathy.

169. In the North-West Frontier Province 4 bulls were purchased, 2 Dhanni bulls for Peshawar.

170. In Bombay there are no bulls belonging to Government but the Ahmedabad district board has 8, Kaira 5, Surat 1, West Khandesh 1, and Ahmednagar 1. In addition to this, under the wise system introduced by Mr. Orr and continued by his successor Mr. McNeill, 87 bulls have been procured by this Department for the use of the people of the district. The system has proved very successful. The dearth of good stock bulls is becoming keenly felt in some districts and in a great number of cases inferior animals are being used. It is important

that measures should be taken in every district where breeding is possible, to improve and maintain the local breeds.

171. The main results of the working of the Provincial Cattle Farms are given in Table IX. Ball rearing
and breeding
Farms and
Depôts

172. The largest and most important of these is the Northcote Cattle Farm at Chharodi which has continued under the supervision of this Department during the year, at the close of which the herd consisted of 5 stock bulls, 150 cows, 86 heifers, 30 heifer calves, 6 three years old bulls, 10 two years old bulls, 18 yearling bulls and 22 bull calves. Seven stock bulls were sold, 47 bull calves and 48 heifer calves were dropped; a very good percentage. The farm as a bull breeding one is reported to be just beginning to get into thorough working order and in future years a steady and increasing supply of stock bulls will be available for issue, but at present the demand is greater than the supply.

173. The bull breeding farms and depôts in Bengal are situated at Pusa, Siripur and Kalimpong. At Pusa there are only 49 cows, 1 bull and 55 young stock. Three bulls were sent into the districts. The animals bred are reported to be disappointing in shape, and deficient in bone and substance notwithstanding that the cows and bull are good and the grazing and feeding in general are all that could be desired. It seems very probable that Pusa is no more suitable for cattle breeding than it has proved to be for horse breeding and rearing. The rejections from the young stock are many. The herd is under the management of the Imperial Agriculturist. The Inspector General of Agriculture has decided not to keep the herd after next year. Proposals with regard to the transfer of the herd to the Bengal Government are under consideration.

174. *Siripur Farm.*—There are 42 *desi* cows and 1 stud bull besides young stock. Four bulls are ready for issue and there are 9 selected two-year old stock and 56 calves. Four bulls have been let loose in the *dehat* in the neighbourhood of the farm and are reported to be doing useful work. The results are reported to be satisfactory and are due to the interest taken in the farm by the Superintendent Mr. M. Mackenzie.

175. *Kalimpong.*—This farm was started in January 1908 under the management of the St. Andrew's Colonial Homes, with 28 cows and 2 bulls of the Siri breed purchased in Bhutan. These animals being of hill breed and very susceptible to Rinderpest suffered severely from an outbreak of that disease and at the end of the year only 18 cows remained. Efforts are being made to obtain more cows.

176. *In the Central Provinces.*—Much attention has been given to cattle breeding by the new Superintendent. The Telankheri farm he does not approve of, as the site is not a good one for a cattle farm, the land producing poor grazing and the cattle, being stunted in consequence; moreover the stock is more than the land can carry. It may be considered advisable to change the site of this farm. There are only 46 cows present and a total stock of 166 head.

177. *Powarkhera.*—This farm is reported to be making good progress and the quality and condition of the Malwi herd is good. There are only 21 cows and the total stock numbers 51 head.

178. *Kindri.*—In the Mandla district is very satisfactory and the stock could be safely increased.

179. *Nimkhera.*—In the Ellichpur district is not being carried on as originally intended but there is every reason to think that this condition will be altered and improved. New cattle of the Khamgaon breed will be purchased by the Superintendent.

180. It may be remarked that none of these farms are under the control of the Provincial Superintendent of this Department. The Agricultural Department has, the Superintendent considers, signally failed; as the graduates while capable of looking after the farming are totally incapable of taking charge of

breeding animals, as they lamentably fail in observing changes of condition and health in them. They cannot in fact be trained in Zootechny in this country as the means do not exist at present. It is expected that cattle breeding will be transferred to the control of the Superintendent of this Department in the near future and that Veterinary Assistants trained at our Imperial farm at Hissar will be utilized.

181. In the United Provinces steps are being taken to acquire the land for a bull rearing farm it is proposed to establish as an experimental measure at Kheri. The smaller graziers here badly require assistance in procuring good herd bulls and the people are very hopeful of the success of this venture. Good mature bulls are very difficult to obtain in the open market and unless some definite and progressive policy be adopted it will soon be impossible to obtain suitable bulls for the small graziers in Kheri or for other parts of the province.

182. In the Punjab the scheme for a bull farm in the Jhelum colony has not progressed owing to the difficulty experienced in obtaining the necessary grazing rights. If sufficient grazing cannot be obtained the scheme will probably have to be dropped. The Punjab has the advantage of being able to obtain bulls suitable for many of the districts from the Imperial Farm at Hissar.

Sheep breeding.

183. One has only to read the remarks in the daily papers and in the reports of the Forest Department to realize that the improvement of the wool bearing capacity of the hill sheep is becoming an absolute necessity. It was recently stated that the increase in the size and number of the flocks of sheep which are grazed for part of the year in the lower hills is a cause of anxiety. Whole hill sides are being denuded of forest growth and in Kangra the shepherds have had to leave their hereditary grazing grounds and go elsewhere in the winter. It is asked, is the surplus capacity of the forest areas to be used for the production of wool or of timber. The view of the Local Government is that hill forests must be protected even if this implies putting a limit to the increase of flocks kept for pastoral purposes. In short the sheep will decrease. In these circumstances it is well that operations have been begun on a small scale in the Punjab and North-West Frontier Province to improve the quality as well as the yield of wool of the short tailed *Gaddi* sheep. A few merinos have been imported into the Hazara district and the Tochi Agency. There are altogether 17 Merino rams present, 12 in Hazara, 1 in the Tochi Agency and 4 in Dera Ismail Khan. Their services are appreciated. In order to obtain any real benefit from the operations, numbers of these sheep are required and a constant supply must be maintained so as to gradually grade up the local sheep. A number of New Zealand Alp rams are being imported for the Kangra district and are expected to arrive shortly.

184. None of the other provinces report anything regarding sheep breeding. It offers a great field for enterprise.

Camel breeding.

185. The question of camel breeding in the Punjab has received a good deal of attention. The breaking up of the areas in which camel breeding has flourished is practically killing the industry so far as the supply of military camels is concerned. It may not perhaps be realized that the canal scheme in the Multan district will destroy the only remaining camel breeding area of any size between the Indus and the Sutlej. It is no matter for surprise, therefore, that good camels suitable for military transport purposes are becoming very scarce, high priced, and difficult to obtain. The various schemes which have been made, such as endeavouring to breed camels on canal tracts were doomed to failure and nothing now remains, if the camel is to exist, but to provide grazing in suitable surra-free areas. The grazing lands of the Punjab are being surveyed in this connection and proposals have been made to open certain surra-free grazing areas for breeding purposes in the Punjab.

(2)—EQUINES (UNDER LOCAL BODIES).

Horse, pony and donkey stallions.

186. The number of horse, pony and donkey stallions present at the beginning of the year is shown in Table X. There were 64 horses, 104 ponies and 99 donkeys against 59 horses, 112 ponies and 65 donkeys in the previous year.

187. They were distributed as follows:—5 horses, 56 ponies and 70 donkeys in the Punjab; 8 horses, 10 ponies and 15 donkeys in the North-West Frontier Province; 44 horses, 6 ponies, and 14 donkeys in the United Provinces; 7 horses, 12 ponies in Bombay; 12 ponies in Madras; 1 in Bengal and 1 in the Central Provinces. The slight decrease in number was due to the fact that the United Provinces Government was unable to purchase the full number required during the year on account of lack of funds as was also the Punjab; but these have since been purchased.

188. Table XI.—Gives the services of horse, pony and donkey stallions. There were altogether 166 horse and pony and 99 donkey stallions on the register and of these 55.59 horse, 107.23 ponies and 94 donkeys were actually employed at stud, the number of mares covered being 2,900 by horses 4,770 by ponies, 3,740 by donkeys or an average of 52.17, 44.48 and 39.78. Thus, whilst the horse and pony breeding remained normal, there was a falling off in mule breeding especially in the Punjab and North-West Frontier Province. There is every reason to hope, however, that now that the supply of donkey stallions has been placed on a more satisfactory basis and that the donkeys received from Europe have become acclimatised and are doing good work, mule breeding will improve greatly in the Punjab and North-West Frontier Province. The reason for the falling off in average coverings this year is that the services of the newly imported donkey stallions were strictly limited, so that although a greater number of mares was covered, the average is lower.

189. There was an improvement in horse breeding in the North-West Frontier Province.

190. The slight decrease noted in the United Provinces is accounted for by the recent famine during which many breeders were obliged to sell their mares. The operations continue to be very popular and successful in this province.

191. In Bombay there is a slight improvement, but horse-breeding in the Deccan is reported to be a rapidly declining industry and the stands at Sholapur, Karmala, Nasik, Chalisgaon and Jalgaon have done badly during the year, scarcely justifying their existence. The decline in the Deccan is stated to be due to economic changes resulting in the necessity for horses not being felt by the people to anything like the same extent as formerly; also to the fact that a long series of bad years has forced many breeders to part with their good mares. The Superintendent considers it improbable that horse breeding will long survive in the Deccan.

192. In Gujrat things are somewhat different and the results are more encouraging.

193. The Superintendent of the Central Provinces thinks it somewhat regrettable that no stimulus can be given to horse breeding as the plateaux of Balaghat and Seoni appear to be ideal for the purpose. It would be perhaps as well to profit by previous experience and save our money.

194. An attempt is to be made to improve matters in Madras.

195. Table XII gives the average cost of feed, keep, attendance, etc., of horse, pony and donkey stallions. There has been an all-round increase due to a general rise in prices.

196. Table XIII gives the abstract particulars regarding horse fairs and Fairs and shows held in the non-selected districts.

197. Table XIV gives the abstract particulars regarding cattle fairs and shows. 133 were held against 72 last year. The total amount distributed as prizes was Rs. 29,590-12-0 out of Rs. 44,875-13-6 available. One hundred and forty-six medals were awarded against 53 last year. The total number of animals competing for prizes was 80,915 against 14,731 last year and the total number of stock present was 760,812 or about the same as last year. The influence which these shows have on the encouragement of cattle breeding varies considerably in different places and the remarks made last year in this connection express my views on the subject. It is generally not to be expected that owners of good cows and young stock will take the risk of travelling their stock long distances and running the risk of the "evil eye," theft and exposure to diseases for the sake of a small money prize.

198. The prizes which are given at fairs perhaps excite some local interest and as well managed fairs produce a very large income to the districts it is well that a small amount in prizes should be distributed to cattle owners. Shows, if held in convenient places in good cattle breeding centres may excite some interest and they are undoubtedly a great success in some places. It is a matter for Local Governments to decide what is best to be done in regard to shows. Fairs will take care of themselves.

IV.—SUBORDINATE ESTABLISHMENT.

Numbers, su-
pervision and
work per-
formed.

199. Table VII gives the strength of the subordinate establishments as they stood at the end of the year. All the services are now Provincial except that of the United Provinces. Bombay has only just arranged to organize the Subordinate Department and it is hoped that some improvement may be possible when the scheme is developed and gets into working order. The development of the subordinate establishment is much hindered in the United Provinces for lack of funds and the Superintendent remarks in this connection that:—
“To give effect to the scheme of Government to raise the subordinate veterinary staff to an ultimate strength of 200 by a gradual yearly increase in number, according to the financial position of the District Boards concerned, every endeavour was made to induce these bodies to increase their Veterinary Staff where it appeared most necessary. Nineteen out of 48 districts agreed to do so and it was hoped that at least 30 men would be added to the strength. Many of the District Boards have had to forego their original intention to entertain the additional men with the result that the increase will only be about half that which was originally intended and required. It will easily be realised how hopelessly impossible it is for a Veterinary Assistant to cope, single-handed with a severe outbreak of disease in a large district.”

200. In the more advanced provinces there can be no doubt whatever that, the work of the Department is much appreciated and that more assistance, necessitating extra staff, is wanted; the present staff being numerically inadequate to deal with the work, especially when epidemic disease is rife. The weakness lies in the necessity for closing Veterinary Hospitals when men have to go on tour or leave. Two men in each tahsil is now generally recognised as necessary.

201. The lack of trained men from the vernacular College is deplorable. The College has been very much overcrowded and the number of students must be decreased to maintain efficient training. There is a demand at the present time for over 500 men whilst the College cannot train a sufficient number to even replace casualties. Urgent representations have been made to Government with a view to the establishment of a second vernacular College, which is very urgently needed. Now that the magnificent and costly Agricultural Colleges are nearing completion it is hoped that sanction may be given for this College which opens up a useful career to the sons of agriculturists for whom immediate and useful employment is forthcoming.

202. The work of the superior staff, especially is becoming more and more arduous as the subordinate staff and the work increase out of all proportion to its strength. We can obtain no addition to our strength of Imperial officers, and it is clear that if the department is to make any progress in dealing with contagious diseases such as Anthrax, Hæmorrhagic Septicæmia, Black Quarter, etc., we must have a more highly trained native agency, who can give efficient assistance to the superior staff, and who will be capable of dealing with epidemics efficiently in the field. Such officers should be placed in charge of the Veterinary Assistants in workable areas. This it appears to me, must come at once if we are to be efficient and it will necessitate the establishment of an Imperial Veterinary College, training men up to the standard of the European or Continental Colleges and granting a degree of B. Sc. in Veterinary medicine. I think good material can be found in the country.

203. The following table will show at a glance the sanctioned establishments of the various provinces, the number added, and the strength at the end of the year:—

Province.	SANCTIONED SCALE.				No. EMPLOYED DURING 1908-09.				INCREASE DURING 1908-09.				REMARKS.
	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Dressers.	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Dressers.	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Dressers.	
Punjab	--	24	170	--	12	127	--	--	1	1	11	--	
North-West Frontier Province.	--	2	26	--	2	26	--	--	--	--	6	--	
United Provinces	--	2	210	--	9	100	--	--	--	--	4	--	
Bengal	--	9	229	--	6	56	--	--	--	--	6	--	
Bombay	--	4	215	--	1	34	--	--	--	1	2	--	
Madras	--	3	132	--	3	47	--	--	--	1	20	--	
Central Provinces and Berar.	--	8	120	--	6	75	--	--	--	--	10	--	
Burma	--	5	120	--	10	107	--	--	--	--	17	--	
Eastern Bengal and Assam.	2	8	120	--	2	33	--	--	--	--	8	--	
Sind, Baluchistan and Rajputana.	--	--	2	--	--	11	--	--	--	--	2	--	
<i>Imperial.</i>													
Government Cattle Farm, Hisar.	1	--	2	--	1	2	--	--	--	--	--	--	
Bacteriological Laboratory.	--	3	10	--	2	10	--	--	--	--	--	--	
Veterinary Officer Investigating Camel Diseases.	--	--	2	--	--	2	--	--	--	--	1	--	
Total	26	145	1,348	10	1	52	620	10	--	2	87	--	

PART B.—IMPERIAL ADMINISTRATION.

BACTERIOLOGICAL LABORATORY.

204. Captain J. D. E. Holmes, M.A., D. Sc., was in charge of the laboratory and Mr. H. E. Cross held the office of Assistant Bacteriologist.

205. The appointment of a Physiological Chemist in the place of the second Assistant Bacteriologist was sanctioned and after some delay Dr. Hartley, D. Sc., (London) was selected for the appointment but did not join until the end of the year. Mr. R. Branford was attached to the laboratory. Mr. Kriebel, Head Laboratory Assistant returned from leave in September and the second and third Laboratory Assistants, Messrs. Keiller and Goff, remained in their respective posts.

PREPARATION OF SERA.

Rinderpest Anti-Serum.

206. During the year under report 545,974 doses have been prepared against 482,833 doses during the previous year. The serum issued amounted to 627,349 doses as against 440,585 doses or 186,764 doses in excess of the previous year.

207. The results of the Anti-Serum injections carried out in the field and collated from the respective returns received in this office are as follows:—

Province.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			Number of animals which died after inoculation.			REMARKS.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab ...	270	4,535	...	...	60,358	...	...	613	...	...
North-West Frontier Province.	13	217	...	...	4,380	...	...	...	...	...
Bengal ...	73	1,954	...	...	11,659	...	...	115	...	...
Eastern Bengal and Assam	359	7,873	121	...	50,194	10	...	444	...	...
United Provinces ...	1,024	5,198	2	...	85,867	200	...	63	...	...	At the request of villagers in the vicinity of the Laboratory 113 head of cattle were inoculated during August and September 1908, and all were protected and the outbreak was checked.
Central Provinces ...	194	2,515	...	...	18,056	...	...	5	...	...
Madras ...	374	18,998	80	...	48,257	2,230	...	64	...	...
Bombay ...	41	611	...	...	7,009	...	...	136	...	...
Mysore ...	51	2,310	...	...	13,273	...	...	13	...	...	The Inspector of Cattle Diseases, Mysore, finds that the results have been very successful and the demand from ryots has been very great.
Burma ...	35	456	...	...	2,336	...	...	161	...	...
Sind ...	1	68	1	...	1,487	17	...	3	...	...
Kotah State	1	6	...	...	22	...	...	...	...	...
Nagod State	7	2,311 deaths reported since April 1908.	137 Bul.	...	358	42 Bul.	...	8	...	1	Inoculations were started on 14th February 1909 for the first time in the State.
Total ...	3,642	68	46,850	241	303,156	2,499	...	1,624	1	...	Death rate 0.40 per cent.

* These figures do not include outbreaks in Military dairy farms.

208. Every endeavour was made to prepare as large an amount of this serum, as possible. The work however was much impeded by continual outbreaks of Foot and Mouth disease, which was prevalent among cattle in the hills throughout the whole year and was introduced into Muktesar almost every month by newly arrived batches of bulls. The segregation of all fresh batches of bulls, the treatment of affected animals and the carrying out of precautions against the introduction of the disease into the laboratory sheds, has greatly increased the work of the Veterinary staff.

209. A proposal was submitted by the Imperial Bacteriologist to erect more kraals for the accommodation of the sanctioned reserve of hill bulls and the Executive Engineer was asked to prepare plans and estimates for the same in consultation with him, but so far no action has been taken in the matter.

210. The Imperial Bacteriologist reports scarcity of water during the months March to June and recommendations have been made by the Executive Engineer to ensure better control over the expenditure in private houses, etc.

211. The demand for anti-Rinderpest serum was greater by 186,764 doses than that of last year and the number of doses issued amounted to 81,375 more than manufactured. As was stated in the last Annual Report the laboratory is working close in the limit of what can be produced.

212. There is no doubt that each year will continue to show a large increase in the demand for this serum. The Ceylon Government and the Native States of Mysore, Coorg, Travancore, Cochin, Junagadh, Dhar, Baroda, Alwar, Kotah, Bharatpur and Nagod desire to be supplied with it. With the increase of the demand in British territory we shall be reluctantly obliged to withdraw the supply for abroad and Native States.

213. Anti-Rinderpest serum is reported to have been successful in curtailing outbreaks and preventing heavy loss among cattle and the popularity it has attained is entirely on its merits.

214. A number of experiments were conducted to ascertain the length of immunity resulting from varying doses of serum and also the effect of exposure to natural infection following the injection of serum. The results appear to show that the passive immunity afforded by large doses of serum is of a few weeks duration, but that when exposed to natural infection during this period animals contract a mild form of the disease without necessarily showing any clinical symptoms, and an active and durable protection follows.

215. Experiments have been carried out by the Imperial Bacteriologist with a view to discovering other methods of immunizing and of preparing serum, but no results of any importance have as yet been arrived at. The use of peritoneal washings as carried out in the Philippines is being tried. It saves 50 per cent in cost of the serum and the experiments so far made are promising.

ANTHRAX ANTI-SERUM.

216. Twenty-nine thousand seven hundred and eighty-six doses of this serum were prepared as against 16,091 doses and 30,933 doses were issued against 38,772 doses during the previous year.

217. The following table shows the result of injections carried out in the field with Anti-Anthrax serum :—

Provinces.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated and in course of outbreak.			Number of animals inoculated.			Number of animals which died after inoculation.			REMARKS.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
United Provinces	11	59	...	...	953	...	...	3	...	...
Madras	29	455	...	...	2,953	...	...	...	...	...
Eastern Bengal and Assam	37	820	20	234	7,128	89	8	26	2	...	
Total	77	7	835	20	234	10,433	89	8	28	2	Death rate 0.35 per cent.

218. The decrease in the demand for this serum is due to the fact that, as pointed out in last year's report the Veterinary Departments are not in possession of accurate information regarding the prevalence of Anthrax, and until further facilities exist for its collection and the correct diagnosis of the disease, it is not possible to successfully deal with it. The orders are that serum shall only be used in actual outbreaks in which the disease has been diagnosed properly.

219. Investigations as to the best methods of preparing serum of high potency, the duration of the immunity conferred by serum, and the practical application of the combined use of serum and virus, are being carried out. The Imperial Bacteriologist states that the results arrived at so far indicate that the serum which gives immunity from three to six weeks against the inoculated virus, is of practical value in the suppression of actual outbreaks, and that in areas where Anthrax is endemic, the simultaneous use of serum and virus is a safer and more reliable method of protection.

220. Most of the serum issued has been sent to the Veterinary Officer of Eastern Bengal and Assam. This officer reports that it has had good results and that cattle owners approve of its use.

221. The following is a statement of inoculations performed by the Veterinary Officer in the Surmah Valley. The diagnosis in most of the outbreaks was confirmed in the Laboratory :—

Number of outbreaks.	Outbreak during the month of 1909.	UNINOCULATED.				Date of inoculation.	INOCULATED.			Serum No.	Dose administered per animal.	REMARKS.
		Number died before inoculation.	Number not inoculated.	Number attacked.	Number died.		Number inoculated.	Number attacked.	Number died.			
1	January ...	6	37	2nd January 1909 ...	183	16	20	Standard dose 5 c. c. Mr. McClellan notes that the opinion of people is good.
2	February ...	8	93	2	1	26th February 1909	399	...	...	16	20
	" ...	3	20	...	...	27th " ...	25	...	...	16	10
	" ...	11	107	4	3	17th " ...	383	...	...	16	20
3	March ...	9	86	11	6	3rd March 1909 ...	305	...	...	16	20
	" ...	20	1,130	125	12	17th " ...	160	3	1	16	10	
	" ...	5	200	...	...	21st " ...	395	...	...	16	10

222. The serum was also used in an outbreak of Anthrax among the Poona Horse. The return furnished by the Veterinary Officer shows that from January to May 1908, 74 horses and mules had been attacked. On 21st May inoculations with the serum were commenced and continued up to July. From the former date, four cases occurred in June among the non-inoculated, and among the inoculated three were attacked more than three weeks after the serum injection. No further cases were recorded.

HÆMORRHAGIC SEPTICÆMIA.

223. The preparation of anti-serum or vaccine of high protective power was under investigation. A serum has been prepared which in doses of 5 to 10 c. c. affords complete protection against the inoculated virus for a period of six weeks, also a dead vaccine which protects for a period of two to three months. These products are under trial as to their suitability for field operations. The serum is not likely to be of much use but the vaccine may be, if used during the rains in villages where the disease is enzootic. 5,140 doses of the new vaccine were prepared and 3,500 doses issued on trial.

224. The following statement shows the results of injections carried out in the field both with the old Anti-Serum and vaccines:—

Province.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			* Number of animals which died after inoculation.			REMARKS.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab	43	380	...	...	6,205†	...	...	13	...	...	* These figures are not reliable.
United Provinces	49	225	...	...	3,854	...	...	35	...	...	† Chiefly with old serum.
Madras	5	47	...	...	477	...	...	...	...	...
Eastern Bengal and Assam	1	79	...	...	350	...	...	...	...	...
Total	97	736	...	...	10,886	...	...	48	...	...	Death rate 0·46 per cent.

225. The Imperial Bacteriologist remarks: "With regard to the efficacy of Hæmorrhagic Septicæmia vaccine, the Superintendent, Civil Veterinary Department, United Provinces, reports that he tried the Vaccine in an outbreak in which 10 animals had died in two days and 4 were sick. One hundred healthy animals were vaccinated and the village kept under observation for three months, but no deaths were reported, except two sick animals (uninoculated) during that interval."

CHARBON SYMPTOMATIQUE.

226. A method of preparing a single vaccine in pillule form has been worked out. The vaccine was tested by a large number of experiments and gave good results. One thousand eight hundred and sixty doses were prepared and 1,310 doses issued to various Superintendents of the Civil Veterinary Department. A special Injector for inoculating the pillules is also supplied with the vaccine.

227. Attempts are now being made to prepare the serum recommended by Leclainche for immunizing against Charbon Symptomatique. This has been asked for by Major Walker for use in actual outbreaks and would prove of great value if used in combination with vaccine in certain cases.

228. Blacklegoids have been largely used in the Punjab and North-West Frontier Province for protecting animals against the disease, and the following

statement collated from the returns shows results in the field. They have proved very successful :—

Provinces.	Number of outbreaks in which inoculation was undertaken.	Number of animals died un inoculated in course of outbreak.			Number of animals inoculated.			Number of animals which died after inoculation.			REMARKS.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab	16	...	40	...	...	2,806	...	...	1	...	
North-West Frontier Province and North Punjab.	24	...	...	...	...	3,605	...	...	...	...
Total	40	...	40	...	...	6,211	...	...	1	...	

229. *Mallein*.—9,238 doses of Mallein were prepared as against 3,753 doses during the year 1907-08. The total issue was 9,052 against 7,926 doses last year. Mallein is made from cultures obtained direct from cases of Glanders. Fresh brews are prepared every four months. It is tested before issue.

230. *Tuberculin*.—306 doses of Tuberculin were prepared against 34 doses during the past year. The total issue for the year amounted to 144 doses.

231. *Specimens examined*.—138 specimens were received for examination against 69 during the previous year and the results communicated to senders.

232. *Training of Veterinary Assistants*.—46 Veterinary Assistants were trained at Muktesar and 26 at Bareilly making a total of 72.

233. The following officers of the Civil Veterinary Department worked at the Laboratory.

(1) Mr. G. T. D'Silva, Assistant Principal, Veterinary College, Madras, a course of instruction in sera preparation and Laboratory technique during May and June.

(2) Mr. Gaiger—Investigation work while on College vacation, from July to September.

(3) Mr. Aitchison—Deputed for instruction in methods of Rinderpest investigation in the month of June.

(4) Mr. Cattell—In training from the month of December 1908, up to date.

234. During the year 1908-09 the following doses of sera were prepared and issued from the Muktesar Laboratory :—

Serial No.	Name of Sera.	Opening balance.	Received back from districts and re-issued.	Prepared.	Total output.	Issued.															Balance in hand.	
						Punjab.	South Punjab.	North-west Frontier and North Punjab.	United Provinces.	Bengal.	Eastern Bengal, and Assam.	Central Provinces.	Madras.	Bombay.	Sind, Baluchistan and Rajputana.	Burma.	Madre States.	Military Department.	Foreign countries.	Used in experiments at the Laboratory.		Total (less).
1	Rinderpest	29,071	20,867	645,074	669,913	24,000	47,038	67,918	181,805	46,100	86,000	25,898	92,063 * Includes 68 doses to Coorg.	5,260	2,200	10,000	41,987	2,057	11,800	12,228	627,549	41,369
2	Anthrax	4,253	950	29,786	34,989	...	...	...	...	500	19,070	20	...	...	...	...	200	12,200	...	942	20,032	4,058
3	Haemorrhagic Septicemia	15,453	...	5,140 Vaccines.	5,140	300	300	300	2,300	...	...	...	...	...	...	...	200	...	...	206	2,506	...
4	Charbon Symptomatique	11,300†	...	1,600 Filiules.	1,300	...	...	...	...	500	300	...	...	...	...	500	...	...	...	...	1,310	690
5	Mallein	2,366	...	2,328	12,404	84	...	504	106	200	...	...	...	50	8	24	250	6,338	...	798	2,052	2,352
6	Tuberculin	2	...	206	208	6 To Mr. L. S. at Mohand.	...	...	...	...	...	24	...	...	...	...	...	116	...	...	124	108
	Total	126,226	21,817	592,304	729,594	24,300	47,336	68,720	184,111	49,000	102,720	25,977	92,063	5,300	3,703	10,024	42,227	12,704	11,300	15,762	672,869	51,308

† Discarded.

* 1,620 doses to Patna Dangar.

‡ Includes 780 doses discarded.

235. *Research*.—In accordance with the pressing recommendations of the Advisory Committee of the Royal Society every effort has been made to relieve the Imperial Bacteriologist from all unnecessary work in connection with the preparation of sera, etc. By reorganising and adding to the staff he has been so far relieved of executive work in this direction that he has placed on record his acknowledgment that he can now devote the greater portion of his time to research work. Indeed it has been possible for him to spend the whole of the winter from November to March at the Branch laboratory at Bareilly, leaving the work at Muktesar under the control of the Assistant Bacteriologist. The difficulties in the way of preparing serum at Muktesar are very great and it scarcely seems fair to throw such heavy responsibility on the shoulders of a junior officer, however good he may be, and I am not very well satisfied with the arrangement; however, we shall see how it works. The research work of the year has been dealt with in detail in several papers which have been forwarded for publication in the form of a Memoir.

236. The programme of research included the following subjects :—

I.—Anthrax.

II.—Hæmorrhagic Septicæmia.

III.—Trypanosomiasis.

The most important results arrived have been :—

237. *Surra*.—An epoch making advance is recorded in the drug treatment of this previously absolutely fatal disease in equines. Captain Holmes is to be congratulated on the successful adaptation of Laveran and Thiroux's method, so successfully applied to the treatment of other forms of trypanosomiasis by Thiroux and Teppaz. This method consists in the use of Atoxyl and Orpiment and Orpiment alone, and Captain Holmes has also used a combination of Atoxyl, Sodium Arsenite and Orpiment as well as Atoxyl and Arsenious Acid. There are at present under observation about 25 horses, ponies and mules treated by these drugs which have remained free from trypanosomiasis for periods varying from six to twelve months after cessation of treatment. None has shown a return of Trypanosomes in the blood. Many of the animals were in an advanced stage of the disease before treatment was commenced. The results of the observations on this treatment justify the conclusion that a complete cure has been effected and not merely a temporary tolerance of the parasites. The treatment is simple, inexpensive and of short duration (3 weeks). The animal rapidly regains condition and can be put to work shortly after the course of treatment has been completed.

238. *Hæmorrhagic Septicæmia*.—The preparation of a dead vaccine which it is claimed gives immunity for a period of two to three months and of an Anti-serum which protects for about six weeks.

239. *Charbon Symptomatique*.—The preparation of a single vaccine in pillule form which it is claimed gives an active and durable immunity without risk of inoculation fatalities and the designing of a special injector for use with the pillules.

240. *Rinderpest*.—The results of a number of experiments have established definitely, that immunity results from (I) Single and increased doses of serum alone, (II) serum and virus, (III) serum and contact with infected animals. They further prove the very great value of the Anti-Rinderpest serum and the method of prophylactic inoculations which have for some years been carried out by the Civil Veterinary Department. The Imperial Bacteriologist states that the protection afforded by the use of serum alone is of comparatively short duration, but that when animals so treated are exposed to natural conditions of infection, as occurs in an out break, they contract a mild form of the disease without necessarily evincing any clinical symptoms and thus acquire an active and durable immunity against further attacks.

241. *Anthrax*.—The investigation of methods of immunising against this disease is still incomplete and is being carried out.

242. *Strangles*.—Experiments are being made in the preparation of an anti-serum and vaccine.

243. *Piroplasmosis*.—Various methods of treating Canine piroplasmosis are being tried.

244. *Tetanus*.—New methods of preparing an anti-toxin or vaccine are being investigated.

245. *Forests*.—A large quantity of fuel and charcoal was obtained from a distance of 3 to 4 miles.

246. The Nursery at Ritani was extended and a large number of Pine and Deodar seeds were sown and grown-up trees replanted. To fill up blanks and to replace inferior species, Kail (*Pinus excelsa*) is being tried as an experimental measure. About 1,300 Deodar and Walnut seedlings were planted in different places, but a great number of the former species died.

247. *Bareilly Branch Laboratory*.—Work was conducted at Kargaina throughout the winter months. Twenty-six Veterinary Assistants received instruction. Unfortunately, as in previous years, loss of time and animals occurred from infection spreading among cattle under experiment and gave further proof of the necessity of extending the Depôt. Captain Holmes wishes to keep on record the utility of the branch Laboratory. Since its establishment in 1902, many of the most important observations regarding Rinderpest serum, Dourine, Surra and Epizootic Lymphangitis have been carried out there. Each year the scope of work is increasing and the convenience of the experimental station in the plains is more appreciated.

248. Captain Holmes acknowledges the consistent and excellent work performed by the whole staff throughout the year. He has worked hard and is deserving of credit for the results achieved.

GOVERNMENT CATTLE FARM, HISSAR.

249. The following officers were in charge of the Farm during the year: Mr. C. W. Wilson until he was transferred to the United Provinces of Agra and Oudh in June 1908; Mr. E. Burke, Deputy Superintendent until the return of the regular Superintendent, Major Farmer, from furlough in Europe in November 1908.

250. This is the tenth year the farm has been under the management of this Department, and it is satisfactory to be able to state that the work continues to make good progress. This may be attributed to continuity of an intelligent policy and to the energy of the officers entrusted with the work of carrying it out. Not only have there been no marked deviations from the policy laid down but we have been lucky enough to retain the services of the same officer as Superintendent for a number of years, so that he has gained experience year by year.

251. The system continues to give very good results, there is a marked improvement all round both in the property and in the stock and our position annually becomes stronger.

252. The same rigorous weeding of stock is being carried out so that it can now safely be said that the herd is far and away the finest in India. Animals not up to our standard are readily bought by Zamindars and others interested in breeding and purchasers from Foreign countries readily take our rejections at a very good price.

253. Every branch of breeding has been very successful during the year. The percentage of calves dropped has been high as has that of mules, whilst donkey and sheep breeding are also in a flourishing condition.

254. Every endeavour has been made to improve the property by making pakka roads cleaning and levelling fields and tree-planting; a pakka road has been made through the Mundiawala block and another to the Chowni stock yards whilst the roads and fields have been raised and levelled in the latter. All masonry outlets of water-courses have been put in order.

255. The important question of tree-planting has received as much attention as possible. Nurseries have been established in the Mundiawala, Chowni and Sully blocks and over 700 young trees have been planted along the roads and water-courses. It is hoped that during the coming year 1,000 more may be transplanted.

256. Better accommodation is being provided for the sheep by utilizing some old disused stock yards, fencing off ruins and putting them in order.

257. The Dutch Barns which were useless at Sully have been moved to the Home Farm and used to roof over the Machinery so protecting it from the weather.

258. Thanks to the favourable rains, there was good grazing in the *bir* and the stock remained in excellent condition during the year. The barani crops were also very good. It would have been easy enough to collect a lakh of maunds of first class reserve hay if circumstances had allowed of this being done. Unfortunately however the good rains did not prove to be an unmixed blessing. Fever was exceedingly rife amongst the people, the farmers' crops were excellent and labor already very scarce, commanded very high wages, as much as a rupee a day and two meals being paid by ordinary farmers during the harvest. Instead therefore of being able to take on extra labour from outside nearly half our ploughmen and gwalas absconded and in order to retain the remainder we had to pay batta. We could not, however, obtain sufficient labour at any price as it was not available. We had therefore to content ourselves with making about 30,000 maunds of good hay in addition to getting in our cultivated crops. Mr. Burke, who was in charge at this time, worked exceedingly hard and the results are due to his energy.

259. A good deal of damage was caused to the *bir* by fires due to sparks from passing engines. Several occurred during the year, one destroying over three miles of good grazing and a stack of hay, whilst considerable difficulty was experienced in preventing further loss. These fires are a source of constant anxiety and representations have been made to Government with a view to having spark arrestors placed on the engines. Nine stacks of old hay, in which but little nourishment remains, have been struck off and will be used as bedding grass.

260. During the earlier months of the year a good deal of loss was caused by Charbon Symptomatique in the young stock and it was eventually decided to inoculate all the young animals against this disease. A single vaccine, Blacklegoids, was selected for the purpose and to Mr. Burke fell the unenviable task of carrying out the inoculation: considering that the cattle are practically wild it is very creditable to him that he carried out the work with only one casualty. The results have been satisfactory, only one death having so far occurred from the disease since the inoculation was done last August. All calves are now inoculated against Blackleg when they are branded and no deaths have occurred.

261. One small outbreak of Hæmorrhagic Septicæmia occurred but was stamped out with the loss of only 41 animals.

262. We were unfortunate enough to get an outbreak of contagious Pneumonia amongst the donkey breeding stock which was promptly dealt with by segregation but we lost 13 donkeys from the disease before it could be got under.

263. Foot and Mouth disease also gave a certain amount of trouble but did not cause any mortality.

264. Open as the Farm is to the attacks of contagious disease, constant watchfulness is necessary to prevent an epidemic by adopting prompt measures

to prevent spread and the Veterinary establishment is to be congratulated on their success in this direction.

265. *Breeding herd—Herd bulls.*—The number of herd bulls at the beginning of the year (Table XVI) was 22. One was added from the male stock, 1 was sold as useless and two were castrated as their stock was not up to the standard. We are still not well off for bulls but are doing what is possible to give the most promising male stock a chance. The selection of bulls for a breeding herd like this is a momentous matter and the very greatest care is exercised in the selection.

266. *Cows.*—There were 1,097 cows present at the beginning of the year and 222 farm bred heifers were transferred to the herds. There were 38 deaths, 80 were cast and sold and 2 destroyed, leaving a balance of 1,199 present at the end of the year. Sanction has been accorded to an increase in the number of cows to 1,500 which the farm can in present circumstances easily carry. I find on Major Farmer's return from furlough that herd books had been maintained at the Farm until he left, but that owing to some misapprehension they were not forthcoming last year, when required by me. They are now being maintained.

267. *Male produce.*—There were 900 male produce at the beginning of the year. 406 were born and 2 purchased; of these 95 died, 2 were destroyed, 64 were sold as unfit, and 276 transferred, leaving a balance of 871 at the end of the year.

268. *Female produce.*—The number at the beginning of the year was 699 and there were 381 births, against which were 64 deaths, 1 destroyed, 161 sold as unfit and 222 transferred to the breeding herd, leaving a balance of 632 at the end of the year. It is satisfactory to note that the rejected female stock is keenly sought after by breeders and that although not good enough for our herds they are better than the outside cattle. The distribution of this stock to the districts has a good effect on cattle breeding in the neighbourhood.

269. *Calves.*—The number of calves born shows a marked increase over last year—787 against 577 last year; of these 406 were males and 381 females.

270. *Supernumerary bulls.*—Eighty-one were sold to Districts and were the best lot so far issued. The rate at which they are sold to districts is a nominal one and better prices could easily be realized for them.

271. *Cultivation bullocks.*—There were 309 at the beginning of the year, 8 were purchased and 26 transferred; of these 12 died, 20 were destroyed as worn out, 35 were sold and 61 transferred to Ordnance leaving a balance of 215. Young farm bred bullocks are now broken and used, and passed on when old enough.

272. *Ordnance Bullocks.*—One hundred and twenty-five bullocks were supplied for Siege train purposes at Rs. 150 each, this is still far short of the authorised number but it is hoped that 180 or more may be issued next year.

273. *Mules.*—As stated last year we have great difficulties in purchasing young mules likely to become fit for ordnance purposes in the open market. We have, late in the year, had several of the Army Remount Department markets thrown open to us. Our purchases were confined practically to the fairs open to us last year and it was found possible to buy only 25 animals. Endeavours will be made to obtain more now that better markets have been opened. The mules purchased in the market are not so good as those bred on the farm.

274. The result of the mule operations is not at all satisfactory at present, as our numbers are steadily decreasing. Last year there was a fall from 226 to 137 and this year a further drop to 107 has taken place, as we only obtained 25 by purchase and 22 by birth, whilst 30 were issued to Ordnance, 28 to Transport, 3 died, 15 were cast and sold and 1 was destroyed.

275. *Donkey Stallions.*—There were 12 present during the year, of these 7 were Catalans received in India too young to issue. The remaining 5 are used for mule and donkey breeding. The Catalans have now been issued to the districts.

276. *Donkey mares.*—There were 85 present at the close of last year and 10 fillies were transferred. Of these 3 died, 1 was destroyed, and 3 were sold as worn out, leaving a balance of 88 at the end of the year. The quality of the

mares is steadily improving owing to farm bred fillies being added. Sanction has been received to gradually increase the number of mares to 100 by the addition of farm bred fillies. There were 34 births during the year, 17 colts and 17 fillies, a very fair percentage. The system of turning loose a jack with a number of mares commenced in Colonel Morgan's time is still adopted with good results.

277. *Donkey Colts.*—There were 58 present at the beginning of the year and 17 were born. Of these 4 died, 1 was destroyed and 15 were issued as Jacks to the Army Remount Department and District Boards. No purchases were made.

278. *Donkey fillies.*—There were 39 at the end of the year and 17 were born. Of these 2 died, 1 was cast and 10 were transferred to donkey mares, leaving a balance of 43 at the end of the year. The donkey breeding operations continue to be very successful and the stock is yearly improving.

279. *Pony mares for mule breeding.*—Thirty-eight were present at the beginning of the year and 1 died, leaving 37 at the end. The results have been very much better this year, 22 births being recorded, or 59.4 per cent. If we could manage to maintain this percentage of foalings it would be well worth our while to increase our pony mare stock, I am inclined to do so next year, but shall wait to see what the prospects are before doing so.

280. *Sheep breeding.*—The total number of sheep present last year was 238 ewes and 248 lambs. 195 lambs were born, 117 died, 2 were destroyed and 90 were sold, leaving a balance of 333 ewes and 158 lambs at the end of the year. Sheep breeding, with a view to improving the yield and quality of the wool, is being carried out and the operations so far promise very well indeed. The ewes are divided into four flocks, two of which are being graded up to the Merino. We have one flock with the Dumba and another with the Bikanir Leicester as well as a small flock of pure Merinos. The experiments so far made prove that ordinary wool-bearing sheep pay very well, that the Dumba cross improves the size and shape of the Bikanir sheep and makes very good mutton as does also the Bikanir Leicester. There is already a very considerable improvement in the yield and quality of the wool in the Merino cross and this will doubtless improve when the flock is graded up closer to the Merino. The Merino flock is doing very well indeed so far, and permission has been obtained to add 20 more ewes and 4 more flock rams with a view to supplying some of the requirements in the districts of the Punjab Himalayas. The Merino wool is of fine grade but very greasy and loses much in scouring. Local purchasers at present only bid Rs. 10-8-0 a maund for Merino wool, whilst ordinary Country wool fetches Rs. 24 a maund: when it is considered, however, that the yield from the former is 8 times as great as from a country sheep it will be seen that it is infinitely more profitable. The amount of wool sold during the year was 10 maunds, 24 seers and the price obtained was Rs. 268-14-6.

281. The accommodation for sheep is being much improved, old stockyards being used for the purpose.

282. *Cultivation.*—The cultivation operations on the Farm have been very greatly handicapped owing, in the autumn of last year, to severe fever and to shortage of labour. The splendid rains which fell were not therefore an unmixed blessing. The crops in the neighbourhood were very good and labor being so scarce farmers were paying very high wages. In these circumstances we naturally suffered considerably, nearly half our establishment absconding and the work being correspondingly hampered. It became obvious that if we did not offer some inducement to our men to stop we should lose them all. This was especially annoying as we had a very large area under a very good crop of Jowar and any amount of hay, if we could only save it. Mr. Burke had a very trying time. The crop from the cultivated land was eventually got in. But our farm operations suffered. Notwithstanding this, a good area was prepared for sowing. Major Farmer has shown great energy since his return, especial attention being given to the

cultivation. The difficulties are very great, and the area dealt with, large. The water supply is uncertain, the surrounding land full of weeds, labour is scarce and wages are high. The heavy rains brought down a good many of our boundary walls which cost a good deal to repair. Eight miles of the Sulky-minor had to be practically redug, as it had completely silted up and the banks had been weakened by heavy rains and damaged by pig.

283. *Machinery*.—This is properly kept and in good order and measures have been taken to protect all the steam driven machinery from the weather. All implements when out of use are repaired and painted to preserve them.

284. *Buildings*.—The repairing of walls, feeding troughs and the thatching of several of the Farm buildings has been carried out; a pucca building is being made near the bullock sheds at Mundiawala for the housing and repairing of machinery and implements. The old tumble-down bhoosa sheds at the Home Farm have had good new roofs put on to them. A scheme for the enlargement of the grain godown is sanctioned. We are erecting a new *Post Mortem* house in place of the present very objectionable building. Major Farmer is preparing a much needed drainage scheme to carry off the flood water which lodges in the Home Farm during the rains. It is proposed to take the water off into the Choupalia Tank which is nearly a mile away from any buildings. All these changes have to be carried out gradually and economically and much energy is expended on them.

285. Table XVIII shows the expenditure on the Farm to have been Rs. 1,08,688, the receipts Rs. 93,907 whilst the valuation of the stock, etc., is Rs. 3,41,655 as against an expenditure of Rs. 1,13,321, receipts Rs. 74,058 and valuation of stock Rs. 3,07,879, last year. It will thus be seen that there is slightly less expenditure, an increase of nearly Rs. 20,000 in receipts and the value of the stock has risen over Rs. 33,000. This I think may be considered to be very satisfactory.

286. These results are due to the energy of the staff employed during the year. Mr. Burke worked exceedingly hard and ably during a very trying time and Major Farmer since his return has brought his great energy and experience to bear on the work. Lieutenant Morris has also worked well and energetically during the year. Major Farmer brings to notice the good work done by the staff.

PART C.—GENERAL

287. Table XIX has been omitted from this report as the information regarding the expenditure of the Department has not been received from the Accounts Officers. When necessary particulars come to hand Table XIX will be furnished as an addendum. Expenditure
of the Department.

288. I am glad to be able to report substantial progress in nearly every Department of our work, which continues to increase out of all proportion to the staff available to cope with it. The Imperial staff is now generally overworked and the limit has been reached. Practically all our institutions and Officers are working at their full capacity, and some relief must be given if we are to progress. General Remarks.

289. If we can obtain no more Imperial Officers at present, it seems imperative that we should provide a sufficiently well trained body of men capable of occupying the position of Deputy Superintendents and of taking charge of workable areas. They must have a thorough veterinary training and be capable of dealing with epidemics in the field and of directing the operations of the Veterinary Assistants under them. It will not be possible to train such men properly unless we are prepared to establish and equip an Imperial Veterinary College, and to provide a proper staff of Teachers for the purpose. The time seems to have come to adopt the suggestion of the Government of India made in their review on the Administration Report of 1906-7. The matter is receiving attention.

290. The increasing demands on the College laboratories for teaching purposes and diagnostic work point to the necessity of increasing the number of Pathologists in the Colleges. This recommendation of the Advisory Committee I should be very glad indeed to carry out, but we have no Officers available for the purpose. Men are badly wanted in Bombay and Madras.

291. The subordinate Department is reported to have generally worked very well during the year.

292. Improvement is noticeable in the important duty of checking inoculation work, but the staff employed is very small and much remains to be done in this direction.

293. An important advance has been made by the Government of India having taken over the Journal of Tropical Veterinary Science as a Departmental publication. Sanction has also been given to the publication of two Memoirs in addition to that containing the research work carried out by the Imperial Bacteriologist.

294. I welcome the revival of the Indian Veterinary Journal (in Urdu) which has been produced by Captain Dawson in a quarterly form and is a very useful publication for the Urdu-speaking Veterinary Assistants, and I consider that the author deserves great credit for his enterprise.

295. I note that pamphlets on various subjects have been issued in certain Provinces with a view to instructing the natives. I may say that my own long experience of the country has not been generally favourable to this method of endeavouring to get at the people, and I think that, as a rule, it is a waste of time and money and I am not impressed with its importance or usefulness. There are many reasons which militate against its success.

296. Reports on the breeds of cattle have been prepared in Madras and the Central Provinces, and are being published. I have also reports on the cattle of Mysore and of Rajputana which it is proposed to publish when funds are available.

297. The collection of biting flies and ticks, which is such a very important matter, is being carried out by this Department, the insects, as they are obtained, being forwarded to the Imperial Entomologist at Pusa. I understand that a great number of flies have been collected in various Provinces but we have so far received no information whatever regarding them. The present arrangement is not by any means a good one. The intimate relation which is recognised as existing between certain insects and the propagation of diseases in animals, is well recognised. We want work done in this direction, but the existing staff at Pusa already have their hands full. We want the flies named, classified and described with life histories so far as possible. We also require collections of named specimens in all our teaching institutions. I am hoping that some progress may be made in this direction in the near future and that the scientific results, including all observations and experiments, may be published from time to time in our Journal. The importance of this subject may be gathered from the fact that the Earl of Crewe has appointed a Scientific Committee of all the most eminent Entomologists in England, to arrange for an enquiry into it in Africa. I think it is time that the world knew that something is being done in this direction in India.

298. I have nothing but praise for the work done by the Imperial Veterinary staff during the year, and I think that they have reason to be satisfied with the results of their labours.

H. T. PEASE, COLONEL,

Inspector General

Civil Veterinary Department.

SIMLA;

15th October 1909. }

TABLE I.

Showing the main results of Veterinary Colleges and Schools during 1908-09.

1 VETERINARY COLLEGES AND SCHOOLS.	2 Name of course of instruction if more than one course followed.	3 NUMBER OF STUDENTS.										4 RECEIPTS.			5 EXPENDITURE.			6 EMPLOYMENT OF STUDENTS WHO PASSED OUT DURING THE THREE YEARS PRECEDING.					23 REMARKS.	
		7 ADMITTED DURING THE YEAR.		8 PASSED FINAL EXAMINATION DURING THE YEAR.			9 REMAINING UNDER INSTRUCTION AT END OF YEAR.			10 STUDENTS ADMITTED DURING THE YEAR, CLASSIFIED BY EDUCATIONAL QUALIFICATIONS.	11 From fees.	12 From other sources.	13 TOTAL.	14 Salaries of Instructing Staff.	15 Other expenses.	16 TOTAL.	17 Total number passed.	18 In service of Government or Local Bodies.		19 In service of other bodies or institutions.		20 In private practice.		21 Number unemployed.
		13 Scholarship-holders.	14 Others.	15 Passed	16 Failed to pass	17 In ordinary course.	18 Instruction prolonged by reason of failure to pass.	19 Matriculated with higher qualifications.	20 Knowing some English, but not matriculated.									21 Knowing no English or very little English.	18 No.	19 No.	20 No.				21 No.	22 No.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
		No.	No.	No.	No.	No.	No.	No.	No.	No.	Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	No.	No.	No.	No.	No.			
Bombay Veterinary College	...	13.	26	17	6	49	19	16	25	...	5,400 0 0	2,500	7,900 0 0	...	...	...	56	(g) 16	22	9	10	(g) 3 are in temporary employment.
Punjab Veterinary College	Diploma or 3 years' course in Urdu.	12	55	69	40	231	(d) 21	10	20	27	8,184 0 0	6,089	14,223 0 0	47,604 0 0	30,285 0 0	77,889 0 0	1:3	176	13	...	...	
Bengal	3 years' course in English.	38	16	25	4	75	17	3	51	...	No College-fee is charged for instruction.	Fine of students Rs. 48	48 0 0	58,445 8 3	2,900 6 8	41,345 14 11	78	67	...	5	6			
Madras Veterinary College	...	10	16	24	5	61	5	7	19	...	11,462 12 2	Nil	11,462 12 2	7,452 2 10	3,410 0 0	10,862 2 10	53	40	9	...	(f) 4			
Burma	Senior A	(a)		
	Senior B	(b)	...	25	3	...	3	4,191 0 0	11,438 0 0	15,629 0 0	24	24		
	Junior C	(c)	24		
TOTAL	...	73	115	160	68	440	65	36	125	27	25,046 12 2	8,539	33,633 12 2	97,692 11 1	48,038 6 8	1,45,726 1 9	494	322	44	14	20			

(a) Left.
 (b) 1 died, 1 removed as medically unfit.
 (c) 1 died, 1 left, 6 dismissed.
 (d) Those who were dismissed from the College after failure are excluded. This includes 3 men who were not allowed to appear in the examination owing to irregular attendance.
 (e) 4 are known as dead.
 (f) 1 minor seminar of Sivagiri and 3 died.

TABLE II.

Showing number of Deaths from Contagious Diseases amongst Animals during the year 1908-09.

PROVINCE.	EQUINES.						BOVINE.						OTHERS.										REMARKS.			
	Glancost.	Anthrax.	Surra.	Dourine.	Other contagious diseases.	Total.	Rinderpest.	Foot and mouth disease.	Hæmorrhagic septicæmia.	Black quarter.	Anthrax.	Other contagious diseases.	Total.	Rinderpest.	Foot and mouth.	Hæmorrhagic septicæmia.	Black quarter.	Anthrax.	Other contagious diseases.	Rabies.	Plague.	Distemper.		Surra.	Pleuro-Pneumonia.	Total.
United Provinces ...	...	2	...	...	(e)5	7	6,602	1,957	626	62	1,015	118	10,440	...	...	30	...	...	(f)90	23	...	3	...	...	86
Punjab ...	(g)33	5	183	...	23	224	8,739	1,241	20,822	721	689	8,605	41,108	108	689	1,088	117	231	12,560	...	...	...	...	...	14,781
Sind ...	...	...	2	...	2	4	1,784	2	8	...	...	9	1,753	1	...	...	...	...	...	54	...	7	3	108	173
Rajputana ...	...	...	...	...	...	...	...	9	...	368	...	...	368	...	...	...	...	...	...	4	...	...	...	...	4
Bengal ...	(h)19	8	9	14	112	301	8,490	3,769	1,546	227	308	2,069	16,458	31	61	* Tetanus.
Bombay ...	27	...	231	...	4	261	4,825	157	2,660	444	238	71	8,395	...	...	...	...	...	...	...	...	...	...	...	...
Madras ...	2	(c)18	1	1	47	69	140,066	4,578	...	4,708	12,511	44,988	216,451	...	...	...	...	...	...	139	15	1	...	...	154
Central Provinces ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burma ...	...	...	...	...	...	(a)...	13,729	2,800	(b)	(b)2,990	...	...	19,519	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(d)908	...	...	...	...	27	930
North West Frontier Province and North Punjab,	5	1	11	...	...	17	408	107	422	226	19	1	1,178	1	21	...	...	...	120	...	...	...	...	143	
Eastern Bengal and Assam	21	86	70	...	102	229	44,126	11,862	8,040	565	2,954	17,989	85,470	...	...	...	...	...	3,878	...	...	...	...	3,878	
TOTAL	...	280	68	487	15	205	1,112	236,874	26,472	84,124	10,299	17,790	74,060	401,139	198	610	1,118	117	231	17,669	95	1	81	9	135	20,208

(a) There is no system of registration in force in Upper Burma. Military Police register 62 deaths, etc., Surra 10, anthrax 12.
 (b) These diseases are not differentiated by villagers or headmen, but are considered as different manifestation of anthrax and so are included under this heading.
 (c) Includes 2 cases in Madras Veterinary Hospital.
 (d) Small Fox 399, Mangle 502, Kulig (Local name) 2.
 (e) Tetanus.
 (f) Fowl cholera 29, Tetanus 1.
 (g) The figures for equines relate only to non-selected districts, the Municipality of Lahore, and the Rawalpindi-Kohala Road, except where cases are treated in Veterinary Hospitals and Dispensaries in selected districts.
 (h) Not including 182 cases in the Sodhpore Pindrapole.

TABLE III.

Showing results of preventive inoculation during the year 1908-09.

Province.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.
				Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
United Provinces ...	Rinderpest.	Serum alone.	1,024	...	5,198	2	...	85,867	200	...	63	...	(a) One outbreak and 2 recrudescences of rinderpest.
Punjab ...			270	...	4,535	...	...	60,258	...	...	613	...
Sind ...			(a)	68	68	1	...	1,487	17	...	2	...	
Rajputana ...			...	...	...	...	...	...	...	...	...	...
Madras ...			574	...	18,996	80	...	43,257	2,280	...	64	...	
Bengal ...			72	...	1,954	...	...	11,659	...	...	115	...
Bombay ...			41	...	611	...	...	7,009	...	...	136	...
Central Provinces ...			194	...	2,515	...	...	18,056	...	...	5	...
North-West Frontier Province ...			13	...	217	...	...	4,980	...	...	...	...
Eastern Bengal and Assam ...			359	...	7,673	121	...	50,194	10	...	444	...	
Burma ...	35	...	456	...	...	2,336	...	...	161	...		
Total ...	...	...	2,582	...	42,223	204	...	280,503	2,437	...	1,003	...
United Provinces ...	Anthrax.	Serum alone.	11	...	59	953	2	...	
Eastern Bengal and Assam ...			37	7	320	20	234	7,126	88	8	26	2	
Madras ...			29	...	456	...	...	2,353	...	...	...	...
Total ...	...	...	77	7	835	20	234	104,322	89	8	28	2
United Provinces ...	Hæmorrhagic Septicæmia.		49	...	225	3,854	35	...	Vaccine.
Punjab ...			40	...	380	6,075	13	...	Serum.
Eastern Bengal and Assam ...			1	...	73	350
Madras ...			5	...	47	477	Vaccine.
Total ...	...	...	95	...	725	...	...	10,756	...	...	43	...
Punjab ...	Hæm. Sept.	Vaccine.	2	130	
Punjab ...	Black quarter.	Vaccine.	16	...	40	2,506	1	...	
North-West Frontier Province and North Punjab.	Black-legoid.	Vaccine.	24	3,605	
Total	42	...	40	6,341	1	...	
GRAND TOTAL	2,796	7	43,823	224	234	317,032	2,545	8	1,680	2	

TABLE IV.

Showing the number of animals treated and castrated by Veterinary Assistants on tour during 1908-09.

PROVINCE.	Number of villages visited.	Number of Veterinary Assistants employed.	CASTRATIONS PERFORMED.				TREATED FOR CONTAGIOUS DISEASES.				TREATED FOR NON-CONTAGIOUS DISEASES.				Total number of cases treated and castrations performed.	REMARKS.
			Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
United Provinces	14,778	69	198	87	21	306	112	32,912	986	34,010	6,526	11,859	2,002	20,387	54,703	
Punjab	9,366	113	545	518	95	1,153	399	31,245	2,327	34,011	4,190	9,304	1,492	14,986	50,150	
Sind	60	7	1	...	...	1	...	375	37	412	1,222	420	479	2,021	2,434	
Rajputana	345	3	...	2	...	2	...	933	...	933	64	223	59	346	1,281	
Pengal	7,947	43	35	34	45	114	93	27,778	199	28,070	8,624	18,846	1,470	28,940	57,124	
Eastern Bengal and Assam	6,382	35	48	166	52	266	670	39,163	643	40,476	4,317	17,328	1,625	23,270	64,012	
Pombay	967	28	...	10	5	15	7	7,465	247	7,719	691	7,180	373	8,249	15,983	
Madras ... ..	...	31	42	234	...	306	...	...	...	...	...	...	...	...	306	
Central Provinces	5,537	20	7	17	10	34	18	17,176	1	17,195	816	11,320	258	12,394	23,623	
Burma	17,752	(a) 107	...	1	...	1	7	20,566	1	20,574	1,305	32,385	91	33,371	54,446	
North-West Frontier Province	1,216	11	143	123	86	352	105	5,231	388	5,724	1,709	3,223	1,177	6,109	(b) 12,165	
TOTAL	64,380	472	1,019	1,217	314	2,550	1,411	182,844	4,869	189,124	29,454	112,088	8,031	150,573	342,247	

(a) Includes two deaths, one drowned and one removed.

(b) In addition to these 3,806 cases were treated by Inspectors and 457 by Assistants in Shan States.

TABLE V.

Showing number of Animals treated at Veterinary Hospitals and Dispensaries during the year 1908-09.

1 PROVINCES.	2 Number of Veterinary Dispensaries.		3 IN-PATIENTS.													4 OUT-PATIENTS.						5 TOTAL NUMBER OF IN AND OUT-PATIENTS TREATED DURING THE YEAR.				29 Receipts.	30 Expenditure.						
	3 Number of Veterinary Assistants employed at Dispensaries.	4 Equines.	5 Bovines.	6 Other animals.	7 ADMITTED DURING THE YEAR.			8 TOTAL.			9 DISCHARGED DURING THE YEAR.			10 BALANCE ON 31st MARCH.			11 NUMBER TREATED DURING THE YEAR.			12 AVERAGE DAILY ATTENDANCE.			13 Equines.	14 Bovines.	15 Other animals.			16 Total.					
					17 Equines.	18 Bovines.	19 Other animals.	20 Equines.	21 Bovines.	22 Other animals.	23 Equines.	24 Bovines.	25 Other animals.	26 Equines.	27 Bovines.	28 Other animals.																	
					29 Equines.	30 Bovines.	31 Other animals.	32 Equines.	33 Bovines.	34 Other animals.	35 Equines.	36 Bovines.	37 Other animals.	38 Equines.	39 Bovines.	40 Other animals.																	
United Provinces...	83	83	81	7	5	1,610	550	246	1,650	557	251	1,505	648	244	36	10	7	9,120	27,202	5,198	24.9	19.7	11.2	10,670	7,758	5,449	23,875	46,704	0	0	36,958	0	0
Punjab ...	86	86	102	62	28	2,675	1,381	440	2,777	1,423	477	2,728	1,402	461	40	21	16	45,259	72,608	22,424	...	...	...	47,987	74,010	22,865	144,862	1,82,398	0	0	1,01,971	0	0
Sind ...	6	6	13	3	9	447	1,779	203	460	1,782	212	445	1,750	205	15	32	7	3,801	4,204	2,771	...	...	...	4,261	5,966	2,963	13,230	41,028	8	6	24,828	2	11
Rajputana ...	8	8	...	...	...	45	22	...	45	22	38	43	22	37	2	...	1	...	...	...	...	...	...	312	423	555	1,238	4,908	10	3	1,559	10	3
Bengal ...	27	27	85	310	8	1,355	2,091	200	1,440	3,301	208	1,400	3,197	202	40	104	6	11,913	26,989	6,419	6	120	32	13,363	29,290	6,627	49,270	51,913	0	0	37,281	0	0
Eastern Bengal and Assam.	14	14	4	14	1	102	395	30	106	409	31	99	393	28	7	11	3	3,039	9,443	2,362	...	...	...	3,145	9,852	2,393	15,390	20,822	0	7	18,989	15	8
Bombay ...	27	27	24	36	4	710	959	175	734	995	179	899	963	174	35	32	5	7,802	23,945	7,895	...	...	...	8,536	26,940	5,074	66,550	54,560	5	7	60,136	1	8
Madras ...	16	20	74	56	148	5,314	1,029	907	1,398	1,085	1,145	1,382	1,018	1,114	56	69	31	8,149	19,400	8,067	6.72	13.63	15.53	10,537	17,485	17,212	35,234	46,430	7	6	46,853	15	1
Central Provinces...	48	48	11	5	3	231	340	44	242	345	47	228	325	44	14	17	3	10,867	35,982	9,108	17.67	11.06	18.79	11,109	36,327	7,755	56,691	65,268	11	0	60,722	14	0
Burma ...	104	107	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,763	8,601	375	4.68	23.63	1.02	1,763	8,601	375	10,739	...	...	...	...	...
North-West Frontier Provinces.	17	17	22	3	6	1,017	182	148	1,039	184	151	1,018	181	151	26	3	3	7,937	8,461	3,606	...	...	...	8,950	8,642	3,767	21,349	6,210	6	5	6,196	4	6
TOTAL ...	380	388	366	465	212	9,415	9,608	2,530	9,761	10,103	2,742	9,402	9,795	2,660	289	306	182	110,917	228,235	66,742	...	...	...	120,623	238,314	69,465	428,402	4,92,134	1	10	4,87,464	0	6

(a) Includes three reserve Assistants.
 (b) Includes four casualties and three at Headquarters.
 (c) In addition to these 392 cases were treated by Inspectors and four by Assistants in Shan States.
 (d) 19 were erroneously shown last year.
 (e) Correct figures shown this year.

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TABLE VI.

Abstract showing Receipts and Expenditure of Veterinary Dispensaries during 1908-09.

Province.	RECEIPTS.							EXPENDITURE.						Balance.	REMARKS.
	Last year's balance.	By Local Fund grants.	By Government grants.	By Municipal contribution.	By fees.	By other sources.	Total.	Pay.	Travelling allowances.	Medicines, instruments, etc.	Furniture, etc.	Contingencies.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.
United Provinces ...	4,954 0 0	35,198 0 0	1,500 0 0	3,731 0 0	1,060 0 0	1,263 0 0	46,704 0 0	23,575 0 0	2,708 0 0	6,837 0 0	571 0 0	5,207 0 0	38,958 0 0	5,755 0 0	(b)
Punjab ...	...	63,089 0 0	1,05,110 0 0	1,029 0 0	12,444 0 0	618 0 0	1,82,288 0 0	43,382 0 0	2,745 0 0	19,445 0 0	3,895 0 0	92,504 0 0	1,01,071 0 0	...	
Sind ...	16,376 15 11	11,244 0 0	5,517 4 7	3,190 0 0	4,193 6 0	7 14 0	41,028 8 8	14,762 13 7	1,435 7 7	2,075 10 11	105 4 8	6,448 14 2	24,828 2 11	16,300 5 7	
Rajputana ...	1,395 2 5	540 0 0	...	1,070 0 0	535 8 0	787 15 10	4,908 10 3	1,128 1 6	...	180 11 6	9 7 0	241 6 2	1,559 10 2	2,176 1 5	(c)
Bengal ...	1,808 0 0	19,990 0 0	5,610 0 0	5,558 0 0	3,127 0 0	17,925 0 0	51,913 0 0	18,309 0 0	3,156 0 0	5,431 0 0	4,943 0 0	5,422 0 0	37,361 0 0	14,652 0 0	
Eastern Bengal and Assam, ...	1,072 10 10	12,443 11 7	4,852 8 1	1,729 0 0	288 8 11	435 9 0	20,822 0 5	9,101 9 8	2,919 10 9	3,027 2 2	475 11 0	3,165 14 1	19,589 15 8	1,232 0 3	
Bombay ...	25,469 11 5	20,365 8 0	19,498 7 8	2,576 0 0	2,844 12 1	1,489 14 10	93,235 1 0	35,843 5 4	6,039 13 8	3,398 5 5	1,338 3 9	16,833 7 8	63,460 3 10	29,774 13 2	
Madras ...	...	10,834 0 3	480 0 0	938 14 0	12,441 11 2	1,009 13 4	26,604 7 2	22,968 8 8	609 4 0	3,722 6 4	2,054 0 3	17,504 11 10	46,853 13 2	...	
Central Provinces ...	...	19,968 11 8	1,050 0 0	10,881 8 7	671 13 0	2,496 14 9	35,398 11 0	36,545 14 8	7,392 15 10	9,464 2 4	1,340 11 0	5,080 2 11	60,729 14 9	-25,461 8 9	
Burma ...	...	...	...	...	...	...	...	92,850 0 0	20,309 0 0	4,000 0 0	755 0 0	13,724 0 0	1,41,628 0 0	...	
North-West Frontier Province.	...	2,437 0 11	2,482 14 8	1,276 5 6	...	14 1 9	6,210 6 5	3,510 11 9	152 15 11	1,880 5 3	444 14 9	207 5 0	6,196 4 8	...	
TOTAL ...	61,556 6 7	2,06,098 11 10	1,46,101 2 7	29,564 7 1	38,825 11 2	26,826 8 6	5,08,952 12 9	3,01,972 1 2	56,557 2 9	61,259 11 11	15,939 4 5	1,67,308 13 10	6,08,036 8 1	...	

(a) These figures differ from the closing balance as given in the Report for 1907-08 as they have been subsequently corrected.
 (b) The difference is the amount of the District Board Budget grant which lapsed at the close of the official year.
 (c) Last year's balance not taken into account in Ajmer-Merwar.
 (d) Correct figure shown this year.

TABLE VII.

Showing total strength of Subordinate Veterinary Staff employed during the year 1908-09.

PROVINCE.	How occupied.	Whether paid from Provincial or Local Funds.	Veterinary Inspectors.	Veterinary Assistants.	Subordinate Teaching Staff.	REMARKS.	
1	2	3	4	5	6	7	
			No.	No.	No.		
United Provinces	In Dispensaries ...	Local ...	...	29	...	
		Provincial ...	...	2	...	
		Private ...	...	1	...	
United Provinces	On other work ...	Municipality ...	...	1	...	
		Local ...	...	46	...	
		Provincial ...	9	6	...		
United Provinces	On other work ...	Municipality ...	...	2	...	
		Local ...	...	13	...	
		Provincial ...	...	...	...	(c) 6
Panjab	In Dispensaries ...	Local ...	...	85	...	
		Provincial ...	...	...	...
		Municipality ...	...	...	...
Panjab	On other work ...	Local ...	...	...	...
		Provincial ...	...	12	(a) 42	...
		Municipality ...	...	...	...	...
North-West Frontier Province and North Punjab.	In Hospitals ...	Local ...	...	7	...	
		Provincial ...	...	...	...
		Municipality ...	...	...	...
North-West Frontier Province and North Punjab.	On other work ...	Local ...	...	...	...
		Provincial ...	...	2	(b) 13	...
		Municipality ...	...	...	...	...
North-West Frontier Province and North Punjab.	Vacancies on 31st March 1909	Local ...	...	6	...	
		Provincial ...	...	...	...
		Municipality ...	...	...	...
Birma	In Schools and Colleges ...	Local ...	...	1	1	
		Provincial ...	...	...	...
		Municipality ...	...	...	...
Birma	In Dispensaries ...	Local Funds ...	...	(c) 48	...	
		Provincial ...	...	10	(d) 58	...
		Municipality ...	...	...	...	...
Birma	On other work ...	Local Funds ...	...	...	...
		Provincial ...	...	...	...
		Municipality ...	...	...	...
Central Provinces	In Dispensaries ...	Foreign service ...	...	1	...	
		Local ...	...	...	22	...
		Foreign State ...	...	...	1	...
Central Provinces	On other work ...	Local ...	...	...	...
		Provincial ...	4	5	...		
		Municipality ...	...	...	...
Berar	In Dispensaries ...	Local ...	...	21	...	
		Provincial ...	...	...	...
		Municipality ...	...	...	...
Berar	On other work ...	Local ...	...	2	...	
		Provincial ...	2	...	...
		Municipality ...	...	...	...
Bombay	In Schools and Colleges ...	Local ...	...	...	4	
		Provincial ...	...	...	...
		Municipality ...	...	...	...
Bombay	In Dispensaries ...	Local ...	...	...	...
		Provincial ...	...	...	3	...
		Municipality ...	...	...	...	...
Bombay	On other work ...	Local ...	...	...	...
		Provincial ...	...	1	...	
		Municipality ...	...	...	...
Madras	Itinerating and attending cattle Fairs and Shows.	Local ...	...	2	(f) 28	
		Provincial ...	...	...	13	...
		Municipality ...	...	...	...	...
Madras	In charge of Hospitals	Local Funds and Provincial.	...	...	...
		Baja's ...	...	...	(g) 4	...
		Society for the Prevention of cruelty to animals (Bellary).	...	...	(h) 1	...
Madras	Ditto	Foreign (Ceylon Government).	...	...	...
		Provincial ...	...	...	1	...
		College work ...	Provincial ...	...	...	(i) 4
Sind	In Schools and Colleges ...	Local ...	...	...	...
		Provincial ...	...	...	...
		Municipality ...	...	...	...
Sind	In Dispensaries ...	Local Fund ...	...	...	6	
		Do. ...	...	...	1	...
		Imperial ...	...	...	2	...
Rajputana	On other work ...	Local Fund ...	...	...	1	
		Imperial ...	...	...	1	...
		Do. ...	...	...	...	...
Baluchistan	In Hospitals ...	Local ...	...	...	7	
		Provincial ...	...	...	2	...
		Do. ...	...	...	4	...
Eastern Bengal and Assam.	Itinerating	Local ...	...	...	...
		Do. ...	...	...	17	...
		Provincial ...	...	2	...	...
Eastern Bengal and Assam.	Inspection	Local ...	...	...	...
		Do. ...	...	...	3	...
		Provincial ...	...	...	...	...
Bengal	On other work ...	Local ...	...	...	...
		Do. ...	...	...	(j) 1	(n) 6
		Provincial ...	...	6	(k) 2	...
Bengal	Ditto	Local ...	...	...	(l) 24	...
		Do. ...	...	...	...	...
		Provincial ...	...	...	(m) 29	...
	TOTAL			50	616	21	

(a) 29 Itinerating Veterinary Assistants.
5 Office Veterinary Assistants.
2 Veterinary Assistants on Tonga Line.
6 Reserve Veterinary Assistants.
(b) 11 On itinerating duty.
1 Reserve.
1 Attached to office.

(c) Includes three Reserve Assistants, two at Headquarters and one drowned.
(d) Includes two died, one removed.
(e) 2 Professors.
1 Assistant Professor.
2 Lecturers.
1 Demonstrator.

(f) Includes 2 Veterinary Assistants who resigned.
(g) 4 includes one Veterinary Assistant having no lien on Government service.
(h) Having no lien on Government service.
(i) 1 Assistant Principal and 3 lecturers.

(j) The Veterinary Assistant at Dumka.
(k) Includes 2 Veterinary Assistants employed by the Dumraon and Hathwa Raj States.
(l) One Veterinary Assistant employed by the Khurda Government States and 1 by the Government of Angul.
(m) Includes 2 Assistants employed by the Fitzroy Society of Calcutta and Hazaribagh.
(n) Includes 1 Assistant Principal, and 5 Lecturers. They are all ranked as Deputy Superintendents.

TABLE VIII
Return of Stud Bulls for the year 1908-09.

PROVINCE.	PROPERTY OF GOVERNMENT.					PROPERTY OF LOCAL BOARDS.					REMARKS.
	Number on 1st April 1908.	OBTAINED DURING THE YEAR		Casualties during the year.	Balance remaining on 31st March 1909.	Number on 1st April 1908.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March 1909.	
		Number.	Average price paid.				Number.	Average price paid.			
1	2	3	4	5	6	7	8	9	10	11	12
United Provinces ...	(c) 9	...	...	3	6	(d) 86	5	51	1	40	
Punjab ...	...	...	...	...	...	879	117	...	59	437	
Sind ...	...	...	...	...	...	...	...	...	...	...
Rajputana ...	...	...	...	...	...	2	...	...	...	2	
Bengal ...	...	...	...	...	...	...	...	...	...	...
Bombay ...	...	...	...	...	...	10	6	...	...	16	
Madras ...	19	...	...	1	(b) 18	...	...	...	...	...
Central Provinces ...	5	18	...	(a) 16	7	...	...	...	...	...
Burma ...	...	...	...	...	...	...	...	...	...	...
North-West Frontier Province ...	...	...	...	...	...	11	4	...	11	14	
Eastern Bengal and Assam ...	(e) 3	4	...	...	7	(f) 17	15	...	5	27	
TOTAL ...	86	22	...	20	38	455	147	...	66	536	

(a) 1 lent, 1 died, 6 sold, 8 castrated.

(b) The bulls are posted thus:—
2 in Vizagapatam, 11 in Guntur,
2 at Madras Veterinary College, 1 in Madura and 2 in Tinnevely district.

(c) 4 were omitted last year.

(d) 5 were omitted last year.

(e) 2 were omitted last year.

(f) 25 were shown as closing balance in last year's report, but the correct number is 17.

TABLE IX.

Showing main results of the working of Provincial Cattle Farms during the year 1908-09.

PROVINCE.	Name of farm.	RECEIPTS.				EXPENDITURE.						VALUATION OF STOCK, GRAIN AND FODDER REMAINING AT CLOSE OF YEAR AS DETAILED ON REVERSE.				REMARKS.
		Sale of animals.	Sale of Produce.	Other heads.	TOTAL.	Salaries of establishment.	Feed and keep of animals.	Cultivation expenses.	Purchase of animals.	Other heads.	TOTAL.	Cattle.	Grain.	Fodder.	TOTAL.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.	Rs.	Rs. A. P.	
Central Provinces ...	Talin Kheri ...	785 0 0	868 0 0	...	1,648 0 0	890 0 0	5,902 0 0	...	...	385 0 0	7,177 0 0	13,935	2,480 0 0	262	16,627 0 0	
Ditto ...	Fowar Khera ...	508 8 0	...	...	508 8 0	267 10 3	1,844 11 2	...	236 5 0	475 8 0	2,844 2 5	1,055	669 7 9	354	2,975 7 9	
Bombay (Gujrat Ahmedabad) ...	Northcote Cattle Farm, Chharodi.	2,068 0 0	...	242 8 0	2,326 8 0	3,634 7 8	6,860 0 0	3,044 10 0	...	2,868 2 0	16,202 8 8	16,020	297 5 0	3,600	19,917 5 0	
Bengal ...	Fusa ...	817 0 0	...	...	817 0 0	251 0 0	4,805 0 0	...	638 0 0	...	5,694 0 0	3,173	...	...	3,173 0 0	
Ditto ...	Siripur ...	1,025 0 0	888 0 0	500 0 0	2,393 0 0	798 0 0	12,017 0 0	...	...	1,508 0 0	14,313 0 0	6,200	...	...	6,200 0 0	
Ditto ...	Kalimpong ...	100 0 0	...	579 8 0	679 0 0	381 0 0	147 0 0	...	60 0 0	81 0 0	679 0 0	553	...	...	558 0 0	
TOTAL	5,318 8 0	1,781 0 0	1,321 8 0	8,371 0 0	6,247 1 11	31,375 11 2	3,044 10 0	934 5 0	5,307 10 0	46,909 8 1	41,841	3,398 12 9	4,216	49,453 12 9	

NOTE.—See reverse for details of stock in hand at close of year.

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Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1908-09.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.	
No.	Quantity.					
	Mds.	TELIN KHERI FARM.		Rs.	Rs.	
		<i>Cattle.</i>				
20	...	Bulls ...	200	4,000	* Including one stud bull,	
46	...	Cows ...	50	2,300		
29	...	Male stock, 2 years' old	150	4,350		
10	...	Ditto 1 year old	100	1,000		
9	...	Ditto calves	75	675		
20	...	Female stock, 2 years' old	40	800		
17	...	Ditto 1 year old	30	510		
15	...	Ditto calves	20	300		
166	...	TOTAL	...	13,935		
		<i>Grain and Fodder.</i>				
...	135 Khandi ...	Cotton seed ...	Rs. 18 per Khandi.	2,430		
...	524,000 Doolas	Hay ...	2,000 per Rupee	262		
...	...	Kirby, etc. ...	...	...
...	...	TOTAL	...	2,692		
		POWAN KHERA FARM.				
13	...	Bulls ...	75	975		
21	...	Cows ...	30	630		
4	...	Male stock, 2 years' old	50	200		
2	...	Ditto 1 year old	20	40		
4	...	Ditto Calves	10	40		
3	...	Female stock, 2 years' old	15	45		
1	...	Ditto 1 year old	10	10		
3	...	Ditto calves	5	15		
51	...	.....	...	1,955	
...	...	Grain and Fodder ...	...	...
...	Mds. Seers.	.....	...	...
...	324 24	Cotton seeds ...	Rs. 2-1-0 per md.	669-7-9		
...	347,560 Pulas	Hay ...	700 Pulas per Rupee.	354-0-0		
		.....	...	1,023-7-9	
			
		GRAND TOTAL	...	2,973-7-9		

GRAND TOTAL 16,627-

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1908-09—contd.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
	Mds.	NORTHCOTE CATTLE FARM, CHHARODI.	Rs.	Rs.	
		<i>Cattle.</i>			
3	...	Bulls ...	250	750	
1	...	Bull (Dboradis) ...	150	150	
1	...	Bull (Mujio) ...	50	50	
150	...	Cows ...	50	7,500	
14	...	Heifers, 4 years' old ...	40	560	
12	...	Do. 3 do. ...	35	420	
28	...	Do. 2 do. ...	25	700	
32	...	Do. 1 year old ...	20	640	
30	...	Female calves ...	10	300	
6	...	Male stock, 2½ years' old ...	150	900	
10	...	Do. 1½ do. ...	70	700	
2	...	Do. 1½ do. castrated ...	70	140	
18	...	Do. 1 year old ...	50	900	
32	...	Bull calves ...	30	660	
11	...	Bullocks ...	150	1,650	
340	...	Total Cattle ...	...	16,020	
		<i>Grain and Fodder.</i>	Rs. A. P.	Rs. A. P.	
...	Mds. 173	Guvar crushed ...	1 8 0	259 8 0	
...	Mds. Sra. 27 20	Oil cake ...	1 6 0	37 13 0	
...	lbs. 600,000	Hay ...	6 0 0	3,600 0 0	
...	...	Total Grain and Fodder ...	...	3,897 5 0	
		GRAND TOTAL	...	19,917 5 0	
		FUSA FARM.	Rs.	Rs.	
		<i>Cattle.</i>			
1	...	Bull ...	100	100	
49	...	Cows ...	45	2,205	
6	...	Male stock, 2 years' old ...	45	225	
10	...	Do. 1 year old ...	22	220	
19	...	Do. calves ...	12	228	
1	...	Female stock, 2 years' old ...	20	20	
3	...	Do. 1 year old ...	13	39	
17	...	Do. calves ...	8	136	
...	...	He-goats ...	...	...
...	...	Castrated male calves ...	...	...
...	...	Calves at heel ...	...	...
105	...	Total ...	...	3,173	
		<i>Grain and Fodder.</i>			
...	...	Gram ...	...	...
...	...	Hay ...	...	...
...	...	Kirby, etc. ...	...	...
...	...	Total ...	...	...
		GRAND TOTAL	...	3,173	

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1908-09—conold.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.	
No.	Quantity.					
	Mds.	SIRIPUR FARM.				
		<i>Cattle.</i>		Rs.	Rs.	
6	...	Bulls	...	...	650	
42	...	Cows	...	...	3,150	
4	...	Male stock, 2 years' old	...	60	240	
12	...	Do. 1 year old	...	50	600	
...	...	Do. calves	...	...	...
6	...	Female stock, 2 years' old	...	70	350	
11	...	Do. 1 year old	...	50	550	
...	...	Do. calves	...	...	...
33	...	Calves at heel	...	20	660	
112	...	Total	...	...	6,200	
		<i>Grain and Fodder.</i>				
...	...	Gram	...	...	...
...	...	Hay	...	...	...
...	...	Kirby, etc.	...	...	...
...	...	Total	...	...	...
		GRAND TOTAL		...	6,200	
		KALIMPONG.				
		<i>Cattle.</i>		Rs.	Rs.	
...	...	Bulls	...	...	...
12	...	Cows	...	31	558	
...	...	Male stock, 2 years' old	...	...	...
...	...	Do. 1 year old	...	...	...
...	...	Do. calves	...	...	...
...	...	Female stock, 2 years' old	...	...	...
...	...	Do. 1 year old	...	...	...
...	...	Do. calves	...	...	...
12	...	Total	...	...	558	
		<i>Grain and Fodder.</i>				
...	...	Gram	...	...	...
...	...	Hay	...	...	...
...	...	Kirby, etc.	...	...	...
...	...	Total	...	...	...
		GRAND TOTAL		...	558	

TABLE X.

Return of Horse, Pony and Donkey Stallions under Local Bodies for the year 1908-09.

Details.	HORSE AND PONY STALLIONS UNDER LOCAL BODIES.												DONKEY STALLIONS UNDER LOCAL BODIES.									
	HORSES.						PONIES.						Total horses and ponies.	Italian.	Cyprian.	Country-bred (Punjab).	Persian.	Catalonian.	Arab.	Ameribeth.	Sicilian.	Total.
	Arab.	Persian.	Thorough bred, English.	Country-bred.	Australian.	Total.	Arab.	Persian.	Country-bred.	Delhi.	Shan.	Total.										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Janee on 1st April 1908	59	...	2	4	1	66	98	...	5	2	1	106	172	11	17	25	2	30	2	2	10	99
increase { Purchased in India	3	...	...	...	...	3	9	...	1	...	...	10	13	...	...	(a) 6	...	(b) 7	...	1	...	14
{ Received by transfer	15	...	...	...	...	15	7	...	...	...	...	7	22	...	...	...	...	4	...	...	...	4
TOTAL	77	...	2	4	1	84	114	...	6	2	1	123	207	11	17	31	2	41	2	3	10	117
Decrease { Died	1	...	...	...	...	1	2	...	...	...	...	2	3	1	...	1	...	1	...	...	...	3
{ Sold	1	...	...	...	1	2	5	...	2	2	...	9	11	4	1	2	2	...	1	1	...	11
{ Destroyed	2	...	...	...	...	2	4	...	...	...	...	4	6	...	...	...	...	...	...	...	...	...
{ Transferred to	15	...	...	...	...	15	6	...	...	...	...	6	21	...	...	...	...	4	...	...	...	4
TOTAL DECREASE	19	...	...	...	1	20	17	...	2	2	...	21	41	5	1	3	2	5	1	1	...	18
Balance on 31st March 1909	58	...	2	4	...	64	97	...	4	...	1	102	166	6	16	28	...	36	1	2	10	99
United Provinces	41	...	2	1	...	44	5	...	...	...	...	6	50	...	...	3	...	9	...	2	...	14
Punjab	5	...	...	...	...	5	56	...	3	...	...	59	64	5	14	23	...	21	...	...	7	70
North-West Frontier Province	8	...	...	...	...	8	10	...	...	...	...	10	18	1	2	2	...	6	1	...	3	15
Bombay	4	...	...	3	...	7	11	...	1	...	...	12	19	...	...	...	...	...	...	...	...	...
Bengal	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
Madras	...	...	...	...	...	...	12	...	...	...	...	12	12	...	...	...	...	...	...	...	...	...
Burma	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...
Central Provinces	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
TOTAL	58	...	2	4	...	64	97	...	4	...	1	102	166	6	16	28	...	36	1	2	10	...

(a) Purchased in India.
(b) Purchased from Europe, were kept at Hissar.

TABLE XI.

Services and Produce of each class of Horse, Pony, and Donkey Stallions, under Local Bodies during 1908-09.

Horse, Pony or Donkey.	Province.	Stallions on Register on 31st March 1909.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE NUMBER OF MARES COVERED PER STALLION EMPLOYED AT STUD.		REMARKS.
			Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
1	2	3	4	5	6	7	8	9	10
Horse ...	United Provinces ...	44	36	37	1,838	1,995	51.05	53.9	
	Punjab ...	5	5	5	272	283	54	56	
	Bombay ...	7	6.59	5.07	295	220	44.76	43.39	
	North-West Frontier Province.	8	8	8	495	458	61.87	57.25	
	TOTAL ...	64	55.59	55.07	2,900	2,956	52.17	51.86	...
Pony ...	United Provinces ...	6	8	9	396	470	48.2	52.2	
	Punjab ...	59	60	60	3,233	3,176	54	52	
	Bombay ...	12	11.41	11.17	343	312	30.06	30.61	
	Madras ...	12	13	13	239	284	17.5	(a) 21	
	North-West Frontier Province.	10	10	10	505	482	50.5	48.2	
	Bengal ...	1	1	...	...	...	...	...
	Burma ...	1	3	4	58	93	19.3	23.2	
	Central Provinces ...	1	1	...	6	...	6	...	
TOTAL ...	102	107.23	107.17	4,770	4,847	44.48	45.22	...	
Donkey ...	United Provinces ...	14	9	5	412	224	45.3	44.8	
	Punjab ...	70	70	47	2,846	2,639	41	56	
	North-West Frontier Province.	15	15	10	482	572	32.13	57.2	
	TOTAL ...	99	94	62	3,740	3,435	39.78	55.4	

(a) The stallions at stud are under the Provincial Department of Government.

TABLE XII.

Showing average cost of feed, keep, attendance, etc., of Horse, Pony, and Donkey Stallions during the year 1908-09.

Province.	HORSE.		PONY.		DONKEY.		REMARKS.
	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
1	2	3	4	5	6	7	8
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
United Provinces ...	...	...	...	...	...	...
Punjab ...	382 0 0	305 0 0	374 0 0	312 0 0	202 0 0	158 0 0	
Sind ...	...	...	...	...	...	...
Rajputana ...	...	...	...	...	...	...
Bengal ...	...	...	224 4 0	151 8 0	...	...	Hathwa Court of Wards Estates.
Bombay ...	518 0 0	497 0 0	501 0 0	475 0 0	...	...
Madras ...	...	...	397 9 0	280 10 0	...	...
Central Provinces ...	...	...	759 9 9	...	...	...
North-West Frontier Province and North Punjab.	336 5 0	295 3 0	328 11 2	325 12 5	219 12 11	164 1 3 ^(a)	
Burma.	...	...	220 4 4	294 10 6	...	...
TOTAL ...	...	...	...	...	...	...

(a) The increase is due to the high prices of grain.

TABLE XIII.

Abstract of particulars regarding Horse Fairs and Shows held in non-selected districts during the year 1908-09.

PROVINCE.	Number of Horse Fair and Shows held.	TOTAL NUMBER OF ANIMALS PRESENT.		TOTAL NUMBER COMPETING FOR PRIZES.		TOTAL NUMBER OF HORSE STOCK (NOT INCLUDING BEADED MARKED HORSES) PRESENT.		NUMBER OF REMOUNTS PURCHASED.				PRICE PAID FOR REMOUNTS.			NUMBER OF MULES PURCHASED.			PRICE PAID FOR MULES BY GOVERNMENT.			Total number of animals sold.	PRIZES AWARDED.						Amount sanctioned by Government of India for next year's Fair or show.	REMARKS.	
		Year under report.	Previous year.	Year under report.	Previous year.	Belonging to breeders.	Belonging to dealers.	For Remount Deptt.	For native Cavalry.	For Police.	Total.	Highest price.	Lowest price.	Average price.	By Government.	By others.	Total.	Highest price.	Lowest price.	Average price.		From Imperial Funds.	From Provincial Funds.	From Local Funds.	From other sources.	Total.	Amount actually awarded.			No. of medals awarded.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
United Provinces	...	...	...	...	...	...	...	...	...	...	...	Rs.	Rs.	Rs.	...	...	...	Rs.	Rs.	Rs.	...	...	...	...	...	...	...	...	...
Punjab	7	2,768	2,397	1,108	1,012	2,734	3	...	...	...	...	...	...	...	23	23	...	...	...	...	76	1,500	...	1,464	20	2,984	2,365	4	...
Sind	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rajputana	1	627	1,022	188	428	...	627	...	...	...	...	...	...	...	...	...	...	...	...	...	278	...	...	500	...	500	442	...	...
Bengal	8	11,657	12,652	211	259	82	2,223	...	...	...	...	...	...	...	...	...	...	...	...	...	6,046	...	150	171	58 199	578	552	1	...
Bombay	1	464	...	464	...	174	116	...	...	3	3	Rs. 1,000 paid for 3 remounts.	...	...	...	...	...	...	...	...	18	1,000	1,500	1,500	...	4,000	2,080	2	...
North-West Frontier Province and North Punjab.	3	1,061	1,415	898	1,164	757	...	2	...	1	3	...	...	...	...	...	...	...	...	...	8	2,320	...	928	...	2,248	2,280	3	...
Burma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	20	17,577	18,488	2,867	2,863	8,747	2,969	2	4	6	...	...	...	...	23	23	...	...	...	...	6,428	4,820	1,650	4,558	277	11,305	7,739	10	...

TABLE XIV.

Abstract of particulars regarding Cattle Fairs and Shows held during the year 1908-09.

PROVINCE.	Number of Cattle Fairs and Shows held.	TOTAL NUMBER OF STOCK PRESENT.							AVERAGE PRICE OF ANIMALS SOLD.					Amount realized in fees.	Total number of animals that competed for prizes.	PRIZES AWARDED.						Number of medals awarded.	REMARKS.	
		Bulls.	Bullocks.	Cows.	Young stock.	Buffaloes.	Camels.	Others.	Bulls.	Bullocks.	Cows.	Buffaloes.	Camels.			From Imperial funds.	From Provincial funds.	From Local Funds.	From other sources.	Total.	Amount actually awarded.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
									Rs.	Rs.	Rs.	Rs.	Rs.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		
United Provinces ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Punjab ...	22	1,328	131,280	(a)	64,265	85,789	8,511	7,789	...	...	...	...	...	89,091 0 0	3,888	...	...	12,003 0 0	689 0 0	12,671 0 0	10,715 0 0	...	7	
Sind ...	3	269	252	85	10	14	...	332	...	...	...	...	...	...	929	50 0 0	...	1,570 0 0	...	1,620 0 0	1,202 8 0	...	...
Rajputana ...	1	...	1,731	...	...	...	...	4,395	...	48 0 0	...	...	61	...	52 pairs of Bullocks 46 camels 322	...	...	62 0 0	...	62 0 0	62 0 0	...	...
Bengal ...	14	205	105,705	8,423	18,627	16,321	362	15,818	54	44 0 0	23 0 0	35 0 0	59	15,001 0 0	...	...	900 0 0	1,855 0 0	117 0 0	2,872 0 0	1,650 0 0	...	2	
Bombay ...	6	1,595	6,674	1,689	724	1,051	...	9,165	...	...	...	...	...	910 10 0	1,710	...	3,500 0 0	700 0 0	942 0 0	5,142 0 0	3,195 0 0	...	7	
Madras ...	14	799	64,274	1,003	1,651	1,728	...	1,368	...	...	...	...	...	249 10 6	70,823	...	3,800 0 0	4,166 0 0	7,073 13 6	15,639 13 6	7,109 4 0	...	24	
Burma ...	1	15	42	11	14	55	...	87	...	...	...	...	...	...	194	100 0 0	1,245 0 0	...	...	1,345 0 0	1,141 0 0	...	...
Central Provinces ...	10	124	28,438	6,311	4,706	13,466	7	1,671	...	...	...	...	...	6,635 2 8	455	800 0 0	...	1,023 0 0	62 0 0	1,994 0 0	991 0 0	...	98	
Baluchistan ...	2	227	143	62	12	6	...	11	...	...	...	...	...	...	460	500 0 0	...	80 0 0	50 0 0	640 0 0	585 0 0	...	2	
North-West Frontier Provinces...	4	207	202	218	28	222	43	132	...	...	...	...	...	...	1,100	1,700 0 0	...	675 0 0	52 0 0	2,427 0 0	2,197 0 0	...	6	
Eastern Bengal and Assam ...	46	1,522	154,830	15,219	6,911	9,413	1,086	1,991	89	162 5 0	73 8 0	147 4 0	125	1,65,305 0 0	296	...	116 0 0	927 0 0	80 0 0	1,073 0 0	803 0 0	...	...
TOTAL ...	133	6,291	469,877	83,015	96,888	78,054	14,813	32,324	...	...	...	...	...	2,67,191 6 9	80,915	2,650 0 0	9,561 0 0	23,069 0 0	9,695 13 6	44,875 13 6	20,590 12 0	146		

(a) Cows and young stock together=64,265.

TABLE XV.

Showing main results of the working of the Imperial Bacteriological Laboratory during 1908-09.

1	2	QUANTITY OF SERA OR ANTI-TOXIN PREPARED AND ISSUED.						INSTRUCTION IMPARTED.				FINANCIAL RESULTS.									
		3	4	5	6	7	8	9	10	11	RECEIPTS.				EXPENDITURE.						
											12	13	14	15	16	17	18	19	20	21	22
Name of sera or anti-toxin.	Opening balance.	Prepared during the year.	Received back from districts and re-issued.	Total.	Issued during the year.	Stock in hand.	Department or Province.	Vet. Inspectors and Assistants attending class.	Number passed.	Sale of animals.	Sale of sera.	Sale of garden products and revenue from reserved forests.	Other miscellaneous receipts.	Total.	Salaries and travelling allowances of officers and subordinate staff.	Feed and keep of animals.	Purchase of animals.	Cost of chemicals and apparatus.	Other miscellaneous expenditure.	Total.	
	Doses.	Doses.	Doses.	Doses.	Doses.	Doses.				Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Imperial Bacteriological Laboratory	Rinderpest ...	92,071	5,46,974	30,867	6,68,913	6,27,349	41,583	United Provinces ...	2	2	...	...	...	...	...	...	...	...	...	...
	Anthrax ...	4,233	29,786	950	34,969	30,933	4,036	Punjab ...	2	2	...	...	...	...	...	...	...	...	...	...
	Hæmorrhagic Septicæmia	18,453	5,140	...	5,140	3,500	1,640	Central Provinces ...	6	6	...	...	...	...	...	...	...	...	...	...
	Charbon Symptomatique	11,300	1,860	...	1,860	1,310	550	Bengal ...	23	23	825 5 9	3,064 12 0	1,079 11 0	9 0 0	5,078 12 9	64,128 4 8	49,791 14 4	24,909 0 0	3,500 0 0	19,730 15 2	1,66,145 7 9
	Mallein ...	3,166	9,238	...	12,404	9,052	3,352	Eastern Bengal and Assam.	10	10
Burditt's Dept.	Tuberculin ...	3	306	...	309	144	165	Rajputana ...	1	1	...	...	...	...	...	...	...	...	...	...
	.....	.....	.....	.....	.....	.....	.....	Native States ...	2	2	...	...	...	...	...	...	...	...	...	...
	.....	.....	.....	.....	.....	.....	.....	United Provinces ...	8	8	...	...	...	...	...	...	...	...	...	...
	.....	.....	.....	.....	.....	.....	.....	Punjab ...	5	5	...	...	...	...	...	...	...	...	...	...
	.....	.....	.....	.....	.....	.....	.....	Central Provinces ...	2	2	...	...	...	...	...	...	...	...	...	...
	Bengal ...	1	1	4 12 0	...	4 12 0	3,560 5 5	2,493 13 11	1,022 12 0	12,968 15 2
	.....	.....	.....	.....	.....	.....	.....	Eastern Bengal and Assam.	1	1	...	...	...	...	...	...	...	...	...	...
	.....	.....	.....	.....	.....	.....	.....	Bombay ...	7	7	...	...	...	...	...	...	...	...	...	...
TOTAL	1,26,228	5,97,304	31,317	7,35,894	6,72,288	51,306	.....	72	72	925 5 9	3,064 12 0	1,084 7 0	9 0 0	5,083 8 9	72,678 9 6	52,385 12 9	26,928 2 0	3,500 0 0	19,730 15 2	1,79,118 6 11

TABLE XVI.

Return of animals for 1908-09.

Details.	Herd bulls.	Supernumerary bulls.	Cows.	Male produce.	Female produce.	Castrated produce.	Ordinance bullocks.	Cultivation bullocks.	Mules.	Pony mares for M. B.	Pony stallions.	Capats.	Donkey stallions.	Donkey colts.	Donkey mares.	Donkey fillies.	Rams.	Ewes.	Male lambs.	Female lambs.	Wethers.	Zebra.	Total.	REMARKS.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1st April 1908	22	...	1,097	900	699	18	...	309	137	98	1	7	(a) 12	58	85	39	4	238	90	158	...	1	3,913	
Increase	By birth	...	...	406	331	...	...	...	22	...	...	...	...	17	...	17	...	...	95	100	...	...	1,038	
	purchase	...	...	2	...	...	...	8	25	...	...	3	...	...	...	...	4	12	...	...	...	...	61	
	transfer	152	222	...	...	187	133	26	...	...	...	...	...	...	10	...	...	109	...	...	93	...	938	
Total	23	152	1,319	1,308	1,080	205	133	343	184	98	1	10	12	75	95	56	8	366	185	258	93	1	5,950	
Decrease	Died	...	1	38	95	64	2	12	3	1	...	1	...	4	3	2	3	29	39	36	13	...	346	
	Destroyed	...	...	2	2	1	...	20	1	...	...	...	...	1	1	...	...	2	...	...	...	...	30	
	Sold	1	81	80	64	161	...	125	35	73	...	1	7	15	3	1	...	2	4	4	80	1	738	
	Transferred	2	64	...	276	222	88	13	61	10	93	109	938
Total	3	146	120	437	448	90	136	123	77	1	...	2	7	20	7	13	3	33	136	149	93	1	2,052	
Balance	20	6	1,199	871	632	115	...	215	107	37	1	8	5	(b) 55	88	43	5	333	49	109	...	...	3,598	
VALUE	4,400	1,500	1,07,615	66,540	13,120	10,880	...	21,370	20,105	3,000	166 10 8	788 12 0	2,480	6,060	8,370	2,530	1,220	1,958	62 8 0	224	...	...	2,72,389 14 8	

(a) Five of these were for the Punjab Government.

(b) One at Goona.

TABLE XVII.

HISSAR FARM.

Results of donkey, mule and zebrule-breeding during 1908-09.

1	Stallions on Register at close of year.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.		RESULT OF PREVIOUS YEAR'S COVERINGS.		AVERAGE RESULT OF PREVIOUS YEAR'S COVERINGS PER STALLION EMPLOYED AT STUD.		REMARKS.
		Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of produce.	Number not held.	Average of produce.	Average of not held.	
2	3	4	5	6	7	8	9	10	11	12	13	
Donkey-breeding	5	6	6	84	78	16.8	12.16	(a) 37	36	6.16	6.0	(a) 3 were still born.
Mule-breeding	5	5	5	85	88	7	7.6	22	16	4.4	8.2	

TABLE XVIII.

Abstract showing main results of the working of the Hisar Farm during the official year 1908-09.

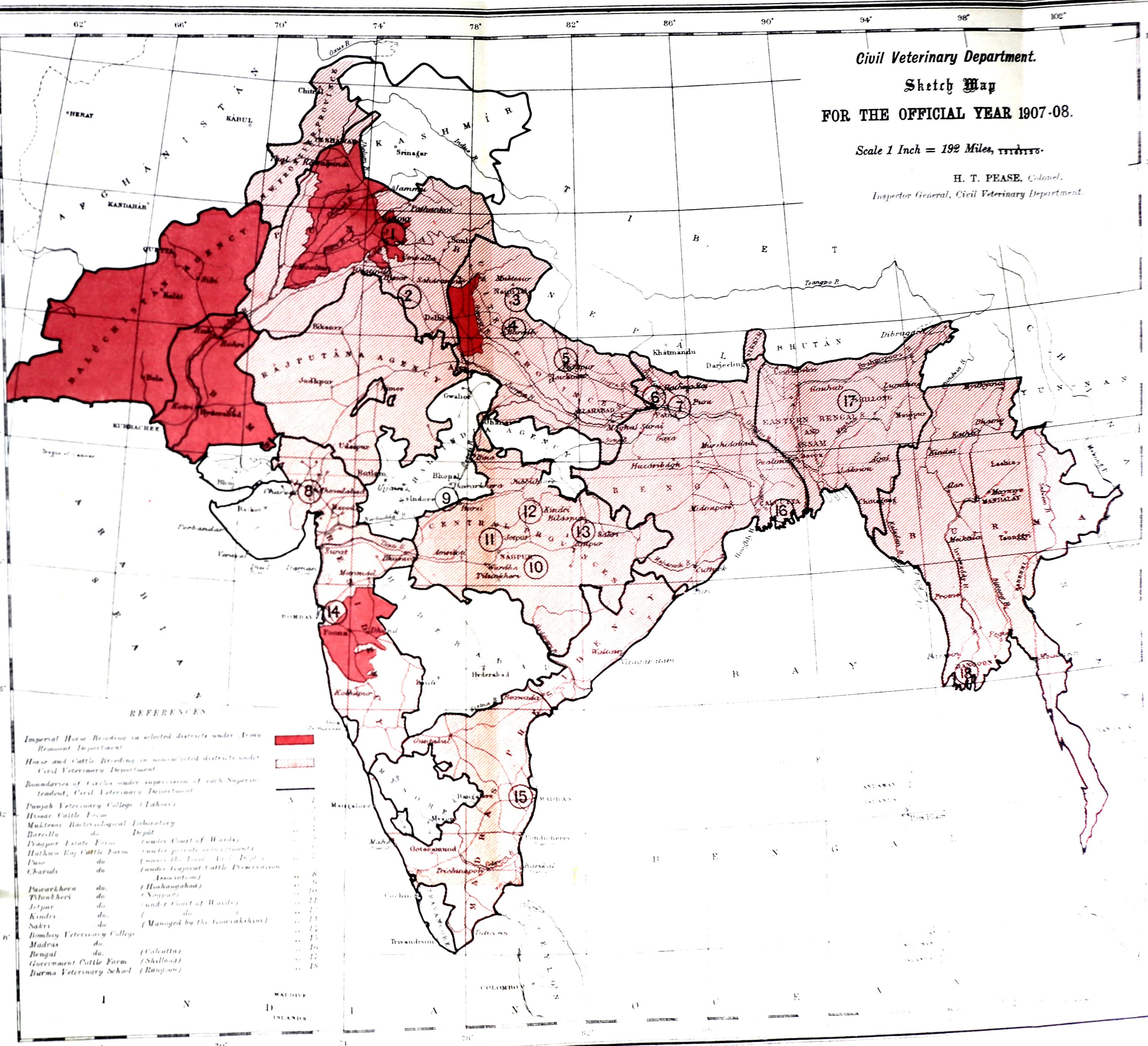
						Rs.	A.	P.
<i>Receipts paid into Treasury.</i>								
1.	Sale of animals (a)	...	...	...	...	78,233	13	0
2.	Sale of produce	...	...	...	...	16	8	0
3.	Other heads	...	...	...	...	20,657	5	9
					TOTAL	93,907	10	9
<i>Expenditure.</i>								
1.	Salaries and travelling allowances of officers	...	...	...	...	12,648	1	8
2.	Ditto ditto of subordinate staff	...	...	...	...	30,101	7	4
3.	Cultivation expenses	...	...	...	...	14,698	11	1
4.	Feed and keep of animals including reserve fodder Rs. 2,455-9-9	...	...	...	...	34,814	15	7
5.	Purchase of animals	...	...	...	...	6,756	0	0
6.	Other heads	...	...	...	...	9,669	2	8
					TOTAL	1,08,688	6	4
<i>Value of animals issued on book credit.</i>								
1.	Siege-train bullocks	...	...	...	...	18,750	0	0
2.	Army transport bullocks	...	...	...	...	...
3.	Bulls	...	...	...	...	...
4.	Mules and donkeys	...	...	...	...	20,800	0	0
					TOTAL	39,050	0	0
<i>Valuation of animals, grain and fodder on hand at end of year.</i>								
1.	Valuation of animals as per Table XVI attached	...	...	...	...	2,72,389	14	8
2.	Do. of grain	...	...	...	...	2,589	12	8
3.	Do. of fodder	...	...	...	...	54,698	6	8
4.	Do. Machinery and dead stock articles	...	...	...	...	11,977	4	11
					TOTAL	3,41,655	6	6

(a) Includes "Valuation of animals issued on Book credit."

Civil Veterinary Department.
 Sketch Map
 FOR THE OFFICIAL YEAR 1907-08.

Scale 1 Inch = 192 Miles, 1:192,000.

H. T. PEASE, Colonel,
 Inspector General, Civil Veterinary Department.



REFERENCES

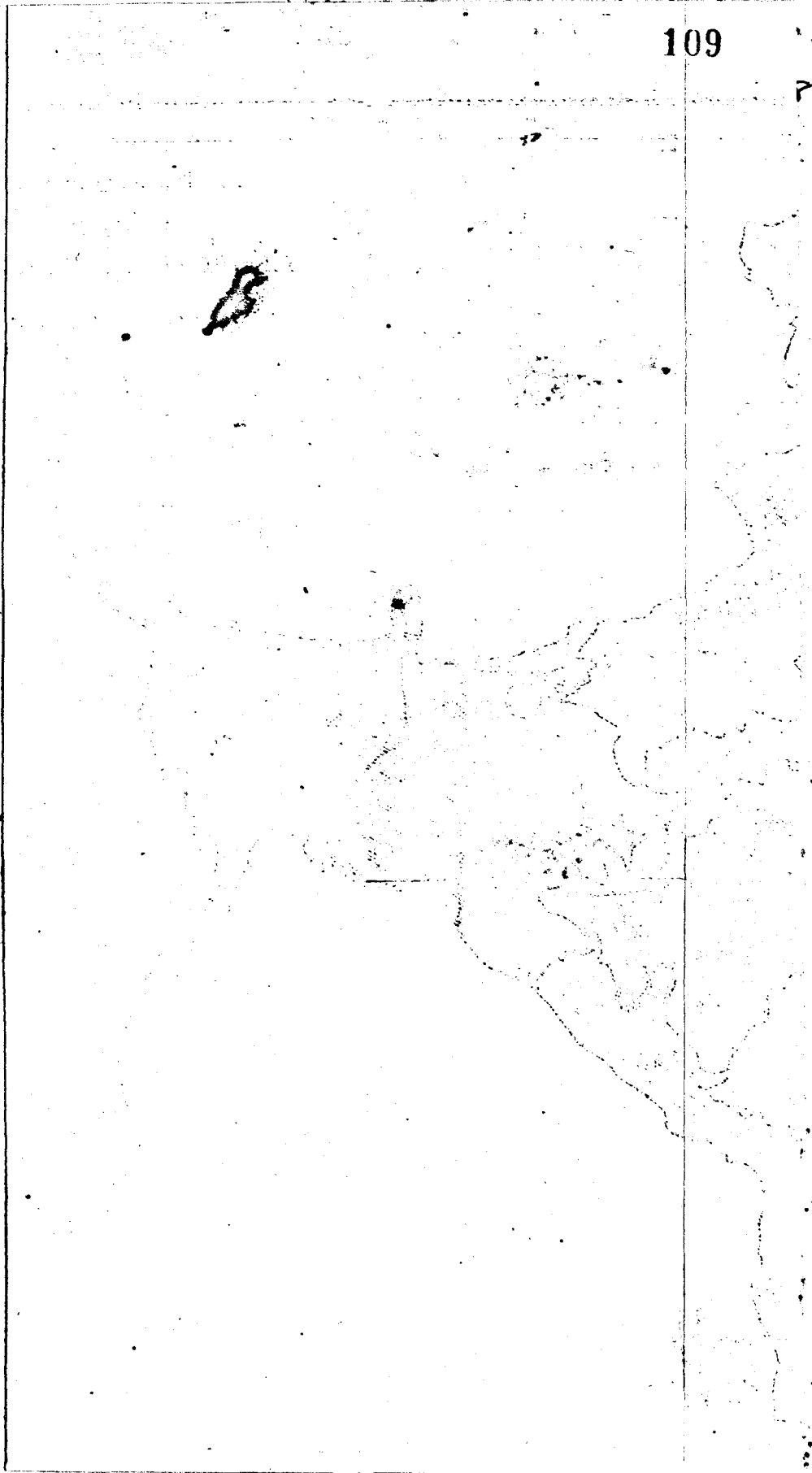
- Imperial Horse Breeding in selected districts under Army Remount Department. ■
- Horse and Cattle Breeding in unselected districts under Civil Veterinary Department. ■
- Boundaries of Circles under supervision of each Superintendent, Civil Veterinary Department.
- Punjab Veterinary College (Lahore) .. 1
- Hissar Cattle Farm .. 2
- Muktesar Bacteriological Laboratory .. 3
- Bareilly do .. 4
- Pratap Estate Farm (under Court of Wards) .. 5
- Hathwa Raj Cattle Farm (under private management) .. 6
- Pusa do (under the Local Vet. Dept.) .. 7
- Charadi do (under Gujarat Cattle Procurement Association) .. 8
- Puarakhra do (Hoshangabad) .. 9
- Thunkeeri do (Nagpur) .. 10
- Jetpur do (under Court of Wards) .. 11
- Kendra do (do) .. 12
- Sabri do (Managed by the Government) .. 13
- Bombay Veterinary College .. 14
- Madras do .. 15
- Bengal do (Calcutta) .. 16
- Government Cattle Farm (Shillong) .. 17
- Burma Veterinary School (Rangoon) .. 18

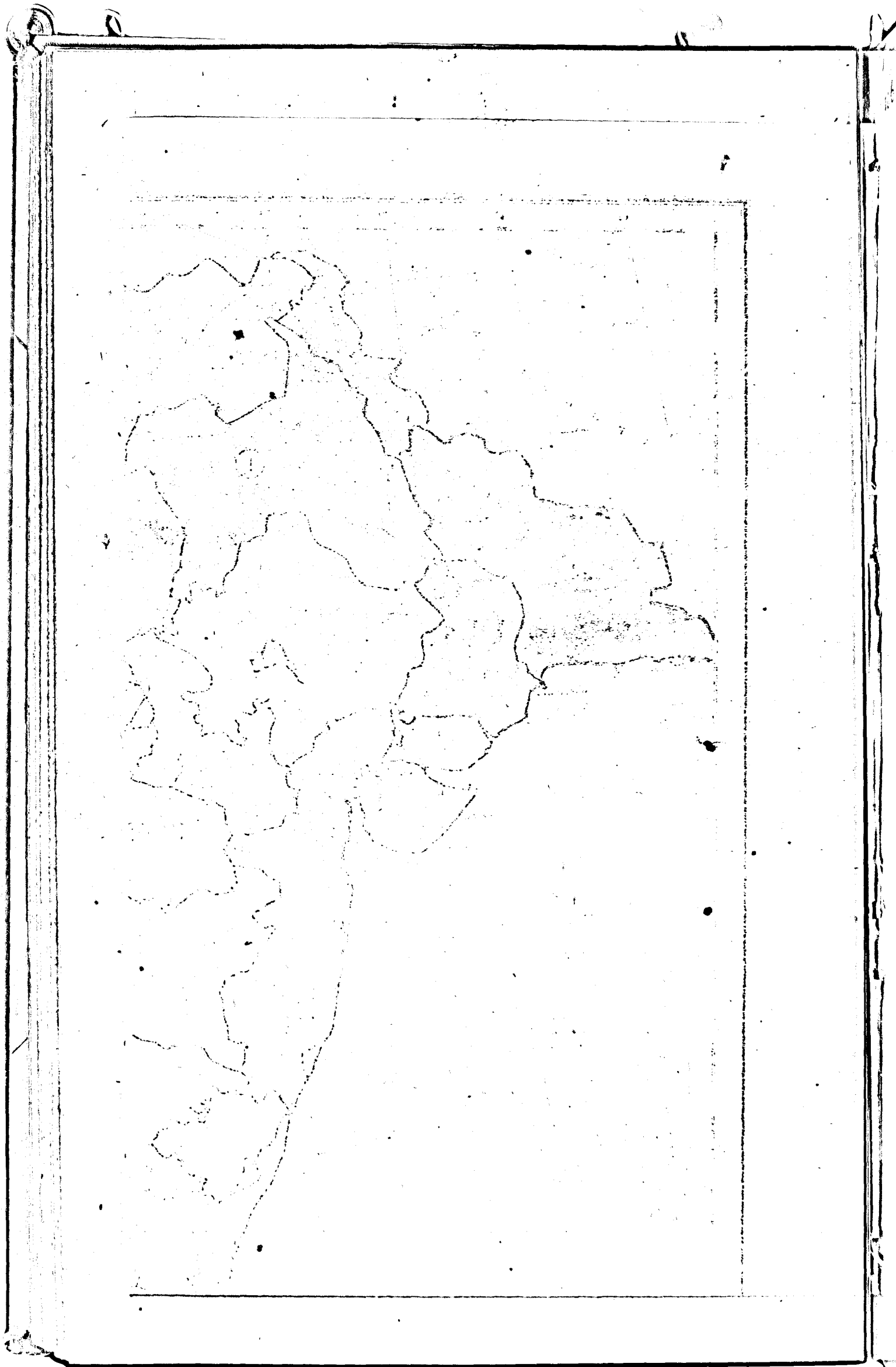
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Annual Administration Report
OF THE
Civil Veterinary Department

FOR THE OFFICIAL YEAR

1909-1910

5



CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1910

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GOVERNMENT OF INDIA.

ANNUAL ADMINISTRATION REPORT

OF THE

CIVIL VETERINARY DEPARTMENT

FOR THE OFFICIAL YEAR

1909-1910.

GENERAL ADMINISTRATION.

Colonel H. T. Pease, C.I.E., was in charge of the Department for the whole of the year and some of the important sections embodied in this report were drafted out by him before proceeding on furlough in June 1910.

Preface.

2. As usual, a coloured Map and the prescribed Tables are appended. It may be mentioned that the colouring on the map has been somewhat altered to indicate more clearly and accurately the horse and cattle breeding districts worked under the administration of the Civil Veterinary Department.

3. The table below gives the names of the officers who held the several appointments in the Department during the year under report:—

Officers in charge.

Appointments.	1st April 1909.	31st March 1910.	REMARKS.
Inspector-General	Colonel H. T. Pease, C.I.E.	Colonel H. T. Pease, C.I.E.	
Imperial Bacteriologist	Captain J. D. E. Holmes, M.A., D.Sc.	Major F. S. H. Baldrey.	
Assistant Bacteriologist	H. E. Cross, Esq.	H. E. Cross, Esq.	
Physiological Chemist	.....	P. Hartley, Esq., B.Sc., D.Sc.	
Superintendent, Government Cattle Farm, Hissar.	Major J. Farmer	Lieutenant-Colonel J. Farmer.	
Superintendent, United Provinces	E. W. Oliver, Esq.	E. W. Oliver, Esq.	Officiating.
2nd Superintendent, United Provinces	C. W. Wilson, Esq.	C. W. Wilson, Esq.	Officiating.
Chief Superintendent, Punjab	Captain G. K. Walker	Major G. K. Walker.	
Superintendent, North-West Frontier Province and North Punjab.	V. de V. H. Woodley, Esq.	V. de V. H. Woodley, Esq.	
Superintendent, South Punjab	G. Taylor, Esq.	G. Taylor, Esq.	
" Sind, Baluchistan and Rajputana.	Major A. S. Trydell	Major A. S. Trydell.	
Principal, Punjab Veterinary College	Major A. Smith	Major A. Smith.	
Professor, Punjab Veterinary College.	Captain W. O. Dawson	E. Burke, Esq.	
Professor, Sanitary Science, Punjab Veterinary College.	S. H. Gaiger, Esq.	S. H. Gaiger, Esq.	
Principal, Bombay Veterinary College.	M. H. Sowerby, Esq.	M. H. Sowerby, Esq.	Sub. <i>pro tem.</i>
Assistant Principal, Bombay Veterinary College.	F. Ware, Esq.	N. D. Dhakmarvala, Esq.	Sub. <i>pro tem.</i>
Superintendent, Bombay	K. Hewlett, Esq.	K. Hewlett, Esq.	
Principal, Bengal Veterinary College	Colonel F. Raymond	Colonel F. Raymond.	
Superintendent, Bengal	D. Quinlan, Esq.	D. Quinlan, Esq.	
Superintendent, Eastern Bengal and Assam.	W. Harris, Esq.	W. Harris, Esq.	
Principal, Madras Veterinary College.	D. A. D. Aitchison, Esq.	D. A. D. Aitchison, Esq.	
Superintendent, Madras	Lieutenant-Colonel W. D. Gunn	Captain W. O. Dawson.	
" Burma	Lieutenant-Colonel G. H. Evans	Lieutenant-Colonel G. H. Evans.	
2nd Superintendent, Burma	T. Rennie, Esq.	C. J. N. Cameron, Esq.	Officiating.
3rd " "	C. J. N. Cameron, Esq.	.....
Superintendent, Central Provinces	Major F. S. H. Baldrey	F. Ware, Esq.	Officiating.
Veterinary Officer Investigating Camel Diseases.	A. S. Leese, Esq.	Colonel H. T. Pease, C.I.E.	In charge office.
Attached for training in Punjab	.....	R. Branford, Esq.	
Ditto	.....	J. G. Cattell, Esq.	
Ditto	.....	S. Carless, Esq.	

4. During the year, Mr. G. D. Martin resigned his appointment on termination of his leave in September 1909. Lieutenant-Colonel W. D. Gunn retired in December 1909 on attaining the age of 55 years; and the regrettable death of Lieutenant-Colonel E. Joslen was reported in February 1910.

5. The following officers were on leave in England at the close of the year :—

Lieutenant-Colonel H. M. Maxwell.

Captain J. D. E. Holmes.

Mr. T. Rennie.

Mr. A. S. Leese.

6. Colonel H. T. Pease, C.I.E., who held the appointment of Inspector-General, Civil Veterinary Department, throughout the year under report, served as President of the Board of Examiners at the Punjab, Bombay, Madras and Bengal Veterinary Colleges. He attended the Agricultural Conference at Lucknow; inspected the Simla-Kalka dâk line; inspected Veterinary dispensaries at Delhi, Agra, Moradabad, Allahabad, Benares and Jubbulpore. Served as President of the Examination Board for promotion of Captain Dawson to rank of Major. Inspected the Imperial Bacteriological Laboratory at Muktesar and the Branch Depôt at Bareilly. Inspected the Cattle Farm at Hissar. Visited the Chharodi Farm. Accompanied the 2nd Superintendent, United Provinces, on a tour of inspection in portions of the Jhansi district. Visited Bombay to purchase Arab stallions for District Boards, and the Amritsar Fair to purchase cattle for the Hathwa Raj.

7. He travelled 14,157 miles by rail and 259 miles by road.

PART A.—PROVINCIAL ADMINISTRATION.

I.—VETERINARY INSTRUCTION.

8. Table I shows the results of the work done in Veterinary Colleges and Schools. The arrangements alluded to last year, regarding the fixing of permanent dates of examinations, the formation of permanent Boards and the allotting of specified subjects to each Examiner, were continued during the year under report.

9. *Bengal*.—This year the Bengal Veterinary College takes the lead as regards the percentage of graduates passed by the Board of Examiners. Thirty-four out of 39 students passed the first year's class; 41 out of 48 the second, and 32 out of 37 passed the final year's test; giving a general average of 86.29 per cent. These results were considered to be very good by the Examining Board. Five Army Transport Drivers from Burma were trained as Dressers during the vacation of the College and three men sent by District Boards, received instruction in shoeing in the Nalbund class.

10. The total number of cases treated in the College hospital was 5,680 against 5,144 in the previous year, and the fees realized for treatment, etc., amounted to R14,495. It is reported that lack of funds again stopped the progress of the larger works in the College, but in spite of financial difficulties, His Honour the Lieutenant-Governor was able to provide for the students a private hospital, also a football and cricket ground, and the services of a Trainer and Gymnasium Instructor.

11. *Punjab* comes next with 65 passes out of 78 students in the first year's class; 56 out of 71 in the second year, and 62 out of 96 in the final year's test; also six graduated in June 1909, giving a general percentage of 74.69. In addition to the ordinary classes, 48 men from the Transport Department were trained as Dressers, and 11 received a course of instruction in shoeing in the Nalbund class.

12. The teaching staff practically remained unchanged. Mr. E. Burke, Deputy Superintendent, was transferred from Hissar to the post of Professor of Surgery at this College, *vice* Captain Dawson transferred to Madras.

13. The Examiners in their report remarked as follows:—

“We would once more bring to the notice of the Punjab Government that the number of students in each class is too large to permit of satisfactory teaching, and we would strongly recommend that this important matter be given the consideration it requires, as soon as possible.”

It is believed that this matter has been represented through the proper channel and is now under the consideration of the Punjab Government.

14. The number of cases treated during the year in the College hospital was 6,303 and the amount realized for treatment, etc., amounted to ₹12,454.

15. Owing to the want of funds no progress has been made with the sanctioned additions to the buildings on the College premises.

16. *Bombay*.—Mr. Sowerby acted as Principal of this College up to the beginning of November 1909 when the late Lieutenant-Colonel Josien returned from leave and took over charge and remained so until the 28th February 1910, the date on which he died from injuries received in a carriage accident. Mr. Sowerby was again placed *sub. pro tem.* in charge and continued to be so until the end of the year under report.

17. The Board of Examiners in their report state:—

“We understand that sanction has been accorded to the provision of anatomical rooms, contagious disease ward, and small laboratory which are urgently needed. Considering the conveniences available for teaching at present, the results of the examinations are satisfactory.”

18. Twenty-two out of 31 students passed the first year's test, 29 out of 37 the second, and 20 out of 31 the final examination, with a general average of 71.71 per cent., which shows a slight improvement on the results of the previous year.

19. Twenty-four men of the Transport Department were put through a course of training as Dressers during the time the College was under vacation, of which 23 were considered competent.

20. The number of cases treated in hospital was 4,277 against 4,064 in the previous year, and the number of operations performed was 333 against 247 in the year 1908-09. The receipts from fees and other sources amounted to ₹8,713.

21. The plans and estimates, duly approved, for the construction of a contagious disease ward and dissection and *post-mortem* rooms on the new premises have been forwarded to the Public Works Department, also those for the building of the Operating Theatre. The library is reported to be thoroughly up-to-date and an increased grant of funds has given facilities for procuring new books, etc.

22. The work at the Patho-Bacteriological-Laboratory has greatly increased. A special grant of ₹1,500 has been sanctioned for the purchase of microscopes required for the Pathology and Histology classes, and the providing of necessary furniture and fittings has also been approved.

23. Many new specimens have been added to the collections at the Museum, including three complete skeletons.

24. *Madras*.—Mr. Aitchison held the post of Principal throughout the year and reports that the selection of candidates for enrolment of students was not made till the end of January 1910 when Lieutenant-Colonel W. D. Gunn, who was then Principal, selected 70 candidates, of which only three were matriculates; subsequently, 30 of the most promising students were finally selected by Mr. Aitchison and admitted in Class A.

25. At the annual examination, 20 out of 30 students passed the first year's test, 10 out of 16 the second year, and 12 out of 21 the final year's examination, with a general average of 62.68 per cent. The Board of Examiners remarked:—“The results, excepting in the final year's class, are satisfactory”, and suggested a complete theoretical course of training in view

to improving the general practical knowledge of the students. The Principal of the College attributes the fall in the percentage of passes to the "very large number of non-matriculated and badly educated students admitted during the three previous years."

26. The total number of patients treated in the hospital attached to the College was 2,074 and the amount realized in fees, etc., amounted to ₹14,243-2-10, which is very satisfactory. The number of operations performed aggregating 916, *viz.*, 514 in-patients and 402 out-patients.

27. The Museum is reported to have been further equipped by the addition of valuable models and instruments. Land adjoining the College grounds has been acquired for a recreation ground for the students and for building purposes.

28. A Bacteriological Laboratory and Pharmacy are reported to have been sanctioned, which will afford greater facilities for teaching students in contagious diseases of animals.

29. *Burma.*—At the Burma Veterinary School the teaching staff remained the same as during the previous year. Five students passed the final examination, leaving at the end of the year 20 students in the Senior class and 13 in the Junior class.

30. The school has been transferred to Insein. A temporary Laboratory was put in working order at the School and about 2,000 smears were examined, chiefly of diseases suspected of being of a contagious nature. The number of animals treated in the temporary Veterinary hospital amounted to 26 in-patients and 214 out-patients.

31. The pupils attended 3 outbreaks of rinderpest, besides having seen cases of foot and mouth disease, surra and piroplasmiasis. They have also had opportunities of preparing and examining microscopical specimens.

32. In view of future expansion, a portion of land, about 9 acres, was acquired.

33. *General.*—The total number of students who presented themselves for examination was 559 against 590 in the previous year. The number who graduated from the Colleges was 137 against 160 last year. From the Punjab College 68 or 64.58 per cent.; Bengal 32 or 86.48 per cent.; Bombay 20 or 64.51 per cent.; and Madras 12 or 57.14 per cent. The number passed out from the Burma Veterinary School was 5.

34. There were 483 students remaining under instruction at the Colleges and 33 in the Burma School at the end of the year against 478 and 27, respectively, in the previous year. The demand for Veterinary Assistants steadily continues and the necessity for the establishment of another Vernacular College is becoming more apparent.

35. The decline in the number of graduates, as compared with the previous year, may be ascribed chiefly to two reasons, (*a*) the classes in the Punjab College being far too large to be well taught, and (*b*) to the admission in the Madras College of a comparatively large number of non-matriculated and badly educated candidates. Both these points have been brought to the notice of the Local Authorities and will, doubtless, receive due consideration.

36. With the staff available, much has been done in the matter of utilising the Laboratories attached to the various Colleges—an increased number of specimens were sent for examination and the practical demonstrations given of contagious animal diseases afforded greater facilities for teaching students in these subjects.

II.—TREATMENT OF DISEASE.

37. Table II shows the reported mortality from contagious diseases amongst animals in the several Provinces named. Cases of contagious diseases amongst equines occurring in selected horse-breeding districts are accounted for by the Army Remount Department and are not included in the figures shown in Table II.

Contagious disease amongst solipeds, outbreaks, mortality, etc.

38. The total mortality reported, as compared with the previous year, is as follows:—

	1908-09.	1909-10.
Equines	1,112	1,898
Bovines	401,139	287,823
Others	20,208	14,935

39. *Glanders*.—In the Provinces named in Table II, 236 cases of Glanders were reported, against 280 in the previous year. One hundred and sixty, or nearly three-fourths of the total number, were reported from Bengal, of which 87 occurred in Sodepur Pinjrapole, 24 in Hazaribagh Pinjrapole, and the remainder in the districts of Burdwan, Hooghly, Murshidabad, Darjeeling, Jessore and Sambalpur. Serious outbreaks were reported from Burdwan and in the Hooghly districts. Of the horses in the Raj stables at Burdwan 64 were tested and of these 13 proved to be glandered. In the Hooghly district 13 horses were destroyed of 44 tested with Mallein. In the Murshidabad district 24 ponies were seized, of which 14 proved diseased and were destroyed. The cases reported from other districts were but few in number.

40. A matter of great importance in the suppression of Glanders and other scheduled diseases has been the extension of the Glanders and Farcy Act to all districts under the supervision of the Superintendent, Civil Veterinary Department, Bengal. Compensation for the horses destroyed was given to some of the very poor owners, the total amount for the Province being R69.

41. *Bombay*.—There were 6 cases of Glanders reported and destroyed in the City of Bombay against 27 last year.

42. *Punjab*.—Twenty-two cases of Glanders were reported during the year from the Rohtak, Delhi, Lahore, Sialkot, and Rawalpindi districts against 33 in the previous year.

43. *Eastern Bengal and Assam*.—Fourteen cases were reported against 21 last year. Only clinically infected animals were destroyed.

44. *North-West Frontier Province*.—Two cases were diagnosed in Peshawar and destroyed.

45. *United Provinces*.—This disease appeared in the districts of Allahabad, Dehra Dun, Bareilly and Naini Tal, 32 cases were detected and dealt with against 2 last year. Two very serious outbreaks occurred, one on the Kathgodam-Naini Tal Tonga line, the other on the Ranikhet road. Prompt measures were taken to suppress the disease, 164 animals were subjected to the Mallein test, and those found affected were immediately destroyed. The public were warned and necessary precautions taken to prevent the spread of the malady.

46. *Central Provinces*.—Table II has not been furnished with the report of the Superintendent, Civil Veterinary Department, Central Provinces. Last year the appendix was also omitted.

47. *Anthrax*.—Only 51 cases have been reported against 63 in the previous year. Bengal reports that 6 deaths occurred in the Patna district, but in none has the diagnosis been confirmed by bacteriological examination.

48. One case is reported in the Bombay Presidency.

49. *Punjab*.—Seven cases were reported, 1 in Hissar, 3 in Gurgaon and 3 in Rawalpindi. Last year the number reported from the Punjab was five.

50. *Eastern Bengal and Assam*.—Twenty-two (22) deaths were reported against 36 last year. This year diagnosis was confirmed in the districts of Cachar, Sylhet, Goalpara, Kamrup and Sibsagar. The cases at Tippera and Darrang were not reported in time to allow of definite diagnosis being made.

51. *Madras*.—In Table II furnished by Madras, 14 deaths are recorded under the head "Anthrax". In paragraph 5 of the Superintendent's Report it is stated:—"The total mortality among horses and ponies was 356, of which 186 was due to disease, 31 to snake-bite and 139 to wild animals." These

figures are shown in an appendix which is not a prescribed form and may be detailed as follows :—

Diarrhoea and dysentery	28
Anthrax	14
Other diseases	144
From snake-bite	31
By wild animals	139
TOTAL	<u>356</u>

52. *Rajputana*.—One death from Anthrax is reported to have occurred in Ajmer district.

53. *Dourine*.—It is satisfactory to be able to again report that no cases of Dourine have been reported from any of the horse breeding districts supervised by this Department.

54. *Surra, Bengal*.—No cases were reported during the year.

55. *Bombay*.—The total number of reported cases was 325 against 231 last year. Outbreaks occurred in Bombay, Thana, Kolaba, Kaira, Panch Mahals, Surat, Poona, Ahmedabad and Ahmednagar. In the Thana and Kolaba districts, surra was scheduled under the Glanders and Farcy Act towards the close of the year. Fourteen cases were destroyed under the Act. In addition to the above many cases occurred among horses in some of the Native States of Gujarat.

56. *Punjab*.—Four hundred and fifty-two (452) deaths were reported against 163 last year. Outbreaks occurred in the districts of Kurnal, Lahore, Gurdaspur, Gujranwala, Shahpur and Mianwali. The outbreak at Gurdaspur was visited by the Chief Superintendent while on tour and many cases were diagnosed by him.

57. *Eastern Bengal and Assam*.—This disease is reported to have been confined to 4 districts in which 29 deaths were recorded. Last year the number amounted to 70. The majority of deaths which occurred this year were reported among the ponies on the Shillong-Gauhatti road.

58. Surra has been scheduled under the Glanders and Farcy Act in the districts of Sylhet, Cachar and Kamrup; also in the station of Shillong and on the Shillong-Gauhatti cart road in the district of Khasi and Jaintia hills. This will allow of prompt measures being adopted for the removal of infected animals.

59. *North-West Frontier Province*.—Forty-six (46) cases were reported from the Bannu and Dera Ismail Khan districts and the Tochi Agency where it was very prevalent. Blood-smears were examined microscopically and necessary precautions with regard to disinfection and disposal of carcasses were undertaken.

60. *United Provinces*.—Two hundred and fifty (250) deaths were reported, but the Superintendent states that it is highly probable that many more cases occurred in outlying localities, about which no reports were received. The districts of Bareilly, Dehra Dun and Jalaun are reported to have been most severely affected, while imported isolated cases were detected in Lucknow, Cawnpore and Jhansi. With greater facilities for investigation, facts are gradually coming to light which indicate that surra exists to a far greater extent in the United Provinces than was formerly supposed. With better arrangements for collection of statistics the existence of this and other diseases will be more clearly revealed. Surra has been scheduled under the Glanders and Farcy Act in Bareilly.

61. *Sind*.—Twelve deaths occurred in Karachi and one in Jacobabad district. It is reported that this disease is now being known at various places, both in horses and camels, viz., Zhob, Sibi, Jacobabad, Larkana, Sukker, Hyderabad, Karachi and Merwara.

62. *Rajputana*.—An outbreak among horses was reported from Kekri (Ajmer district) causing 46 deaths. The diagnosis was confirmed by microscopic examination.

63. *Central Provinces*.—Outbreaks were reported from Damoh district, Bhandara City, and amongst the ponies on the Dhamangaon-Darwah dâk line, and also amongst the camels on the Pusad-Wasim line. Diagnosis in each case sent up was confirmed by microscopical examination, and destruction of the affected animals advised.

64. Surra and Epizootic Lymphangitis having been scheduled under the Glanders and Farcy Act within Cantonment limits, will allow of cases being summarily dealt with.

65. *Burma*.—Thirty-one deaths occurred amongst the ponies of the Military Police.

66. *Other contagious diseases. Bengal*.—Two hundred and twenty (220) deaths were reported against 112 last year, but no details are forthcoming.

67. *Bombay*.—Three cases of Epizootic Lymphangitis were reported from Bombay and one from Poona. These were dealt with under the Glanders and Farcy Act.

68. *Punjab*.—Forty-five (45) deaths were recorded under this head, but no details have been furnished.

69. *Eastern Bengal and Assam*.—One hundred and fifteen (115) cases are recorded against 102 last year, but no details have been given.

70. *North-West Frontier Province*.—Under this head one case was reported from Tetanus.

71. *United Provinces*.—Sixty-four (64) cases of Tetanus have been recorded under this head. Other diseases, such as Strangles, Equine Piroplasmiasis, Horse pox, Parasitic skin disease, etc., no doubt exist, but no reliable information regarding them is furnished.

72. *Sind*.—Under this head it is reported that one case of Piroplasmiasis was identified in a mule at the Karachi Veterinary hospital.

73. The total number of deaths from contagious diseases among cattle are recorded in Table II. It is satisfactory to note a large decrease, as compared with last year's figures. The aggregate this year amounts to 287,823 against 401,139 in the year 1908-09. The decreases are chiefly under the heads "Rinderpest", "Anthrax", and "Other contagious diseases."

74. *Rinderpest. Bengal*.—This disease was prevalent in most districts of Bengal. Bihar is reported to have had a comparatively clean bill of health. There was a slight increase in the number of reported deaths in this Province as compared with last year's figures; but this is to be expected where more Veterinary Assistants and Inspectors are posted, and prompt attention paid to the reports of outbreaks. A virulent type of the disease appeared in Darjeeling district, not many animals were attacked, but there was a high mortality amongst those affected. At the Senchal Dairy Farm, 29 head of cattle died, and some goats on the Farm were also affected with the disease.

75. *Bombay*.—This disease occurred in 13 districts besides the City of Bombay. There were 1,520 deaths against 4,825 last year. Dharwar is the only district in which the disease assumed serious proportions, causing 605 deaths.

76. *Punjab*.—The death of 18,055 head of cattle is reported against 8,739 last year. The Superintendent states:—"This enormous increase is, in all probability, due to the short supply of serum from the Laboratory, which was discontinued when the disease was very prevalent." The supply of serum was temporarily suspended owing to insufficiency of hill bulls at the Laboratory.

77. *Eastern Bengal and Assam*.—This disease was, more or less, prevalent in all the districts of the Province. It was reported from 25 districts causing the death of 28,860 head of cattle against 44,126 in the previous year. This large decrease is satisfactory. Increases were reported from some of the districts, but the majority show a considerable decrease, especially

in Mymensingh where the mortality was reduced from 1,101 to 658; in Backerganj from 8,132 to 1,345; in Noakhali from 1,077 to 143; and Goalpara from 5,405 to 462.

78. *North-West Frontier Province and North Punjab.*—Rinderpest occurred in the districts of Peshawar, Hazara, Kohat, Dera Ismail Khan and the Kurram Agency, of which Hazara suffered most—1,448 deaths were reported against 403 last year.

79. *United Provinces.*—With the exception of the districts of Etah, Mainpuri, Ballia, Ghazipur and Gorakhpur, rinderpest prevailed throughout the Province—17,071 deaths were reported against 6,662 last year. This year the disease assumed a very virulent form in Cawnpore, Fatehpur, Banda, Hamirpur and Jalaun. Outbreaks were attended to and where the District Board staff was insufficient, Provincial Veterinary Assistants were, when possible, deputed to render help. Inoculations were carried out in 36 districts.

80. *Madras.*—The reported loss from rinderpest this year was 56,900 against 149,666 in the previous year. The decrease is accounted for by the Superintendent as probably due to the more careful recording of mortality. Preventive inoculation against this disease was conducted in almost all the districts of the Presidency.

81. *Central Provinces.*—No figures have been furnished but it is reported that rinderpest has been fairly prevalent in most districts, and that inoculation against the disease was conducted with less opposition than formerly.

82. *In Sind, Baluchistan and Rajputana* reports, beyond repeating the figures shown in Table II, there is nothing worthy of note, except that the Superintendent states that "reports of the death-rate of stock from the districts can hardly be relied upon and are more or less useless."

83. *Burma.*—This year the mortality, as compared with figures of last year, has considerably increased. The totals for the Province show 22,240 deaths from rinderpest against 13,729 in the previous year.

84. *In Lower Burma* the cattle in the Akyab district are reported to have enjoyed greater freedom from this disease than usual, but outbreaks, more or less severe, are reported from Myohaung Township. Outbreaks were also reported from the Tharrawaddy, Thayetmyo, Henzada, Amherst and Toungoo districts.

85. *In Upper Burma* the disease was prevalent throughout the year in Myitkyina district causing the death of 4,358 head of cattle. The introduction of the disease is attributed to the importation of affected Chinese pigs. On each occasion of an outbreak the Superintendent and 2nd Superintendent at once proceeded with a party and carried out serum injection. In the Bhamo district the disease was chiefly confined to the Kachin Hill tracts. In the Yamethin district it was most severe in the Yamethin sub-division.

86. *In the Southern Shan States* rinderpest prevailed for the greater part of the year, though perhaps, in many parts, in a less virulent form. The estimated mortality in these States reached 16,000, and mortality in the States of the Western Sub-division was 10,000.

87. *Foot and mouth disease. Bengal.*—The number of deaths reported is 2,374 against 3,769 in the previous year. It is stated that there was an error in the number of cases reported last year by the Police, and that the attention of the authorities concerned has been drawn to the fact.

88. An outbreak occurred among the Siripur Cattle Farm, but it was quickly suppressed.

89. *Bombay.*—The appearance of this disease is reported in 12 districts, as well as in the City of Bombay. Of 5,586 head of cattle attacked 62 deaths occurred against 4,388 attacks and 157 deaths last year.

90. *Punjab.*—Every district in the Province was affected, 3,899 deaths being recorded against 1,241 last year. The increase is ascribed to more reliable information having been furnished under an improved system of collecting statistics.

91. *Eastern Bengal and Assam*.—Deaths reported amount to 7,783 against 11,852 last year. The remarks made in paragraph 120 of last year's Annual Administration Report may be read in this connection as the cause of the high mortality.

92. *North-West Frontier Province and North Punjab*.—All the districts and Agencies were involved. Eighteen thousand one hundred and seventy-one (18,171) cases were reported, of which 113 died against 6,117 attacks and 107 deaths last year.

93. *United Provinces*.—Deaths reported amounted to 3,677 against 1,957 in the previous year. These figures cannot be relied on, as losses from this disease are comparatively small being usually confined to young stock or old and weakly animals. It sweeps over a large extent of country and practically nothing can be done to prevent spread owing to its extremely contagious nature, and the apathy and ignorance of the people who will not realise the utility of segregation and the adoption of simple remedies.

94. *Madras*.—The deaths reported were 3,260 against 4,578 last year. No allusion is made to these figures in the Superintendent's report.

95. *Central Provinces*.—It is reported that this disease has been very prevalent. A few deaths are said to have occurred, but except for the inconvenience caused by the inability of affected cattle to work, the outbreaks were not very serious.

96. *Burma*.—The total deaths under this head amounted to 5,207 against 2,800 last year.

97. *In Lower Burma* the disease was generally prevalent throughout the Pegu, Irrawaddy and Tenasserim divisions.

98. *In Upper Burma* though the disease was prevalent in many districts it was generally in a benign form.

99. *In the Shan States* the disease prevailed but was not of a severe type.

100. *Hæmorrhagic Septicæmia. Bengal*.—Three thousand one hundred and thirty (3,130) deaths occurred this year against 1,546 last year. Heavy mortality is reported from the districts of Jessore, Patna and Saran. In Gaya the number of deaths is reported to be 489.

101. *Bombay*.—This disease is reported to have occurred in 15 districts causing 3,651 deaths against 2,660 last year.

102. *Punjab*.—This disease existed in all the Punjab districts. Lahore and Shahpur suffered most. The total number of deaths in the Province amounted to 18,255 against 20,822 last year.

103. *Eastern Bengal and Assam*.—Reports of the prevalence of this disease were received from 15 districts causing the death of 3,327 head of cattle against 8,040 last year. The heaviest mortality has again been reported from the district of Kamrup.

104. *North-West Frontier Province and North Punjab*.—Outbreaks were reported from Peshawar, Hazara, Kohat, Dera Ismail Khan and the Kurram Agency. One thousand two hundred and twenty-five (1,225) deaths were reported against 422 last year.

105. *United Provinces*.—It is reported that owing to the heavy summer and winter rainfall, the mortality was heavy, viz., 2,839 deaths against 626 last year. Outbreaks were visited and 7,520 head of cattle were treated with successful results by the new vaccine method.

106. *Madras*.—The deaths reported were 6,954, against *nil* last year. The reason why no deaths were recorded last year was not explained in the Provincial report, probably it was due to the staff employed being too small to collect much information as noted in paragraph 117 of last year's Annual Administration Report. It is reported that 797 head of cattle were inoculated.

107. *Central Provinces*.—This disease was frequently reported, but in most cases it had subsided before the arrival of the Veterinary Assistant. In one outbreak the Veterinary Inspector arrived in time to use the protective vaccine with satisfactory results.

108. *Black Quarter. Bengal.*—This disease caused 737 deaths against 227 in the previous year. The disease was confirmed by bacteriological examination of slides.

109. *Bombay.*—It is reported that this disease occurred in 10 districts causing 1,125 deaths against 444 in the previous year.

110. *Punjab.*—The districts mostly affected were Hissar, Rohtak, Shahpur and Attock. The total number of deaths recorded in the whole Province amounted to 1,546 against 721 last year.

111. *Eastern Bengal and Assam.*—This disease was reported from 2 districts and caused 38 deaths against 6 districts and 565 deaths last year.

112. *North-West Frontier Province and North Punjab.*—Black Quarter was reported from Peshawar, Kohat and Hazara districts. One hundred and five deaths were recorded against 226 last year.

113. *United Provinces.*—The number of deaths reported is 679 against 62 last year. The most serious outbreak occurred in the Jhansi district where 536 animals are said to have succumbed. The 2nd Superintendent visited the outbreak and personally conducted inoculations.

114. *Madras.*—Shows 4,404 deaths against 4,708 last year. No other details have been furnished in the Superintendent's report.

115. *Anthrax. (Bovines). Bengal.*—The number of deaths reported is 812 against 365 last year. The disease was fairly prevalent throughout the Province as proved by microscopical examination of slides, and a very severe outbreak, with a high mortality, occurred in Terai. On one garden the Manager lost a large number of animals but no particulars were communicated to this Department. Returns of this disease are now submitted monthly to the American Consul-General.

116. *Bombay.*—Five hundred and twenty-three (523) deaths are reported, against 238 last year. It is said that outbreaks occurred in 11 districts, but there is nothing to show that the diagnosis was proved by microscopical examination.

117. *Punjab.*—This disease was reported from 6 districts with 55 deaths against 688 last year. In all cases now where anthrax is reported in the Punjab, blood-smears are sent for verification. This, no doubt, accounts for the decrease in the number of so-called anthrax cases reported in previous years.

118. *Eastern Bengal and Assam.*—One thousand eight hundred and twenty (1,820) deaths are reported against 2,954 last year. The cases from 3 districts were not previously reported during the year, and consequently a definite diagnosis was not made. The heaviest loss has been reported from Sibsagar and Lakhimpur.

119. *North-West Frontier Province and North Punjab.*—One hundred and thirty-eight (138) deaths were reported against 19 last year. The blood-smears submitted from suspected cases were microscopically examined by the Superintendent, who was unable to confirm any case, and who states that "It is certain anthrax is, comparatively speaking, rare in this Province, and is not so widely distributed as was at one time thought."

120. *United Provinces.*—One thousand three hundred and thirty-three (1,333) deaths were reported against 1,015 last year. The Superintendent doubts the accuracy of these figures, as the disease was not proved by microscopical examination of blood-smears. Monthly reports of this disease are now submitted to the American Consul-General.

121. *Madras.*—The number of deaths reported is 11,968 against 12,511 last year. There is nothing in the Superintendent's report to show whether the cases reported were confirmed by microscopical examination.

122. *Central Provinces.*—It is stated that sporadic cases were reported from time to time. Mention is made of an outbreak in which 4 buffaloes were found dead one morning. Poisoning was suspected, but pieces of skin from 2 of these buffaloes having been sent to the Bombay Veterinary College, the Principal reported that a microscopical examination confirmed anthrax.

123. *Burma*.—Under the combined head of "Hæmorrhagic Septicæmia," "Black Quarter" and "Anthrax," 3,119 deaths are recorded against 2,990 last year.

124. *In Lower Burma* it prevailed in the Akyab district. In the Pegu Division it caused very little trouble. In the Irrawaddy Division it was chiefly confined to three Townships. In the Tenasserim Division a few cases were recorded in Thaton and Toungoo districts and 248 deaths in Amherst district. Only a few cases were recorded from Upper Burma.

125. *Other contagious diseases. Bengal*.—Deaths numbered 1,723 against 2,059 in the previous year, but no information regarding the diseases to which the cattle succumbed is available.

126. *Bombay*.—One hundred and thirty-seven (137) deaths are recorded against 71 last year, but no details have been furnished.

127. *Punjab*.—A considerable decrease under this head is shown. This year 358 deaths are recorded against 8,895 last year. The Superintendent states:—"With better climatic conditions, gillar or parasitic disease was much less in evidence."

128. *Eastern Bengal and Assam*.—The number of deaths reported is 8,448 against 17,939 in the previous year. The Superintendent referring to the reduction states:—"Besides indicating that contagious diseases were less prevalent, it may also indicate that the symptoms and names of such diseases are becoming more widely known, with the result that these statistics are becoming more accurate."

129. *North-West Frontier Province and North Punjab*.—Under this head 32 deaths are recorded, which include Mange, Contagious Pleuro-Pneumonia, Cow pox and Liver fluke.

130. *United Provinces*.—Three hundred and eighty-nine (389) deaths were reported against 118 last year. These figures include cases of Piroplasmosis, Pleuro-Pneumonia, Tuberculosis, Contagious abortion, etc.

131. *Madras*.—Under this head 26,587 deaths are recorded against 44,988 last year. The decrease is satisfactory.

132. *Central Provinces*.—Under this head may be recorded the occurrence of Piroplasmosis, Epizootic Abortion and White Scour. The Superintendent also alludes to a disease called "*Bhowra*," which is stated to be a hydatid disease of the brain, affecting buffaloes and cattle; and it is thought that the intermediate stage of the Tape-worm may be in some of the smaller molluscs which infest stagnant water in tanks, etc. Parasitic diseases are also alluded to and to the supply of certain appliances for the spraying of animals, etc.

133. In Table II will be found the number of cases of contagious disease that occurred among animals other than "Equines" and "Bovines" during the year, aggregating 14,935 against 20,208 in the previous year. No detailed particulars regarding the several diseases have been furnished, but the most noticeable decreases appear under "Black Quarter," "Other contagious diseases" and "Rabies," while those under "Rinderpest," "Anthrax," "Distemper" and "Pleuro-Pneumonia" show an increase. Twenty-nine cases of "Fowl Cholera" are also shown in this year's figures.

134. *Preventive inoculation*.—Table III shows the number of outbreaks which have been dealt with by means of protective inoculation. The subject has been fully reviewed in Part B of this report under the head "Bacteriological Laboratory."

135. *Contagious diseases amongst other animals*.—Mr. Leese has held the appointment of "Officer Investigating Camel Diseases" sanction having been accorded to extension of the appointment for a further period of 5 years from the 13th February 1910. He has submitted detailed reports on his work, which are being published. Unfortunately the proposals for the erection of a small hospital and Laboratory for the study of camel diseases at Sohawa were still under consideration at the end of the year and in consequence work has been much hampered. A great deal of valuable information of a practical nature has, however, been collected in the field.

136. The important subject of surra has been further studied, (1) with a view to devising methods of prophylaxis, and (2) to find an effective treatment. In regard to (1), the advice given by Mr. Leese is of a practical nature, founded on the accepted fact that the disease is carried from sick to healthy by the bites of flies. The broad principles involved are the weeding out of surra infected camels and the avoidance of surra zones. The provision of surra free grazing for Silladar Camel Corps is a most important measure and the remarks made by Mr. Leese on this subject deserve very serious consideration, if surra is to be diminished in the Corps.

137. Mr. Leese truly says in regard to prophylaxis, that no excuse need be made for repeating a good deal of what has been said on the subject in previous reports. The most important requirement for prophylaxis is surra free grazing in the monsoon season for Corps Camels, having secured that the mortality would be less and the demand for remounts also. The next requirement is surra free grazing for camel breeding.

138. The summary of the condition of the various cadres in regard to their infection with surra is valuable as an indication of the efficiency of the measures recommended to prevent mortality. It shows that weeding out of surra cases does very greatly reduce the prevalence of the disease in future years. It is a pity therefore that more attention is not in some cases given to the routine examination of camels for this purpose.

139. It has been suggested that working isolation of camels might be practicable in the Punjab, but this is shown to be unworkable owing to lack of space and danger to healthy animals. July, August and September 1909 were spent touring in the grazing grounds with the primary object of definitely ascertaining which were surra free. The mapping out of the surra and surra free zones must necessarily be very slow, as in only three months in the year is this kind of work possible and they are unfortunately the most difficult to travel in. The work involves great exposure in very unhealthy country owing to the fact that it must be carried out during and after the rainy season and in country covered with jungle and reeking with malaria. The good progress which has been made in the work, therefore, is very creditable indeed.

140. In regard to the experimental treatment of surra, considering that no accommodation has been provided for the experimental animals, the progress made is extraordinarily good. Mr. Leese has submitted two reports (which are being separately published) on the subject, giving details of the experiments made with (1) Tartar emetic alone, (2) Tartar emetic and Atoxyl alternately, (3) Tartar emetic alone followed by a short course of mercuric bichloride alone, (4) Orpiment, (5) Antimony sulphide by the mouth, (6) Soamin, (7) White arsenic, (8) Arsenic in powder, (9) Arsenic in solution in various forms as (a) Solution of sodium arsenate, (b) Liquor arsenicalis, (c) Donovans solution, (d) Solution of arsenious iodide, (e) Solution of sodium arsenite. (10) Methylene blue and mercuric bichloride, (11) Soamin and sodium arsenate, (12) Soamin and antimony tartarate, (13) Atoxyl, soamin and sodium arsenate, (14) Atoxyl, antimony and sodium arsenate. Contrary to what has been found to be the case in the horse, no successful treatment has been yet obtained, but the results of some combinations are somewhat encouraging. It is interesting as well as discouraging to note that camel surra offers a separate problem for solution. The experiments are being continued.

141. The remarks made by Mr. Leese regarding compensation for slaughter of surra camels are worthy of attention. He points out that no loss is involved in the slaughter of a surra camel which is too weak to use under a load or is suffering from coincident unsoundness such as chronic blindness or lameness and that compensation should only be given for the slaughter of a camel in the public interest when it is still capable of ordinary work. With this I agree.

142. Various contagious and other diseases of the camel have also been studied as opportunity occurred, but lack of accommodation proved a serious drawback. It is interesting to find that little evidence now remains to show

that foot and mouth disease occurs in the camel. Jhooling has been found to be contagious. A form of specific peritonitis was met with in the Montgomery district. A separate report is being prepared regarding Filariasis. Various other diseases have been studied and noted on.

143. Three parasites have been added to the check list, *i.e.*, *Thelazia leesei*, a new parasite, causing ophthalmia, *Tenia centripunctata*, common also in the sheep, and *Onchocerca fasciata*, found coiled up in nodules in the subcutaneous tissue. *D. hepaticum* was found in 2 per cent. of the camels examined and the larvae of *Linguatula tænioides* once in the mesenteric glands.

144. Sanction has now been accorded for the erection of the necessary buildings at Sohawa so that disease may be more thoroughly studied.

145. Mr. Leese has continued to devote himself whole-heartedly to his work in very trying and unhealthy conditions and I consider that he deserves great credit for the progress which he has made during the year.

146. Table IV gives the number of animals treated and castrated by Veterinary Assistants on tour. The number of Veterinary Assistants employed has increased from 472 (*vide* last year's report) to 517. With the exception of Sind, Rajputana and Baluchistan, the number of Veterinary Assistants has been added to in every other Province. They visited 83,114 villages against 64,380 last year; treating 450,919 cases of which (excluding 1,662 castrations and 258 cases treated in cattle markets for lice) 282,470 were of contagious diseases and 166,529 non-contagious maladies against 189,124 and 150,573 respectively last year. This increase of 109,302 may be regarded as very satisfactory.

147. A reference to Table V will show that 408 Veterinary dispensaries were at work during the year under report against 380 last year, or an increase of 28. The increases are 3 in the United Provinces, 8 in the Punjab, 8 in Bombay Presidency, 5 in Madras Presidency, and 4 in Burma.

148. The number of in and out-patients treated was 518,787 against 428,402 last year. Satisfactory increases appear in the United Provinces, Punjab, Eastern Bengal and Assam, Bombay, Central Provinces, Burma and the North-West Frontier Province and North Punjab.

149. In Bengal of 27 dispensaries the one at Jessore was closed, as the Veterinary Assistant was ordered to do only district work. The dispensaries which call for special notice as regards work are Larpur, Muzaffarpur, Bankipur, Bhagalpur, Gya, Ranchi, Burdwan, Arrah and Cuttack. Proposals have been submitted for establishing Veterinary hospitals at Bettiah, Motihari and Beguserai, and it is hoped they will be in working order during next year.

150. The eight shoeing forges in the districts of Bengal are generally reported to be doing good work and gaining in popularity.

151. The work done by itinerating Veterinary Assistants is reported as satisfactory. The falling off in the number of cases as compared with last year's figures is accounted for by the fact that the actual number of new cases treated are now recorded. Inoculations and old cases for which only advice was given are now excluded.

152. In the Bombay Presidency the work done at the various dispensaries, with a few exceptions, show satisfactory progress indicating that these institutions are appreciated by the people. The average number of cases treated per dispensary is about the same as last year if the 8 new dispensaries (several of which were in working order for only a few weeks of the year) are included; but if we exclude these, the average is 2,674 against 2,266 last year.

153. In the Punjab there were 94 Veterinary Hospitals against 86 last year. The total number of cases treated was 199,066 against 144,882 in the previous year. These figures represent a very satisfactory increase and indicate the growing popularity of these institutions. Of the 94 Veterinary hospitals 59 are constructed on standard plans and the remainder are accommodated in other buildings. A new hospital at Amritsar has long been anticipated, but has not been started yet. The Sargoda Veterinary hospital

was transferred to the Army Remount Department, and a new hospital, in place of the one at Sargoda, was opened at Sahiwal. It is expected that a new hospital will be built next year at Bhawani as Lala Tara Chand, *Rais* of Bhawani, has presented the District Board with a sum of ₹7,000 for that purpose.

154. In Eastern Bengal and Assam there has been no addition to the number of Veterinary hospitals and dispensaries. Sixteen thousand three hundred and forty-one (16,341) in and out-patients were treated against 15,390 in the previous year. As the Veterinary Assistants in charge of these institutions have also to tour in the districts, attend outbreaks of disease and inspect dāk lines, etc., the amount of work done may be considered very satisfactory.

155. In the North-West Frontier Province and North Punjab the total number of Veterinary hospitals and dispensaries remained the same, but under the revised system, introduced during the year under report, stationary men have been put in charge of these institutions: in addition to which one itinerating Veterinary Assistant has been appointed to each district. This system has answered satisfactorily in most places, but in several instances the stationary men had to render help in attending outbreaks, necessitating the hospital being temporarily closed. Gradually, with the appointment of suitable men to the districts this difficulty will be overcome. Thirty-nine thousand three hundred and twenty (39,320) animals were treated against 21,349 in the previous year. The increase is very satisfactory. New hospitals are to be built at Peshawar, Mardan and Tonk.

156. In the United Provinces 3 new Veterinary hospitals were opened, *viz.*, at Saharanpur, Bareilly and Moradabad, while others are about to be built at Sitapur, Meerut and Cawnpore. New premises for the Lucknow and Aligarh hospitals are being taken in hand and the building of institutions of this kind in other districts are under consideration. A very satisfactory increase in the number of cases treated is apparent, *viz.*, 34,634 against 23,878 last year, indicative of the growing popularity of these institutions.

157. Five additional Veterinary hospitals were opened in the Madras Presidency during the year, and proposals for starting 6 others are under consideration. The number of cases treated show a satisfactory increase, being 45,461 against 35,234 last year. In addition to this 2,074 cases were treated at the Madras Veterinary College.

158. In the Central Provinces the number of Veterinary dispensaries remain unaltered. The total number of animals treated was 58,271 against 56,591, showing an increase of 1,680 during the year. It is stated that new Camp dispensaries were opened at 7 centres.

159. In Sind the number of Veterinary hospitals and dispensaries remained the same as last year. The number of cases treated show a decrease of 1,398, *viz.*, 11,832 against 13,230 last year. This is reported by the Superintendent to be chiefly accounted for by inoculation cases having been excluded from this year's figures.

160. In Rajputana there are 2 Veterinary dispensaries, the same number as last year. The total number of cases treated was 828 against 1,289 last year. The decrease is reported to be due to the post of Veterinary Assistant at one of the dispensaries having been vacant for 7 months; and also to the prevalence of plague during the year, both in the Ajmer and Beawar districts.

161. In Baluchistan there are no Veterinary hospitals or dispensaries.

162. Four new Veterinary dispensaries have been added to last year's number in Burma. A satisfactory increase in the number of cases treated is noted, *viz.*, 17,043 against 10,739 in the previous year. These figures do not include the 298 cases treated by Inspectors and 26 by Veterinary Assistants in Shan States.

163. Table VI shows the receipts and expenditure on Veterinary hospitals during the year. As compared with last year's figures, the financial results of these institutions are satisfactory.

164. Table VII shows the total strength of the subordinate Veterinary staff. There were 65 Veterinary Inspectors and 688 Veterinary Assistants employed against 50 and 616 respectively last year.

III.—BREEDING OPERATIONS.

(1) *Bovines.*

165. Table VIII gives the number of stud bulls the property of Government and of Local Boards. The figures furnished continue to show discrepancies and the information furnished cannot be considered reliable. Of stud bulls the property of Government, the closing balance of last year's return was 38, whereas the opening figures of this year's statement is shown as 50; similarly a discrepancy of 22 appears among the bulls the property of Local Boards.

166. In Bengal there are 3 bull-rearing and breeding farms, *viz.*, Siripur, Kalimpong and Bettiah; they are not maintained at Government expense. A new scheme is reported to have been adopted by which all bulls reared on these farms are to be distributed to various centres in the Estates instead of selling them to outsiders. During the year 13 bulls were so selected and distributed, and it is reported that their services are eagerly sought after.

167. Improvement is reported in the breeding of buffaloes by crossing them with Punjabi bulls.

168. Considerable improvement is reported to have taken place in the herd since the Siripur Farm was put under European supervision.

169. In Bombay the bulls maintained at the Chharodi Farm are occasionally allowed to serve the cows of local cattle breeders, and 36 young Khillari bulls are reported to have been purchased for the cows belonging to breeders of the Ahmednagar district. The Northcote Cattle Farm at Chharodi continues under the supervision of the Superintendent, Civil Veterinary Department, Bombay. The land of the farm has been acquired and necessary buildings are being constructed. The object of this farm is, principally, to breed bulls of pure blood for distribution among the herd of Gujarat. Careful selection and mating have resulted in bringing out the old characteristics of the breed and the herd can now be considered as of pure Kankrej blood. There are 18 young bulls which will be available for distribution next year, and 15 in the succeeding year. The breeding herd of cows is to be increased next year. Sufficient fodder reserve is maintained. This farm was visited by Colonel Pease last year, as well as by the Superintendent of the Government Cattle Farm at Hissar.

170. In the Punjab 53 bulls were supplied from the Hissar Farm, and 20 bulls of the Dhanni breed were obtained from Chakwal and Talagang for the North Punjab districts. It is reported that some districts are still very short of bulls. The subject of issuing detailed instructions, in regard to the best methods of maintaining stud bulls, of deriving the best success from them, and ensuring their proper care, is under consideration.

171. It is reported from Eastern Bengal and Assam that natives, in some districts, have so far failed to appreciate the value of suitable bulls, and that although the bulls have toured about in the district the cattle owners showed no great interest in them, "nor did they prefer them to their own weak bulls."

172. The Superintendent in remarking on the limited supply of bulls, states:—"One method of solving this question of the scarcity of bulls, is to buy selected calves and rear them in a suitable district where there is sufficient grazing all the year round." Referring to the Provincial Cattle Farms, the Superintendent states that there are 6 young bulls ready to be distributed.

173. The Superintendent, North-West Frontier Province and North Punjab, states that the number of bulls at stud are quite inadequate if any permanent results are to be obtained, and that very little interest is taken by District Boards in cattle breeding. It is also stated that in many places there is difficulty in finding men willing to keep a District Board bull.

174. In the United Provinces the stud bulls maintained are chiefly the property of Court of Wards and private Estates, but it is reported that many District Boards are now contemplating the advisability of locating good bulls. In alluding to the difficulty in obtaining a sufficient number of mature and suitable bulls in the open market to meet the demand, the Superintendent puts forward the suggestion of enlisting the co-operation of some of the most

influential *Raises* and other gentlemen interested in cattle breeding and who have sufficient grazing on their Estates, by placing under their care small herds of 10 or 15 selected male calves to be reared until fit for issue as stud bulls.

In the Central Provinces the Superintendent states that there are signs of greater interest being taken in cattle breeding, especially in the Chhatisgarh Division. Four *Malguzars* are reported to have purchased about 50 cows and a bull, with which they intend to specialise in cattle breeding, and that certain Court of Wards and Zamindars have definitely arranged to start farms.

175. The main results of the working of Provincial Cattle Farms are given in Table IX.

176. In Bengal, at the Siripur Farm there were 44 cows, of which 9 were Farm bred. During the year 42 calves were born of which 3 died. Ten bull calves and 2 heifers were selected, and 2 cows and nine heifer calves were rejected and sold. The Agricultural Department at Pusa having decided to give up the *desi* herd of cattle, handed it over unconditionally to the Court of Wards, Bettiah. The herd consists of 1 bull, 45 cows and 42 young stock, together with 4 bulls which were sent to Siripur to be reared. It is intended to establish this Farm at Manjheria, about 4 miles from Bettiah. At the Kalimpong Farm there were 15 cows, and one bull was purchased in February 1910.

177. At "The Northcote Cattle Farm," Chharodi, in the Bombay Presidency, the herd consisted of 323 head against 340 last year. The decrease is due to the disposal of all unsuitable stock. Sixty calves were dropped during the year, against 95 last year. Sixteen young bulls were sold for stud purposes against 7 last year. There was no contagious disease among the Farm cattle, although several villages in the vicinity were affected.

178. At the Upper Shillong Farm, in Eastern Bengal and Assam, there were 82 head of cattle including 10 bulls and 21 cows. Sixteen calves were dropped. Six young bulls are ready to be distributed. Seven cows, 18 heifers, and 6 calves were sold. One cow, 4 calves and 1 bullock died. Arrangements are being made to secure good grazing ground near Burapani, as during the winter months there is not sufficient food for the herd at the Upper Farm.

179. An attempt has been made to encourage the breeding of camels in the Punjab by the grant of substantial prizes for various classes of these animals at some of the Punjab Fairs. The Commandants of the various Silladar Camel Corps have subscribed Rs. 1,700 which has been allotted to the following centres :—

	R
Campbellpore	600
Dera Ghazi Khan	200
Montgomery	200
Muzaffargarh	200
Jacobabad	200
Shikarpur	200
Batesar	100
TOTAL	1,700

180. The details of the scheme have, however, been left to the General Officers Commanding the Divisions concerned, who have been asked to work out, in communication with the local civil authorities, a definite plan and to decide upon the amounts of prizes to be allotted.

181. The scheme for the encouragement of camel breeding in the Punjab by throwing open certain surra free grazing areas is still under consideration.

(2) Equines (under Local Bodies).

182. Table X shows the number of horse, pony and donkey stallions (under Local Bodies) employed at stud.

Horse, pony and donkey stallions. At the beginning of the year there were 64 horses, 102 ponies and 99 donkeys present. Twelve horses (including 2

country-breds), 13 ponies and 6 donkeys were purchased during the year. Those died, destroyed and sold aggregated 20, leaving a balance at the end of the year of 71 horses, 105 ponies and 100 donkey stallions. They were distributed as follows:—

50 horses, 5 ponies and 17 donkeys in the United Provinces,
 5 horses, 64 ponies and 70 donkeys in the Punjab,
 10 horses, 9 ponies and 13 donkeys in the North-West Frontier Province,
 5 horses and 14 ponies in Bombay,
 1 horse and 1 pony in Bengal, and
 12 ponies in Madras.

183. Table XI gives the services of horse, pony and donkey stallions. There were all told 176 horse and pony and 100 donkey stallions on the register, of which 61.02 horses, 102.85 ponies and 93.00 donkeys were actually employed at stud. The number of mares covered being 3,263 by horses, 4,922 by ponies and 4,302 by donkeys, or an average of 53.5, 47.8 and 46.3 respectively.

184. In Bengal and Bombay reports there is nothing special under this head worthy of record. Punjab alludes to the great shortage in the supply of donkey stallions and states that as the Hissar Farm is not likely to be able to meet the demand for some years, enquiries are being made as to the suitability of certain trans-Indus donkeys as sires for mule breeding, adding that if these latter animals are not available, it will be necessary to indent on Europe again. The North-West Frontier Province also complains of the paucity of donkey stallions. In the United Provinces horse breeding (under Local Bodies) is reported to be making satisfactory progress. The growing demand for the services of donkey stallions and the difficulty in obtaining them is alluded to. In Madras pony breeding shows an increase over last year's figures. In Central Provinces the only stallion they had was condemned as unfit for further service and sold, but the Superintendent states that there is still a demand for pony stallions, as several mares were brought for service after the sale of the stallion above alluded to. In Burma the only stallion employed was sold. The proposal for the preservation and possible improvement of the indigenous breed of Shan pony on a new system has been sanctioned and will, it is hoped, be brought into effect as soon as two of the essential factors for the fulfilment of the object in view are forthcoming, namely, funds and suitable stallions.

185. Table XII gives the average cost of feed, keep, attendance, etc., of horse, pony and donkey stallions. The cost, as compared with last year's figures, has increased in Burma, Madras and North-West Frontier Province; while it has fallen in Bombay, Punjab, Central Provinces and Bengal.

186. Table XIII is an abstract of particulars regarding Horse Fairs and Shows held in the non-selected districts.

187. Table XIV furnishes particulars regarding Cattle Fairs and Shows. One hundred and sixty-four were held against 133 last year. The total amount awarded in prizes was ₹23,677-4-0 out of ₹40,939 available. Forty-nine (49) medals were awarded. The total number of animals competing for prizes was 156,536 against 80,915 last year, and the total number of stock present was 863,355 against 760,812, showing an increase of 102,543. Last year no figures were supplied from the United Provinces, and this year Rajputana has failed to furnish statistics under this head.

IV.—SUBORDINATE ESTABLISHMENT.

Numbers, supervision and work performed.

188. Table VII shows the strength of the subordinate establishments at the end of the year.

189. *Bombay*.—The work performed by Veterinary Assistants in this Presidency is reported as generally satisfactory. The entire staff, with two exceptions, has now undergone a course of training in inoculation work. The Superintendent adds:—"The standard of professional knowledge of

Veterinary Assistants, as a whole, is not high. In fact some of them have degenerated into mere empirics and some are incompetent. There is great need for improvement in this respect and the question of establishing post-graduate courses was mooted during the year under report."

190. *Punjab* states "The subordinate staff continues to improve in efficiency. Much depends upon the degree and quality of supervision of the Inspectors who, generally, have worked well". Proposals have been submitted for an increase in the number of Veterinary Inspectors and also in the reserve staff which is found to be quite inadequate.

191. *North-West Frontier Province and North Punjab*.—The Veterinary Inspectors and Veterinary Assistants are reported to have worked energetically and well.

192. *United Provinces*.—The Provincial subordinate staff has been increased but a greater demand for the services of Veterinary Assistants has been created by the opening up of new dispensaries, and the Superintendent states that the Veterinary Assistants "have worked very hard and conscientiously in the face of many difficulties".

193. *Madras*.—The work done by Veterinary Inspectors and Veterinary Assistants is satisfactory.

194. *Burma*.—The work of Veterinary Assistants has, on the whole, been quite satisfactory.

195. The following statement shows the sanctioned establishments of the various Provinces, the number added and the strength at the end of the year:—

PROVINCE.	SANCTIONED SCALE.				NUMBER EMPLOYED DURING 1909-10.				INCREASE DURING 1909-10.				REMARKS.
	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Dressers.	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Dressers.	Deputy Superintendents.	Veterinary Inspectors.	Veterinary Assistants.	Dressers.	
Punjab . . . . .	...	24	170	...	...	12	135	...	...	...	8	...	
North-West Frontier Province and North Punjab . . . . .	...	2	26	...	...	2	(a) 23	...	...	...	...	...	(a) Three vacancies on 31st March 1910.
United Provinces	2	20	210	...	...	12	129	...	...	3	29	...	
Bengal	9	30	229	...	...	16	68	...	...	10	12	...	
Bombay	4	24	215	...	...	2	36	...	...	1	2	...	
Madras	3	15	132	...	...	3	43	...	...	1	1	...	
Central Provinces and Berar . . . . .	...	8	120	...	...	6	82	...	...	...	7	...	
Burma	5	12	120	...	...	10	112	...	...	...	5	...	
Eastern Bengal and Assam	2	8	120	...	...	2	44	...	...	...	11	...	
Sind, Baluchistan and Rajputana . . . . .	...	...	2	...	...	...	11	...	...	...	...	...
<i>Imperial</i>													
Government Cattle Farm, Hissar	1	...	2	...	...	2	...	...	...	...	...	...	Deputy Superintendent transferred to Punjab Veterinary College.
Bacteriological Laboratory . . . . .	...	4	...	10	...	4	...	10	...	...	...	...
Veterinary Officer Investigating Camel Diseases . . . . .	...	...	2	...	...	2	...	...	...	...	...	...
TOTAL	26	147	1,348	10	...	69	692	10	...	15	75	...	

PART B.—IMPERIAL ADMINISTRATION.

BACTERIOLOGICAL LABORATORY.

196. Captain J. D. E. Holmes, M.A., D.Sc., held charge of the Laboratory up to the 16th February 1910 and since his departure on combined leave Major F. S. H. Baldrey, F.R.C.V.S., D.V.H., officiated in the appointment of the Imperial Bacteriologist.

197. Mr. Cross held the office of the Assistant Bacteriologist and Dr. Hartley that of the Physiological Chemist throughout the year.

198. Mr. J. G. Cattell after completing his training at this Laboratory was posted in the month of October 1909 for training in district work under the Chief Superintendent, Civil Veterinary Department, Punjab.

199. The three European Laboratory Assistants remained in their respective posts.

Preparation of Sera.

200. *Rinderpest anti-serum.*—Four hundred and nine thousand and seventy-eight (409,078) doses of anti-rinderpest serum issued have been prepared as against 545,974 doses, or 136,896 doses less than in the previous year.

201. The serum issued amounted to 446,981 doses as against 627,349 doses during the previous year.

202. The shortage in preparation of the serum was solely due to insufficient supply of hill bulls.

203. The demand far exceeded the supply and very great inconvenience resulted from the suspension of the issue for about three months so as to allow of a small reserve being collected. The supply to Foreign countries had to be discontinued entirely and that to Native States limited. The demand is still greater than can be met and the provision of another serum Laboratory is a pressing necessity; search is being made for a suitable site and it is hoped that we may find one in the near future.

204. The popularity of the method is daily increasing in all Provinces, except Bombay where nothing is being done. No doubt the good results which follow its use rapidly overcome the prejudices of the people who ask for it when rinderpest breaks out.

205. The results of the anti-serum injections carried out in the field and collated from the respective returns received in this office are as follows:—

PROVINCE.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab	284	...	5,672	...	...	43,277	...	...	94	...	
North-West Frontier Province and North Punjab	40	...	998	...	...	15,068	...	...	8	...	
Bengal	85	...	872	2	...	12,549	37	...	98	5	
Bengal Veterinary College	58	...	74	...	...	2,448	...	...	80	...	
Eastern Bengal and Assam	...	...	...	...	...	...	...	...	...	...
United Provinces of Agra and Oudh	570	...	5,629	...	...	43,212	...	...	91	...	
Central Provinces	196	...	1,887	...	...	21,916	...	...	49	...	
Madras	598	...	12,724	1,025	...	46,952	1,149	...	88	...	
Bombay	...	...	...	...	...	...	...	...	...	...
Mysore State	64	...	1,178	...	...	10,497	...	...	1	...	
Nagod State	4	...	80	78	...	632	84	...	...	...
Burma	34	...	642	...	...	3,466	...	...	81	...	
Sind, Baluchistan and Rajputana	5	...	718	...	...	887	7	...	2	...	
Hissar Cattle Farm	2	...	18	...	...	876	84	...	4	...	

206. The work of the Laboratory was carried on under very great difficulties. In the early part of the year rinderpest and foot and mouth disease among animals and cholera among the villagers prevailed throughout the

districts from which animals are purchased. Foot and mouth disease remained throughout the whole year. Mr. Grundy, the purchasing Agent, was unable to obtain more than half the supply of bulls required each month. Of the bulls received, the majority arrived with severe lesions of foot and mouth disease. Few of the bulls were in suitable condition and there was a large percentage of calves and very old animals. The following is a statement of the animals received with a record of their condition :—

Numbers received free from disease.	Numbers affected with foot and mouth disease at time of arrival.	Total number received.	CONDITION OF BULLS RECEIVED.				Total.
			In suitable condition.	Calves under 1 year age.	Old.	Weak.	
680*	1,447	2,127†	1,257	301	169	400	2,127

* Many of these became infected soon after arrival.

† Out of these 203 animals died soon after arrival at Muktesar.

207. To avoid an entire failure of the supply of serum, the diseased bulls had to be used. The treatment of the affected bulls and the carrying out of all necessary precautions to prevent the infection spreading among the serum preparing and other experimental animals, threw a very heavy amount of extra work on the whole staff.

208. The fact that in face of all these difficulties, although the issue had to be suspended for a short time, the preparation of serum was not once interrupted and that the amount of rinderpest serum prepared falls short by about one lac of doses, taking the mean annual output at 5 lacs doses, testifies to the zeal and good work of the staff directly engaged in that duty.

209. The shortage in the supply of bulls has also been a serious drawback to all experimental treatment as well as to the preparation of serum. Only animals discontinued from serum preparation could be spared for this work. The year has also been a disastrous one for Mr. Grundy who lost a large number of bulls from disease on the road to Muktesar.

210. As far as the limited supply of bulls permitted, experiments were carried out with a view to improve methods of rinderpest serum preparation. A number of discontinued bulls were sent out into the district immune to rinderpest.

211. Two series of experiments were conducted by a new method and also other experiments with dilutions of virulent blood.

212. Investigation as to the possibility of using plains bulls only in the preparation of serum were started and are still in progress. This question is one of great importance, as the supply of hill bulls is becoming more difficult to obtain each year.

Anthrax anti-serum.

213. During the year under review 12,168 doses of this serum were prepared as against 29,786 doses, and 12,404 doses issued against 30,933 doses during the previous year. The amount of manufacture was regulated according to the demand in the field.

214. The following table shows the result of injections carried out in the field with anti-anthrax serum :—

PROVINCE.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Madras . . .	1	...	13	...	...	36	...	...	...	...
Mysore State . .	1	...	15	...	...	220	...	...	1	...	

215. The investigation into methods of immunizing against anthrax had to be suspended owing to the difficulties previously explained. Experimental immunization by vaccination is being carried on and it is hoped to issue a report on this work at an early date.

Hæmorrhagic Septicæmia.

216. During the past official year, 8,320 doses of Hæmorrhagic Septicæmia vaccine were prepared and with the previous year's balance 9,960 doses in all were issued.

217. Further tests of the serum have been carried out on ponies and buffaloes. The results have been as satisfactory as heretofore and confirmed the view that serum is a safe and effectual agent for conferring a passive immunity and the vaccine an active one.

218. From the following table the result of injections carried out in the field will be seen :—

PROVINCE.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab	5	...	...	...	...	219	...	...	...	...
United Provinces of Agra and Oudh	101	...	653	...	...	7,481	...	...	6	...	
Central Provinces	...	...	...	...	...	406	...	...	...	...	Result satisfactory.

219. With regard to the efficacy of results of preventive inoculation for Hæmorrhagic Septicæmia, the Superintendent, Civil Veterinary Department, Central Provinces, states :—

"The results appear to me to be remarkably good. Sufficient time has not yet elapsed to pronounce with absolute certainty of the result, but I forward the appended table to show what is up to now so satisfactory."

Charbon Symptomatique.

220. During the year under review 20,350 doses of single vaccine and 5,800 c.c. of serum were prepared. The total issue to various Superintendents including previous year's balance being 20,900 doses. From some Provinces the results reported were very satisfactory and no casualties occurred from their use at Government Cattle Farm, Hissar. Some doubtful results however were reported from the Punjab, but it is possible that the deaths, reported from some Provinces may have been due to intercurrent disease.

221. The following table shows the result of injections carried out in different Provinces :—

PROVINCE.	Number of villages in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.
		Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
Punjab	49	...	7	...	...	1,978	...	...	16	...	
North-West Frontier Province	25	...	...	...	...	4,931	...	...	20	...	
United Provinces of Agra and Oudh	13	...	91	...	...	2,189	...	...	...	...
Madras	17	...	855	...	...	797	...	...	...	...
Sind, Baluchistan and Rajputana	2	...	81	...	...	97	...	...	1	...	

222. *Strangles*.—As an experimental measure 5,753 c.c. of strangles serum and some vaccine were prepared by Baruchello's method as a prophylactic against strangles, of which 125 doses were issued for trial in the field. No definite results have as yet been received.

223. *Mallein*.—Nine thousand five hundred and fifteen (9,515) doses of Mallein were prepared against 9,238 during the previous year. The total issue being 10,137 against 9,052 doses in the year 1908-09. As during the last year fresh cultures were obtained from cases of Glanders for the preparation of Mallein and fresh brews were prepared and tested every four months.

224. *Tuberculin*.—Four hundred and forty-four (444) doses of Tuberculin were prepared against 306 in the past year. The total demand or issue was 469 doses.

225. *Specimens examined*.—During the year under review only 84 specimens were received for examination against 138 in the previous year and results communicated with the least possible delay to the persons interested on the subject.

226. *Training of Veterinary Assistants*.—Twenty-six Veterinary Assistants were trained at Muktesar and ten at Bareilly, making a total of 36 against 71 during the last year. This decrease in the number of Veterinary Assistants is due to the facilities now afforded in the Veterinary Colleges to train the students in inoculation work.

227. During the past year the following officers of the Veterinary Department worked at this Laboratory :—

(i) Captain W. O. Dawson from July 4th to September 29th, 1909.

(ii) Mr. J. G. Cattell on training from the beginning of the year to October 1909.

(iii) Captain R. C. Cochrane, A.V.C., for a course of instruction in sera preparation and inoculation, etc., from 18th September 1909 to 24th February 1910.

228. During the year 1909-10 the following doses of sera were prepared and issued from the Muktesar Laboratory :—

Serial No.	NAME OF SERA.	Opening balance.	Prepared.	Total output.	ISSUE.															Total issue.	Balance in hand.		
					Punjab.	North-West Frontier and North Punjab.	South Punjab.	United Provinces of Agra and Oudh.	Bengal.	Eastern Bengal and Assam.	Central Provinces.	Madras.	Bombay.	Coorg.	Sind, Baluchistan and Rajputana.	Burma.	Military Department.	Native States.	Indian Firms.			Foreign Countries.	Used in experiments at the Laboratory.
1	Einderpest	41,568	406,078	450,641	24,320	16,000	24,000	80,800	41,000	53,800	28,000	53,000	6,500	5,000	...	15,000	68,380	21,400	700	3,400	2,901	446,981	3,680
2	Anthrax	4,036	12,168	16,204	40	...	...	500	...	10,000	...	...	...	...	...	...	200	1,610	...	...	54	12,404	3,800
3	Hemorrhagic Septicemia vaccine .	1,640	8,320	9,960	50	...	...	7,210	...	...	2,600	...	...	...	...	...	100	...	...	...	...	9,960	...
4	Charbon Symptomatique	550	20,350 and 5,800 c.c. serum.	20,900 and 5,800 c.c. serum.	1,700	5,750	2,000	3,000	...	...	250	5,000	100	...	400	...	...	...	...	...	2,700*	20,900	5,800 c.c. serum.
5	Mallein	3,352	9,615	12,967	66	22	...	189	700	...	8	...	25	...	...	98	7,211	1,425	...	...	400†	10,137	2,730
6	Tuberculin	185	424	609	62	...	...	80	30	...	50	...	20	...	...	140	59	...	...	...	18	469	140
7	Strangles vaccine and serum . . . . .	...	5,753 c.c.	5,753	...	...	...	...	...	...	...	...	...	...	...	...	2,000 c.c. or 125 doses.‡	...	...	...	583 c.c.	2,568	3,170 c.c.
	TOTAL	51,306	459,875 and 11,553 c.c.	511,181 and 11,553 c.c.	26,238	23,772	26,000	101,589	41,730	63,800	30,908	58,000	6,645	5,000	400	15,238	65,930 and 2,000 c.c.	24,435	700	3,400	7,073 and 583 c.c.	500,851 and 2,553 c.c.	10,330 and 3,970 c.c.

* Discarded.

† Includes 342 discarded.

‡ 50 doses vaccine, 75 " serum.

229. *Research*.—The programme of research work for the year under report included the following subjects :—

- (i) *Anthrax*.—To continue the investigation laid down in the programme of the previous year.
- (ii) *Charbon Symptomatique*.—The preparation of an anti-serum.
- (iii) *Surra*.—Methods of treatment.
- (iv) Further tests of vaccines prepared during the past year against Hæmorrhagic Septicæmia and Charbon Symptomatique.

230. *Anthrax*.—As previously explained this investigation had to be suspended for the greater part of the year. The results obtained are being put together and will be published.

231. *Charbon Symptomatique*.—A serum was prepared with a view to its use in actual outbreaks where the use of vaccine is attended with danger. This serum has been tested in the Laboratory but not yet used in the field.

232. *Surra*.—The further investigation into the curative treatment of surra has met with the most successful results. The tests which up to the present have been carried out prove beyond any reasonable doubt that surra in horses is curable by a simple treatment with arsenious oxide. We have kept under continuous observation upwards of 60 treated cases. None have shown a relapse during periods reaching up to two years from the completion of their treatment.

233. In our hands we have been able to cure about 80 per cent. of cases treated. The treatment was subjected to the most severe test it is possible to apply. Twenty ponies from the Transport Corps were sent to the Laboratory in October 1909. These ponies had contracted surra in the Kathgodam road. They were in the last stage of the disease entirely emaciated and hardly able to walk. They were aged ponies, most of them well over sixteen years. Out of these twenty ponies, two died from colic not attributable to the treatment. One died from injuries received by being cast in his stall. This occurred some weeks after the completion of his treatment. Ten were returned to work at the end of January 1910, having been under observation three months from the termination of treatment. Seven others were returned to the Transport at the end of March 1910. These also were kept under observation for three months.

234. *Further tests, etc.*—Further tests with peritoneal washings in the immunizing of animals against rinderpest have during the last few months been made and it would appear that the method is valuable and a great saving. This fluid is now being extensively used with no untoward results.

A number of other experimental investigations regarding vaccine against Hæmorrhagic Septicæmia and Charbon Symptomatique were carried out, results of which will be submitted for publication.

235. *Administration*.—The arrangements for the supply of fodder and fuel were satisfactory. As usual fodder in large quantities was obtained from the forests of Dhari, Peora and Ramgarh, in addition to that supplied by our own area.

236. The shortage in the supply of hill bulls is engaging our serious attention. Every endeavour is being made to open new tracts of country for the purpose of collection and every possible facility is given to the purchasing agent.

237. *Forests*.—The Muktesar reserved forests supplied our demands for fuel and charcoal and a small quantity of fodder. The administration was carried on under the provisions of the sanctioned Working Plan. The Forest Department recommended that the management of this area be left in their hands, which course on account of the difficulties of dual control and other reasons was not deemed advisable. The sowing and planting operations were carried on as usual.

Bareilly Branch Laboratory.—This Depôt remained open during the past year from the 15th of November 1909 to the middle of March 1910. The work of serum testing, training of Veterinary Assistants, researches on camel

trypanosomiasis and various experiments with a view to prepare serum from plains animals were carried out.

238. I have much pleasure in recording the excellent work which has been done during the year. The whole of the staff has continued to carry out their duties zealously under the most trying and discouraging conditions. The work done in the experimental treatment of surra has been attended by the most brilliant results and very great credit is due to Captain Holmes, Mr. Cross and Dr. Hartley for the results achieved. Mr. Cross, on whom the actual treatment of the horses devolved, was most zealous in the performance of his duties, and to him much of the success is due.

GOVERNMENT CATTLE FARM, HISSAR.

239. Major (now Lieutenant-Colonel) J. Farmer was in charge of the Farm during the year. Mr. E. Burke, Deputy Superintendent, was transferred to the Punjab Veterinary College in December 1909 and his post remained vacant owing to the impossibility of finding a suitable officer to fill it. Much extra work was in consequence thrown on the Superintendent who is much overworked.

240. There has been no change in policy during the year, the system which has so far given good results having been adhered to. I am glad to report that the operations at the Farm have been successful and that there has been continued all round improvement.

241. The period for which the sanction of Government was accorded to the management of the Farm by this Department having expired, a special report on the operations carried on for the last four years has already been submitted for consideration. This report gives details of all matters dealt with at the Farm and is already in the hands of the Government of India.

242. The Farm year has been an average one. The rains were good but there was an unfortunate break in July which injured the *barani crops*. We were particularly unfortunate regarding outbreaks of contagious disease, rinderpest, foot and mouth disease, black quarter having occurred amongst the cattle and sheep and strangles and infectious pneumonia in the mules and donkeys.

243. Rinderpest broke out in the Sully herds in July 1909, the total number of animals exposed to contagion being 439, of which 41 became affected and 22 died. Fortunately, the disease was early diagnosed and precautions of segregation, etc., adopted. There was some delay in obtaining serum, but eventually 376 animals which had been exposed to contagion, were injected with anti-rinderpest serum which stopped the outbreak.

244. Rinderpest also broke out amongst the Merinos in October 1909 and four deaths occurred. Thirty-four were inoculated.

245. Hæmorrhagic Septicæmia also occurred in October 1909 and there were 7 deaths.

246. Foot and mouth disease appeared in May and affected all the animals. It was not severe and caused no deaths. When flies are prevalent the disease is very troublesome as it is difficult to prevent maggots in the wounds.

247. Occasional cases of Charbon Symptomatique still occur, although we inoculate all stock at weaning time with Blacklegoids. The following table gives the cases which have occurred and the time which elapsed since they were inoculated:—

Serial No.	Number.	Inoculated on		Attacked on		Interval between inoculation and attack.			REMARKS.
		Y.	M.	Y.	M.	Y.	M.	D.	
1	Male 2/7 H 173	15th	July	10th	June	...	10	26	
2	" 2/7 H 144	15th	July	16th	July	1	...	1	
3	" 3/8 H 207	5th	April	18th	July	...	3	13	

Serial No.	Number.	Inoculated on	Attacked on	Interval between inoculation and attack.			REMARKS.
				Y.	M.	D.	
4	Male 4/7 H 295	13th July 1908.	20th January 1909.	...	6	7	
5	" 2/9 . . . . .	...	15th October 1909.	...	...	...	Not inoculated.
6	" 1/9 H 54	13th October 1909.	11th November 1909.	...	...	28	
7	" 4/8 H 303	6th July 1909	12th January 1910.	...	6	6	
8	" 2/7 H 171	15th July 1908.	17th January 1910.	1	6	2	
9	" 2/8 H 147.	8th March 1909.	20th February 1910.	...	11	12	
10	" 1/9 H 86	12th October 1909.	20th February 1910.	...	4	8	
11	" 1/9 H 63	13th October 1909.	27th February 1910.	...	4	14	
12	" 3/8 H 194	5th April 1909.	15th March 1910.	...	11	10	
13	" 1/9 H 47	13th October 1909.	19th March 1910.	...	5	6	
14	" 1/9 H 105	16th October 1909.	23rd March 1910.	...	5	7	
15	" 2/8 H 139	8th March 1909.	25th March 1910.	1	...	17	
16	Female 1/9 . . . . .	...	4th July 1909.	...	...	...	Not inoculated.
17	" 3/8 H 193	1st April 1909	1st October 1909.	...	6	...	
18	" 3/8 H 222	1st April 1909	1st October 1909.	...	6	...	
19	" 2/8 H 135	10th March 1909.	1st October 1909.	...	6	21	
20	" 4/7 H 266	4th July 1908	4th October 1909.	1	3	...	
21	" 4/7 H 245	4th July 1908	4th October 1909.	1	3	...	
22	" 2/8 H 143	10th March 1909.	4th October 1909.	...	6	24	
23	" 2/8 H 146	10th March 1909.	6th October 1909.	...	6	26	
24	" 2/8 H 79	10th March 1909.	6th October 1909.	...	6	26	
25	" 3/8 H 219	1st April 1909	7th October 1909.	...	6	6	
26	" 2/9 . . . . .	...	20th October 1909.	...	...	...	Not inoculated.
27	" 2/9 . . . . .	...	20th October 1909.	...	...	...	Ditto.
28	" 3/8 H 225	1st April 1909	21st October 1909.	...	6	20	
29	" 1/9 . . . . .	...	14th October 1909.	...	...	...	Not inoculated.
30	" 4/7 H 240	4th July 1908	11th November 1909.	1	4	7	
31	" 3/9 . . . . .	...	10th January 1910.	...	...	...	Not inoculated.

248. The number of animals inoculated was 1,617 and 25 subsequently contracted the disease. The percentage of loss from this disease has considerably decreased since the introduction of inoculation. Both, Muktesar and Parke Davis and Company's, vaccines were employed and gave about equal results. There was no inoculation mortality.

249. Contagious pneumonia broke out amongst the mules and donkeys in April. Forty-two animals became infected, and of these 15 died and 27 recovered. The source of this infection is unknown. It started in the donkeys and spread rapidly until the animals were segregated. It ceased on the 7th May.

250. It is impossible to keep the Farm animals free from contagious disease to which they are exposed on all sides. Constant watchfulness and early and energetic action is consequently necessary should any disease gain entry. The manner in which the outbreaks have been dealt with reflects great credit on the Superintendent and his staff.

251. Table XVI gives a complete return of the animals on the Farm for 1909-10, and it is only necessary for me to mention here the changes which have occurred during the year.

252. *Herd bulls.*—The very important subject of providing the very best bulls available has received the most careful attention, and I am glad to say that our position has very materially improved in this respect. We have been able to put 8 exceptionally good bulls into the herds and to remove three which were not considered up to the standard. Our stud bulls now are of excellent quality and the results should show in a few years' time. One bull died during the year.

253. *Cows.*—The herd of breeding cows only shows an increase of 18 over last year. The reason for this is that a good market offered and we took the opportunity of getting rid of a number of cows which were not quite up to the standard. They were replaced by heifers of our own breeding. Thus the herd has been greatly improved in quality.

254. *Calves.*—The calvings were good again this year, 663 calves being dropped or a percentage of over 60. Of these, 318 were males and 345 cow calves. The average is less than last year but is still very good. The quality of the calves generally is very good indeed.

255. *Bulls and Bullocks.*—Fifty-seven bulls were supplied to District Boards and others for breeding purposes and 178 bullocks to the Military Department. The whole of these animals were of very good stamp.

256. *Mules.*—There has been no improvement in the position regarding this part of the Farm scheme. We have only 83 mules on the estate instead of 400 and have only been able to obtain 21 by purchase in the open market. We are endeavouring to come to some arrangement with the Army Remount Department to improve matters as there is no doubt that the Hissar reared mule is an excellent animal. Of the 58 mules due for issue, 31 were up to the standard for Ordnance, 23 went to Transport and there were four casualties. Amongst those issued for Transport many only just missed being Ordnance mules and I am sure that the Transport Department could not buy similar animals in the open market.

257. There were 37 mares kept for mule breeding during the year, and of these 13 foaled and 20 are now in foal. The number of mules born in considerably less than last year, *i.e.*, 35.1 per cent. This is the case always in this industry, alternate years being good and bad. As has been shown in the detailed report already submitted on the working of the Farm, the general percentage of foalings has been good. I am now increasing the number of mares to 50—the sanctioned strength.

258. *Donkey stallions.*—One was bought during the year and one, which was not getting good stock, was sold. The old Italian donkey "Calcutta" now 17 years old is still getting good mule stock and the three farm bred donkeys "Hansi", "Hissar" and "Farmer's boy" are quite satisfactory.

259. *Stud Donkey Mares.*—Our stud of donkey mares was increased by 5 and now stands at 93.

260. *Foalings.*—Forty-five foals were born during the year, giving a percentage of 51.7 which may be considered to be very satisfactory. The number of males born was 26 and of females 19.

261. *Donkey Colts*.—The donkey colts are a good lot, all but two being likely to grow into good Jacks. Two were sold to the Army Remount Department and six to District Boards.

262. *Donkey Fillies*.—With the exception of three, these are a good lot.

263. *Sheep*.—The crossing of Bikanir sheep with the Dumba ram has been discontinued. The cross bred sheep produce good mutton and the yield of wool is somewhat improved. We are now going on two distinct lines:—

(1) Breeding pure Merinos.

(2) Cross breeding Merino ram and Bikanir ewe.

264. The object of the pure Merino herd is to endeavour to produce pure bred rams in the country instead of importing them. The operations are of too recent origin to allow of any definite conclusions being arrived at. Last year we had only 333 ewes, the crop of lambs from which was 251,—132 males and 119 females. The mortality in this small herd was 125. We obtained 19 ewes and three rams from Australia during the year, too late for anything to be done. They were a good lot. The total strength of the herd is now 596.

265. Three flocks of selected ewes are running with the Merino rams and the results are fairly satisfactory, but the mortality continued to be somewhat heavy (about 16 per cent.). The housing and care of sheep, however, has until recently left much to be desired and I am glad to say that very great improvement has been made in this direction during the year. New and excellent pens have been provided and the animals are now kept in comfortable and sanitary pens.

266. *Cultivation*.—Good work has been done in the improvement of the cultivation and the results are satisfactory, despite the various difficulties which have to be contended with. I think that now that the store of reserve fodder is rapidly approaching a lac of maunds, it will be possible to abandon or reduce areas lying far afield and to confine our cultivation to land most conveniently situated and to substitute to a greater extent intensive for extensive cultivation. This will be necessary as the labour difficulty seems likely to increase and become more serious year by year. With this object in view, Lieutenant-Colonel Farmer has devoted much time and attention to the improvement of the land near at hand. Water-courses have been remodelled, level of fields lowered, boundaries straightened, roads made and trees planted in the Mundianwala, Chowni, Stable and Sully blocks. The Kherwan block will be reduced. The difficulties connected with labour are very great. The demand exceeds the supply and it is not an easy matter to get men at all when most required, as the wages offered are not very high. I found that many of our ploughmen came as much as five or more miles to work and as a consequence we never got anything like a fair day's work done. It has been decided to put up a block of ten houses for them on the estate, as an experiment, to try to induce them to remain as permanent labourers. If this proves a success, others will be put up later on.

267. *Machinery and rolling-stock* is kept in excellent order. A new threshing machine, straw bruiser and two elevators have been received from England.

268. *Buildings, roads, etc.*—The buildings, etc., generally have, so far as possible, been kept in good order. New sheep pens have been made, *pucca* roads constructed at Chowni and another to the Stable Farm, and a new road made from the Home Farm to the Donkey paddocks. The new *post-mortem* house is almost complete. The Home Farm has been very greatly improved by the drainage operations which have been carried out. The low-lying places have been raised and drains made to carry off the rain water to Chowpalia tank. Trees have also been planted to give some shade in the Home Farm as well as in the Sully Farm.

269. Table XVIII shows the expenditure on the Farm to have been R1,13,639 and the receipts R1,02,027, while the valuation of the stock, etc., is R3,65,690 against an expenditure of R1,08,688, receipts R93,907 and valuation of stock R3,41,655 last year. The expenditure therefore increased by nearly R5,000 due to purchase of stock, sheep, etc., whilst the receipts rose over

Rs,000 from sales of stock. The results may be considered satisfactory. The value of the Farm, however, cannot be expressed in figures, for in addition to supplying animals to Government, District Boards, etc., at a nominal rate, the like of which cannot be obtained elsewhere, the Farm is an object lesson to breeders in the surrounding country and is the only source of supply of stud bulls of the type famous in Harriana to which our herds have been bred.

270. Lieutenant-Colonel Farmer has worked very hard during the year and the results achieved are due to his zeal and energy. He brings to notice the good work done by Lieutenant Morris, Farm Overseer; Mr. MacCutchan, Farm Bailiff; and Veterinary Assistant Ghulam Hussain. The post of Deputy Superintendent fell vacant in December and it has been found impossible to fill it again so far. The Superintendent is much overworked at present and the question of giving him some assistance is under consideration.

PART C.—GENERAL.

271. The total cost of the Department (both Imperial and Provincial) as shown in Table XIX amounts to R20,51,849-1-6 against R17,30,508-12-11 last year, showing an increase of R3,21,340-4-7. In regard to the figures of the Imperial grant, as furnished by the Comptroller, India Treasuries, there is a net increase of only R3,872, the remainder of the increase appears under Provincial charges as rendered by Accountants General.

272. The work of the Department has been dealt with fully in the body of the report and it will be seen that the progress of the Department is very satisfactory. As in the previous year, the Imperial staff has been fully occupied. Without an increase further work cannot be undertaken.

273. If more Imperial officers cannot be appointed, it will be necessary to take some steps in the direction of training capable men for appointments as Deputy Superintendents. They would be required to supervise the work of Inspectors and Veterinary Assistants and also to direct operations in the suppression of contagious diseases.

274. Notwithstanding a large amount of work done by the present staff, the appointment of Pathologists, as recommended by the Advisory Committee, is desirable. In the matter of early reports of outbreaks of disease and checking of inoculation work carried out in the field, there is a decided improvement.

275. The frequent and large demands for anti-rinderpest serum continues. Unfortunately, for reasons, already stated, the Laboratory, in spite of every effort on the part of the staff, was unable at all times to comply with the indents. The desirability of the establishment of a second Laboratory for the manufacture of serum to cope with the annually increasing demands is now under the consideration of the Government of India. It is hoped that in the near future a suitable site for the establishment of such will be obtained.

G. H. EVANS, *Lieutenant-Colonel,*
Offg. Inspector-General,
Civil Veterinary Department.

SIMLA,
The 6th October 1910.

TABLE I.

Showing the main results of Veterinary Colleges and Schools during 1909-10.

VETERINARY COLLEGE AND SCHOOL.	Name of course of instruction if more than one course followed.	NUMBER OF STUDENTS									RECEIPTS.			EXPENDITURE.			EMPLOYMENT OF STUDENTS WHO PASSED OUT DURING THE THREE YEARS PRECEDING.					REMARKS.
		ADMITTED DURING THE YEAR.		Passed final examination during the year.		REMAINING UNDER INSTRUCTION AT END OF YEAR.		STUDENTS ADMITTED DURING THE YEAR, CLASSIFIED BY EDUCATIONAL QUALIFICATIONS.			From fees.	From other sources.	Total.	Salaries of Instructing Staff.	Other expenses.	Total.	Total number passed.	In service of Government or Local Bodies.	In service of other bodies or institutions.	In private practice.	Number unemployed.	
		Scholarship-holders.	Others.	No.	No.	In ordinary course.	Instruction prolonged by reason of failure to pass.	Matriculated with higher qualifications.	Knowing some English, but not matriculated.	Knowing no English or very little English.												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
		No.	No.	No.	No.	No.	No.	No.	No.	No.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	No.	No.	No.	No.	No.	
Bombay Veterinary College		10	22	20	11	50	19	9	23	..	4,650 0 0	4,068 0 0	8,718 0 0	80,302 15 1	23,267 18 3	54,070 12 4	60	14	33	4	(b) 9	
Burma.	Senior A	5	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Senior B	(c) 24	..	..	..	(e) 20	..	..	..	..	..	..	..	13,331 0 0	9,345 9 1	22,676 9 1	42	41	..	..	(f) 1	
	Junior	(d) 15	..	..	..	13	..	..	..	15	..	..	..	..	..	..	..	..	..	..	..
Punjab Veterinary College.	Diploma or 3 years' course in Urdu.	27	48	(g) 68	(h) 34	133	66	9	36	30	3,186 0 0	4,268 0 0	12,454 0 0	50,645 0 0	27,250 0 0	77,895 0 0	199	181	18	..	..
Bengal Veterinary College	3 years' course in English.	35	8	32	5	73	23	3	40	..	No College fee is charged for instruction. 14,243 2 10	15 3 0	15 3 0	40,709 9 8	3,138 8 4	43,848 2 0	89	78	..	2	9	
Madras.	..	10	20	12	9	56	9	3	27	..	..	..	14,243 2 10	15,945 3 1	2,724 0 0	18,669 3 1	52	35	7	..	(i)	
TOTAL		126	98	137	59	399	117	24	126	45	27,079 2 10	8,346 8 0	35,425 10 10	1,51,433 11 10	65,725 14 8	2,17,159 10 6	442	349	53	6	19	

(a) Includes 3 men holding temporary appointments. (b) Includes those about whom definite information is not available. (c) Three dismissed, one died. (d) Two resigned. (e) Includes 1 Shan, 19 Burmans. (f) One not employed owing to ill-health. (g) Six passed in June 1909 and 62 in April 1910. (h) Ten men failed in one subject only. (i) Information not available.

TABLE II.

Showing number of Deaths from Contagious Diseases amongst Animals during the year 1909-10.

PROVINCE.	EQUINE.						BOVINE.						OTHERS.										REMARKS.				
	Glanders.	Anthrax.	Surra.	Dourine.	Other contagious diseases.	Total.	Rinderpest.	Foot and mouth disease.	Hæmorrhagic Septicæmia.	Black quarter.	Anthrax.	Other contagious diseases.	Total.	Rinderpest.	Foot and mouth disease.	Hæmorrhagic Septicæmia.	Black quarter.	Anthrax.	Other contagious diseases.	Surra.	Distemper.	Rabies.		Fowl cholera.	Pneumo-Pneumonia Contagiosa.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
Burma	(a)	..	..	..	..	..	22,240	5,207	..	(b) 8,119	..	30,566	..	..	..	..	..	..	..	..	..	..	..	..	..	(a) There is no system of registration in force in Burma.	
United Provinces	32	..	250	..	(c) 64	346	17,071	3,677	2,839	679	1,338	389	25,988	300	2	19	..	..	..	1	10	2	29	30	398	(b) These diseases are not differentiated by villagers or head men, but are considered as different manifestations of anthrax and so are included under this heading.	
Punjab	22	7	452	..	45	526	18,055	8,899	18,255	1,546	55	358	42,168	855	468	878	6	201	6,445	..	..	..	..	..	..	1,325	(c) Tetanus.
Eastern Bengal and Assam	14	22	29	..	115	180	28,860	7,783	3,327	38	1,820	8,448	50,276	728	65	4	..	9	519	..	..	..	..	..	..	..	(d) Hydræmia of sheep.
Bombay	6	1	325	..	4	336	1,520	62	3,651	1,125	523	137	7,018	..	..	..	..	..	..	..	..	..	..	..	..	..	(e) Small-pox = 72, Kullog = 112.
Sind	..	..	13	..	1	14	745	6	42	171	17	5	986	1	..	..	..	..	..	..	..	..	..	..	..	9	
Rajputana	..	1	46	..	..	47	..	10	..	10	..	2	22	..	..	..	..	..	..	..	..	..	..	..	..	..
Baluchistan	..	..	..	..	..	..	..	12	..	..	..	8	20	..	..	..	..	..	..	..	..	..	..	..	..	..
Madras	..	14	..	..	..	14	56,900	3,260	6,954	4,404	11,968	26,567	110,073	..	..	..	..	..	..	..	..	..	..	..	..	2,674	
North-West Frontier Province	2	..	46	..	1	49	1,448	113	1,225	105	188	32	3,061	833	103	106	..	337	1,295	..	..	..	..	..	..	..
Bengal	160	6	..	..	220	386	8,369	2,374	3,130	737	812	1,723	17,645	..	..	..	..	..	420	..	..	..	..	..	..	420	
TOTAL	236	51	1,161	..	450	1,898	165,708	26,403	39,423	11,934	16,666	37,689	237,823	2,717	638	1,007	6	547	9,004	1	44	29	29	913	14,935		

TABLE III.

Showing results of preventive inoculation during the year 1909-10.

PROVINCE.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.
				Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Burma.	Rinderpest.	Serum alone.	34	..	984	..	..	3,466	..	..	226	..	
United Provinces			570	..	5,629	13	..	43,362	15	..	91	..	
Punjab			283	..	5,704	..	..	43,250	..	..	95	..	
Eastern Bengal and Assam			376	..	8,091	5	..	38,153	83	..	339	..	
Bombay			36	..	372	..	..	1,872	..	..	3	..	
Sind			5	..	648	..	..	387	7	..	2	..	
Madras			593	..	12,724	1,025	..	46,952	1,149	..	38	..	
North-West Frontier Province			40	..	992	6	..	15,026	..	..	8	..	
Central Provinces			187	..	1,070	..	..	21,537	..	..	41	..	
Bengal			136	..	841	..	..	14,992	37	..	123	5	
TOTAL			2,259	..	37,055	1,049	..	228,997	1,291	..	966	5	
United Provinces	Black quarter.	Serum alone.	13	..	91	..	..	2,189	..	..	..	..
Sind			2	..	81	..	..	97	..	..	1	..	
Bengal			5	..	..	..	..	197	..	..	..	..
TOTAL			20	..	172	..	..	2,483	..	..	1	..	
Punjab	Black quarter.	Vaccine.	48	..	..	..	..	1,899	..	..	16	..	
Madras			5	..	81	..	..	797	..	..	..	..
North-West Frontier Province and North Punjab			25	..	..	..	..	4,442	..	..	4	..	
TOTAL			78	..	81	..	..	7,138	..	..	20	..	
Eastern Bengal and Assam	Anthrax.	Serum alone.	22	13	175	1	302	3,203	6	1	2	..	
Madras . . . . .			..	..	..	..	..	36	..	..	..	..
TOTAL			22	13	175	1	302	3,239	6	1	2	..	
United Provinces	Hæm. Sept.	Serum alone.	104	1	675	..	..	7,520	..	..	6	..	
TOTAL					104	1	675	7,520	6
Punjab	Hæm. Sept.	Vaccine.	6	..	7	..	..	398	..	..	..	..
Central Provinces			17	..	476	1,397
TOTAL			23	..	483	..	..	1,695	..	..	..	..

TABLE IV.

Showing the number of Animals treated and castrated by Veterinary Assistants on tour during 1909-10.

PROVINCE.	Number of villages visited.	Number of Veterinary Assistants employed.	CASTRATIONS PERFORMED.				TREATED FOR CONTAGIOUS DISEASES.				TREATED FOR NON-CONTAGIOUS DISEASES.				Total number of cases treated and castrations performed.	REMARKS.
			Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Burma	18,965	(a) 112	2	..	..	2	20	41,253	43	41,316	1,331	30,827	196	32,354	(b) 73,672	
United Provinces	18,722	78	166	46	19	251	162	52,134	859	53,155	5,284	10,783	1,211	17,278	70,684	
Punjab	12,155	121	215	313	35	563	398	75,393	1,636	77,427	4,816	12,235	1,234	19,285	97,275	
Eastern Bengal and Assam	6,662	44	51	83	42	176	787	30,977	1,145	32,909	6,041	31,525	2,978	40,544	73,629	
Bombay	922	35	3	13	3	19	2	5,741	379	6,122	575	4,390	185	5,150	11,291	
Sind	161	7	2	..	..	2	7	436	557	1,000	1,184	594	646	2,424	3,426	
Rajputana	221	3	..	..	..	..	..	384	..	384	28	54	20	111	495	
Baluchistan	106	1	..	..	..	..	..	446	82	528	15	70	30	115	643	
Madras . . . . .	..	..	14	187	1	202	..	..	..	..	95	1,557	217	1,869	2,071	
North-West Frontier Province and North Punjab	1,410	23	138	77	61	276	93	12,908	3,231	16,232	1,255	2,312	654	4,721	21,229	
Central Provinces	10,743	29	14	53	15	82	17	23,149	17	23,183	2,486	10,976	635	23,097	46,620	
Bengal	13,047	64	44	12	33	89	84	29,683	447	30,214	5,353	12,878	1,350	19,511	49,884	
TOTAL	83,114	517	669	784	209	1,662	1,570	272,504	8,396	282,470	28,463	123,701	9,365	163,529	450,919	

(a) Includes 1 died, 2 removed, 1 resigned.

(b) In addition to these the Inspectors treated 2,339 cases. The Assistants visited 377 villages and treated 1,198 cases in Shan States.

(c) Other than those inoculated.

(d) Includes 253 cases treated by Veterinary Assistant in markets, etc.

TABLE V.

Showing number of Animals treated at Veterinary Hospitals and Dispensaries during the year 1909-10.

PROVINCE.	Number of Veterinary Dispensaries.	Number of Veterinary Assistants employed at Dispensaries.	IN-PATIENTS.									OUT-PATIENTS.						TOTAL NUMBER OF IN AND OUT-PATIENTS TREATED DURING THE YEAR.				Receipts.	Expenditure.								
			REMAINING ON 1ST APRIL.			ADMITTED DURING THE YEAR.			TOTAL.			DISCHARGED DURING THE YEAR.			BALANCE ON 31ST MARCH.			NUMBER TREATED DURING THE YEAR.			AVERAGE DAILY ATTENDANCE.										
			Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.			Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Burma	108	(a) 112	..	..	..	18	5	3	18	5	3	15	5	3	3	..	..	1,850	14,626	541	5'06	40'07	1'4	1,868	14,631	544	(b) 17,043	Rs. A. P.	Rs. A. P.		
United Provinces	26	26	45	9	7	2,173	796	389	2,218	805	396	2,164	792	389	54	13	7	12,415	11,160	7,650	34'01	30'5	20'9	14,633	11,955	8,046	34,634	52,042	0 0	44,845	0 0
Punjab	94	94	49	21	16	2,228	2,198	615	2,277	2,219	631	2,183	2,174	612	94	45	19	51,948	111,675	29,471	..	..	..	55,131	113,852	30,083	199,066	189,586	0 0	166,101	0 0
Eastern Bengal and Assam.	14	14	7	11	3	110	263	27	117	274	30	113	253	30	4	21	..	2,770	10,565	2,585	1'9	5'3	1'5	2,887	10,839	2,615	16,341	19,002	12 2	17,595	5 7
Bombay	35	25	(c) 30	(d) 41	(e) 3	700	1,068	146	730	1,109	149	632	1,062	146	48	47	3	9,284	46,772	8,586	..	..	..	10,014	47,881	8,735	66,630	61,351	4 7	41,542	1 1
Sind	6	7	(f) 16	32	7	358	293	124	374	325	191	366	311	186	8	14	5	4,179	3,848	2,915	..	..	..	4,553	4,173	3,106	11,832	40,311	6 0	26,619	13 0
Rajputana	2	3	2	..	1	56	17	34	58	17	35	57	17	34	1	..	1	190	212	316	..	..	..	248	229	351	828	6,280	4 2	2,632	8 4
Madras Veterinary College.	1	5	26	32	13	483	167	425	509	199	433	487	181	426	22	18	12	303	142	483	7'5	2'0	9'07	312	341	921	2,074	14,243	2 10	39,058	11 1
Madras Civil Veterinary Department.	21	22	30	37	13	753	1,263	525	783	1,800	543	759	1,263	518	24	37	25	9,840	24,798	6,226	6'4	13'21	4'3	10,623	26,093	6,769	(h) 45,461	15,721	9 10	24,449	14 10
North-West Frontier Province and North Punjab.	17	17	26	3	3	1,508	353	223	1,534	361	226	1,502	359	215	32	2	11	12,874	16,879	7,491	..	..	..	14,376	17,238	7,709	39,320	17,891	0 0	17,891	0 0
Central Provinces	48	48	14	17	3	290	415	85	304	432	83	294	421	86	10	11	2	11,179	37,355	3,313	..	..	..	11,483	37,787	9,001	38,271	..	..	..	..
Bengal	26	26	(g) 39	110	6	1,196	2,908	213	1,235	3,016	224	1,128	2,813	204	107	193	20	6,088	12,657	4,067	..	..	..	7,323	15,673	4,291	27,287	49,606	0 0	41,478	0 0
TOTAL	408	419	284	313	80	10,373	3,749	2,874	11,157	10,062	2,954	10,750	9,656	2,849	407	406	105	122,920	290,674	79,244	..	..	..	133,951	300,602	82,168	518,787	466,235	7 7	422,213	5 11

(a) Includes one died, two removed and one resigned.
 (b) In addition to these 298 cases were treated by Inspectors and 26 by Assistants in Shan States.
 (c), (d) and (e) 35, 42 and 5, respectively, were shown as closing balance in the Report for 1908-09, the difference is due to the exclusion of the Poona Dispensary from the table and correction in the return of Jalgaon Dispensary.
 (f) 15 were shown by mistake last year as balance on 31st March 1909.
 (g) Correct figures reported this year.
 (h) Details of 1,976 patients not available.

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TABLE VI.

Abstract showing Receipts and Expenditure of Veterinary Dispensaries during 1909-10.

PROVINCE.	RECEIPTS.							EXPENDITURE.						Balance.	REMARKS.
	Last year's balance.	By Local Fund grants.	By Government grants.	By Municipal contribution.	By fees.	By other sources.	Total.	Pay.	Travelling allowances.	Medicines, instruments, etc.	Furniture, etc.	Contingencies.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Burma . . . . .	..	..	..	..	..	509 0 0	509 0 0	1,26,076 0 0	43,468 0 0	13,408 0 0	56 0 0	58,888 0 0	2,36,891 0 0	..	
United Provinces	5,755 0 0	39,037 0 0	1,256 0 0	3,151 0 0	1,494 0 0	1,349 0 0	52,042 0 0	28,560 0 0	3,244 0 0	6,099 0 0	929 0 0	6,013 0 0	44,845 0 0	2,691 0 0	(b)
Punjab . . . . .	..	40,805 0 0	1,34,642 0 0	1,470 0 0	11,867 0 0	802 0 0	1,39,586 0 0	56,827 0 0	5,748 0 0	22,969 0 0	2,605 0 0	77,957 0 0	1,66,101 0 0	..	
Eastern Bengal and Assam	1,168 12 0	12,332 1 5	3,939 10 8	358 0 0	619 14 4	600 5 0	19,002 12 2	7,398 12 3	2,958 1 10	1,579 8 8	123 14 0	5,535 0 10	17,596 8 7	1,407 6 7	(d)
Bombay	20,757 6 4	22,244 0 0	18,951 3 3	3,233 0 0	3,237 5 6	7,685 11 10	82,108 10 11	12,870 1 3	1,247 7 1	11,544 9 1	1,584 11 8	14,545 4 0	41,542 1 1	40,586 9 10	
Sind	16,200 5 7	11,177 0 0	5,573 6 0	3,190 0 0	4,129 1 0	41 9 5	40,311 6 0	15,267 4 3	1,446 15 5	3,123 0 4	28 4 0	6,764 5 0	26,619 13 0	13,691 9 0	
Rajputana	2,257 8 11	790 0 0	900 0 0	1,357 0 0	699 11 3	276 0 0	6,280 4 2	1,732 5 4	86 6 0	777 5 0	..	36 8 0	2,632 8 4	3,367 11 10	(g)
Madras Veterinary College	..	..	..	..	14,243 2 10	..	14,243 2 10	21,349 7 3	105 11 0	5,743 11 0	161 10 10	11,098 2 7	39,058 11 1	..	
Madras Civil Veterinary Department.	..	10,466 11 6	480 0 0	110 0 0	2,282 11 9	2,565 9 7	15,904 0 10	14,749 5 5	636 12 1	5,306 11 10	658 9 4	3,098 7 3	24,449 13 11	..	
North-West Frontier Province and North Punjab.	..	3,326 0 0	7,756 0 0	1,497 0 0	..	312 0 0	17,391 0 0	11,172 0 0	821 0 0	4,475 0 0	872 0 0	551 0 0	17,391 0 0	..	
Central Provinces	1,662 0 4	7,839 15 3	4,600 10 6	3,261 8 2	1,273 3 0	2,425 3 6	26,062 8 9	15,797 11 3	1,973 4 6	11,466 4 5	1,574 1 0	11,086 12 7	41,398 2 2	5,335 9 5	
Bengal	4,787 0 0	23,207 0 0	4,604 0 0	4,175 0 0	4,014 0 0	8,819 0 0	49,606 0 0	18,679 0 0	3,621 0 0	9,382 0 0	3,231 0 0	6,516 0 0	41,478 0 0	3,128 0 0	
TOTAL	52,572 1 11	1,62,223 12 2	1,62,702 14 5	26,302 8 2	43,360 1 3	25,385 7 4	5,13,546 13 8	3,30,268 15 10	65,351 9 11	95,874 2 4	11,824 2 10	1,97,683 8 3	7,01,002 8 2	..	

(a) Includes Rs 26,518 on account of compensation for land taken up for public purposes.
 (b) In some of the districts the unexpended balance lapsed on the termination of the official year.
 (c) The difference of Rs 79-4-0 is accounted for having been credited to Government Treasury last year leaving no balance in hand.
 (d) Actual balance Rs 1,144-4-7; credited to Treasury Rs 263-2-0.
 (e) These figures differ from the closing balance as given in the Report for 1908-09, as they have been subsequently corrected.
 (f) Rs. 178-1-5 was shown as balance on 31st March 1909 in the Report for 1908-09, the sum of Rs 18-3-4 having been debited to Veterinary Fund.
 (g) Last year's balance not taken into account in Beawar District, Merwara.
 (h) Correct figures reported this year.

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TABLE VII.

Showing total strength of Subordinate Veterinary Staff employed during the year 1909-10.

PROVINCE.	How occupied.	Whether paid from Provincial or Local Funds.	Veterinary Inspectors.	Veterinary Assistants.	Subordinate Teaching Staff.	REMARKS.
1	2	3	4	5	6	7
Burma	In Schools and Colleges	Provincial	No.	No.	No.	(a) Includes— Reserve 3 Head-quarters 2 Removed 1
	In Dispensaries	Do. . . . .	..	1 (a) 46	1 ..	
United Provinces	On other work	Local Funds Do.	(c) 10	(b) 65 ..	..	(b) Includes— Died 1 Removed 1 Resigned 1
	Itinerating	Local . . . . .	..	73	..	(d) 29 Itinerating Veterinary Assistants. 5 Office Veterinary Assistants. 2 Tonga Line Veterinary Assistants. 6 Reserve Veterinary Assistants. 42
	Ditto	Provincial	12	..	..
	In Dispensaries	Local . . . . .	..	33	..	
	Ditto	Provincial . . . . .	..	1	..	
	In charge Depôt at Moradabad	Local Do.	1 12	
Attached to office of Superintendent, Civil Veterinary Department, Lucknow	Provincial Do. . . . .	..	..	1 7	..	
Punjab	In charge Kheri Rearing Depôt	Do. . . . .	..	1	..	*1 Professor of Anatomy. 1 Professor of Materia Medica. 1 Demonstrator of Anatomy. 1 Assistant Professor of Chemistry. 1 Assistant Professor of Sanitary Science. 1 Professor of Bov. Pathology.
	In Dispensaries	Do. . . . .	..	93	..	
Eastern Bengal and Assam	On other work	..	12	(d) 42	..	(e) Hospital Surgeon. (f) One Assistant Principal and two Lecturers.
	School and College	Provincial . . . . .	..	..	*6	(g) Includes 2 in Cochin and 1 in Pudukotai States having no lien on British service. (h) Having no lien on Government service.
	Inspection	Provincial	2	..	5	..
	Itinerating	Do. . . . .	..	..	25	..
	Ditto	Provincial and Local Ditto . . . . .	..	..	2	..
	Veterinary Hospital	Provincial . . . . .	..	..	3	..
	Itinerating and Veterinary Dispensary	Provincial and Local Ditto . . . . .	..	..	6 3	..
Bombay	Itinerating and Veterinary Dispensary	Provincial . . . . .	..	..	4	..
	In Schools and Colleges	Local . . . . .	..	1	..	..
Sind	In Dispensaries	Provincial . . . . .	..	34	..	..
	On other work	Do.	2	1	..	..
Rajputana	In Dispensaries	Local Funds . . . . .	..	7	..	..
Baluchistan	Ditto	Do. . . . .	..	3	..	(j) 5 on itinerating duty. 1 attached to office.
Madras Civil Veterinary Department	On other work	Provincial . . . . .	..	1	..	..
	College work	Do. . . . .	..	(e) 1	(f) 4	..
	Itinerating and attending Cattle Fairs and Shows	Provincial	3	25	..	(k) Hospital Surgeon, Bengal Veterinary College.
	In charge of Hospitals	Local and Provincial. Rajas and Zemindars S. P. C. A. . . . .	..	..	15 (h) 5 (i) 1	..
North-West Frontier Province and North Punjab	In charge of Quarantine Depôt	..	..	1	..	(m) 1 Assistant Principal and 5 Lecturers in Bengal Veterinary College.
	In Hospitals	..	..	17	..	(n) The Veterinary Assistant at Dumka.
Central Provinces	On other work	..	2	(j) 6	..	(o) Includes 2 Veterinary Assistants employed by the Dumraon and Hathwa Raj States and 1 by Kooch Bihar Raj State.
	In Dispensaries	Provincial State Service and Court of Wards . . . . .	..	46 2	..	..
	On other work	Provincial	6	29	..	(p) Includes 2 Veterinary Assistants employed by the Pinjrapole Societies of Calcutta and Hazaribagh.
	Touring	..	..	4	..	..
Bengal	Attached to office Slaughter House	..	..	1	..	..
	In School and College	Provincial	(k) 1	(l) 2	(m) 6	..
	In Dispensaries	Do. . . . .	..	(n) 1	..	(q) Six Veterinary Inspectors employed in the Civil Veterinary Department, eight Glanders Inspectors, one Court Veterinary Inspector under the Principal, Bengal Veterinary College.
	On other work	Local Provincial Local . . . . .	..	23 3 (p) 39	..	..
TOTAL			65	688	21	

TABLE VIII.

Return of Stud Bulls for the year 1909-10.

PROVINCE.	PROPERTY OF GOVERNMENT.					PROPERTY OF LOCAL BOARDS.					REMARKS.
	Number on 1st April 1909.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March 1910.	Number on 1st April 1909.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March 1910.	
		Number.	Average price paid.				Number.	Average price paid.			
1	2	3	4	5	6	7	8	9	10	11	12
United Provinces	6	1	Rs. A. P. 102 0 0	1	6	40	4	Rs. A. P. 95 0 0	..	44	
Punjab . . . . .	..	..	..	..	..	437	87	..	52	472	
Eastern Bengal and Assam	7	9	118 11 0	..	16	(a) 28	13	68 14 0	3	38	(a) One was omitted last year.
Bombay . . . . .	..	..	..	..	..	(b) 11	22	..	2	31	(b) 16 were shown as balance on 31st March 1909 in the Report for 1908-09, but the purchases were completed in June 1909.
Rajputana . . . . .	..	..	..	..	..	2	..	..	..	2	
Madras	18	..	..	1	17	..	..	..	..	..
North-West Frontier Province and North Punjab . . . . .	..	2	..	..	2	14	4	..	1	17	
Central Provinces	7	3	..	3	7	..	..	..	..	..
Bengal	12	..	..	2	10	26	..	..	3	23	
TOTAL	50	15	220 11 0	7	58	558	130	..	61	627	

TABLE IX.

Showing main results of the working of Provincial Cattle Farms during the year 1909-10.

PROVINCE.	Name of farm.	RECEIPTS.				EXPENDITURE.						VALUATION OF STOCK, GRAIN AND FODDER REMAINING AT CLOSE OF YEAR AS DETAILED ON REVERSE.			
		Sale of animals.	Sale of produce.	Other heads.	Total.	Salaries of establishment.	Feed and keep of animals.	Cultivation expenses.	Purchase of animals.	Other heads.	Total.	Cattle.	Grain.	Fodder.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.	Rs.	Rs. A. P.
United Provinces	Kheri (Bull-rearing Farm) . . . .	..	..	..	..	..	..	..	..	3,000 0 0	3,000 0 0	..	..	..	..
Eastern Bengal and Assam	Upper Shillong Farm	774 2 0	676 1 6	8 0 0	1,358 3 6	1,050 1 9	3,459 0 0	554 6 1	124 12 0	..	5,188 3 10	4,850	105 7 0	..	4,455 7 6
Bombay	Northcote Cattle Farm, Chharodi	3,540 14 0	68 5 9	86 4 0	3,640 7 9	4,254 0 0	5,827 2 9	2,556 12 9	..	5,377 0 1	18,014 15 7	18,430	158 14 0	6,100	24,688 14 10
Central Provinces	Telin Kheri	3,171 0 0	..	..	3,171 0 0	710 0 0	1,999 0 0	..	..	280 0 0	2,989 0 0	7,651	1,092 0 0	1,446	10,189 0 0
	Powar Khara	660 0 0	175 0 0	8 0 0	843 0 0	266 0 0	926 0 0	..	55 0 0	10 0 0	1,257 0 0	1,880	62 0 0	849	2,791 0 0
Bengal	Bettiah . . . . .	..	..	..	..	40 0 0	341 0 0	..	..	..	381 0 0	3,970	..	..	3,970 0 0
	Siripur	12,932 0 0	894 0 0	500 0 0	14,326 0 0	860 0 0	10,774 0 0	249 0 0	1,441 0 0	2,251 0 0	15,575 0 0	6,240	..	..	6,240 0 0
	Kalimpong . . . . .	..	..	581 0 0	581 0 0	254 0 0	82 0 0	212 0 0	..	83 0 0	581 0 0	636	..	..	636 0 0
TOTAL		21,078 0 0	1,708 7 8	1,188 4 0	23,919 11 8	7,434 1 9	23,408 2 9	3,572 2 10	1,620 12 0	10,951 0 1	46,986 3 5	43,157	1,418 5 0	8,395	52,970 5 10

(a) This being only the wages of daily labourers for their keep.
 (b) Including the cost of ensiling fodder.
 NOTE.—See next page for details of stock in hand at close of year.

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1909-10.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
UPPER SHILLONG FARM.					
<i>Cattle.</i>					
			Rs.	Rs.	
8	..	Bullocks	80	640	
11	..	Bulls	140	1,540	
21	..	Cows	80	1,680	
4	..	Male stock, 2 years old	20	80	
9	..	Ditto, 1 year old	10	90	
16	..	Ditto, calves	10	160	
5	..	Female stock, 2 years old and above	20	100	
1	..	Ditto, 1 year old	10	10	
5	..	Ditto, calves	10	50	
80	..	TOTAL . . . . .	..	4,350	
<i>Grain and Fodder.</i>					
	Mds. s. c.			Rs. A. P.	
	12 0 0	Oilcake	3	36 0 0	
	11 23 0	Matikalai	5	57 14 0	
	1 7 12	Rice	5	5 15 6	
	1 16 0	Salt	4	5 9 6	
		TOTAL . . . . .	..	105 7 0	
		GRAND TOTAL . . . . .	..	4,455 7 0	
NORTHCOTE CATTLE FARM, CHHARODI.					
<i>Cattle.</i>					
			Rs.	Rs.	
3	..	Bulls	250	750	
126	..	Cows	60	7,560	
43	..	Heifers, 2 years old	50	2,150	
39	..	Ditto, 2 years old	30	1,170	
22	..	Ditto, yearlings	20	440	
19	..	Female calves	10	190	
1	..	Bull, 3 years old	100	100	
17	..	Bulls, 2 years old	120	2,040	
15	..	Do. yearlings	80	1,200	
2	..	Bullocks, 3 years old	150	300	
6	..	Ditto, 2 years old	70	420	
1	..	Bullock, yearling	40	40	
19	..	Bull calves	30	570	
10	..	Bullocks	150	1,500	
		TOTAL . . . . .	..	18,430	

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1909-10—contd.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
NORTHCOTE CATTLE FARM, CHHARODI—contd.					
<i>Grain and Fodder.</i>					
	Mds.		Rs. A. P.	Rs. A. P.	
	13	Guar crushed	1 6 0 per maund.	17 14 0	
	lbs. 850,000	Hay	6 0 0 per 1,000 lbs.	5,100 0 0	
	Bundles 20,000	Kirby	5 0 0 per 100 bundles	1,000 0 0	
	Mds. 47	Sundhia jowari for seed	3 0 0 per maund.	141 0 0	
TOTAL GRAIN AND FODDER . . . . .			..	6,258 14 0	
GRAND TOTAL . . . . .			..	24,688 14 0	
CATTLE BREEDING FARM, TELIN KHERI,					
<i>Cattle.</i>					
			Rs.	Rs.	
1	..	Bulls	100	100	
41	..	Cows	50	2,050	
20	..	Male stock, above 2 years old	150	3,000	
12	..	Ditto, 2 years old	100	1,200	
7	..	Ditto, 1 year old	50	350	
11	..	Ditto, calves	25	275	
2	..	Female stock, above 2 years	32	64	
8	..	Ditto, 2 years old	30	240	
12	..	Ditto, 1 year old	20	240	
11	..	Ditto, calves	12	132	
TOTAL . . . . .			..	7,651	
<i>Grain and Fodder.</i>					
	lbs. 39,782	Cotton seeds	Rs. A. P. 0 7 9 per khandi.	1,092	
	722,900 Pulas.	{ Hay Kirby, etc. }	{ 2 0 0 per 1,000 Pulas. }	1,446	
TOTAL . . . . .			..	2,538	
GRAND TOTAL . . . . .			..	10,189	

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1909-10—contd.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
POWAR KHERA FARM, HOSHANGABAD.					
<i>Cattle.</i>					
			Rs.	Rs.	
6	..	Bulls	75	450	
29	..	Cows	30	870	
4	..	Male stock, 2 years old	50	200	
6	..	Ditto, 1 year old	20	120	
11	..	Ditto, calves	10	110	
2	..	Female stock, 2 years old	15	30	
3	..	Ditto, 1 year old	10	30	
14	..	Ditto, calves	5	70	
75	..	TOTAL . . . . .	..	1,880	
<i>Grain and Fodder.</i>					
	Mds. s.			Rs. A. P.	
	24 28	Gram	16 seers per rupee.	61 12 0	
	311,525	Hay Pulas	1,000 per rupee	311 8 5	
	Mds. s. 268 30	Cotton seeds	Rs. 2 per md.	537 8 0	
		TOTAL . . . . .	..	910 12 5	
		GRAND TOTAL . . . . .	..	2,790 12 5	
BETTIAH.					
<i>Cattle.</i>					
			Rs.	Rs.	
1	..	Bulls	150	150	
45	..	Cows	55	2,500	
4	..	Male stock, 2 years old	50	200	
10	..	Ditto, 1 year old	40	400	
11	..	Ditto, calves	30	330	
7	..	Female stock, 2 years old	25	175	
10	..	Ditto, 1 year old	20	200	
1	..	Ditto, calves	15	15	
89	..	TOTAL . . . . .	..	3,970	
<i>Grain and Fodder.</i>					
		Gram . . . . .	..	..
		Hay . . . . .	..	..
		Kirby, etc. . . . .	..	..
		TOTAL . . . . .	..	..
		GRAND TOTAL . . . . .	..	3,970	

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1909-10—concl'd.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
SIRIPUR.					
<i>Cattle.</i>					
			Rs.	Rs.	
3	..	Bulls	100	300	
6	..	Do	125	750	
44	..	Cows	75	3,300	
26	..	Male stock, 2 years old	40	1,040	
..	..	Ditto, 1 year old . . . . .	..	..
13	..	Ditto, calves	20	260	
11	..	Female stock, 2 years old	30	330	
..	..	Ditto, 1 year old . . . . .	..	..
13	..	Ditto, calves	20	260	
116	..	TOTAL . . . . .	..	6,240	
<i>Grain and Fodder.</i>					
		Gram . . . . .	..	..
		Hay . . . . .	..	..
		Kirby, etc. . . . .	..	..
		TOTAL . . . . .	..	..
GRAND TOTAL					
			..	6,240	
KALIMPONG.					
<i>Cattle.</i>					
			Rs.	Rs.	
..	..	Bulls . . . . .	..	..
15	..	Cows	40	600	
..	..	Male stock, 2 years old . . . . .	..	..
..	..	Ditto, 1 year old . . . . .	..	..
4	..	Ditto, calves	6	24	
..	..	Female stock, 2 years old . . . . .	..	..
..	..	Ditto, 1 year old . . . . .	..	..
2	..	Ditto, calves	6	12	
21	..	TOTAL . . . . .	..	636	
<i>Grain and Fodder.</i>					
	Mds. 2	Gram	Rs. A. P. 3 12 0 a maund.	Rs. A. P. 7 8 0	
		Hay . . . . .	..	..
		Kirby, etc. . . . .	..	..
		TOTAL . . . . .	..	7 8 0	
GRAND TOTAL					
			..	643 8 0	

TABLE X.

Return of Horse, Pony and Donkey Stallions under Local Bodies for the year 1909-10.

DETAILS.	HORSE AND PONY STALLIONS UNDER LOCAL BODIES.													DONKEY STALLIONS UNDER LOCAL BODIES.									
	HORSES.						PONIES.						Total Horses and Ponies.	Italian.	Cyprian.	Country-bred (Fur-jabi).	Persian.	Catalonian.	Arab.	American.	Sicilian.	TOTAL.	
	Arab.	Persian.	Thorough-bred, English.	Country-bred.	Australian.	Total.	Arab.	Persian.	Country-bred.	Del.	Shan.	Total.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Balance on 1st April 1909	58	..	2	4	..	64	97	..	4	..	1	102	166	6	16	28	..	36	1	2	10	99	
Increase { Purchase in India	10	..	..	2	..	12	12	..	1	..	..	13	25	..	..	6	..	..	..	..	..	6
{ Received by transfer	(a) 17	..	..	..	..	17	..	..	..	..	..	..	17	..	..	1	..	4	..	..	..	5
TOTAL	85	..	2	6	..	93	109	..	5	..	1	115	208	6	16	35	..	40	1	2	10	110	
Decrease { Died	2	..	..	..	..	2	..	..	..	..	..	..	2	..	1	1	..	..	..	..	..	2
{ Sold	2	..	..	..	..	2	7	..	..	..	1	8	10	1	1	..	..	..	1	..	..	3
{ Destroyed	1	..	..	..	..	1	2	..	..	..	..	2	3	..	..	..	..	..	..	..	..	..
{ Transferred	(b) 17	..	..	..	..	17	..	..	..	..	..	..	17	..	..	1	..	4	..	..	..	5
TOTAL DECREASE	22	..	..	..	..	22	9	..	..	..	1	10	32	1	2	2	..	4	1	..	..	10
Balance on 31st March 1910	63	..	2	6	..	71	100	..	5	..	..	105	176	5	14	33	..	36	..	2	10	100
United Provinces	46	..	2	2	..	50	5	..	..	..	..	5	55	..	..	6	..	9	..	2	..	17
Punjab	5	..	..	..	..	5	60	..	4	..	..	64	69	4	18	25	..	21	..	..	7	70
North-West Frontier Province	9	..	..	1	..	10	9	..	..	..	..	9	19	1	1	2	..	6	..	..	3	13
Bombay	2	..	..	3	..	5	13	..	1	..	..	14	19	..	..	..	..	..	..	..	..	..
Bengal	1	..	..	..	..	1	1	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..
Madras . . . . .	..	..	..	..	..	..	12	..	..	..	..	12	12	..	..	..	..	..	..	..	..	..
Burma . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Central Provinces . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL	63	..	2	6	..	71	100	..	5	..	..	105	176	5	14	33	..	36	..	2	10	100

(a) Includes 1 Arab horse presentation in United Provinces.
 (b) Includes 1 removed from United Provinces registers.

TABLE XI.

Services and Produce of each class of Horse, Pony and Donkey Stallions under Local Bodies during 1909-10.

Horse, Pony or Donkey.	PROVINCE.	Stallions on register on 31st March 1910.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE NUMBER OF MARES COVERED PER STALLION EMPLOYED AT STUD.		REMARKS.
			Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
1	2	3	4	5	6	7	8	9	10
Horse	United Provinces	50	42	36	2,267	1,838	53.9	51.5	
	Punjab	5	5	5	236	272	47	54	
	Bombay	5	6.02	6.59	220	295	36.54	44.76	
	Bengal	1	..	..	..	..	..	..
	North-West Frontier Province and North Punjab.	10	8	8	540	495	67.5	61.87	
	TOTAL	71	61.02	55.59	3,263	2,900	53.5	52.17	
Pony	Burma . . . . .	..	1	3	5	58	5	19.3	
	United Provinces	5	5	8	359	386	71.8	48.2	
	Punjab	64	62	60	3,384	3,233	54	54	
	Bombay	14	12.85	11.41	443	343	34.47	30.06	
	Madras	12	12	13	277	239	23.00	17.5	
	North-West Frontier Province and North Punjab.	9	9	10	453	505	50.33	50.5	
	Central Provinces . . . . .	..	1	1	1	6	1	6	
Bengal	1	..	1	..	..	..	..
	TOTAL	105	102.85	107.41	4,922	4,770	47.8	45.22	
Donkey	United Provinces	17	9	9	417	412	46.3	45.7	
	Punjab	70	70	70	3,171	2,846	45	41	
	Bombay . . . . .	..	..	..	..	..	..	..
	North-West Frontier Province.	13	14	15	714	482	51	32.13	
		TOTAL	100	93	94	4,302	3,740	46.3	39.78

TABLE XII.

Showing average cost of feed, keep, attendance, etc., of Horse, Pony and Donkey Stallions during the year 1909-10.

PROVINCE.	HORSE.		PONY.		DONKEY.		REMARKS.
	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
1	2	3	4	5	6	7	8
	Rs. A. P.	Rs., A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Burma . . . . .	..	..	302 4 9	220 4 4	..	..
Punjab	315 0 0	382 0 0	339 0 0	374 0 0	189 0 0	202 0 0	
Bombay	441 0 0	518 0 0	452 0 0	501 0 0	..	..
Madras . . . . .	..	..	690 12 11	397 9 7	..	..
North-West Frontier Province and North Punjab.	340 10 9	336 5 0	314 8 9	328 11 2	234 7 10	219 12 11	
Central Provinces . . . . .	..	..	287 8 2	759 9 9	..	..
Bengal	113 0 0	..	169 8 0	224 4 0	..	..

TABLE XIII.

Abstract of particulars regarding Horse Fairs and Shows held in non-selected districts during the year 1909-10.

Province.	Number of Horse Fairs and Shows held.			TOTAL NUMBER OF ANIMALS PRESENT.		TOTAL NUMBER COMPETING FOR PRIZES.		TOTAL NUMBER OF HORSES (NOT INCLUDING SHAMU) PRESENT.			NUMBER OF HORSES PURCHASED.				PRICE PAID FOR HORSES PURCHASED.			PRIZES AWARDED.											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Bombay	1	387	464	387	404	153	142	..	..	15	15	875	265	316	..	..	..	..	..	..	58	1,000	1,500	1,500	..	4,000	1,965	2	1,050
Punjab	7	4,176	8,333	639	977	3,026	..	..	..	..	..	..	..	..	..	54	54	..	..	..	607	1,200	..	1,517	..	2,717	1,368	2	1,050
North West Provinces and North Punjab.	3	1,103	1,061	936	898	729	..	9	..	..	0	..	..	213	..	..	..	..	..	..	9	2,090	..	780	..	3,410	2,385	3	..
Bengal	6	6,632	12,384	123	211	30	5,475	..	..	..	..	..	..	..	..	..	..	..	..	..	5,302	..	150	430	..	580	534	1	..
ROYALS	10	15,488	17,292	2,085	2,550	8,938	5,617	9	..	15	24	875	265	520	..	54	54	5,931	4,890	1,650	4,177	..	10,707	7,052	8	2,050

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TABLE XIV.

Abstract of particulars regarding Cattle Fairs and Shows held during the year 1909-10.

PROVINCE.	Number of Cattle Fairs and Shows held.	TOTAL NUMBER OF STOCK PRESENT.							AVERAGE PRICE OF ANIMALS SOLD.					Amount realized in fees.	Total number of animals that competed for prizes.	PRIZES AWARDED.					Number of medals awarded.	REMARKS.												
		Bulls.	Bullocks.	Cows.	Young stock.	Buffaloes.	Camels.	Others.	Bulls.	Bullocks.	Cows.	Buffaloes.	Camels.			From Imperial Funds.	From Provincial Funds.	From Local Funds.	From other sources.	Total.			Amount actually awarded.											
		3	4	5	6	7	8	9	10	11	12	13	14			15	16	17	18	19			20	21	22	23	24							
									Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs.	A. P.		Rs.	Rs.	Rs.	Rs. A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.								
Burma	1	23	72	8	8	172	..	100	..	..	..	..	..	..	..	383	..	1,345	..	..	1,345	0	0	..	..	..	..	..	..
United Provinces	5	45	521	236	578	..	..	..	..	..	..	..	..	..	..	204	..	1,000	..	..	1,000	0	0	934	0	0	..	..	..		
Punjab	31	302	153,553	23,018	26,183	48,023	4,869	15,719	..	..	..	..	..	..	..	1,05,713	0	0	3,895	35	..	11,510	295	0	0	11,840	0	0	10,129	0	0	5
Eastern Bengal and Assam.	68	12,692	133,933	10,600	34,580	30,694	2,766	7,441	..	..	..	..	..	..	..	1,17,886	10	0	517	..	96	820	99	0	0	1,015	0	0	948	0	0	3
Bombay	4	1,755	4,520	833	539	1,128	..	6,507	385	280	0	0	115	0	0	173	0	0	..	..	2,800	850	..	..	3,650	0	0	2,717	0	0	6	
Sind	2	31	428	81	35	139	12	..	..	60	0	0	..	..	..	..	..	..	..	..	1,380	..	..	1,380	0	0	1,115	0	0	..	..	..
Baluchistan	2	113	189	47	11	..	..	..	24	..	..	..	..	..	..	..	..	..	..	500	..	95	50	0	0	645	0	0	595	0	0	2
Madras	21	563	129,698	1,268	5,343	6,163	..	898	..	87	5	88	75	..	..	860	2	11	146,483	..	4,825	3,349	4,208	9	9	12,382	9	9	1,279	4	0	23
North-West Frontier Province and North Punjab.	4	253	298	250	46	802	44	119	..	..	..	..	..	..	..	1,128	1,850	..	..	750	200	0	0	2,800	0	0	2,504	0	0	7	..	..
Central Provinces	13	815	38,661	10,300	5,159	9,774	7	4,711	450	480	5	0	198	5	5	441	0	8	550	1,390	328	0	0	2,268	0	0	1,508	0	0	2
Bengal	13	284	66,457	16,258	16,453	16,124	860	10,652	40	80	0	0	25	0	0	80	0	0	900	1,345	369	0	0	2,614	0	0	1,948	0	0	1
TOTAL	164	16,966	528,330	62,899	88,935	112,519	8,059	45,647	2,54,590	8	8	156,536	2,385	11,516	21,489	5,549	9	9	40,939	9	9	23,677	4	0	49

TABLE A V.

Showing main results of the working of the Imperial Bacteriological Laboratory during 1909-10.

1	QUANTITY OF SERA OR ANTI-TOXIN PREPARED AND ISSUED.					INSTRUCTION IMPARTED.				FINANCIAL RESULTS.											
	Names of sera or anti-toxin.	Opening balance.	Prepared during the year.	Total.	Issued during the year.	Stock in hand.	Department or Province.	Veterinary Inspectors and Assistants attending class.	Number passed.	RECEIPTS.					EXPENDITURE.						
										Sale of animals.	Sale of sera.	Sale of garden products and revenue from reserved forests.	Other miscellaneous receipts.	Total.	Salaries and travelling allowances of officers and subordinate establishments.	Feed and keep of animals.	Purchase of animals.	Cost of chemicals and apparatus.	Other miscellaneous expenditure.	Total.	
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
	Doses.	Doses.	Doses.	Doses.	Doses.		Nos.	Nos.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
Multitest Laboratory.	Rinderpest	41,563	409,078	450,641	446,981	3,660	United Provinces.	9	9												
	Anthrax	4,036	12,168	16,204	12,404	3,800	(e) Punjab	2	2												
	Hemorrhagic Septicæmia.	1,640	8,320	9,960	9,960	..	North-West Frontier Province and North Punjab.	2	2												
	Charbon Symptomatique.	550	20,350 and 5,900 c. c. serum.	20,900 and 5,800 c. c. serum.	20,900	5,800 c. c. serum.	Bengal	2	2	591 5 8	3,093 10 0	478 1 4	69 5 6	4,232 6 1	75,809 6 5	47,914 1 9	22,874 10 0	18,996 0 4	17,414 5 1	1,83,008 7 7	
	Mallein	3,352	9,515	12,867	10,137	2,730	Eastern Bengal and Assam.	9	9												
	Tuberculin	165	444	609	469	140	Bombay Veterinary College.	1	1												
	Strangles	..	5,753 c. c.	5,753 c. c.	2,583 or 125 doses.	3,170 c. c.	Native States	1	1												
Bareilly Depot.	....	..	..	..	..	..	United Provinces.	3	3											
	....	..	..	..	..	..	Punjab	1	1			278 0 0	..	278 0 0	10,001 0 4	3,105 12 4	3,800 2 0	..	..	16,906 14 8
	Bombay	6	6												
	51,306	459,875 and 11,553 c. c.	511,181 and 11,553 c. c.	500,851 and 2,583 c. c.	10,330 and 8,970 c. c.	TOTAL	86	86	591 5 8	3,093 10 0	756 1 4	69 5 6	4,510 6 1	85,810 6 9	51,019 14 1	26,874 12 0	18,996 0 4	17,414 5 1	1,99,915 6 8		

(e) Includes 1 Laboratory Assistant from Punjab Veterinary College.

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TABLE XVI.

Return of animals for 1909-10

Detail.	Herd buls.	Super- numer- ary buls.	Cows.	Male produce.	Female produce.	Castrated produce.	Ordnance bullocks.	Cultiva- tion bullocks.	Mules.	Pony mares for the M. B.	Pony stallions.	Camels.	Donkey stallions.	Donkey colts.	Donkey mares.	Donkey Fillies.	Rams.	Ewes.	Male lambs.	Female lambs.	Wethers.	Total.	REMARKS.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1st April 1909	20	6	1,199	871	632	115	..	215	107	37	1	8	5	55	88	43	5	333	49	109	..	3,898	
Increase { By birth	..	..	..	318	345	..	..	..	18	..	..	..	..	26	..	19	..	..	132	119	..	972	
.. purchase	..	..	3	2	2	..	..	15	21	..	1	1	1	..	..	..	8	19	..	..	..	68	
.. transfer	8	85	199	3	..	177	187	28	..	..	..	..	1	..	8	..	1	86	..	..	1	734	
TOTAL	28	91	1,401	1,194	979	292	187	258	141	37	2	9	7	81	96	62	9	388	181	228	1	5,672	
Decrease { Died	1	1	89	54	54	3	..	7	8	..	..	..	..	11	8	8	1	45	26	48	1	305	
.. Destroyed	..	..	..	..	2	..	..	1	1	..	1	..	..	1	..	..	..	1	..	3	..	10	
.. Sold	1	57	145	72	108	6	178	26	54	..	..	2	1	8	..	..	..	..	47	1	..	708	
.. Transferred	2	80	..	241	199	186	9	19	..	..	..	..	..	1	..	8	..	..	2	86	..	733	
TOTAL	4	88	184	367	363	195	187	53	58	..	1	2	1	21	8	16	1	46	75	88	1	1,754	
Balance	24	3	1,217	827	616	97	..	205	83	37	1	7	(a) 6	60	93	46	8	342	106	140	..	3,918	
VALUE Rs.	5,050	750	1,06,210	59,870	11,050	8,950	..	20,875	11,030	2,260	120	754	2,460	3,170	7,780	2,910	1,430	2,608½	615	365½	..	2,53,858	

TABLE XVII.

HISSAR FARM.

Results of donkey, mule and achrule breeding during 1909-10.

1	Stallions on register at close of year.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.		RESULT OF PREVIOUS YEAR'S COVERINGS.		AVERAGE RESULT OF PREVIOUS YEAR'S COVERINGS PER STALLION EMPLOYED AT STUD.		REMARKS.
		Year under report.	Pre-vious year.	Year under report.	Pre-vious year.	Year under report.	Pre-vious year.	Num-ber of produce.	Num-ber not held.	Aver-age of produce.	Aver-age of not held.	
2	3	4	5	6	7	8	9	10	11	12	13	
Donkey breeding	5	5	5	88	84	17.2	16.8	50(a)	84	70	48	(a) This number includes 8 slips and still-born foals.
Mule breeding	5	4	5	88	85	9	7	15	22	26	44	

TABLE XVIII.

Abstract showing main results of the working of the Hissar Farm during the official year 1909-10.

<i>Receipts paid into Treasury.</i>		Rs. a. p.	
Sale of animals (a)		89,990	11 0
Sale of produce		251	11 9
Other heads		11,785	6 10
TOTAL		1,02,027	13 7
<i>Expenditure.</i>			
Salaries and travelling allowances of officers		19,419	11 0
Ditto ditto of subordinate staff		25,888	10 11
Cultivation expenses		17,967	11 5
Feed and keep of animals including reserve fodder	R2,128-9-1	29,403	11 10
Purchase of animals		12,411	6 10
Other heads		8,547	13 10
TOTAL		1,13,639	1 0
<i>Value of animals issued on book credit.</i>			
Siege-train bullocks		28,480	0 0
Army transport bullocks			
Bulls			
Mules and donkeys		18,375	0 0
TOTAL		46,855	0 0
<i>Valuation of animals, grain and fodder on hand at end of year.</i>			
Valuation of animals as per Table XVI attached		2,53,858	0 0
Do. of grain		490	7 0
Do. of fodder		67,157	14 1
Do. of machinery and dead stock articles		44,184	2 10
TOTAL		3,65,690	7 1

(a) Includes valuation of animals issued on book credit.

TABLE XIX.

Statement showing total charges during 1909-10 in connection with Civil Veterinary Department.

	Inspector-General.	Imperial Bacteriologist.	Hissar Cattle Farm.	United Provinces.	Punjab.	Bengal.	Madras.	Central Provinces.	Bombay.	Burma.	North-West Frontier Provinces.	Eastern Bengal and Assam.	Sind, Baluchistan and Rajputana.	Veterinary Officer investigating camel diseases.	TOTAL.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1. Superintendence	71,305 8 9			24,174 1 6	76,414 0 0	33,200 3 3	80,874 4 6	81,715 0 0	9,945 0 0	61,293 2 7		17,525 8 0			3,55,947 8 4
2. Veterinary Instruction					73,143 0 0	1,40,758 8 9	39,058 11 1	1,026 0 0	55,925 7 10	86,128 7 10	1,249 0 0	2,732 15 9			3,50,072 5 3
3. Subordinate Establishment.				31,162 1 4	1,10,878 0 0	13,193 5 8	25,702 11 9	59,662 0 0	37,870 5 1	1,29,076 14 4	27,701 0 0	48,446 8 10			4,69,179 13 6
4. Hospitals and Dispensaries.				3,203 2 7	66,875 0 0	15,772 12 3	17,888 1 9	4,173 0 0	92,024 3 7	9,952 0 2	11,999 0 0	19,853 7 3			2,41,733 12 7
5. Breeding operations			1,16,344 7 2	14,875 11 9	1,00,786 0 0		8,289 11 3		36,195 12 4		14,165 0 0	50 0 0	23,048 11 4		3,13,555 4 1
6. Prizes	1,226				6,922 0 0				1,875 8 3		800 0 0	320 0 0			8,991 8 3
7. Fairs and Shows					56,975 0 0		4,810 0 0		19,608 4 5		9,385 0 0	2,533 0 0			83,261 4 5
8. Bacteriological Research.		1,95,180 10 3													1,95,180 10 3
9. Camel Specialist														16,760 2 8	16,760 2 8
10. Other charges										440 4 0		8,721 8 11			9,161 13 8
TOTAL	68,079 8 9	1,95,180 10 3	1,16,344 7 2	73,215 1 2	4,91,993 0 0	2,02,924 13 11	1,26,121 8 7	96,577 0 0	2,53,244 9 6	2,36,890 13 8	50,737 0 0	1,00,731 10 6	23,048 11 4	16,760 2 8	20,51,849 1 6

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Annual Administration Report
OF THE
Civil Veterinary Department

FOR THE OFFICIAL YEAR

1910-1911

6

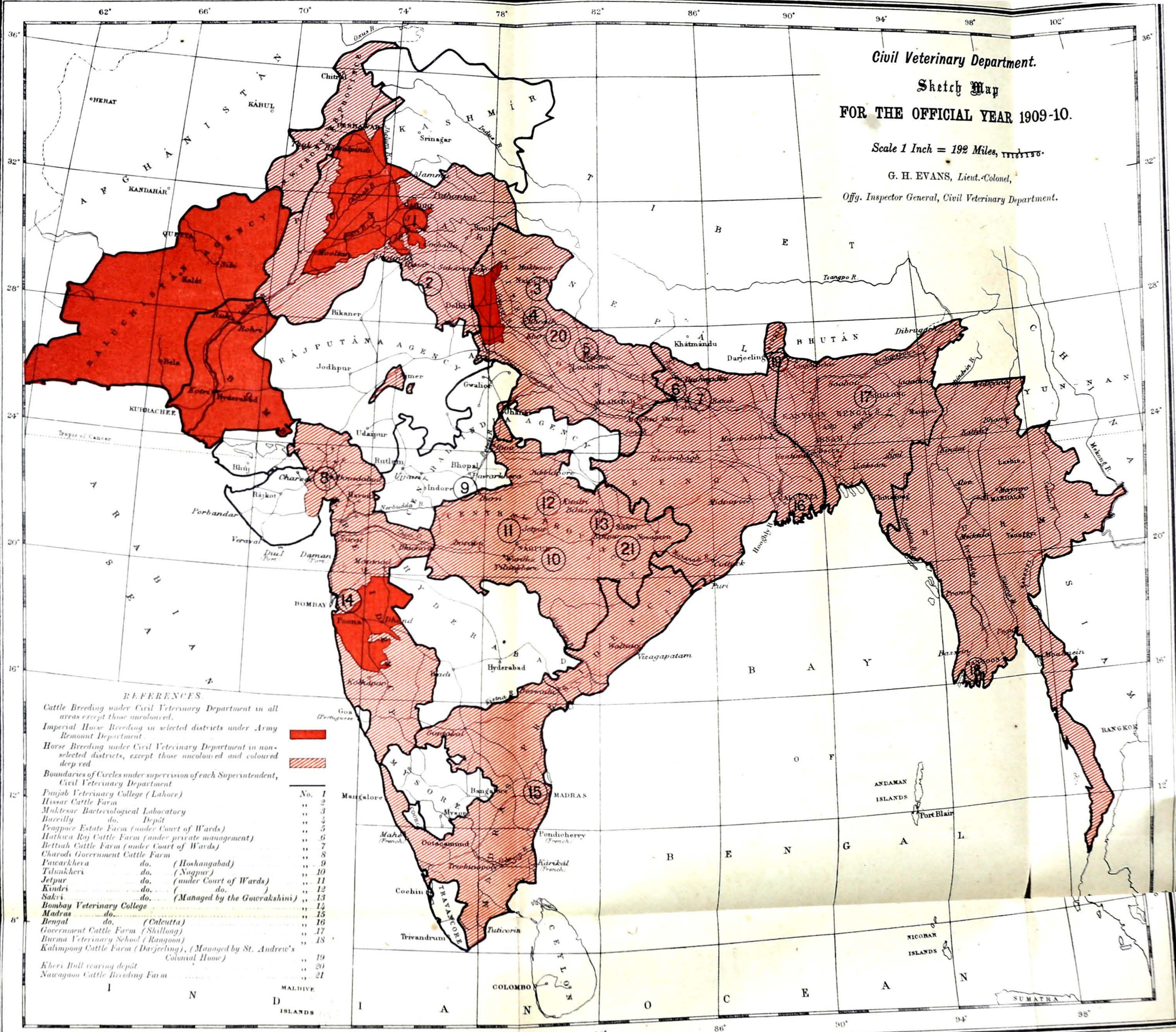


CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1911

Civil Veterinary Department.
 Sketch Map
 FOR THE OFFICIAL YEAR 1909-10.

Scale 1 Inch = 192 Miles, 1:192000

G. H. EVANS, Lieut.-Colonel,
 Offg. Inspector General, Civil Veterinary Department.



REFERENCES

- Cattle Breeding under Civil Veterinary Department in all areas except those uncoloured.
- Imperial Horse Breeding in selected districts under Army Remount Department.
- Horse Breeding under Civil Veterinary Department in non-selected districts, except those uncoloured and coloured deep red.
- Boundaries of Circles under supervision of each Superintendent, Civil Veterinary Department.
- Punjab Veterinary College (Lahore)
- Hussar Cattle Farm
- Muktesar Bacteriological Laboratory
- Bareilly do. Depot
- Peagpure Estate Farm (under Court of Wards)
- Hathwa Raj Cattle Farm (under private management)
- Bethwah Cattle Farm (under Court of Wards)
- Charodi Government Cattle Farm
- Pawarkheva do. (Hoshangabad)
- Tilankheri do. (Nagpur)
- Jetpur do. (under Court of Wards)
- Kyndri do.
- Sakri do. (Managed by the Govrakshini)
- Bombay Veterinary College
- Madras do.
- Bengal do. (Calcutta)
- Government Cattle Farm (Shillong)
- Burma Veterinary School (Rangoon)
- Kalimpong Cattle Farm (Darjeeling), (Managed by St. Andrew's Colonial Home)
- Kheri Bull rearing depot
- Nawaganj Cattle Breeding Farm

	No. 1
	No. 2
	No. 3
	No. 4
	No. 5
	No. 6
	No. 7
	No. 8
	No. 9
	No. 10
	No. 11
	No. 12
	No. 13
	No. 14
	No. 15
	No. 16
	No. 17
	No. 18
	No. 19
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	No. 21

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GOVERNMENT OF INDIA.

ANNUAL ADMINISTRATION REPORT
OF THE
CIVIL VETERINARY DEPARTMENT

FOR THE OFFICIAL YEAR

1910-1911.

GENERAL ADMINISTRATION.

Colonel H. T. Pease, C.I.E., was in charge of the Department from 1st April to 4th June 1910 when he proceeded on furlough to Europe and was relieved by Lieut.-Colonel G. H. Evans, who officiated as Inspector-General from 5th June to the end of the year under report.

Preface.

2. As usual, a coloured Map and the prescribed Tables are appended. The following alterations have been made in the map as compared with last year :—

- (a) Kaliaana Cattle Farm has been added in the Punjab.
- (b) Moradabad Stallion Depôt has been added in the United Provinces.
- (c) Horse breeding in the Deccan Circle has been placed under the management of the Civil Veterinary Department, Bombay.

3. The table given below shows the names of the officers who held the several appointments in the Department during the year :—

Officers in charge.

Appointments.	1st April 1910.	31st March 1911.	Remarks.
Inspector-General	Colonel H. T. Pease, C.I.E.	Lieutenant-Colonel G. H. Evans.	Officiating.
Imperial Bacteriologist	Major F. S. H. Baldrey	Major J. D. E. Holmes, M.A., D.Sc.	
Assistant Bacteriologist	H. E. Cross, Esq.	H. E. Cross, Esq.	
Physiological Chemist	P. Hartley, Esq., D.Sc. (Lond.).	P. Hartley, Esq., D.Sc. (Lond.).	
Superintendent, Government Cattle Farm, Hisar.	Lieutenant-Colonel J. Farmer.	Lieutenant-Colonel J. Farmer.	
Superintendent, United Provinces	E. W. Oliver Esq.	E. W. Oliver, Esq.	
2nd Superintendent, United Provinces	C. W. Wilson, Esq.	C. W. Wilson, Esq.	
Chief Superintendent, Punjab	Major G. K. Walker	V. de V. H. Woodley, Esq.	Officiating.
Superintendent, North-West Frontier Province and North Punjab.	V. de V. H. Woodley, Esq.	S. Carless, Esq.	Officiating.
Superintendent, South Punjab	G. Taylor, Esq.	G. Taylor, Esq.	
Superintendent, Sind, Baluchistan and Rajputana.	Major A. S. Trydell	Major A. S. Trydell.	
Principal, Punjab Veterinary College	Major A. Smith	Major A. Smith	(On 6 months' leave from 1st April 1911.)
Professor, Punjab Veterinary College	E. Burke, Esq.	E. Burke, Esq.	Acting.
Professor, Sanitary Science, Punjab Veterinary College.	S. H. Gaiger, Esq.	S. H. Gaiger, Esq.	(Officiating Principal, Punjab Veterinary College, from 1st April 1911.)

Appointments.	1st April 1910.	31st March 1911.	Remarks.
Principal, Bombay Veterinary College	M. H. Sowerby, Esq.	K. Hewlett, Esq.	
Assistant Principal, Bombay Veterinary College.	N. D. Dhakmarvala, Esq.	M. H. Sowerby, Esq.	
Superintendent, Bombay	K. Hewlett, Esq.	Lieutenant-Colonel H. M. Maxwell.	
Principal, Bengal Veterinary College	Colonel F. Raymond	Colonel F. Raymond.	
Superintendent, Bengal	D. Quinlan, Esq.	D. Quinlan, Esq.	
Superintendent, Eastern Bengal and Assam.	W. Harris, Esq.	W. Harris, Esq.	
Principal, Madras Veterinary College	D. A. D. Aitchison, Esq.	D. A. D. Aitchison, Esq.	
Superintendent, Madras	Captain W. O. Dawson	F. Ware, Esq.	
" Burma	Lieut.-Colonel G. H. Evans	T. Rennie, Esq.	Officiating.
2nd Superintendent, Burma	C. J. N. Cameron, Esq.	C. J. N. Cameron, Esq.	Officiating.
3rd Superintendent, Burma	.....	.....
Superintendent, Central Provinces	F. Ware, Esq.	Major F. S. H. Baldrey.	
Veterinary Officer Investigating Camel Diseases.	Colonel H. T. Pease, C.I.E.	A. S. Leese, Esq.	
Attached for training in Punjab	R. Branford, Esq.	.....
Ditto	J. G. Cattell, Esq.	J. G. Cattell, Esq.	
Ditto	S. Carless, Esq.	.....
Ditto Central Provinces	.....	Major W. O. Dawson.	
Ditto Government Cattle Farm, Hissar.	.....	B. Branford, Esq.	
Ditto Bengal Veterinary College.	.....	P. J. Kerr, Esq.	

4. Mr. P. J. Kerr, M.R.C.V.S., joined the Department on 22nd January 1911. The undermentioned officers were on leave in Europe at the close of the year :—

Colonel H. T. Pease, C.I.E.

Major G. K. Walker.

5. From 1st April to 4th June 1910, the period during which Colonel Pease was in charge, he served as President of the Board of Examiners at the Punjab Veterinary College; inspected the Rawalpindi-Srinagar dak line; inspected the Muktesar Laboratory, and visited Bombay to purchase Arab stallions. He travelled 2,024 miles by rail and 570 miles by road.

Lieut.-Colonel G. H. Evans assumed charge of the Department on 5th June and from that date up to 7th August 1910 was detained in Burma. He arrived at Simla on 14th August and left on tour on 27th October 1910. From the latter date to the end of the year, he inspected the Veterinary Hospitals and Dispensaries at Ambala, Hissar, Delhi, Meerut, Agra, Allahabad, Lucknow, Cawnpore, Moradabad, Bareilly, Nagpur, Amraoti, Ajmer and Beawar. Interviewed the Residents at Jaipur and Udaipur; visited the Cattle Farms at Hissar, Pawarkhera and Tilunkheri. Inspected the Laboratory at Muktesar and branch at Bareilly. Served as President, Board of Examiners, at the Bombay, Madras and Bengal Veterinary Colleges. Purchased stallions at Bombay, visited Burma and inspected Veterinary School at Insein. He travelled 10,009 miles by rail, 108 miles by road and 1,500 miles by sea.

PART A.—PROVINCIAL ADMINISTRATION.

I.—VETERINARY INSTRUCTION.

6. The results of work done in Veterinary Colleges is shown in Table I. The examinations were conducted by the permanent Board.

Veterinary Colleges and Schools.

7. *Bengal*.—Taking the percentage of passes, the Bengal College stands first. In the first year's class, 39 students out of 50 sent up were successful; in the second, 28 out of 37; and in the final year's test 35 out of 46, giving a general average of 76.69. During the vacation, eight Army Transport Drivers were trained as dressers.

The number of cases in the hospital is slightly in excess of the year previous, *viz.*, 5,869 against 5,680. The fees realized for treatment, etc., amounted to Rs. 14,869-12-8.

A new ambulance was urgently needed and Babu Govindram Singhonia presented Rs. 1,000 for the purchase of a conveyance.

The Principal remarks on the difficulty in obtaining funds for the further development of the College.

8. *Punjab*.—This institution stands next. In the first year's class there were 63 students of whom 48 passed; 76 in the second year and of these 59 were successful. Out of a class of 76 in the final year 53 qualified, giving a general percentage of 74.41. With regard to the quality of the passes much might be said. The report of the Board of Examiners was forwarded to the Punjab Government and it is hoped that in the interests of the institution effect will be given to their recommendations.

In addition to the ordinary work, a three months' course was given to 43 men from the Transport Department. A nine months' course in practical shoeing was arranged for; 22 men attended and at the examination held on completion of the course, 16 men satisfied the Examiners.

The number of cases treated during the year was 5,597. The sum of Rs. 12,046-11-1 was paid into the Treasury.

9. *Madras*.—There was a slight alteration in the teaching staff owing to the departure of Mr. Valladares on leave. The following is the result of the examination. First year's class—number presented 18, passed 13; second year—22, passed 16; and in the final year—18, of whom 10 qualified. General average 67.24 per cent.

At this College owing to the small number of pupils in each of the classes, the Lecturers were able, and evidently had devoted much trouble and care to the training of the students, and the examiners were gratified to find the successful students so well up in their work.

The number of cases treated in the hospital was 2,145, and the receipts from hospital charges amounted to Rs. 11,099-14-6.

10. The Principal has pointed out the great difficulty experienced in obtaining sufficiently educated students. During the year, after advertising the College prospectus in the Fort St. George and Local Gazettes, and having expended the sum of Rs. 1,200 in advertising in newspapers, he succeeded in obtaining only 11 matriculates. This difficulty exists elsewhere. The task imposed on Lecturers in expecting them to teach Indian students up to a certain standard, is rendered doubly difficult when in order to make up classes, they are obliged to admit students known to them to be very deficient in general education.

11. *Bombay*.—Mr. Sowerby officiated as Principal from the beginning of the year until the 27th June, on which date Mr. Hewlett assumed charge of the office and remained so till the end of the year.

At the annual examination, 23 students presented themselves for the first professional and 15 passed; in the second year 27, of whom 21 were successful; and in the final year's class, 41 men appeared and 22 passed. General average 63.73 per cent.

As the Examiners were of opinion that the students as a whole had not acquitted themselves to their satisfaction, the Board ventured to bring to the notice of the Bombay Government certain matters which it deemed desirable to submit for their consideration.

During the long vacation, a class was held for the training of Drivers of the Supply and Transport Corps as Dressers. Thirteen Drivers attended the course.

During the year, 4,550 animals received treatment. Receipts amounted to Rs. 8,887-10-0.

Various improvements to the College buildings have been carried out. Owing to a comprehensive scheme for the general improvement of the College

premises being under consideration, the construction of certain proposed buildings has been held in abeyance.

12. *Burma*.—At the beginning of the year there were 33 pupils in the School—20 in the senior and 13 in the junior class. Eighteen pupils in the senior class were examined and 14 qualified. A fresh batch of 13 pupils has been admitted.

There has been a considerable increase in the number of cases treated at Insein, 738 against 240 last year, and there seems ample reason to believe that when suitable accommodation (which at present is temporary) is provided, that a further increase may be anticipated. The work at the laboratory has also increased to a great extent owing to the large number of specimens received from all parts of the Province. Much time is occupied in examining and reporting on them. The Superintendent observes that, "the efforts of the staff have been taxed to the utmost to deal with the amount of work now presented and will be totally insufficient to cope with much further increase."

13. A school for the training of Shans to deal with contagious diseases in the States was opened on 12th July at Taunggyi. Veterinary Inspector Maung Tun Myah is in charge. There are four pupils—2 from the Northern and 2 from the Southern Shan States. The school was visited in March by Mr. Cameron and the pupils examined. The results are said to be encouraging.

II.—TREATMENT OF DISEASE.

14. The reported mortality from contagious diseases amongst animals in the several Provinces is shown in Table II. Those amongst equines in the selected horse breeding districts are accounted for by the Army Remount Department.

Contagious disease amongst solipeds, outbreaks, mortality, etc.

The total mortality reported, as compared with the previous year, shows a decrease of 461 under "Equines," and increases of 6,942 and 423 under "Bovines" and "Others," respectively.

15. *Glanders*.—The number of cases of Glanders reported is 229 against 236 in the previous year. Of the total number, 130 or nearly 57 per cent. were reported from Bengal. Eastern Bengal and Assam shows an increase of 35 over last year's figures, Punjab 3, and North-West Frontier Province, 2. United Provinces show a decrease of 17 and Bengal 30. Diagnosis was in all cases confirmed by the Mallein test.

The policy of granting compensation to owners of animals destroyed for Glanders is reported to have greatly improved the working facilities for the suppression of this disease. Measures can now be promptly taken to stamp it out.

16. It may not be out of place to mention here, that owing to the very serious prevalence of Glanders within the Municipal limits of Rangoon, especially so in the gharry stables of the town and suburbs, the services of an officer of the Civil Veterinary Department was specially asked for to assist the Municipal Authorities in dealing with the disease. Mr. Branford was placed on special duty on the 23rd December and remained on this work till the 15th March, when he had to leave in order to take charge of the Hissar Farm during the absence of Lieut.-Colonel Farmer whose state of health necessitated his proceeding on leave.

Such work, at all times unpleasant, was rendered exceedingly so owing to the hostile attitude of native owners. I have great pleasure in reporting that Mr. Branford merits much praise for his tact and care in dealing with the people, and also for the amount of work he performed during the above-named period.

17. *Anthrax*.—A decrease is reported under this heading, the number being 16,425 "Equines," "Bovines" and "Others," against 17,264 last year. Under the head "Equines" 46 deaths are reported against 51 in the preceding

year. The diagnosis of cases of Anthrax reported from the United Provinces, Central Provinces, Bengal and Eastern Bengal and Assam, was confirmed by bacteriological examination.

18. *Dourine*.—No case of Dourine has been reported from any of the horse breeding districts supervised by this Department.

19. *Surra*.—The total mortality recorded is 767 against 1,126 last year. The deaths reported from the Punjab, Eastern Bengal and Assam, United Provinces and North-West Frontier Province are less than those recorded by these Provinces last year. An increase is reported in Bombay and Sind. Two cases were reported from Bengal and after the Annual Report had been sent to Press, 417 cases were reported amongst mules and ponies in Burma, of which 312 cases were recorded in North Shan States, 78 in South Shan States and 27 in Burma. Surra is believed to have been rife amongst caravan animals returning from Chiengmai (in Siam) and to have been generally prevalent along the Burma-Siam frontier.

No other cases are reported from any of the other Provinces. There is no question that many more cases occurred than those recorded. No reports, however, appear to have been received by the Provincial Superintendents.

20. *Other contagious diseases*.—The number of cases reported under this head amounts to 46,542 against 47,143 last year. No details, however, as to the nature of these ailments have been furnished.

21. *Rinderpest*.—The number of deaths reported this year is 156,978 against 158,425 shown in last year's returns. Increases appear under Contagious diseases in bovines, outbreaks, preventive inoculation, mortality, etc. Punjab, Burma, Bombay, Sind, Rajputana, Bengal and North-West Frontier Province, whilst Eastern Bengal and Assam, United Provinces and Madras show a falling off as compared with last year's figures.

22. *Foot and mouth disease*.—A decrease is shown under this head, the figures being 25,548 against 27,041 last year. Decreases are reported from Punjab, Eastern Bengal and Assam, Sind and Bengal, whilst Burma, Bombay, Rajputana, United Provinces, North-West Frontier Province and Madras, show increases over last year's figures.

23. *Hæmorrhagic Septicæmia and Black Quarter*.—The total number of deaths recorded under these two headings is 63,413 against 52,370 last year. Increases appear in the returns furnished by Bengal, United Provinces and North-West Frontier Province, whilst those submitted by Bombay, Madras and the Punjab show a falling off as compared with last year's figures. Preventive inoculation against these diseases was adopted with encouraging results.

24. *Other contagious diseases* met with among animals in addition to those already specified, were Distemper, Rabies and Contagious Pleuro-Pneumonia. Increases are recorded under Rabies and Pleuro-Pneumonia.

25. *Preventive inoculation*.—Table III shows the number of outbreaks which have been dealt with by means of serum injection. The subject has been fully reviewed in Part B of this report under the head "Bacteriological Laboratory."

26. *Contagious diseases amongst other animals*.—Mr. Leese on return from leave on 29th June 1910 resumed charge of the Office of Veterinary Officer Investigating Camel Diseases. A detailed report showing the work performed has been submitted. Some items of interest are as follows: Mortality in eight Silladar Camel Corps now down to 13.3 per cent. on an average strength of 8,230 camels, which is satisfactory. A very interesting Note on Surra spreading in the sandy desert of the Bikanir State. That camel surra may spread in years of unusual rainfall in this desert is rather a startling fact. No such outbreaks have been observed in the deserts of the Punjab. The only species of biting fly present was a *Lyperosia* (*Lyperosia minuta*, Bezzi). These flies occurred in swarms on every camel, particularly favouring the lower portion of the neck, region of the hump and knees. They are a source of great annoyance and cause intense irritation. The animals in their efforts

to dislodge them, rub violently against each other. They do not confine their attacks to the hours of daylight as they can be found on camels during the night. *Lyperosia* appear to have only once before on good grounds been suspected as a transmitter of Surra, *i.e.*, amongst cattle in Rhodesia (Kinghorn and Montgomery). It is clear that this outbreak occurred in the absence of *Tabanus*, *Stomoxys* or other biting flies. Mr. Leese will no doubt avail himself of any opportunity afforded in endeavouring to establish his suspicions regarding *Lyperosia*.

27. *Treatment of Surra*.—Mr. Leese has continued to devote himself whole-heartedly to the study of Surra and its treatment. It is sincerely hoped that in the near future he will be in a position to announce the discovery of an effective treatment in camels. Every endeavour is being made to supply him with affected camels in a condition fit to undergo treatment, in order that he may have ample material to uninterruptedly pursue his investigations. As the results of the year's experiments cannot yet be considered conclusive, it is unnecessary to go into details. Some cases have apparently been cured but in regard to statements of cures in camels much caution is desirable owing to the peculiar characters of the disease in these animals.

The treatment considered most promising is by the use of Atoxyl and Tartar Emetic (intravenously), and Sodium Arsenate solution (per os). This combination of drugs has been chiefly worked at, altering the intervals and doses and the methods of administration. Of four animals treated by the method described, one relapsed, the remaining animals have gone (since treatment), 491, 178 and 162 days, respectively. By other methods 147, 162, 144, 96 and 91 days.

Considering the difficulties under which work has been carried on and the absence of proper accommodation, the progress in regard to the experimental treatment of Surra has been praiseworthy.

28. *Rebari test for Surra*.—This is employed by the Rebaris in the South East Punjab. The suspected camel is made to stale on a handful of clay taken from a clean place. The wet clay is made into a ball and laid aside for half an hour. It is then broken and in the case of an affected camel a pungent, sweetish but sickly odour is emitted. The urine of healthy camels merely gives off a smell of ammonia. The Rebaris who are fairly expert, employ the test when animals are observed to be off their grazing, and if the characteristic odour is noted, the animal is isolated until such time as they can sell it. The test is known as *Dalli lena*.

29. *Bilharziosis*.—During a search for adult filariæ a parasite was found in the mesenteric veins of the large intestines which proved to be *Schistosomum Indicum*. (Identification confirmed by Dr. Leiper of London School of Tropical Medicine.) Subsequently it was found in 5 out of 18 camels examined. It would seem the parasite is only of practical importance when the infestation is severe.

30. *Peritonitis*.—Last year a specific peritonitis was met with in Montgomery district. The larvæ of the *Linguatula tænioides* are extremely common in camels and show a predilection for the group of glands draining the cæcum and colon. This year a case was again met with and there seems little doubt of their association with peritonitis in the camel. A post-mortem examination revealed the glands of the cæcum and colon intensely inflamed. They contained large numbers of larvæ and were full of cavities which had been occupied by parasites; many of these cavities opened on the outer surface of the glands. No free larvæ were found in the peritoneal cavity nor was there any enteritis nor any other channel of infection found. The functional destruction of the glands would appear to have allowed access of bacteria from the intestine to the peritoneum. Last year, hæmorrhage from the nose was observed as an occasional symptom.

31. *Parasitic bronchitis*.—The disease seems to be very rare in Northern India; in only one case has the causal parasite been discovered.

A considerable amount of valuable information of a practical kind has been placed on record.

32. Towards the close of the year the buildings at Sohawa were reported to be approaching completion. It is anticipated they will be ready for occupation during the early part of the next official year.

33. Mr. Leese has been most energetic and unremitting in his labours to advance our knowledge of the diseases of the camel. Considering his work has been carried out often in trying circumstances, the success achieved is highly commendable. I consider we are greatly indebted to him not only for the zealous manner in which he has carried on his work but also for the progress made.

34. Table IV shows the number of animals treated and castrated by Veterinary Assistants while on tour. The number of Veterinary Assistants employed has increased by nearly a hundred, *viz.*, from 517 to 614. With the exception of Rajputana, additions have been made in every Province. Madras shows 38 Veterinary Assistants now employed. In last year's report none were recorded. The work performed by Veterinary Assistants indicates general progress. Over 11,000 more villages were visited and the number of cases treated (excluding castrations) exceeded those of last year by 63,741.

35. A reference to Table V will show that there were 327 Veterinary Dispensaries in working order during the year under report, against 408 in the previous year. Burma shows a decrease of 107 Dispensaries and Madras of 2. An explanation on this point will be given later. In Rajputana and Bengal the numbers remain the same as last year; in all other Provinces there is an increase shown.

There is nothing special worthy of note under this head. Madras explains that the reduction of two Veterinary Dispensaries is due to those at Ongole and Ellore having been transferred from Government administration to that of the District Boards of Guntur. Burma explains as follows in regard to the reduction of 107 Dispensaries:—

“ There being no hospital in charge of any District Veterinary Assistant as in Indian Provinces, it has been deemed advisable, for the purposes of Table V, to disregard the dispensing of medicines by Veterinary Assistants from their supply at headquarters and to consider them all as itinerating Veterinary Assistants only. The number of dispensaries is therefore reduced to one, *viz.*, that attached to the Veterinary hospital at Insein.”

36. The receipts and expenditure connected with Veterinary hospitals are detailed in Table VI. The financial results are satisfactory showing an increase under 'Receipts' and a decrease under 'Expenditure.'

The total strength of the subordinate veterinary staff employed and the work performed will be found fully detailed under the head "IV.—Subordinate Establishment."

III.—BREEDING OPERATIONS.

(1) *Bovines.*

37. Discrepancies in figures still continue, *vide* paragraph 165 of last year's report. The closing balance of stud bulls, the property of Government, was shown to be 58 in the previous year, whereas the opening balance this year (Table VIII) is reported to be 63, and this is stated to be the correct number. As compared with last year's figures there is an increase of 53 stud bulls maintained by Local Boards.

38. Bengal reports that the demand for bulls for stud purposes is increasing and urges the necessity of Government starting a large breeding farm as early as possible. The local farms maintained by the Court of Wards Estates at Siripur and Bettiah are reported to be supplying bulls to meet their own requirements. The class of animals is well reported on. The site

of the farm at Bettiah is declared unsuitable owing to its being subject to inundation, and the condition of the cattle is also reported to be 'not good.'

39. In the Bombay Presidency the results of the Northcote Cattle Farm at Chharodi continue to prove satisfactory. There is an increase in the number of live-stock at the Farm; several bulls were sold to the people of neighbouring villages. The number of calves dropped was nearly double that of the previous year. Mortality among the stock has been less than usual. Several improvements with regard to water supply, fencing of stock yards, repairs to buildings, closing of roads running through the farm, etc., have been carried out. An increased quantity of fodder is now maintained as a reserve.

40. Punjab reports that the requirements of nine districts amounting to 43 bulls, were fully met from the Government Cattle Farm at Hissar. Nineteen bulls of the 'Dhanni' breed were purchased from Chakwal to meet the requirements of four districts.

41. Twenty-five (25) bulls were purchased by Local Boards in Eastern Bengal and Assam. It is reported that several indents were received from Local and District Boards for the supply of stud bulls, which could not be complied with as suitable animals were difficult to obtain. The Superintendent states that "A scheme for the breeding of bulls has been drawn up and is now under consideration."

42. Owing to the increasing demand, the United Provinces also experience the same difficulty regarding the insufficient supply of suitable stud bulls. Arrangements have been made for the supply of a certain number from the Government Cattle Farm, Hissar, to meet immediate demands. It is expected that next year some 20 Hissar bulls will be available for issue to selected districts. As an experiment, a farm for rearing bulls has been started at Kheri.

43. The number of bulls in the North-West Frontier Province is reported to be quite inadequate.

44. In the Central Provinces, suggestions have been brought forward by the Superintendent regarding the establishment of a Demonstration Farm in Raipur, also the establishment of Farms on the Raigarh plateau and at Machurda in the Balaghat district. The farms at Kindri and Telinkheri are reported as being capable of considerable improvement, *i.e.*, with regard to the class of animal bred, and general condition of the stock maintained.

45. The main results of the working of Provincial Cattle Farms are shown in Table IX. The details furnished in the Valuation Statements which accompany Table IX, indicate the financial position of each farm. The total receipts amount to Rs. 20,181 against Rs. 23,919 last year; the expenditure is set down at Rs. 52,884 against Rs. 46,986 in the previous year, and the value of stock, grain and fodder at the close of the year is estimated at Rs. 67,980 against Rs. 52,970 in the previous report. Punjab has furnished no particulars. Bengal states that the report on the Kalimpong Farm was not received.

46. The scheme for the encouragement of camel breeding by the award of prizes at Camel Fairs not meeting with the success hoped for, the question of its discontinuance is now before Government.

47. The subject dealt with in paragraph 181 of last year's report, regarding making available certain Surra free grazing areas with the view of encouraging camel breeding in the Punjab, is also under consideration of the authorities concerned.

48. *North-West Frontier Province and North Punjab.*—The result of experiments of crossing Merino rams with indigenous ewes is reported to have proved a success, especially so in the Kagan Valley where the people take an intelligent interest in the improvement in the quality of the fleeces of their sheep. It is also reported that attempts are being made to fix the Merino

type by in-breeding, and hopes are entertained that the experiment, if care is taken in the selection of the ewes, will succeed.

As regards mortality among the cross-bred sheep, it is stated that except when very young, *i.e.*, the first few days after birth, they are constitutionally as strong as the indigenous sheep. The annual losses, however, in flocks generally, from such contagious diseases as Black Quarter, Hæmorrhagic Septicæmia, Sheep scab and Foot and mouth disease, are stated to be very heavy.

Twenty Merino rams are expected to arrive from New Zealand this year and will be entrusted to the care of influential Jagirdars and Zemindars.

49. *Kangra and Kulu*.—Of 25 Merino rams in Kangra and Kulu, 11 casualties are reported to have occurred up to the end of the year under report, thus leaving 14 rams in the districts named. The Chief Superintendent, Civil Veterinary Department, Punjab, does not consider the experiment is run on proper lines to ensure success. He suggests the early importation of additional rams and some ewes, as the mortality amongst those already imported, amounts to nearly 50 per cent.

The wool of the cross-bred lambs is reported as vastly improved, but it is stated that the natives experience great difficulty in removing fatty secretions from the fleece.

50. *Baluchistan*.—The Political Agent at Sibi imported some Australian Merino sheep with the object of improving the quality of the fleece of local sheep in the Marri hills. The results of these experiments have not yet been communicated.

(2) *Equines (under Local Bodies)*.

51. Table X shows that at the end of the year under report there were 79 horse, 109 pony and 105 donkey stallions maintained by Provincial Governments and Local Bodies, against 71, 105 and 100, respectively, last year. Ordinary casualties account for the slight variations in the number of stallions at the end of the year in all Provinces. In Bombay 13 horses and 27 ponies are shown as present, against 5 horses and 14 ponies last year. This increase is due to the transfer of horse breeding operations in the Deccan Circle, from the Army Remount Department to the Civil Veterinary Department.

52. Table XI shows a slight increase in the average number of mares covered by pony and donkey stallions, and a decrease in the average of those served by horse stallions.

In the Provincial reports there is nothing special under this head worthy of note, excepting the increasing demand for the services of donkey stallions, and the usual complaint of the difficulty in obtaining a sufficient number for issue.

53. The average cost of feed and keep of stallions, as shown in Table XII, has decreased in every Province except Bengal and the North-West Frontier Province. The cost in Bengal has risen from Rs. 113 to Rs. 248, but no reason has been assigned in the Provincial report. There is only one pony stallion in the Province. He is stationed at Dumraon and is the property of the Raj.

54. Tables XIII and XIV furnish particulars regarding Horse and Cattle Fairs and Shows held in the non-selected districts during the year under report. The figures reported are generally satisfactory showing an increase in the number of animals present, as well as in those exhibited to compete for prizes. The average price paid for remounts was less than last year. The number of animals of all classes sold at these Fairs and Shows indicates a satisfactory increase.

IV.—SUBORDINATE ESTABLISHMENT.

55. A reference to Table VIII will show that the strength of the subordinate establishment has been increased Numbers, supervision and work performed, by 9 Veterinary Inspectors, and 66 Veterinary Assistants. The numbers being 74 and 754, respectively, at the close of the year under report.

The work performed by Veterinary Inspectors and Veterinary Assistants has been reported on as generally satisfactory in Bombay, Eastern Bengal and Assam, Bengal, Central Provinces, North-West Frontier Province, the United Provinces and Burma. The names of several Inspectors and Veterinary Assistants have been specially mentioned for good work. Punjab reports that the work of the subordinate staff can only be classed as fair, and that the Veterinary Inspectors are wanting in energy and initiative.

PART B.—IMPERIAL ADMINISTRATION.

BACTERIOLOGICAL LABORATORY.

56. Major F. S. H. Baldrey officiated as Imperial Bacteriologist until the 4th November 1910 on which date Major J. D. E. Holmes assumed charge. Mr. H. E. Cross and Dr. P. Hartley held their respective charges of Assistant Bacteriologist and Physiological Chemist. The three European Laboratory Assistants held their respective appointments during the year.

Preparation of Sera.

57. *Rinderpest anti-serum.*—The number of doses of anti-rinderpest serum prepared during the year as shown in Table XII amounted to 577,969 as against 409,078 manufactured last year, roughly an increase of 169,000 doses. The issue of serum amounted to 533,799 as compared with 446,981 during the year 1909-1910.

Foot and mouth disease was not so prevalent as in 1908-1909; 190 affected animals were received during the winter months. In addition to the bulls supplied by contractors, a large number were purchased by the Veterinary Inspectors which gave facility for the preparation of a large amount of serum.

58. The results of the anti-serum injections carried out in the field and collated from the respective returns received in this office, may be seen by a reference to Table III.

The demand for serum increases each year and is far greater than the output. Many indents could not be complied with at all, or only in part. It is interesting to find that the use of serum is being so much appreciated in Native States. In Mysore some 27,000 animals have been injected during the past three years and so great is the popularity of the method that at times it has been impossible to meet the demands.

59. The total number of hill bulls received was 2,540; of these 1,930 were in suitable condition. Of the remaining animals some were unfit being affected with foot and mouth disease, while others were aged, too young, or debilitated.

The past official year has been a particularly busy one and the manufacture of serum has been carried out under extreme pressure both as regards the staff and the supply of bulls.

60. During the winter months, experiments were conducted at Bareilly with a view of working out a method of preparing a sufficiently potent serum from plains cattle and buffaloes with encouraging results. Experiments were also undertaken to test the susceptibility of cattle from several districts. A report on the results of these investigations is now in the hands of the Government of India.

The difficulty in meeting the demand for this serum has raised the question of providing another laboratory for serum preparation.

61. *Anthrax anti-serum*.—During the past year 5,415 doses of the above-mentioned serum were prepared against 12,168 during the previous year. The issue amounted to 9,715 doses against 12,404 of the previous year. Its preparation was regulated according to the demand in the field. Investigations regarding the practical value of anti-anthrax serum and vaccines have been conducted during the past two years and a preliminary report will be published shortly.

The results of injections with this serum will be found at Table III.

62. *Hæmorrhagic Septicæmia*.—During the year under report 50,350 doses of Hæmorrhagic Septicæmia vaccine were prepared and all issued, as against 8,320 or 42,030 doses more than in the previous year. In addition, 1,825 doses of Hæmorrhagic Septicæmia serum were prepared and issued during the past financial year. The results of injections carried out in the field are given in Table III.

No unfavourable reports were received with regard to the efficacy of the vaccine and the figures (Table III) show satisfactory results.

63. *Charbon Symptomatique*.—During the past official year 33,400 doses of single vaccine in pillule form were prepared; 19,900 doses of vaccine and 536 of serum were issued to the various Superintendents. The results of injections carried out in the different Provinces are shown in Table III.

The vaccine prepared at the Laboratory appears to be very efficacious. The mortality in animals vaccinated in the Punjab amounted to .07 per cent., whereas in untreated animals, the usual death-rate is something like 88 per cent.

64. *Strangles*.—During the past year 1,829 doses of anti-Streptococcus serum and 500 doses of vaccine were prepared. The total issue of these products amounted to 1,617 doses.

This serum was prepared to meet the demand from the Army Remount Department, but no definite results have been reported to this Department.

65. *Mallein*.—Twelve thousand nine hundred and forty-one (12,941) doses of Mallein were prepared against 9,515 doses during the previous year. With a balance of 2,730 doses from the previous year and 598 returned from the field as unused balance, the total issue amounted to 16,229 doses.

66. *Tuberculin*.—During the year under report 209 doses of tuberculin were prepared and 188 issued.

67. *Specimens examined*.—Two hundred and ten (210) specimens were received for examination and report during the past official year, against 84 during the previous year. The results were communicated to the persons interested with the least possible delay.

68. *Training of Veterinary Assistants*.—Seventeen Veterinary Assistants attended the course of training, 8 at Muktesar and 9 at Bareilly, against 36 during the past year. The decrease is due to the facilities now afforded in the Veterinary Colleges for training students in inoculation work.

Captain M. St. G. Glasse, Army Veterinary Corps, worked at the Laboratory from 18th June to 12th August 1910.

69. *Research*.—The programme of research work for the past year was as follows:—

- (i) *Anthrax*.—To continue the investigations laid down in the programme of the previous year.
- (ii) *Surra*.—To continue experiments in methods of treatment and prophylaxis.
- (iii) *Rinderpest*.—Investigations as to possibility of preparing serum from buffaloes, and also the use of other than hill bulls for the preparation of serum.
- (iv) Further tests of sera and vaccines prepared during the past two years.

Several papers by Majors Baldrey and Holmes dealing with the above-named and other diseases have been prepared and will shortly be published.

Administration.

70. *Fodder supply.*—The arrangements were very satisfactory. In addition to what was collected from the Laboratory area, hay was purchased in large quantities from villagers.

Supply of hill animals.—Owing to the shortage in the supply from the Kumaon Division, a new area—Garhwal District—has been opened, and animals are being received from there in small batches. On account of the great distance of the seat of purchase from the Laboratory, it takes three weeks for hill bulls to arrive at Muktesar.

Forests and fuel.—The fuel supply was obtained from the Muktesar Reserved Forest. Its administration under the forest rules was carried on successfully, there being no illicit fellings nor fires within the Reserve. The sowing of seed in the Nurseries and planting of one year old plants was carried on as usual. On the recommendation of Forest Officers, one of the Forest Guards was deputed for an eight months' course of training in the Provincial Forest School at Dehra Dún.

71. *Bareilly Branch Laboratory.*—The Depot remained open during the winter months—a period of 5 months. In addition to the experiments referred to in paragraph 59, the usual work of serum testing, training of Veterinary Assistants, researches on Surra treatment, etc., was carried out. The Laboratory area was found too confined, hence ground had to be rented and temporary grass sheds erected for cattle under experiment.

72. As already noted, the whole staff—superior and subordinate—have had very hard work throughout the year, indeed the pressure at times has been so great that a number of members of the staff have had to be employed from daylight to dark daily, including Sundays and Gazetted holidays. The Imperial Bacteriologist records his appreciation of the excellent work and co-operation of the whole staff and I have much pleasure in endorsing his remarks.

Much credit is due to Majors Holmes and Baldrey, Mr. Cross and Dr. Hartley for having, under trying circumstances, accomplished so much during the year.

GOVERNMENT CATTLE FARM, HISSAR.

73. Lieut.-Colonel J. Farmer held charge throughout the year under report. The operations at the Farm have on the whole been successful.

74. It was handed over temporarily to the Civil Veterinary Department on the 1st April 1899 and was transferred permanently to the Department on the 1st April 1910. There is no denying that during the abovenamed period, the Farm in its various branches has been vastly improved, and financially it is perhaps now in a more satisfactory state than at any time during its history.

Conditions, however, exist which render it almost impossible to make the Farm all that could be desired. It is most unfortunate that at the time the Farm was started, those responsible failed to close all public highways passing through the acquired tract of country. The result of such an omission has made the charge of the Hissar Farm both an anxious and highly responsible one. It is hardly necessary to state that efforts to prevent the introduction of contagious disease into an area unfenced and through which public roads exist is a big problem. To endeavour when disease appears, to confine it within certain limits (a matter of the utmost importance), is no easy matter. Local precautions are rarely perfect, and of themselves effective, in checking the spread of disease into healthy localities. Every effort is made to intercept and if possible impound cattle from villages in the vicinity of the Bir which may have strayed, or which is more likely have purposely been driven there. In spite of all possible precautions, with disease at times prevailing all around, infection through the agency of diseased animals from without occurs from time to time. Owing to unremitting attention the outbreaks are few, and in recent years the Farm has escaped the severe ravages committed by contagious maladies in days gone by. During the year, cases

of the following diseases were reported, *viz.*, Rinderpest, Foot and mouth disease, Black Quarter, Strangles and Sheep pox. As a result of the prompt action taken by the Superintendent, the outbreak of Rinderpest was rapidly checked and only one death was reported.

An outbreak of Sheep pox gave considerable trouble. The Merino sheep and half-breds suffered from a severe form of the disease; a number of animals succumbed and several of those which recovered were useless and had to be destroyed.

75. The difficulty in obtaining adequate labour to work the Farm seems to be increasing every year. Some reasons which may be tending towards bringing about this state of affairs are as follows, *viz.*, two lines of railway under construction, three cotton mills at work in Hissar, higher wages paid by the Public Works Department and Zemindars, the ravages of plague and malaria, especially among the Mali class, and the visits of recruiting parties. A number of the hands now employed on the Farm are mere lads 10 to 14 years of age, hence the work of supervision is greatly increased. It is quite probable that at any time it may be necessary for Government to consider the question of granting a general rise in the scale of wages. The Superintendent is at times very hard pressed to procure sufficient hands to carry on the farm work. It was hoped that providing quarters for a certain number of men might induce them to accept permanent employ; so far, however, the scheme has not proved a great success.

76. The excellent work performed last year in the matter of raising the level of roads, repairing and erecting walls, clearing and remodelling water-courses, extending cultivation and planting trees has been continued during the year under report, and the success attained in spite of the difficulty in the matter of labour reflects credit on all concerned. As might be expected, pigs and other wild animals continue to do damage in the cultivated areas.

In the Bir a large area which was barren or overrun with useless grasses has been ploughed and *Anjan* grass seed sown.

Machinery and rolling-stock are kept in excellent order.

The buildings are old and require overhauling. A Committee will assemble next year to report on them. A post-mortem house has been erected during the year.

77. As the present state of the stock as well as all increases and decreases is clearly indicated in Table XVI, it would appear superfluous to enter into details regarding the several classes of animals maintained on the Farm. It may perhaps be sufficient to state that there is a continued improvement in the stock bred there. Sheep breeding is doing fairly well. The Merinos and half-breds suffer considerably from the heat and attacks of flies. The results of donkey and mule breeding are shown in Table XVII.

78. The annual expenditure connected with the working of the Farm as shown in Table XVIII will be seen to have been Rs. 1,06,366-7-8; receipts Rs. 86,857-14-3 and the valuation of stock, fodder, machinery, etc., Rs. 3,87,652-12-1, against expenditure Rs. 1,13,639-1-0, receipts Rs. 1,02,027-13-7 and valuation of stock, etc., Rs. 3,65,690-7-1 for the previous year. The decrease in expenditure is roughly Rs. 7,000. The receipts show a falling off of Rs. 15,000 mainly due to the less number of animals sold; the valuation of stock, etc., has however increased by nearly Rs. 22,000.

If the fact that a large amount of the stock bred at Hissar is issued to Government Departments at prices very far below that obtainable from private purchasers or in the open market is taken into consideration, the Farm may be said to be practically self-supporting.

79. Lieut.-Colonel Farmer has as usual worked hard and afforded ample proof of his being particularly well suited to fill the appointment of Superintendent. Any success attained is mainly due to his zeal and untiring supervision. He records his appreciation of the good work performed by his staff more particularly Lieut. R. Morris, Farm Overseer, and Mr. E. MacCutchan, the Farm Bailiff.

80. There is little doubt that the work has increased to an extent that the Superintendent is much overworked. If in the interests of the Farm alone, it would seem expedient that a second officer be appointed permanently to be trained under Lieut.-Colonel Farmer who stands alone in his knowledge and experience of the Hissar Farm. Should any circumstance arise necessitating Colonel Farmer relinquishing charge of the farm, unless there is an officer thoroughly conversant with the various duties connected with this special charge ready to immediately take up the work, I fear it would not be long before neglect of this precaution was very forcibly impressed upon us.

PART C.—GENERAL.

81. The total cost of the Department, as shown in Table XIX amounts to Rs. 20,29,494-11-2 against Rs. 20,51,849-1-6 last year, showing a decrease of Rs. 22,354-6-4.

Expenditure of the Department.

General remarks.

82. From the pages of the report it may be seen that—

- (a) progress of the Department in every branch continues;
- (b) a larger amount of anti-rinderpest serum has been prepared and issued;
- (c) a greater number of serum injections has been performed, and this method of treatment is becoming more popular;
- (d) the results of the working of the Hissar Farm have been successful;
- (e) prospects of the discovery of a practical cure for surra in camels are encouraging.

83. Work continues to increase and it is questionable if the Imperial staff can accomplish any more than is now being done. It would, however, appear in several Provinces that Superintendents have a large amount of office work to get through. It is to be feared the tendency is, to look upon such and administrative duties as matters of the first importance. Experience teaches that the amount of office work instead of diminishing year by year increases enormously, and Superintendents are being prevented (or can at least make it an excuse) from devoting themselves to the essential part of their duties, *viz.*, field work. Unless measures be taken to curtail the office work there is every prospect, and that in the near future, of Superintendents blossoming into Deputy Directors for veterinary work. The aim and object of their appointments thereby being to a great extent frustrated. Superintendents are experts and are very few in number; their energies should be concentrated on veterinary and not be dissipated in clerical work, to do which, many other cheaper and perhaps more efficient agencies are available. In order to perform veterinary work proper, in an efficient manner, it is imperative that they be free as possible to employ their time in special work and pursue it among the agricultural classes. Superintendents who do not spend the greater portion of the year going about their respective charges, helping the people during outbreaks of cattle disease and enquiring into all matters affecting agriculture from a veterinary standpoint, but who entrust such important duties to subordinates without thorough supervision, will not, in my opinion, be in full sympathy with the welfare of cattle owners, and must fail in the special purpose for which they are appointed.

Most of the routine office work can be well done by others not possessed of their special knowledge. Fully qualified Veterinary Surgeons for district work in India, Assam and Burma number 17.

Veterinary Assistants trained in Indian Schools and Colleges, when first put to district work, naturally are far from being qualified to perform the real work required from them. Central Colleges situated as they are in large towns cannot provide the experience necessary. The most important part of their training must come after they have left the Colleges, and it is the District Superintendents alone who can afford them this special training.

It certainly cannot be done by writing from head-quarters. It is rarely in Colleges that opportunity occurs of affording pupils practical instruction in that all-important work dealing with epidemics, and the same remark applies equally to the local hospitals. It can only be imparted in the villages, grazing grounds, etc., while epidemics are prevailing and as soon as possible after the outbreak has occurred. To carry out such work a Superintendent must be willing and free to leave his head-quarters at any time, and himself supervise and help in as many outbreaks as possible. When there are no epidemics Superintendents can find plenty to do in looking after the work of Assistants and instructing them how to deal with outbreaks at the onset, before their superiors can arrive, and when they must necessarily act on their own initiative.

G. H. EVANS, *Lieut.-Colonel,*
Offg. Inspector-General,
Civil Veterinary Department.

SIMLA,
The 30th September 1911.

TABLE I.

Showing the main results of Veterinary Colleges and Schools during 1910-1911.

1	2	NUMBER OF STUDENTS.					STUDENTS ADMITTED DURING THE YEAR, CLASSIFIED BY EDUCATIONAL QUALIFICATIONS.					RECEIPTS.			EXPENDITURE.			EMPLOYMENT OF STUDENTS WHO PASSED OUT DURING THE THREE YEARS PRECEDING.					REMARKS.
		ADMITTED DURING THE YEAR.		Passed final examination during the year.	Failed to pass final examination.	REMAINING UNDER INSTRUCTION AT END OF YEAR.	In ordinary course.	Instruction prolonged by reason of failure to pass.	Matriculated with higher qualifications.	Knowing some English, but not matriculated.	Knowing no English or very little English.	From fees.	From other sources.	Total.	Salaries of Instructing Staff.	Other expenses.	Total.	Total number passed.	In service of Government or Local Bodies.	In service of other bodies or institutions.	In private practice.	Number unemployed.	
		Scholarship holders.	Others.																				
Punjab Veterinary College.	Diploma or 3 years' course in Urdu.	(a) 14	(b) 46	(c) 62	(d) 23	147	(e) 57	2	23	35	7,184 0 0	4,868 0 0	12,047 0 0	45,016 0 0	29,438 0 0	74,449 0 0	199	185	13	1	...		
Bombay Veterinary College.	Ditto in English.	10	14	22	19	37	24	7	17	...	4,170 0 0	4,717 10 0	8,887 10 0	29,647 2 4	31,536 1 5	61,233 3 9	59	15	33	9	2		
Burma	3 years' Vernacular.	13	...	(f) 14	4	(g) 26	(h) 6	...	...	13	...	...	14,680 0 0	8,781 0 0	23,461 0 0	32	31	...	...	(i) 1	
Bengal Veterinary College.	3 years' course in English.	40	12	35	11	67	19	8	44	...	(j) 110 0 0	(k) 25 6 0	135 6 0	41,119 1 4	2,938 2 11	44,057 4 3	94	77	2	6	9		
Madras Veterinary College.	Ditto	10	9	10	8	45	13	15	4	...	11,099 14 6	...	11,099 14 6	4,749 0 1	3,290 0 0	8,039 0 1	46	(l) 35	(m) 8	2	1		
TOTAL . . . . .	..	87	81	143	65	322	119	32	88	48	22,563 14 6	9,606 0 0	32,169 14 6	1,35,211 3 9	76,023 4 4	2,11,239 8 1	430	343	56	18	13	

(a) Admitted April 1910. (b) Military students and others. (c) 53 in April 1911, 9 in June 1910 in one subject only. (d) 1 man failed in one subject only. (e) Failed to pass the annual examination held in April 1911 55; Absent from the examination 2. (f) Includes one shan. (g) 2 left. (h) 1 medically unfit, 4 left, 1 dismissed. (i) Died. (j) From plucked students. (k) Fines of students. (l) British service 33, District Boards 2. (m) Native States 4, Foreign 1, not known 3.

TABLE II.

Showing number of Deaths from Contagious Diseases amongst Animals during the year 1910-1911.

PROVINCE.	EQUINES.						BOVINES.							OTHERS.											
	Glanders.	Anthrax.	Surra.	Dourine.	Other contagious diseases.	Total.	Rinderpest.	Foot and mouth disease.	Hæmorrhagic septicæmia.	Black quarter.	Anthrax.	Other contagious diseases.	Total.	Rinderpest.	Foot and mouth.	Hæmorrhagic septicæmia.	Black quarter.	Anthrax.	Other contagious diseases.	Surra.	Distemper.	Rabies.	Fowl cholera.	Pleuro-Pneumonia Contagiosa.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Punjab	25	2	171	...	27	225	49,154	1,128	17,432	2,116	19	184	70,033	1,124	249	189	...	...	2,876	...	...	...	...	...	4,438
Eastern Bengal and Assam	49	27	26	...	38	140	19,137	6,252	6,095	104	2,342	8,030	41,960	968	75	671	5	33	224	...	13	25	...	...	2,009
Burma . . . . .	...	...	...	...	...	(a)	29,222	6,096	...	(b)3,846	...	...	39,164	...	...	...	...	...	...	...	...	...	...	...	...
Bombay	6	...	411	...	8	420	2,249	79	3,292	623	752	153	7,148	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(c)2,193	...	...	...	...	...	2,193
Sind . . . . .	...	...	32	...	...	32	1,504	4	307	13	2	19	1,849	...	...	...	...	...	338	2	19	19	...	372	750
Rajputana . . . . .	...	...	...	...	3	3	11	178	4	64	...	1	258	...	...	...	...	...	...	...	3	3	...	...	6
United Provinces	15	2	76	...	(d)39	132	15,675	4,734	6,303	2,030	1,360	160	30,262	181	103	117	...	23	(e)2	...	...	...	...	1,204	1,630
Bengal	130	5	2	...	239	426	11,687	1,846	6,000	1,517	470	2,796	24,316	...	...	...	...	...	(f)737	...	...	...	...	...	(f)737
North-West Frontier Province and North Punjab	4	...	44	...	1	49	1,543	95	1,863	152	4	61	3,718	93	470	1,082	...	...	1,947	3	...	...	...	...	3,595
Madras . . . . .	...	10	...	...	...	10	24,435	4,239	6,731	2,857	11,374	26,421	76,057	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	229	46	762	...	400	1,437	1,54,617	24,651	48,027	13,322	16,323	37,825	2,94,765	2,361	897	2,059	5	56	8,317	5	35	47	...	1,576	15,858

(a) There is no system of registration in force in Burma Military Police register 40 deaths, viz., Surra 34, Anthrax 2, Epizootic Lymphangitis 4.
 (b) These diseases are not differentiated by villagers or headmen, but are considered as different manifestations of Anthrax and so are included under this heading.

(c) Small pox 1735, Pleuro Pneumonia 410, other diseases 43.
 (d) Tetanus 25, other diseases 14.
 (e) Tetanus 2.
 (f) Details not known.

TABLE III.

Showing results of preventive inoculation during the year 1910-1911.

PROVINCE.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.		
				Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Punjab	Rinderpest.	Serum alone.	705	...	15,536	20	...	1,02,593	10	...	300	...			
Eastern Bengal and Assam			316	...	7,048	12	...	33,375	96	...	232	...			
Burma			56	...	796	...	...	4,562	...	...	35	...	
Bombay			89	...	983	179	...	8,096	340	...	19	...			
Central Provinces			201	...	2,976	...	...	14,742	...	...	37	...	
Sind			24	...	1,224	...	...	2,751	3	...	6	...	
United Provinces			434	...	5,101	51	...	41,602	374	...	59	...			
Bengal			251	...	2,284	...	...	23,132	...	...	61	...	
North-West Frontier Province and North Punjab			57	...	766	...	...	16,790	...	...	7	...	
Madras			381	...	5,538	596	...	21,080	115	...	92	...			
TOTAL			2,464	...	42,252	858	...	2,68,723	938	...	898	...			
<i>As furnished by Imperial Bacteriologist.</i>															
Hissar Cattle Farm			1	263	
Mysore State	2	...	305	...	...	2,624	...	...	...	...	...	...
Baroda State	3	...	9	...	...	843	...	...	...	...	...	...
Military Department	No particulars furnished	...	...	...	...	...	...	...	...	...	...	...
TOTAL	28	...	314	...	...	3,730	...	...	...	...	...	...
GRAND TOTAL	2,492	...	42,566	858	...	2,72,453	938	...	898	...	...	...
Eastern Bengal and Assam	Anthrax.	Serum alone	25	16	184	2	553	...	...	2	1	8	...
Bengal			1	...	1	...	...	69	...	...	...	1	...
TOTAL			26	16	185	2	553	2,832	2	1	9	...	...
<i>As furnished by Imperial Bacteriologist.</i>															
Bombay	1	...	6	...	...	351	...	...	...	...	...	...
GRAND TOTAL	27	16	193	2	553	3,183	2	1	9	...	...	...
Punjab	Black quarter.	Vaccine	12	...	...	...	523	...	...	...	3	...	
Central Provinces			10	...	109	...	784	...	...	...	2	...	
United Provinces			31	...	375	...	3,209	...	...	...	...	1	...
Bengal			15	...	112	...	2,692	...	...	...	...	5	...
North-West Frontier Province and North Punjab			13	...	...	...	2,814	...	...	...	...	26	...
TOTAL	81	...	596	...	...	9,972	...	...	...	36	1	...	
Punjab	Hem. Sept.	Vaccine	6	...	...	...	598	...	...	...	...	...
Eastern Bengal and Assam			3	...	99	...	176	...	...	...	...	...
Central Provinces			1	...	3	...	15	...	...	...	...	6	...
United Provinces			238	...	968	2	...	20,691	30	...	...	...	...
Bengal			15	...	212	...	...	2,165	...	...	...	9	...
TOTAL	263	...	1,282	2	...	23,645	30	...	15	...	...		

TABLE IV.

Showing the number of Animals treated and castrated by Veterinary Assistants on tour during 1910-1911.

PROVINCE.	Number of villages visited.	Number of Veterinary Assistants employed.	CASTRATIONS PERFORMED.				TREATED FOR CONTAGIOUS DISEASES.				TREATED FOR NON-CONTAGIOUS DISEASES.				Total number of cases treated and castrations performed.	REMARKS.
			Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Punjab	12,141	130	219	388	37	644	741	46,107	1,187	48,035	5,650	16,848	1,603	24,101	72,780	
Eastern Bengal and Assam	9,447	45	41	24	63	128	317	29,789	665	30,771	6,645	48,701	3,856	59,202	90,101	
Burma	22,247	120	...	1	...	1	46	55,833	28	55,912	3,888	38,098	546	42,532	98,445	(a)
Bombay	1,535	40	6	12	1	19	21	14,225	551	14,797	603	5,563	434	6,600	21,416	
Central Provinces	13,341	53	23	158	18	201	...	40,456	202	40,658	1,969	26,188	690	28,847	69,706	
Sind	822	8	2	...	...	2	27	1,589	254	1,870	672	329	709	1,710	3,582	
Rajputana	297	3	...	...	...	...	2	1,258	77	1,337	47	236	60	343	1,680	
United Provinces	20,463	81	207	49	23	279	268	73,179	1,843	75,295	6,026	12,982	1,834	20,892	96,466	
Bengal	13,737	71	70	25	73	168	139	21,457	176	21,772	6,123	14,895	2,229	23,247	45,187	
North-West Frontier Province and North Punjab.	1,369	25	166	98	119	383	30	6,213	1,274	7,517	920	2,058	902	3,880	11,780	
Madras . . . . .	...	38	177	175	2	354	...	772	...	772	21	2,608	21	2,650	3,776	
TOTAL	94,899	614	913	930	336	2,179	1,591	2,90,883	6,262	2,98,736	32,564	1,68,506	12,934	2,14,004	5,14,919	

(a) Includes also cases treated by Assistants on special duty and Reserve Assistants.

TABLE V.

Showing number of Animals treated at Veterinary Hospitals and Dispensaries during the year 1910-1911.

PROVINCE.	Number of Veterinary Dispensaries.	Number of Veterinary Assistants employed at Dispensaries.	IN-PATIENTS.															OUT-PATIENTS.						TOTAL NUMBER OF IN AND OUT-PATIENTS TREATED DURING THE YEAR.				Receipts.	Expenditure.						
			REMAINING ON 1ST APRIL.			ADMITTED DURING THE YEAR.			TOTAL.			DISCHARGED DURING THE YEAR.			BALANCE ON 31ST MARCH.			NUMBER TREATED DURING THE YEAR.			AVERAGE DAILY ATTENDANCE.														
			Equine.	Bovines.	Other animals.	Equine.	Bovines.	Other animals.	Equine.	Bovines.	Other animals.	Equine.	Bovines.	Other animals.	Equine.	Bovines.	Other animals.	Equine.	Bovines.	Other animals.	Equine.	Bovines.	Other animals.	Total.	Equine.	Bovines.	Other animals.			Total.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
Punjab	102	101	94	45	19	4,131	2,609	756	4,225	3,654	775	4,131	2,617	718	94	37	27	67,309	116,712	31,212	...	...	...	71,440	119,329	31,960	222,729	2,13,507	0	0	1,97,940	0	0
Eastern Bengal and Assam.	16	16	4	24	...	142	323	26	146	344	26	136	334	26	10	10	...	3,010	10,237	2,689	...	...	...	3,156	10,581	2,715	16,452	18,974	7	8	17,955	0	11
Burma	(a)	...	3	29	21	15	32	21	15	30	20	15	2	1	...	127	329	217	34	90	59	159	350	232	741	8,387	0	0
Bombay	40	41	(b) 46	(b) 45	3	924	1,162	189	970	1,207	192	899	1,148	188	71	59	4	11,104	52,915	10,190	...	...	...	12,074	54,122	10,382	76,573	47,684	12	3	45,704	10	7
Central Provinces	57	55	10	11	2	273	439	58	283	450	60	268	435	56	15	15	4	12,606	49,606	9,473	189-08	555-51	123-75	12,889	50,056	9,533	72,478	31,456	11	10	54,174	6	6		
Sind	7	8	8	14	5	480	276	197	488	290	202	468	279	201	20	11	1	4,401	3,892	3,130	...	...	...	4,889	4,182	3,332	12,403	41,716	9	5	31,803	2	8
Rajputana	2	3	1	...	1	67	16	42	68	16	43	62	16	43	6	...	...	638	179	501	...	...	...	706	195	544	1,445	7,691	15	3	3,003	2	9
United Provinces	37	37	54	13	7	1,953	753	458	2,007	776	463	1,937	757	455	70	19	10	13,426	13,917	9,845	36-7	38-1	26-9	15,493	14,693	10,310	40,436	52,378	0	0	48,680	0	0		
Bengal	26	26	(b) 98	(b) 185	(b) 16	1,467	2,630	321	1,565	2,815	337	1,444	2,629	290	121	186	47	5,763	9,887	4,677	...	...	...	7,328	12,702	5,014	25,044	47,330	0	0	43,212	0	0
North-West Frontier Province and North Punjab.	19	19	32	2	11	1,834	958	294	1,866	360	505	1,840	357	296	23	3	9	14,918	16,741	8,051	...	...	...	16,752	17,099	8,351	42,202	19,920	0	0	19,475	0	0
Madras Veterinary College.	1	1	22	18	12	454	167	398	476	185	410	450	169	392	26	16	18	312	132	630	6-1	1-7	7-9	788	317	1,040	2,145	11,099	14	6	36,322	10	8		
Madras Civil Veterinary Department.	19	19	26	26	27	498	521	381	524	547	408	494	515	384	30	32	24	3,136	9,253	4,967	...	...	...	3,660	9,880	5,375	18,835	17,505	14	9	24,117	10	11
TOTAL	327	326	398	(b) 380	(c) 103	12,352	9,285	3,135	12,650	9,665	3,238	12,159	9,276	3,094	491	389	144	136,750	283,800	85,588	...	...	...	149,274	293,506	88,788	531,488	509,565	5	8	530,774	12	7

(a) At Insein.
(b) Correct figures reported this year.

TABLE VI.

Abstract showing Receipts and Expenditure of Veterinary Dispensaries during 1910-1911.

PROVINCE.	RECEIPTS.							EXPENDITURE.						Balance.	REMARKS.
	Last year's balance.	By Local Fund grants.	By Government grants.	By Municipal contribution.	By fees.	By other sources.	Total.	Pay.	Travelling allowances.	Medicines, instruments, etc.	Furniture, etc.	Contingencies.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Punjab . . .	...	43,821 0 0	1,46,289 0 0	1,622 0 0	13,875 0 0	7,900 0 0	2,13,507 0 0	63,749 0 0	6,579 0 0	23,221 0 0	2,556 0 0	1,01,835 0 0	1,97,940 0 0	...	
Eastern Bengal and Assam.	923 7 2	12,485 13 4	2,706 0 6	2,095 6 5	650 13 9	108 14 6	18,974 7 8	8,364 9 4	2,800 4 8	2,169 13 8	252 13 0	4,567 8 8	17,955 0 11	1,019 6 9	
Burma . . .	...	...	...	...	...	...	...	...	...	8,387 0 0	...	...	8,387 0 0	...	
Bombay . . .	(b) 41,778 5 8	20,583 10 4	16,333 5 4	4,892 6 8	3,728 7 3	2,646 14 8	89,458 1 11	12,050 15 2	852 13 0	14,002 1 4	2,190 8 5	16,608 9 8	45,704 10 7	43,753 7 4	
Central Provinces	...	17,531 9 6	8,772 10 6	8,629 11 8	1,024 6 6	498 5 8	31,458 11 10	27,063 5 1	3,923 8 11	11,955 12 7	936 11 5	10,295 0 6	54,174 6 6	...	
Baluchistan . .	...	...	3,197 12 0	...	...	...	3,197 12 0	...	...	1,797 12 0	400 0 0	1,000 0 0	3,197 12 0	...	
Sind . . .	15,230 2 3	12,643 0 0	5,638 0 9	3,690 0 0	4,460 2 0	35 4 5	41,716 9 5	15,983 9 2	1,986 9 9	5,841 12 8	5 0 0	7,986 3 1	31,803 2 8	9,913 6 9	
Rajputana . . .	(c) 3,338 0 9	840 0 0	900 0 0	1,542 14 10	984 15 8	338 0 0	7,691 15 8	2,194 12 11	2 1 0	646 6 0	...	159 14 10	3,003 2 9	4,688 12 6	
United Provinces .	2,691 0 0	41,806 0 0	1,870 0 0	3,833 0 0	1,706 0 0	1,472 0 0	52,878 0 0	32,264 0 0	2,769 0 0	8,410 0 0	492 0 0	4,745 0 0	43,680 0 0	...	
Bengal . . .	(c) 1,214 0 0	23,730 0 0	4,843 0 0	4,597 0 0	4,108 0 0	8,838 0 0	47,330 0 0	19,683 0 0	4,154 0 0	9,655 0 0	2,698 0 0	6,622 0 0	43,212 0 0	41,118 0 0	
North-West Frontier Province and North Punjab.	...	8,754 0 0	9,743 0 0	1,421 0 0	...	2 0 0	19,920 0 0	12,105 0 0	1,060 0 0	4,601 0 0	312 0 0	1,397 0 0	19,475 0 0	...	
Madras . . .	...	11,942 1 10	560 0 0	1,508 0 0	14,129 13 0	2,306 11 9	30,448 10 7	40,241 0 2	1,129 5 3	11,776 3 4	1,162 12 0	15,608 12 11	69,918 1 8	...	
TOTAL . . .	65,169 15 10	1,93,737 8 0	1,95,352 13 1	33,331 7 7	44,646 10 2	24,189 8 0	5,56,377 4 8	2,33,899 8 10	25,056 10 7	1,02,663 13 2	11,005 7 10	1,70,825 1 8	5,43,450 5 1	1,00,493 1 4	

TABLE VII.

Showing total strength of Subordinates Veterinary Staff employed during the year 1910-1911.

PROVINCE.	How occupied.	Whether paid from Provincial or Local Funds.	Veterinary Inspectors.	Veterinary Assistants.	Subordinate Teaching Staff.	REMARKS.
1	2	3	4	5	6	7
			No.	No.		
Punjab	In Schools and Colleges In Dispensaries On other work	... ... ...	... ... 12	... 101 (a) 43	(c) 6 (k) 3 ...	(a) 29 Itinerating Veterinary Assistants.
Eastern Bengal and Assam.	Inspectors Itinerating Itinerating and reserve Itinerating In charge Hospital In Hospital Municipal Hospital Itinerating and Hospital Itinerating and Dispensary Ditto.	Provincial Do. Do. Provincial and Local Do. Do. Do. Do. Provincial Provincial and Local	4 ... ... ... ... ... ... ... ... ...	... -2 1 32 1 1 1 6 2 5	... ... ... ... ... ... ... ... ... ...	5 Office Veterinary Assistants. 2 Touga Line. 7 Reserve. 48 (b) Includes 3 reserve and 2 at Head quarters. (c) Manager, Northcote Cattle Farm, Chharodi. (d) 1 Assistant Principal and 5 Lecturers.
Burma	In Schools and Colleges In Dispensaries On other work	Provincial Provincial Local Funds	1 11 ...	1 55 (b) 64	1	(e) Hospital Surgeon, Bengal Veterinary College. (f) 1 Veterinary Overseer and Veterinary Assistant, Bengal Veterinary College.
Bombay	In Schools and Colleges In Dispensaries On other work	Local Provincial Do.	... ... 3	... 1 40 (c) 1	4	(g) The Veterinary Assistant at Dumka. (A) Two Veterinary Assistants employed by the Dumraon and Hathwa Raj Estate and one by the Cooh Behar State.
Central Provinces	In Dispensaries Ditto. On other work Touring Attached to office Slaughter House Deputed to Bombay Veterinary College for completing the Graduate Course.	Provincial Court of Wards Provincial Do. Do. Do. Do.	... ... 6 ... ... ... ...	... ... ... 28 2 1 2	... ... ... ... ... ... ...	(i) 8 Veterinary Inspectors employed by Civil Veterinary Department, 8 Glanders Inspectors and 1 Court Veterinary Inspector. (j) Two Assistants employed by the Pinjrapole Societies at Sodepur and Hazaribagh.
Baluchistan Sind Rajputana United Provinces	On other work In Dispensaries Ditto Inspectors Itinerating In Municipality In Dispensary Ditto Ditto In Dispensary and Itinerating. In charge Civil Veterinary Department Depôt. Attached to office of Superintendent. In charge Bull-rearing Depôt.	Provincial Local Funds Do. Provincial Local Do. Provincial Local Do. Provincial Do. Do.	... ... ... 14 ... ... ... ... ... ... ... ... ... ...	... ... ... ... 78 19 31 1 1 3 5 1	... ... ... ... ... ... ... ... ... ... ... ... ... ...	(k) 5 On Itinerating duty. 1 Reserve. 1 Attached to office at Rawalpindi. (l) 1 Acting Hospital Surgeon. 1 Acting 3rd Lecturer. (m) 1 Assistant Principal. 3 Lecturers. (n) 1 on furlough, one acting as Inspector and 3 salaried employed on ostrating duty. (o) 1 Professor of Anatomy. 1 Professor Bov. Patho.
Bengal	In Schools and Colleges In Dispensaries On other works	Provincial Do. Local Do. Provincial Local Do.	1 (e) 17	(f) 2 (g) 1 3 (A) 20 11 (j) 2 43	6 (d)	1 Professor Materia Medica. 1 Assistant Professor of Sanitary Science. 1 Demonstrator of Anatomy. 1 Assistant Professor of Chemistry.
North-West Frontier Province and North Punjab.	In Dispensaries On other works	Provincial Do.	... 2	19 (h) 7	... ...	(p) 1 House Surgeon. 1 Veterinary Hospital Assistant.
Madras	College work Itinerating In charge of Hospitals Foreign service	Provincial Do. Local Funds Zemindars Coorg Government	... ... 3	(i) 2 (n) 40 5 6 3 1	(m) 4	1 Veterinary Graduate in Dogward.
	TOTAL	...	74	754	24	

TABLE VIII.

Return of Stud Bulls for the year 1910-1911.

PROVINCE.	PROPERTY OF GOVERNMENT.					PROPERTY OF LOCAL BOARDS.					REMARKS.
	Number on 1st April 1910.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March 1911.	Number on 1st April 1910.	OBTAINED DURING THE YEAR.		Casualties during the year.	Balance remaining on 31st March 1911.	
		Number.	Average price paid.				Number.	Average price paid.			
1	2	3	4	5	6	7	8	9	10	11	12
Punjab . . . . .	...	...	...	...	...	472	76	...	63	485	
Eastern Bengal and Assam	16	...	...	3	13	38	25	...	3	60	
Pomtay . . . . .	...	...	...	...	...	31	11	...	2	40	
Central Provinces	7	1	...	3	5	...	...	...	...	...
Rajputana . . . . .	...	...	...	...	...	2	...	...	...	2	
United Provinces	6	...	...	...	6	44	4	94	...	48	
Bengal	(a) 15	2	...	2	15	23	6	...	...	29	
North-West Frontier Province and North Punjab.	2	...	...	1	1	17	3	...	4	16	
Madras	17	2	212 8 0	1	18	...	...	...	...	...
TOTAL	(a) 63	5	...	10	58	627	125	...	72	680	

(a) Correct figures reported this year.

TABLE IX.

Showing main results of the working of Provincial Cattle Farms during the year 1910-1911.

PROVINCE.	Name of farm.	RECEIPTS.				EXPENDITURE.						VALUATION OF STOCK, GRAIN AND FODDER REMAINING AT CLOSE OF YEAR AS DETAILED ON REVERSE.			
		Sale of animals.	Sale of Produce.	Other heads.	Total.	Salaries of establishment.	Feed and keep of animals.	Cultivation expenses.	Purchase of animals.	Other heads.	Total.	Cattle.	Grain.	Fodder.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Punjab . . . . .	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Eastern Bengal and Assam.	Upper Shillong Farm.	654 2 0	533 9 0	8 0 0	1,195 11 0	1,366 0 6	1,993 7 6	355 8 9	1,298 6 6	...	5,013 7 3	4,640 0 0	41 14 8	72 8 0	4,754 6 8
Bombay	Northcote Cattle Farm, Chharodi.	1,768 0 0	1,069 12 0	8,758 3 4	11,595 15 4	4,602 15 6	6,124 4 1	2,669 11 3	702 0 0	7,462 15 3	21,561 14 1	24,135 0 0	270 15 3	8,831 9 7	33,237 8 10
Central Provinces	Power Khara	564 0 0	219 12 0	...	783 12 0	269 10 4	1,368 10 4	...	...	523 11 0	2,161 15 8	1,645 0 0	970 14 0	324 14 6	2,940 12 6
	Talin Kheri	4,535 0 0	1,024 0 0	...	5,559 0 0	559 0 0	3,068 0 0	...	...	113 0 0	3,740 0 0	5,020 0 0	923 0 0	2,614 0 0	8,557 0 0
United Provinces	Manjra Bull-rearing Farm	...	280 0 0	...	280 0 0	57 0 0	573 0 0	344 0 0	2,872 0 0	3,950 0 0	7,796 0 0	3,936 0 0	98 0 0	313 0 0	3,347 0 0
Bengal	Bothia . . . . .	...	...	...	...	375 0 0	2,123 0 0	118 0 0	...	...	2,616 0 0	2,330 0 0	100 0 0	30 0 0	2,460 0 0
	Siripur	517 0 0	...	250 0 0	767 0 0	502 0 0	3,112 0 0	...	60 0 0	1,321 0 0	9,995 0 0	12,675 0 0	...	...	12,675 0 0
TOTAL	8,033 2 0	3,127 1 0	9,016 3 4	20,181 6 4	7,731 10 4	23,362 5 11	3,487 4 0	4,932 6 6	13,370 10 3	52,884 5 0	53,381 0 0	2,404 11 11	12,186 0 1	67,971 12 0

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Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1911.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
		UPPER SHILLONG FARM	Rs.	Rs.	
		<i>Cattle.</i>			
10	...	Bulls	100	1,000	
24	...	Cows	100	2,400	
9	...	Male Stock, 2 years old and above .	20	180	
14	...	Ditto, 1 year old	15	210	
7	...	Ditto, calves	10	70	
4	...	Female Stock, 2 years old and above	40	160	
5	...	Ditto, 1 year old	30	150	
7	...	Ditto, calves	10	70	
8	...	Bullocks	50	400	
88	...	TOTAL	...	4,640	
		<i>Grain and Fodder.</i>			
	Mds. s. c.		Rs. A. P.	Rs. A. P.	
	4 34 0	Oilcake	2 14 0	13 15 1	
	5 11 4	Matikalai	3 15 0	20 2 0	
	1 18 0	Rice	5 0 0	7 4 0	
	0 6 0	Salt	4 0 0	0 9 7	
	100 0 0	Silage	0 8 0	50 0 0	
	30 0 0	Hay	0 12 0	22 8 0	
		TOTAL	...	114 6 8	
		GRAND TOTAL	...	4,754 6 8	
		NORTHCOTE CATTLE FARM, CHHARODI.			
		<i>Cattle.</i>	Rs.	Rs.	
1	...	Bull	300	300	
3	...	Bulls	250	750	
198	...	Cows	60	11,880	
34	...	Heifers, 2 years old	30	1,020	
27	...	Ditto yearlings	20	540	
8	...	Cow calves	10	280	
9	...	Bulls 2½ years old	125	1,125	
30	...	Bulls 1½ years old	100	3,000	
30	...	Bulls, yearlings	75	2,250	
3	...	Bullocks 2 years old	100	300	
26	...	Bull calves	40	1,040	
11	...	Bullocks	150	1,650	
400	...	Total cattle	...	24,135	

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1910-11.

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
		<i>Grain and Fodder.</i>	Rs. A. P.	Rs. A. P.	
	Mds. Srs.				
	8 0	Guvar crushed	1 6 0 per maund.	11 0 0	
	6 27	Gram crushed	1 10 0 per maund.	20 13 6	
	1 6	Bran	1 6 0 per maund.	1 9 3	
	17 20	Oilcake	1 11 0	29 8 6	
	109 0	Jowari for seed	2 0 0	218 0 0	
	lbs.				
	1,338,600	Hay	6 Rs. per 1,000 lbs.	8,031 9 7	
	16,000	Jowari Kirby	5 Rs. per 100 bundles.	800 0 0	
		TOTAL GRAIN	...	9,102 8 10	
		GRAND TOTAL	...	33,237 8 10	
		CATTLE BREEDING FARM, PWAR KHERA.			
		<i>Cattle.</i>	Rs.	Rs.	
4	...	Bulls	75	800	
20	...	Cows	80	600	
6	...	Male stock, 2 years old	50	300	
9	...	Ditto, 1 year old	20	180	
7	...	Ditto, calves	10	70	
2	...	Female stock, 2 years old	15	30	
12	...	Ditto, 1 year old	10	120	
9	...	Ditto, calves	5	45	
69	...	TOTAL	...	1,845	
		<i>Grain and Fodder.</i>			
	Mds. Srs.			Rs. A. P.	
	388 14	Gram	16 Seers.	970 14 0	
	324,900	Hay	1,000 Poolas.	324 14 6	
		Kirby, etc. . . . .	...	...
		TOTAL	...	1,295 12 6	
		GRAND TOTAL	...	2,940 12 6	

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1910-11.

NUMBER OR QUANTITY		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
CATTLE BREEDING TELINKHERI.					
<i>Cattle.</i>					
			Rs.	Rs.	
1	...	Bull	80	80	
40	...	Cows	50	2,000	
15	...	Male stock, 2 years old . . . . .	...	1,500	
8	...	Ditto, 1 year old	50	400	
13	...	Ditto, calves	25	325	
11	...	Female stock, 2 years old . . . . .	...	375	
8	...	Ditto, 1 year old	20	160	
12	...	Ditto, calves	15	180	
108	...	TOTAL	...	6,020	
<i>Grain and Fodder.</i>					
		Concentrated food . . . . .	...	923	
	1,307,250	Hay . . . . .	...	2,614	
		Kirby, etc. . . . .	...	...
	1,307,250	TOTAL	...	3,537	
GRAND TOTAL				...	8,557
MANJRA BULL-REARING FARM, UNITED PROVINCES.					
<i>Cattle.</i>					
			Rs. A. P.	Rs.	
2	...	Working bullocks	75 0 0 each	150	
2	...	Ditto, buffaloes	16 0 0	32	
...	...	Male stock, 2 years old . . . . .	...	...
(a)	...	Ditto, 1 year old . . . . .	...	...
88	...	Ditto, calves	31 4 8	2,754 (b)	
		Female stock, 2 years old . . . . .	...	...
		Ditto, 1 year old . . . . .	...	...
		Ditto, calves . . . . .	...	...
		TOTAL	...	2,936	
92	...				
<i>Grain and Fodder.</i>					
	Mds. Srs. Chs.	Gram	20 seers per rupee	98	
	49 4 13	Hay	Rs. 1 per maund	272	
	272 0 0	Bhusa	14 annas per maund	41	
	47 0 0				
		TOTAL	...	411	
GRAND TOTAL				...	3,347

Valuation Statement of Cattle, Grain and Fodder in hand at close of the year 1910-1911:

NUMBER OR QUANTITY.		Description.	Rate.	Value.	REMARKS.
No.	Quantity.				
BETHIA.					
<i>Cattle.</i>					
			Rs.	Rs.	
1	...	Bulls	150	150	
43	...	Cows . . . . .	...	1,195	
14	...	Male stock, 2 years old	30	420	
10	...	Ditto, 1 year old	15	150	
13	...	Ditto, calves	10	130	
5	...	Female stock, 2 years old	20	100	
9	...	Ditto, 1 year old	15	135	
10	...	Ditto, calves	5	50	
105	...	TOTAL . . . . .	...	2,330	
<i>Grain and Fodder.</i>					
	...	Gram . . . . .	...	100	
	...	Hay . . . . .	...	30	
	...	Kirby, etc. . . . .	...	...
		TOTAL . . . . .	...	130	
GRAND TOTAL					
			...	2,460	
SIRIPUR.					
<i>Cattle.</i>					
			Rs.	Rs.	
3	...	Bulls	200	600	
47	...	Cows	75	3,525	
17	...	Male stock, 2 years old	200	3,400	
28	...	Ditto, 1 year old	100	2,800	
22	...	Ditto, calves	50	1,100	
1	...	Female stock, 2 years old	100	100	
14	...	Ditto, 1 year old	50	700	
15	...	Ditto, calves	30	450	
147	...	TOTAL . . . . .	...	12,675	
<i>Grain and Fodder.</i>					
	...	Gram . . . . .	...	...
	...	Hay . . . . .	...	...
	...	Kirby, etc. . . . .	...	...
		TOTAL . . . . .	...	...
GRAND TOTAL					
			...	12,675	

TABLE X.

Return of Horse, Pony and Donkey Stallions under Local Bodies for the year 1910-1911.

DETAILS.	HORSE AND PONY STALLIONS UNDER LOCAL BODIES.												DONKEY STALLIONS UNDER LOCAL BODIES.							
	HORSES.						PONIES.						Total Horses and Ponies.	Italian.	Cyprian.	Country-bred.	Sicilian.	Catalonian.	American.	Total.
	Arab.	Persian.	Thorough-bred English.	Country-bred.	Australian.	Total.	Arab.	Persian.	Country-bred.			Total.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Balance on 1st April 1910	64	...	2	5	...	71	100	...	5	...	...	105	176	5	14	33	10	36	2	100
Increase { Purchased in India	8	...	1	...	...	9	7	...	...	...	...	7	16	...	...	14	...	...	...	14
Received by transfer	29	...	3	1	1	34	11	...	3	...	...	14	48	...	...	3	...	5	...	8
TOTAL	101	...	6	6	1	114	118	...	8	...	...	126	240	5	14	50	10	41	2	122
Decrease { Died	2	...	...	...	...	2	5	...	...	...	...	5	7	...	1	1	...	2	...	4
Sold	4	...	...	...	...	4	4	...	...	...	...	4	8	2	...	2	...	1	...	5
Destroyed	1	...	...	...	1	2	6	...	...	...	...	6	8	...	...	...	...	...	...	...
Transferred to	25	...	1	1	...	27	2	...	...	...	...	2	29	...	...	3	...	5	...	8
TOTAL DECREASE	32	...	1	1	1	35	17	...	...	...	...	17	52	2	1	6	...	8	...	17
Balance on 31st March 1911	69	...	5	5	...	79	101	...	8	...	...	109	188	3	13	44	10	33	2	105
United Provinces	47	...	2	2	...	51	4	...	...	...	...	4	55	...	...	8 (a)	...	8	2	18
Punjab	4	...	...	...	...	4	57	...	4	...	...	61	65	3	12	31	7	19	...	72
North-West Frontier Province and North Punjab	10	...	...	...	...	10	8	...	...	...	...	8	18	...	1	5	3	6	...	15
Bombay	7	...	3	3	...	13	23	...	4	...	...	27	40	...	...	...	...	...	...	...
Bengal	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Madras	...	...	...	...	...	...	9	...	...	...	...	9	9	...	...	...	...	...	...	...
TOTAL	69	...	5	5	...	79	101	...	8	...	...	109	188	3	13	44	10	33	2	105

(a) 1 Punjab, 7 Country-bred.

TABLE XI.

Services and Produce of each class of Horse, Pony, and Donkey Stallions, under Local Bodies during 1910-1911.

Horse, Pony or Donkey.	Province.	Stallions on Register on 31st March 1911.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE NUMBER OF MARES COVERED PER STALLION EMPLOYED AT STUD.		REMARKS.
			Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
1	2	3	4	5	6	7	8	9	10
Horse	Punjab	4	5	5	257	236	51	47	(a) On 31st March 1910.
	Bombay	(a)5	7.93	6.02	369	220	46.53	36.54	
	United Provinces	51	42	42	2,232	2,267	53.14	53.9	
	Bengal	1	1	1	8	...	8	...	
	North-West Frontier Province and North Punjab.	10	9	8	525	540	58.33	67.5	
		71	64.93	62.02	3,391	3,263	52.2	53.5	
Pony	Punjab	61	63	62	3,558	3,384	56	54	
	Burma . . . . .	...	...	1	...	5	...	5	
	Bombay	(a)14	20.47	12.85	856	443	41.81	34.47	
	United Provinces	4	4	5	212	359	53	71.8	
	Bengal . . . . .	...	1	...	...	...	...	...
	North-West Frontier Province and North Punjab.	8	8	9	417	453	52.12	50.33	
	Madras	9	9	12	172	277	18.10	23.08	
Central Provinces . . . . .	...	...	1	...	1	...	...
		96	105.47	102.85	5,215	4,922	49.4	47.8	
Donkey	Punjab	72	67	70	3,066	3,171	45	45	
	United Provinces	18	12	9	510	417	42.5	46.3	
	North-West Frontier Province and North Punjab.	15	13	14	700	714	53.84	51	
	TOTAL	105	92	93	4,276	4,302	46.5	46.3	

TABLE XII.

Showing average cost of feed, keep, attendance, etc., of Horse, Pony, and Donkey Stallions during the year 1910-11.

Province.	HORSE.			PONY.			DONKEY.			REMARKS.
	Year under report.	Previous year.		Year under report.	Previous year.		Year under report.	Previous year.		
1	2	3	4	5	6	7	8			
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Punjab	291 0 0	315 0 0	293 0 0	339 0 0	178 0 0	189 0 0				
Burma . . . . .	...	...	...	302 4 9	...	...		
Bombay . . . . .	...	...	434 0 0	449 0 0	...	...		
Bengal	248 0 0	113 0 0	...	...	...	...
North-West Frontier Province and North Punjab.	327 4 3	340 10 9	328 15 3	314 8 9	235 2 1	234 7 10				
Madras . . . . .	...	...	422 7 7	690 12 11	...	...		

TABLE XIII.

Abstract of particulars regarding Horse Fairs and Shows held in non-selected districts during the year 1910-1911.

PROVINCE.	Number of Horse Fairs and Shows held.		TOTAL NUMBER OF ANIMALS PRESENT.		TOTAL NUMBER COMPETING FOR PRIZES.		TOTAL NUMBER OF HORSE STOCK (NOT INCLUDING BRANDED MARES) PRESENT.		NUMBER OF REMOUNTS PURCHASED.				PRICE PAID FOR REMOUNTS.			NUMBER OF MULES PURCHASED.			PRICE PAID FOR MULES BY GOVERNMENT.			PRIZES AWARDED.						Amount sanctioned by Government of India for next year's Fair or show.	
	Year under report.	Previous year.	Year under report.	Previous year.	Belonging to breeders.	Belonging to dealers.	For Remount Department.	For Native Cavalry.	For Police.	TOTAL.	Highest price.	Lowest price.	Average price.	By Government.	By others.	TOTAL.	Highest price.	Lowest price.	Average price.	Total number of animals sold.	From Imperial Funds.	From Provincial Funds.	From Local Funds.	From other sources.	TOTAL.	Amount actually awarded.	No. of medals awarded.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Punjab	9	5,517	4,176	881	639	3,362	797	...	...	...	...	...	...	...	...	97	97	...	...	...	1,476	1,500	...	2,410	30 0 0	3,910 0 0	2,741	3	600
Bombay	2	1,105	859	1,105	859	261	165	4	...	12	16	595	425	499 8	...	...	...	...	...	...	250	1,000	2,500	3,500	121 10 11	7,121 10 11	5,350	2	2,000
Rajputana	1	893	627	127	188	...	893	...	...	...	...	...	...	...	...	...	...	...	...	...	462	...	...	500	...	500 0 0	410	...	...
Bengal	10	18,674	10,742	308	213	...	6,010	...	...	...	...	...	...	...	...	...	...	...	...	...	6,718	...	199	...	10 0 0	209 0 0	187	...	...
North-West Frontier Province and North Punjab.	4	1,162	1,103	808	1,062	803	...	...	...	2	2	225	175	200 0	1	1	2	126	100	113	4	2,680	...	820	50 0 0	3,550 0 0	3,161	3	...
TOTAL	26	27,351	17,507	3,229	2,961	4,428	7,865	4	...	14	18	595	175	349 12	1	98	99	126	100	113	8,905	5,180	2,699	7,230	376 10 11	15,330 10 11	11,849	8	2,600

TABLE XIV.

Abstract of particulars regarding Cattle Fairs and Shows held during the year 1910-1911.

PROVINCE.	Number of Cattle Fairs and Shows held.	TOTAL NUMBER OF STOCK PRESENT.							AVERAGE PRICE OF ANIMAL SOLD.					Amount realized in fees.	Total number of animals that competed for prizes.	PRIZES AWARDED.						Number of medals awarded.	REMARKS.
		Bulls.	Bullocks.	Cows.	Young stocks.	Buffaloes.	Camels.	Others.	Bulls.	Bullocks.	Cows.	Buffaloes.	Camels.			From Imperial funds.	From Provincial funds.	From Local Funds.	From other sources.	Total.	Amount actually awarded.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Punjab	34	3,530	103,935	23,590	42,892	61,429	7,233	18,730	223	585	407	554	1,042	1,39,347 0 0	5,018	400	...	14,230	755 0 0	15,385 0 0	13,111 0 0	11	
Eastern Bengal and Assam.	57	5,960	154,466	11,323	11,123	14,163	3,025	6,966	...	...	...	...	...	1,47,889 8 9	542	...	93	533	103 0 0	729 0 0	...	...
Burma	1	35	73	10	6	183	...	84	...	...	...	...	...	...	341	...	1,225	...	...	1,225 0 0	1,094 0 0	...	
Bombay	5	1,032	4,672	1,661	521	1,059	...	5,142	...	...	...	...	...	761 3 3	1,863	...	2,300	650	200 0 0	3,150 0 0	2,395 0 0	9	
Central Provinces	19	957	40,848	14,107	5,335	8,166	2	5,374	808	407	175	293	70	12,398 7 0	1,732	...	...	2,594	173 0 0	2,767 0 0	1,944 0 0	8	
Baluchistan	2	195	103	51	9	...	...	26	90 to 115	60 to 80	79	...	...	...	325	500	...	95	50 0 0	645 0 0	590 0 0	2	
Sind	1	7	123	62	5	38	9	...	...	...	...	...	...	...	244	...	...	1,038	...	1,038 0 0	650 0 0	...	
Rajputana	1	...	5,533	...	...	...	4,625	...	...	55	...	...	64	...	Bullocks 54 pairs, camels 57.	...	...	110	...	110 0 0	110 0 0	...	
United Provinces	2	18	42	67	139	...	...	...	...	...	...	...	...	...	71	...	1,000	...	...	1,000 0 0	432 0 0	...	
Bengal	14	9,297	66,895	7,572	25,649	25,408	500	4,468	40	50	25	35	50	21,690 0 0	896	...	150	725	516 0 0	1,391 0 0	1,391 0 0	...	
North-West Frontier Province and North Punjab.	5	329	465	842	96	390	61	295	...	...	...	...	...	...	1,619	2,350	...	670	200 0 0	3,220 0 0	3,130 0 0	7	
Madras	23	351	88,946	1,772	5,233	5,261	...	236	...	...	...	...	...	...	154,397	...	3,500	690	771 4 3	1,931 4 3	2,653 8 0	13	
TOTAL	164	21,711	466,101	60,557	91,008	116,047	15,455	41,323	3,21,386 8 0	167,105 + 54 pair bullocks.	3,250	8,263	21,335	2,768 4 3	32,591 4 3	27,500 8 0	45	

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TABLE XV.

Showing main results of the working of the Bacteriological Laboratory during 1910-1911.

QUANTITY OF SERA OR ANTI-TOXIN PREPARED AND ISSUED.							INSTRUCTION IMPARTED.				FINANCIAL RESULTS.											
Name of sera or anti-toxin.	Opening balance.	Prepared during the year.	Returned serum re-issued.	TOTAL.	Issued during the year.	Stock in hand at end of year.	Department or Province.	NUMBERS ATTENDING CLASSES.		RECEIPTS.					EXPENDITURE.							
								Veterinary Inspectors and Assistants.	Number passed.	Sale of animals.	Sale of sera (both for cash and on book credit).	Sale of garden products and revenue from reserved forests.	Other miscellaneous receipts.	TOTAL.	Salaries and travelling allowances of officers and subordinate establishment.	Feed and keep of animals.	Purchase of animals.	Cost of chemicals and apparatus.	Other miscellaneous expenditure.	TOTAL.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
	C. C.	C. C.	C. C.	C. C.	C. C.	C. C.		Nos.	Nos.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Makhsar Laboratory.	Binderpest	8,660	5,77,969	2,050	5,83,679	5,33,779	49,900	United Provinces of Agra and Oudh	1	1												
	Anthrax	3,800	5,415	500	9,715	9,715	...	...	..	..								
	Hem. Sept. vaccine.	..	50,350	..	50,350	50,350	...	Punjab	2	2												
	Hem. Sept. serum.	..	1,825	..	1,825	1,825	...	North-West Frontier Province and North Punjab	3	3												
	Charbon Symptomatique vaccine.	..	83,400	..	83,400	19,900	13,500	{ Bengal Native State	1	1	2,097 9 0	214 6 0	442 9 2	168 7 0	2,922 15 2	78,531 14 8	56,958 2 0	27,028 3 0	11,339 0 11	13,567 7 7	1,92,424 11 9	
	Charbon Symptomatique serum.	536	536	536												
	Mallein	2,780	12,941	5 98	16,269	16,229	40												
	Tuberculin	140	209	..	349	188	161												
	Anti Streptococci vaccine.	..	500	..	500	500												
	Anti Streptococci serum.	(a) 817	1,829	..	2,146	1,117	1,029												
Bareilly Depot.	...	...	...	...	...	...	North-West Frontier Province and North Punjab.	3	3	568 0 0	...	50 0 0	...	618 0 0	11,166 0 8	6,868 2 1	2,121 3 3	...	3,500 0 0	23,670 5 7	
	..	..	..	..	..	..	Bombay	5	5												
	..	..	..	..	..	..	Native States	1	1												
TOTAL	11,183	684,438	8,148	698,769	634,139	64,630	TOTAL	17	17	2,665 9 0	214 6 0	492 9 2	168 7 0	3,540 15 2	89,697 14 6	63,841 4 1	29,149 6 3	11,339 0 11	22,067 7 7	2,16,095 1 4		

TABLE XVI.

Return of animals for 1910-11.

Detail.	Herd bulls.	Super-numerary bulls.	Cows.	Male pro-duce.	Female pro-duce.	Castrated pro-duce.	Ordinance bullocks.	Culti-vation bullocks.	Mules.	Pony mares for mule breed-ing.	Pony stal-lions.	Camels.	Donkey stal-lions.	Donkey colts.	Donkey mares.	Donkey fillies.	Hams.	Ewes.	Male lambs.	Female lambs.	Wethers.	Female goats.	Female kids.	Male goats and kids.	Pony colts.	Pony filly.	Total.	REMARKS.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1st April 1910	24	3	1,217	827	616	97	...	208	88	27	1	Rs. A. P. 7 0 0	6	60	93	46	8	332	106	140	...	...	...	...	...	...	Rs. A. P. 3,918 0 0	
Increase	By birth	...	...	429	380	...	...	...	21	...	...	...	...	19	...	17	...	...	145	142	...	...	6	5	1	1	1,166 0 0	
	,, purchase	...	...	...	...	1	...	40	16	15	...	3 0 0	...	1	...	...	...	43	...	...	...	12	2	1	...	...	124 0 0	
	,, transfer	8	62	85	1	...	149	169	80	...	...	...	1	...	16	...	1	40	...	...	24	...	...	...	...	...	680 0 0	
TOTAL	27	65	1,302	1,257	996	247	169	325	120	52	1	10 0 0	7	80	108	63	9	425	261	282	24	12	8	6	1	1	5,648 0 0	
Decrease	Died	...	...	23	65	41	4	10	1	...	...	2 0 0	...	4	3	3	1	71	56	56	...	1	2	1	...	...	864 0 0	
	Destroyed	2	...	4	4	2	1	2	...	1	...	(b) 2 0 0	...	...	1	...	...	5	...	2	...	...	...	...	...	...	29 0 0	
	Sold	...	50	43	89	23	2	22	24	26	2	...	...	28	11	7	...	26	69	26	24	...	...	3	...	...	493 0 0	
	Transferred	4	9	...	122	85	162	137	19	1	...	15	25	40	680 0 0
TOTAL	6	69	80	290	162	170	169	55	27	3	...	5 0 0	...	31	15	25	1	112	150	125	24	1	2	4	...	...	1,506 0 0	
Balance on 31st March 1911	21	(a) 5	1,222	967	844	77	...	270	92	49	1	5 0 0	(c) 7	49	98	38	8	313	101	157	...	11	6	2	1	1	4,342 0 0	
VALUE Rs.	3,910	1,350	1,07,280	64,200	20,500	8,480	...	20,505	15,200	5,675	100	822 3 0	2,630	4,440	7,925	2,220	1,045	806½	244½	485	...	66	18	8	...	10	2,76,040 8 0	

(a) One at Dehra Dun.
 (b) One left in the Bir as per Inspector General, Civil Veterinary Department.
 (c) One at Cooma.

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TABLE XVII.

HISSAR FARM.

Results of Donkey and Mule breeding during 1910-11.

1	Stallions on Register at close of year.	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.		RESULT OF PREVIOUS YEAR'S COVERINGS.		AVERAGE RESULT OF PREVIOUS YEAR'S COVERINGS PER STALLION EMPLOYED AT STUD.		REMARKS.
		Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of produce.	Number not held.	Average of produce.	Average of not held.	
Donkey-breeding.	6	5	5	91	86	18.2	17.2	(a) 37	49	7.4	9.8	(a) Includes 1 slip.
Mule-breeding.	6	3	4	44	36	14.66	9	(b) 22	14	5.5	3.5	(b) Includes 1 still-born foal.

TABLE XVIII.

Abstract showing main results of the working of the Hissar Farm during the official year 1910-11.

	Rs.	a.	p.
<i>Receipts paid into Treasury.</i>			
Sale of animals (a)	66,405	8	0
Sale of produce	166	8	0
Other heads	20,285	14	3
TOTAL	86,857	14	3
<i>Expenditure.</i>			
Salaries and travelling allowances of officers	22,581	3	2
Ditto ditto of subordinate staff	27,391	13	7
Cultivation expenses	15,423	11	3
Feed of animals including purchase of reserve fodder Rl, 104-8-7	20,764	14	2
Purchase of animals	11,097	0	0
Other heads	9,107	13	6
TOTAL	1,06,366	7	8
<i>Value of animals issued on book credit.</i>			
Siege-train bullocks	4,500	0	0
Army transport bullocks	.....	
Bulls	.....	
Mules and Donkeys	10,250	0	0
TOTAL	14,750	0	0
<i>Valuation of animals, grain and fodder on hand at end of year.</i>			
Valuation of animals as per Table XVI attached	2,78,040	3	0
Do. of grain	2,683	10	6
Do. of fodder	62,054	11	10
Do. of machinery and dead stock articles	41,874	2	9
TOTAL	3,87,652	12	1

(a) Includes valuation of animals issued on book credit.

TABLE XIX.

Statement showing total charges during 1910-11 in connection with Civil Veterinary Department.

	Inspector-General.	Imperial Bacteriologist.	Hisar Cattle Farm.	United Provinces.	Punjab.	Bengal.	Madras.	Central Provinces.	Bombay.	Burma.	North-West Frontier Province.	Eastern Bengal and Assam.	Sind, Baluchistan and Rajputana.	Veterinary officer investigating camel diseases.	TOTAL.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1. Superintendence	72,910 14 9	...	...	36,308 0 0	68,036 0 0	41,013 8 1	25,858 11 3	33,267	28,961 8 7	47,617 15 5	...	21,029 10 4	...	...	3,31,634 4 5
2. Veterinary Instruction . . . . .	...	...	...	...	74,009 0 0	1,37,368 12 8	36,322 10 3	1,200	58,366 9 6	8,780 10 7	1,229 0 0	3,804 10 3	...	...	3,19,770 6 3
3. Subordinate Establishment . . . . .	...	...	...	86,224 0 0	1,20,168 0 0	14,725 11 4	31,517 12 1	64,478	60,660 3 3	1,38,753 0 11	19,019 0 0	62,009 13 2	...	...	4,72,871 8 9
4. Hospitals and Dispensaries . . . . .	...	...	...	3,302 0 0	74,221 0 0	20,549 8 0	27,703 4 6	3,477	93,800 7 0	8,012 9 4	8,223 0 0	17,776 13 2	...	...	2,53,188 9 0
5. Breeding operations . . . . .	...	...	1,06,567 0 1	19,130 0 0	92,736 0 0	...	4,879 8 0	...	42,873 8 7	20 6 6	14,526 0 0	...	22,964 5 2	...	3,02,697 12 4
6. Prizes	3,500 0 0	...	...	...	6,732 0 0	...	4,075 0 0	...	6,330 13 3	...	...	1,091 3 9	...	...	21,719 1 0
7. Fairs and Shows . . . . .	...	...	...	...	84,336 0 0	...	1,830 0 0	...	10,878 5 9	...	10,755 0 0	1,196 8 0	...	...	88,495 13 9
8. Bacteriological Research . . . . .	...	2,12,485 2 11	...	...	...	...	...	...	...	...	...	...	...	...	2,12,485 2 11
9. Camel specialist . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	15,533 0 6	15,533 0 6
10. Other charges . . . . .	...	...	...	...	...	...	(a) 1,650 12 0	...	...	...	...	9,443 4 3	...	...	11,099 0 3
TOTAL	72,910 14 9	2,12,485 2 11	1,06,567 0 1	82,962 0 0	5,00,232 0 0	2,13,547 9 1	1,38,337 10 1	92,412	2,91,569 7 11	12,03,794 10 9	53,754 0 0	1,10,46 13 11	22,964 5 2	15,533 0 6	20,29,494 11 2

Note—To be furnished by the Comptroller, India Treasuries, and several Accountants General concerned.
(a) Establishment for the inspection of cattle for export to Ceylon.

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