

REPORT
OF THE
**Mechanized State Farms
Reorganization Committee**

1959



ALLAHABAD :
SUPERINTENDENT PRINTING AND STATIONERY, UTTAR PRADESH, (INDIA)

1960

CORRIGENDUM

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..	4-2(b)	..	Mahurakund	..	Madburikund
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..	14	..	Comments others	..	Comments by others

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(i)	2	25	Aniamls	.. Animal
(ii)	3	6	Or	.. of
(iii)	1	7	Uniformed	.. un-informed
(iv)	3	1	Contracts	.. contacts
(v)	2	3	materials	.. material
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Introduction

2	2	4	or --	.. for
3	2(5)	13	Ganjaria	.. Gajaria
3	3	2	Ganjaria	.. Gajaria
7	6	1	farm	.. Farms
9		4	From May and June to May & June.	May 1953 to June 1953
9	..	12	July 1955	.. June 1955
9	..	14	December 1957	.. December 1957
9	..	21	(under the heading "To") January 1956	June 1956
10	..	15	S. P. Agarwal	.. O. P. Agarwal
10	..	15	0.5 24 --	.. crossed
15	4	6	Moderate Rs.10	.. moderate rate of Rs.10
15	5	5	of --	.. to
15	5	6	lactation	.. lactations
16	4	2	(below Ganjari note)	.. Gajaria
17	..	6	loss....Machinery	.. Loss....machinery including those partially used because they were there..... Rs.1,08,000

Page	Para	Line	For	Read
17	..	7	Recurring..calamities	Recurring.... calamities.....38,54,265
<i>Clarification of objections</i>				
18	5	2	developmental research	developmental and re- search
18	5	14	detremental	.. detrimental
<i>Mechanised State Farm Andeshnagar (Lakhimpur Kheri.</i>				
19	3	2	Rs.25,187.81	.. Rs.25,159.81
21	Production table	3	8918 ..	.. 8928
..	..	6	1577 ..	.. 15,773.
21	3(2)	2	havier ..	.. heavier
22	3	2	worth Rs.....on	.. worth Rs.20,000/- on
..	..	..	about Rs.....had	.. about Rs.2,900 had
22	6	2	slopping	.. sloping
23	1(Table)	7	(—)4954	.. (+)4954
24	10	3	become ..	.. becomes
<i>Mechanised State Farm Arazi Lines (Varanasi)</i>				
25	2	5	lead ..	.. led
28	3(Table) 10(1957- 58)	11.03	.. ..	.. 11,036
29	5	4	building ..	.. buildings
31	1	5	lead ..	.. led
38	2(Table) 7(1955- 56)	9.34	..	.. 29.34
..	..	8(1956- 57)	..	.. 33.09
40	3(II Ta- 5(1952- ble) 53)	1945	..	.. 1955
41	last	2	encouraged	.. encouraging
43	1	4	animals	.. animal
<i>Mechanised State Farm, Bharari</i>				
47	2	2	non-decript	.. non-descript
50	2	7	farms	.. farm

Page	Para	Line	For	Read
53	4(Table)	2(1949-50)	3082	.. (—)3082
..	..	5(1952-53)	15,804 ..	.. (—)15,804
54	1	15	non-descript	.. non-descript
54	2(Table)	..	(—)128,205	.. (+)128,205
..	..	..	(—)76,104	.. (+)76,104
54	4	8	353.165	.. 353,163
..	..	9(Total)	494,931	.. 497,931
55	Cattle Section (3)	..	replace	.. Replaced

Mechanised State Farm, Hastinapur

60	3(Table)	Col.V.	Acres md.	.. md.
61	1(IV)	3	sowing	.. sowings.
63	2(Table)	5(1954-55)	4.69 ..	.. 5.69
65	Last	1	The farm....seers	of The depreciation and interest to the tune of Rs.37,197/- per annum has
66	2(Table)	2	680,208	.. 680,205
68	2	3	(appended below)	.. (appendix)

Mechanised State Farm, Hempur

70	..	2(item No. 4)	180	.. 1.80
71	3(Table)	6(1956-57)	259—20—0	.. 259.20
73	.. 1.	6	stock ..	.. stocks.
73	3(Table)	8(1955-56)	1.0 ..	.. 1.9
74	3(II Table)	11(Total)	19,780	.. 119,780
75	1	5	accounts	.. account
75	4	13	Even	.. Ever
77	1	7	of the December	.. of December
77	4(item no. 5)—	Large	..	.. Larger
78	Last (item no. 3 4).	believed	..	.. belied

Page	Para	Line	For	Read
<i>Kamyar Farm</i>				
86	3	7	(Delete "with the.....also	be done")
86	3	10	opened	.. open
<i>Mechanised State Farm, Madhurikund (Mathura)</i>				
89	1	3	farms	.. farm.
91	2(Table)	Col.6	HM	.. H
"	"	Col. 7.	HM	.. M
92	1(Table)	3(1950-51)	(—)	.. (+)
93	3	6	believed	.. belied
93	3	6	flowerish	.. flourish
94	4	1	Rs.165,964	.. 1,66,005
94	4	2	Rs.1,45,141	.. Rs.1,46,280
95	7	2	Delete (,) Comma after	Cattle.
<i>Mechanised State Farm, Manjhra</i>				
97	2	25	1958	.. 1948
98	3(Table)	7	250.55	.. 950.55
99	5(Table)	2	1,33,959	.. 1,33,059
102	1(Table)	2	(—)62,404	.. (+)62,404
105	Cattle Section to be read.		after item No. 5	.. instead of 4
105	10	2	repairs remodelling..	repairs and remodelling
<i>Mechanised State Farm, Niblett (Bara Banki)</i>				
106	4	5	BANGAR	.. BANJAR
108	6(Table)	10	4391.19	.. 4391.12
112	2	6	engaged raising	engaged in raising
113	1	2	Scare	.. Scarce
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114	6	5	armers	.. farmers
114	8	2	189305-5-3	.. 1,89,301-5-3
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115	5	9	its discharges	.. It discharges

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121	2(Table)	5	3-5-8 30-5-8.
121	2(Table)	5	14-2-0 14-12-0
121	7(Table)	1	3,63	.. 3,63,002-0-0
122	5	1	effects	.. efforts.
123	4	2	most --	.. more
<i>Mechanized State Farm, Saidpur</i>				
124	1	4	way ..	.. away
124	3	3	This idea..	.. The idea
124	3	10	then ..	.. them
124	5	2	Mahrauni—Madhura	Mahrauni-Madaura
<i>Tractors and Machinery</i>				
134	3	2	Operation	.. Operations
137	2	9(Sl.8)	Maşure Spreader 8	.. manure spreader 10
141	6	6	funds replacement	.. funds in replacement
143	Item No. 19	..	Sultan care crusher	.. Sultan Cane-Crusher.
143	Item No. 25	..	(25) Assorted B. D. Implement—50	Item no. (23) Ford V-8 Station Wagon....1.
143	Item No. 23	..	——no. (23)	.. No. (25).
<i>Base Workshop</i>				
146	2	25	G.O. no. 4668/XIIE—5506-1950.	G.O. no. 4668/XIIE—506-1950.
148	1	6	it is with	.. and it is with
148	3	11	essential in	.. are essential in
149	8	4	Spare parts parts	.. Spare parts
<i>All Farms taken together</i>				
150	Heading of statement.		Statement showing the requirements of tractors for the Mech. State Farms PTTR Pradesh in the year 1950-51.	Statement showing the General information in respect of the Mech. State Farms Uttar Pradesh.
151	3	2	over ..	.. ever.
151	3	8	were ..	.. are

<i>Page</i>	<i>Para</i>	<i>Line</i>		<i>Read</i>
152	3	21	made many
152	4	2	lead led
153	2	18	until while
153	2	22	appreciated	.. appreciate
154	2	4	general machine	.. Several machines
155	2	7	former farmer
155	4	2	slowed slower
157	4(Table)	6	1506 1504.
159	3	12	and in
160	6	9	50 500
161	Item No. 6	..	Supervise	.. Supervision
162	Col. No. 7	13	120.50 112.50
162	P.S. (Under table)" ₄		Soil hay cereal hay
163	5 (4)	2	plus 20 per cent	.. plus 30 per cent
166	Table (Col. 1 3).	1	3.50 4.50
166	Table (Col. 3) 10	10	27.200 27.00
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167	8		Last extinction of	.. extinction or
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176	1	2	Vitual ritual
176	2	3	reitated re-iterated
177	3	2	hardly hardy
179	5	2	where were

<i>Page</i>	<i>Para</i>	<i>Line</i>	<i>For</i>	<i>Read</i>
180	3	4	Add after acclimatise	"These animals on the farms of the area for better results in the field".
180	4(Table)	6	Shahajiwal	.. Shahiwal
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180	4(Table)	9	Bhardawari	.. Bhiadawari
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184	Last	Last domicile docile
187	3	1 or for
189	last	last brans barns
190	9	1 conferred confined
193	6	3 against departments	..	.. against those departments
194	5	2 distinct	..	.. district
196	1	6 then	..	.. may
<i>Retrospect and Prospect</i>				
•				
197	2	6 Continue..	..	.. continues
197	2	30 made	..	.. make
198	1	21 Key farming	..	.. Ley farming
199	1	7 General	..	.. A general
199	1	23 fooder	..	.. fodder
199	1	39 lead	..	.. led.
199	2	3 rendered agriculture..	..	.. rendered to agriculture
200	1	21 Agriculture and Animal Husbandry Deptts.	..	.. Animal Husbandry Department
201	1	17 for	..	.. from
201	1	18 Rs.2,56,566	..	.. Rs.2,55,564
202	2	3 uniformed	..	.. un-informed
205	2	5 or	..	.. for
205	6	8 of	..	.. on
209	2	4 compassion	..	.. comparison

Statement Showing the Financial Results of the Various Mechanised State Farms Since their Inception

Year						(+) <i>Profit</i> or (—) <i>Loss</i>
1948-49	..	..	..	..	..	(—) 2,64,261
1949-50	..	..	..	..	..	(—) 5,14,267
1950-51	..	..	..	..	..	(+) 4,60,410
1951-52	..	..	..	..	..	(—) 5,60,999
1952-53	..	..	..	..	..	(—) 8,17,156
1953-54	..	..	..	..	..	(—) 6,83,190
1954-55	..	..	..	..	..	(—) 4,23,213
1955-56	..	..	..	..	..	(—) 4,00,917
1956-57	..	..	..	..	..	(—) 2,94,273
1957-58	..	..	..	..	..	(—) 4,40,967
1958-59	..	..	..	..	..	(—) 1,85,403

APPENDIX

Copy of D.-O. no. 2225, dated Lucknow, September 9, 1958 from Dr. R. N. Singh, Deputy Director, Mechanized State Farms, U. P., Lucknow to Sri S. S. Mehrotra, B.A., Under Secretary to Government, U. P., Animal Husbandry Department, Civil Secretariat, Lucknow.

This is in reference to your D.-O no. A-247/XII-G, dated August 22, 1958, regarding the working of Hastinapur Farm in connexion with the observations of the Prime Minister of India. The desired information is submitted hereunder :

1. It will not be possible to reduce the area of the farm without seriously affecting the economy of the institution. The total investment on the farm in the form of buildings, roads, channels, tube-wells and machinery is worth Rs.10,26,521 and the amount of depreciation and interest on this investment comes to Rs.79,156 which is nearly Rs.55 per acre. I should believe that most of these would continue to belong to the farm even when the area is reduced to 500 acres and, therefore, the depreciation and interest alone will amount to Rs.158 per acre. Although it would be possible for us to reduce the staff to some extent but the expenditure, shown above cannot be materially reduced and, therefore, the differences that are at present met with by a greater over-all production cannot be met by cultivating only 500 acres.

We maintain about 400 animals on the farm. The land is poor, low lying and alkaline. The area attached to the dairy is undulated and poor and, therefore, we will need more than 500 acres to produce only feeds and fodders for the cattle. The gain through the cultivation section in the form of bye-products like, sugarcane-tops, wheat *bhusa* and such other materials will also not be available and the losses in the cattle section which are already very heavy will increase further.

It would be clear from what I have said above that if the area is reduced to 500 acres production of seed and sugarcane will have to be stopped and only feeds required for the cattle will be grown. The farm has been losing year after year and this will only increase further.

2. If I understand correctly, by low productivity of milk at the farm you wish to indicate that the total per day production is low. If this is so, I have explained this point very clearly in my last letter no. 12125/II—8, dated April 26, 1958 wherein I have said that there is no market at Hastinapur and Mowana even for the small amount of milk that is produced on the farm. Milk need not be produced just for the sake of production. Low production is deliberate and is for want of a market. The production can be increased if a market is created.

I am afraid, that the Prime Minister has been given to understand that the Mechanized State Farm, Hastinapur is a dairy farm and the whole object of the farm is to produce milk. To

any one who may be under such an impression, production of 14 maunds of milk per day from an area of 1,400 acres and with all that investment would certainly look absurd. What is necessary is to remove that impression? It is not a dairy farm but a mixed farm and deals both in Agriculture and Cattle Breeding. We grow on the farm over one lakh maund of sugarcane besides, wheat, paddy, barley and oats etc. The table given below will give the total strength of livestock maintained, the number of animals in milk and production per head per animal.

Adult cows		Growing and suckling stock	Bulls	Bullocks	Total	
Haryana	..	48	61	26	74	209
Murrah	..	108	96	38	..	234
				Total	..	443

Adult cows	Cows in milk	Cows dry	Percentage in milk	Net average per head per day	Over all average per head per day	
				lbs.	lbs.	
Haryana	..	21.5	26.5	44%	7	3.11
Murrah	..	63.0	45.0	58%	11	6.5

Although this is by no means a creditable record, it is not very poor either and compares favourably with other farms.

The Haryana stock is not doing very well but it is improving and we will be able to build a good herd of cows and buffaloes at Hastinapur Farm. I might once again assure that if reasonable market can be created for milk at Hastinapur we will increase the milk production further without any extra expenditure on the part of the State. The average rate of milk obtained during the past several years has been about Rs.13 to Rs.14 per maund. This is inclusive of the expenditure on transport, distribution, manufacture and other miscellaneous items which means that the net return can easily be lower by about Rs.2 per maund or so.

3. I am afraid, I may not be able to furnish a satisfactory reply to the third question, i.e. why a scheme for the supply of milk to Delhi could not be worked out. As far as I know this aspect of the question was entrusted to the Co-operative Department and perhaps the Dairy Development Officer would be the right person to answer this query.

To summerise I may just say that this farm has been giving an annual loss of about Rs.1,00,000 a year. Barring natural calamities I hope to level it off in the next year or so. I am expecting some 50,000 maunds more of cane this year alone. If only 500 acres are left the losses will only be heavy. Besides the quantity of milk produced on the farm every day can also not be increased in future (if required to do so after some industries have been developed) if only 500 acres are left with the farm.

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PREFACE

At the advent of freedom there sprang many problems of dimensions. The partition of the country with its attendant loss of the rich wheat lands and of the tracts providing the best pastures of cows and buffaloes was one of the most serious consequences. The country as a whole was faced with grave shortage of food, fodder and good animals. Ways and means had to be found to tackle this situation.

The establishment of the Mechanised State Farms Organization, U. P., in the year 1947 with a view to grow more food and develop the livestock of the State was one of those steps to meet the challenge. And perhaps with a view to hasten the pace of progress and to improve and make such lands fit for cultivation which were hitherto considered to be unculturable and sub-marginal and also because the conventional bullock power could not do the job—mechanization was adopted. Large tracts of virgin land lying barren and eroded, saline and low lying covered with *Kans* and perennial bushes were broken and made to produce food. Large numbers of animals were also purchased and put on these farms to develop the livestock of the State. Besides cattle and buffaloes, sheep, goats and poultry were also introduced. In all these farms were brought within the ambit of this organization and research and development both in the field of Agriculture and Animal Husbandry was a part of the multifarious activities of the organization. While in the field of Agriculture the organization was called upon to multiply pure and pedigreed seeds, test different varieties of important crops, develop and supply fodders and manures; in the field of Animal Husbandry, it had to take up the improvement of different breeds of cattle and buffaloes, sheep and goats and poultry by upgrading and selective breeding. It had also been responsible for supplying pure bred bulls, bucks, rams and goats in large numbers to meet the ever increasing demands of the State. It also has to assist in projects of research on animals for nutrition and disease investigation, artificial insemination and cross-breeding, etc. etc.

Side by side with all these developmental and research activities the department had to present an yearly balance-sheet and account for the profits or losses. These balance sheets were drawn up on purely commercial lines—different from those followed by the farms of the Agriculture Department. Ever since the inception of the organization the collective Balance sheet of the various farms has been showing losses year after year.

Unlike the balance-sheets of similar farms belonging to other organizations the balance-sheets of this organization are included in the State appropriation accounts and are discussed every year by the Public Accounts Committee. Naturally the losses attracted the attention of the above named Committee and of the legislature and have become a subject of perennial controversy.

The Government have, therefore, been thinking for sometime of ways and means to cut down these losses if possible and if necessary to reorganize the entire set-up. Accordingly a committee consisting of the following officers was appointed by Government, *vide* Pashu Palan Vibhag's G. O. no. G-3181/XII-E—908-56, dated October 9, 1958 in order to go into the matter in detail and submit their recommendations to the Government:

(1) Sri H. B. Shahi, M.Sc., M. R. C. V. S., D. T. V. M.,
Animal Husbandry Commissioner, Uttar Pradesh.

(2) Dr. B. K. Mukerjee, Ph.D., Director of Agriculture,
Uttar Pradesh.

(3) Dr. R. N. Singh, M.Sc., Ph.D., Deputy Director,
Mechanised State Farms, Uttar Pradesh—*Convener*;
The terms of reference of the above Committee are as follows:

(1) To examine the causes of losses at each of the Mechanised State Farms.

(2) To suggest what steps should be taken to minimise the loss and to run the farms on sound financial lines.

(3) To suggest methods of evaluation of cattle at the Mechanised State Farms.

(4) To suggest, as to which of the activities of the farms can be classified as "Developmental" and which should be termed as "Commercial".

(5) To make experiments in growing fodder of different qualities suitable for different cattle in different areas.

(6) To suggest the relationship between these farms and the Department of Animal Husbandry and Agriculture.

(7) Whether these farms should specialise in breeding different kind of cattle in different farms.

The Committee was also authorised to make other suggestions for the improvement of these farms, even if they were not included in the aforesaid terms of references. It was further informed, *vide* Sri Mehrotra's D. O. letter no. 74166/XII-E (GEC)—908-59, dated November 25, 1958, that the aforesaid Committee may consider the question about Mechanised State Farm, Hempur, district Naini Tal also, if it so desired.

The Committee has made an earnest attempt to study and examine the various facts of the organization keeping in view the various terms of references and their considered views are set forth in the pages that follow. No claim is made regarding the completeness of the report in all respects but it is certainly hoped that it would be able to clear many doubts and apprehensions and suppress unformed criticism from different quarters. If the hope is realized this would by itself be a sufficient compensation for the labours put in. The Committee seeks no more. It is our fond hope that the implementation of the various recommendations would be made easy and the farms which taken collectively together form an unique organization in the country, would be greatly benefited and increase their utility to the State.

The submission of the report has been unduly delayed which is regretted. In parenthesis it might be added that this was only to be hoped. Such an important theme could not be dealt with lightly and brushed aside with perfunctory observations. The members have been busy with their routine work and they did their best to squeeze out the maximum possible time to give the report a presentable and factual shape.

The convener made contracts with the other members and a general line of drawing up of the report was chalked out. Collection of material was started on those lines.

Because of various factors the first meeting of the Committee was considerably delayed. This was first held in the office of the Director of Agriculture on March 18, 1959. Thereafter, the Committee met at the following places on the dates given against each:

(1) Mechanised State Farm, Bharari, on March 21, 1959.

(2) Mechanised State Farm, Saidpur, on March 22, 1959.

(3) Mechanised State Farm, Manjhra, on April 3, 1959.

(4) Mechanised State Farm, Andeshnagar, on April 4, 1959.

(5) Mechanised State Farm, Madhurikund, on April 8, 1959.

(6) Office of the Animal Husbandry Commissioner, Uttar Pradesh, Lucknow, on June 2, 1959.

The members of the Committee also visited the various farms of the organization according to the programme given below:

Name of the Mechanised State Farms	Date of visit	Name of the members in the visit
1. Hastinapur	20-11-'58	1. Dr. B. K. Mukerjee. 2. Dr. R. N. Singh.
2. Babugarh	21-11-'58	1. Dr. B. K. Mukerjee. 2. Dr. R. N. Singh.
3. Nilgaon	22-12-'58	1. Dr. B. K. Mukerjee. 2. Dr. R. N. Singh.
4. Hempur	27-1-'59	1. Dr. B. K. Mukerjee. 2. Dr. R. N. Singh.
5. Niblett	14-2-'59	1. Dr. B. K. Mukerjee. 2. Dr. R. N. Singh.
6. Arazi Lines	26-2-'59	1. Dr. B. K. Mukerjee. 2. R. N. Singh.
7. Bharari	21-3-'59	1. Sri H. B. Shahi. 2. Dr. B. K. Mukerjee. 3. Dr. R. N. Singh.
8. Saidpur	22-3-'59	1. Sri H. B. Shahi. 2. Dr. B. K. Mukerjee. 3. Dr. R. N. Singh.
9. Niblett	30-3-'59	1. Sri H. B. Shahi. 2. Dr. R. N. Singh.
10. Manjhra	3-4-'59	1. Sri H. B. Shahi. 2. Dr. B. K. Mukerjee. 3. Dr. R. N. Singh.
11. Andeshnagar	4-4-'59	1. Sri H. B. Shahi. 2. Dr. B. K. Mukerjee. 3. Dr. R. N. Singh.
12. Madhurikund	8-4-'59	1. Sri H. B. Shahi. 2. Dr. B. K. Mukerjee. 3. Dr. R. N. Singh.
13. Pashulok	8/9-5-'59	1. Sri H. B. Shahi. 2. Dr. R. N. Singh.
14. Kalsi	10-5-'59	1. Sri H. B. Shahi, 2. Dr. R. N. Singh.
15. Hempur	13/14-6-'59	1. Sri H. B. Shahi. 2. Dr. R. N. Singh.

The Committee wishes to express its thanks to the various managers and the Superintendents of the farms who took considerable trouble in collecting materials and taking the members round. Thanks are also due to Sri R. N. Pathak, Accountant of the Mechanised State Farms for his valuable help in the compilation of the report. He was appointed by the Government to

assist the convenor. The Committee also thanks Sri Govind Prasad of the office of the Deputy Director, Mechanised State Farms for collecting and scrutiny of the figures and Sarvsri Ali Akhtar, Steno to Deputy Director, Mechanised State Farms and W. S. Ceaser, Typist of the Mechanised State Farm, Organization for the ungrudging help they have rendered in typing ou the entire report.

INTRODUCTION

It was about the year 1913 that the Cattle Breeding work was started by the Civil Veterinary Department of the Uttar Pradesh Government by establishing two Cattle Breeding Farms—one at Manjhra in the Lakhimpur-Kheri District and the other at Madhurikund in Mathura District. These two Cattle Breeding Farms continued to function under the control of the Veterinary Department up to the year 1921, when it was decided to transfer this work to the Agriculture Department. A whole-time Deputy Director of Agriculture, Incharge Cattle Breeding Operations, U. P., with his Headquarters at Mathura was appointed for this work in the State. Later on, in the year 1931 the Headquarters of the Deputy Director of Agriculture, Incharge Cattle Breeding Operations were shifted from Mathura to Jhansi and in addition to the cattle breeding work of the State, he was also assigned the Agriculture Development work of the Bundelkhand Circle. He was then designated as Deputy Director of Agriculture, Bundelkhand Circle and Cattle Breeding, U. P. and at this stage, one more Cattle Breeding Farm at Bharari was established and another farm at Hempur, district Naini Tal, was transferred to his charge from Tarai and Bhabar Estate. Subsequently two more Quarantine Stations were established in order to rear the young bull-calves purchased from Punjab. Thus, there were four Cattle Breeding Farms and 2 Quarantine Stations under the charge of the aforesaid Deputy Director of Agriculture, Bundelkhand Circle, Cattle Breeding, Jhansi, viz. :

- (1) Manjhra Cattle Breeding Farm (district Lakhimpur).
- (2) Madhurikund Cattle Breeding Farm (district Mathura)
- (3) Bharari Cattle Breeding Farm (district Jhansi).
- (4) Hempur Cattle Breeding Farm (district Naini Tal).
- (5) Bainpur Artauni Quarantine Station (district Agra).
- (6) Ata Quarantine Station (district Jalaun).

Besides the above, there were three important Cattle Breeding districts for intensive Cattle Breeding work each under the charge of a Cattle Inspector.

These were:

- (1) Mathura.
- (2) Mainpuri.
- (3) Kheri.

Thus two departments were functioning side by side: (1) the Agriculture Department, and (2) the Veterinary Department. The former was looking after Cattle Breeding work and the latter was engaged in the prevention and treatment of diseases. This arrangement of Cattle Breeding work with the Agriculture Department continued nearly up to the year 1944, when it was decided to transfer this work to the newly constituted Animal Husbandry Department of the State. From the year 1944 up to the year 1948, there were no major changes except that an area of about 800 acres of waste land was taken over at Babugarh (district

Meerut) from the Defence Department in the year 1946 with a view to establish a Livestock and Dairy Farm there.

Due to the partition of the country in the year 1947, large fertile grain producing tracts and all renowned breeds of cattle and buffaloes were lost to the country with the result that the State was confronted with the heavy shortage of food and paucity of good breeds of livestock. The pressure of the demobilised soldiers of the last war was there and was being tackled when all of a sudden this pressure was multiplied many times by the unexpected influx of refugees who were uprooted from their place of birth in millions. There was scarcity of food and there was need to settle these unfortunate people who had lost all their belongings for no fault of theirs.

The need for self-sufficiency in food could not be over-emphasized and Government felt that the future welfare of the State lay solely upon agricultural progress and a secure supply of food for human being and fodder or cattle. The immediate and imperative need, therefore, demanded an earnest and persistent endeavour to overcome the shortage of food, fodder and good quality cattle as speedily as possible by mobilising all possible resources. The pressure on cultivated areas was heavy. But vast areas of waste land were awaiting reclamation and subsequent development as agricultural farms, which mechanisation alone could do. It was considered that through the adoption of the tried mechanised methods suitably adjusted to our conditions, agricultural production in the State could be stepped up and induced to march forward. Agriculture, in our present stage demands an all round development, such as better and more production of both food and fodder and better livestock and more milk. It was felt that this development could be brought about only through the creation of large mixed farms running efficiently with mechanical appliances like tractors and allied implements forming a vital part of a well co-ordinated system of power farming. It was clear that such large areas of marginal and sub-marginal lands which were difficult to reclaim but were required to produce improved seeds and fodder for livestock could only be tackled through mechanisation and it was for the Government to give a lead to the progressive agriculturists in creating such a system and to show that this system when used judiciously would throw open new areas and make them fit to produce food for the growing population. The farms mentioned before had large areas but only little was under cultivation, the bulk being unsuitable for economic production of crops. Under such circumstances it was finally decided that seven of the existing farms, viz., Bharari, Babugarh, Madhurikund, Manjhra, Hempur, Niblett and Nilgon should be mechanized. Since these farms were to provide good quality improved seeds on the one hand and pedigree livestock on the other, it was decided to run them as mixed farms. These Mechanised Farms were to serve the most useful purpose of raising pedigree seeds for stocking the Basic Seed Stores, which were being established gradually and to produce pedigree livestock to meet the growing needs of the State. Accordingly, Government, *vide* G. O. no. 2468/XIIE-259-D-47, dated June 19/24, 1948, sanctioned the scheme of Mechanised State Farms organisation and decided to mechanize the following Government farms :

- (1) Bharari Cattle Breeding Farm.
- (2) Babugarh Cattle Breeding Farm.
- (3) Madhurikund Cattle Breeding Farm.

- (4) Manjhra Cattle Breeding Farm.
- (5) Hempur Cattle Breeding Farm.
- (6) Nilgaon Agriculture Farm.
- (7) Niblett Agriculture Farm.

A whole-time Deputy Director was appointed to control the activities of the 7 mechanised State Farms and Sri T. H. Naqvi, who was formerly working as Deputy Director of Agriculture, Western Circle, Meerut, was appointed to this post with his Headquarters at Lucknow.

Subsequently, the following five farms were established on wasteland, *vide* Government Orders noted against each, thus making a total of 12 Mechanised State Farms under the control of the Deputy Director Mechanised State Farms :

- (1) Arazi Lines, district Varanasi, *vide* G. O. no. 269/XII-D-682-1948, dated February 15, 1949.
- (2) Saidpur, district Jhansi, *vide* G. O. no. 6482/XII-D-68-49 dated December 17, 1949.
- (3) Kamyar, district Gonda (Bara Banki), *vide* G. O. no. 402/XII-E-683-49, dated March 13, 1950.
- (4) Andeshnagar, district Lakhimpur-Kheri, *vide* G. O. no. 1269/XII-D-670-48, dated June 24, 1949.
- (5) Ganjaria, district Lucknow, *vide* G. O. no. 439/XIIE-703-1949, dated March 2, 1950.

Later, it was decided by the Government, *vide* G. O. no. 878/XII-D-347(11)-51, dated November 8, 1951 to transfer the Ganjaria Farm to the control of the Director, Animal Husbandry, Uttar Pradesh, in order to establish a dairy near the State Capital. This farm was accordingly transferred from this scheme and placed under the control of the Director of Animal Husbandry in December 1951 and thus there remained 11 farms to function in the scheme. Subsequently, in the year 1954, *vide* G. O. no. C-11/XXXII-B-775-1949, dated March 31, 1954 Hempur Farm was also transferred to the control of the Deputy Director, Tarai State Farms and in its place Hastinapur Ganga Khadar Farm, district Meerut, was included in this scheme.

The activities of Kamyar farm have since been abandoned in view of the decision of the Government, *vide* G. O. no. 1204/XII-E-625-1950, dated April 27, 1955 to close this farm and so this organization is at present controlling the activities of 10 farms only.

AIMS AND OBJECTS OF THE SCHEME :

These farms were to operate as multi-purpose projects of the State. They were to run as mixed farms with different development assignments. The main aim was to utilize these farms as the store house of improved seeds of grains and livestock and to disseminate the same all over the State for rapid development in both the sectors. The farms were expected to undertake work on allied problems, e.g. development of culturable waste, fodder resources and to undertake researches in crop and livestock production and management.

INITIAL DIFFICULTIES :

The Mechanised State Farms Organization has been labouring under a number of difficulties since its very inception. It must be frankly admitted that the State had but little experience in the field of large-scale mechanised farming at the time of launching this scheme. Besides, many strongly unfavourable factors were there which had to be slowly overcome to put the organization on a sound footing. The organization, as it has emerged out today, is the result of a combined effort of more than one department which played important roles in the initial stages and all must have a share in its achievements as well as failures. The following are the most important factors which play significant roles in the success or the failure of the project :

- (1) Land.
- 2) Machinery—
 - (i) Tractors and implements.
 - (ii) Irrigation equipment and facilities.
- 3) Livestock.
- 4) Buildings.
- 5) Means of communication.
- 6) Staff.

Each of these factors will find a place in the discussions on the individual farms and there is an exclusively separate chapter on tractors and machinery but a brief note on each of the above will not be out of place here.

LAND :

The total area that came under the purview of this Organization at one time or the other was 24,000 acres. (The present area is 13,135 acres only). Total number of farms handled were 12 (at present there are only 10 running farms). Of these 5 were new farms, i.e. started after the establishment of this Organization and 7 were running farms. The total area under cultivation on all the seven farms prior to their transfer to this Organization was nearly 1,250 acres. This alone gives some idea of the quality of the land and its environments. In general the land was very very poor all over, and rightly so as one could not expect to establish large farms on good land already under cultivation. (The only place where this was tried was Arazi Lines, Varanasi and it was a great failure inasmuch as 1,530 acres were taken to start with but of this 1,184.43 acres had to be released to the original tillers on account of serious agitation. There has been a huge loss to State Government on this account). An idea of the quality of land and associated difficulties can only be understood by actually seeing the farm and the improvements brought about can be appreciated only by those who have ever seen the areas before they were taken over. The value of the land has since improved by at least 20 lakhs of rupees and it is really creditable that large areas lying waste and considered to be unculturable are now producing valuable food at economic costs.

Bulk of the area is put under varieties of grain crops to supply seed to the Department of Agriculture. The Department purchases the produce and pays at the rates as on May 31 which is generally the cheapest in the year. In its own turn the Department disposes it off on *sawai*. This

Organization has, up to the year 1957-58, supplied 2,60,000 mds. to the Department and *sawai* of this comes to 3,25,000 mds. the net gain being 65,000 mds. which may be easily valued at a moderate flat rate of Rs.15 per md. worth Rs.9,75,000 of which not more than 10 per cent should be the expenditure on distribution and collection.

MACHINERY :

There is a separate chapter on machinery. It would be sufficient to mention here that this Organization had no hand in the purchase and selection of the equipment. It may also be stated that the then prevailing conditions (soon after the war there were no stocks of standard material and there was great difficulty in getting such machines) allowed but little choice to the authorities to select and standardize. Experience in mechanized farming was also lacking. Tractors and implements of so many makes and models found their way and their maintenance became very expensive.

Similarly all sorts of pumping plants and engines were had, many of which were not meant for tropical climates. Their running and maintenance was not only expensive but their defective service did not permit smooth working and, therefore, production suffered.

In spite of all this, however, there is no doubt that some of the wastage could have been saved if sufficient care had been taken.

In brief it may be mentioned here that—

(a) the Organization was over capitalized and had to incur considerable losses on this account;

(b) that because some of the machines were unsuitable they not only increased cost of maintenance but reduced production due to failure at time of need ;

(c) that because of lack of standardization the maintenance cost has been high and proper upkeep has become difficult;

(d) that a large number of machines were transferred in an out of order condition and at higher book values. Their repair cost has been high and the organization has been put to considerable loss on account of their higher valuation ; and

(e) with the notable exception of two farms, i.e. Madhurikund and Bharari none of the farms had any facilities for irrigation. This has slowly developed but even today large areas are lying unirrigated. However, these facilities are being constantly improved.

LIVESTOCK :

All livestock maintained on the farm was provided by the Animal Husbandry Department. Soon after partition it had become essential to get quickly as many animals of the famous breeds like the Hariana and the Murrah as possible to take up livestock development work in the State, Large-scale purchases (worth Rs.15 lakhs) were made within two years from the Punjab and naturally a good number of poorer animals were taken in. None knew of their pedigree nor was there a chance to know the same.

A herd of Kenkatha cows (84 adults and 53 young stock including the new born—total 137) was purchased from Madhya Bharat at a cost of Rs.85,000 or Rs.774 per adult. Kenkatha is a poor milker and is more of a draught animal. The buffaloes that came cost the farms over Rs.825

per animal. The Department of Animal Husbandry decided to continue keeping of breeds like the Kherigarh, Ponwar, Tarai and Bhadawari, etc. etc., and they are being maintained. This organization was to cater to the needs of the Department of Agriculture and Animal Husbandry by multiplying the stock which the two departments provided to enable them to concentrate on development work in the State and it has done this satisfactorily. Ordinarily it should have been accepted from the very beginning that draught and dual purpose cows are not meant for economic milk production and that heavy losses were not only natural but were bound to be there.

It may also be stated here that the bulls and heifers supplied to the Department are valued at prices far below their cost of production. The farm, therefore, loses in two ways—prices obtained from sale of milk are much below the cost of production and so also is the case with the live-stock supplied to the Department.

BUILDINGS:

Buildings were required to house the staff, the cattle and the offices and godowns, etc., etc. Barring exceptions there is an acute scarcity of quarters for staff on most of the farms. Although it is unfortunate but it is a fact that on most of the farms the cattle have been provided with better accommodation than the staff and until this day the staff are living in thatched or tin-roofed houses even on risk of life. The saddest part of it is that they are paying 10 per cent of their pay as rental for these improvised dwellings.

On some of the farms there is still need for more accommodation for the cattle, but buildings have become a source of loss at 3 of the farms.

At Arazi Lines Farm, Varanasi, the buildings for cattle and godown are bigger than required. These were planned to meet the needs of a 1,300 acre farm which has now shrunk to an area of 345 acres only. Losses on this account are discussed elsewhere.

At Hastinapur Farm the buildings were constructed by the Colonization Department with an ambitious plan and while buildings worth Rs.1,64,318 are surplus to its needs at the town block there is scarcity at the main farm $1\frac{1}{2}$ miles away.

At Babugarh Farm a sum of about Rs.3,25,000 was spent on repairs and renovation of the old buildings by the Agricultural Engineering Department. This was all a waste. The Executive Engineer and the Assistant Engineer and the Overseers, etc., were dismissed for wasting the money but this did not help this Organization in any way. The Department goes on spending money on its depreciation and interest as if the buildings are of the value shown in the books. Over and above it has to constantly keep spending more and more on repairs and maintenance. The inconvenience caused to the livestock and the extra expenditure on cleaning etc., is not accounted for.

At Niblett Farm, buildings worth Rs.56,435 were constructed by the Agricultural Engineering Department in the year 1950 which were defective and useless. These are lying since then and have neither been repaired nor alternative accommodation provided to the organization.

At the Mechanised State Farm, Manjhra, a cattle-shed is lying incomplete for the last three years because there is some dispute between the contractor and Public Works Department.

At the Mechanised State Farm, Bharari, big and expensive barns were made for tobacco curing and after the termination of the scheme these were put on the books of the farm and it has to pay all interest and depreciation on the same. The farm also maintains at its own cost the buildings which house the Animal Nutrition Research Laboratories and cattle-sheds, etc.

At Madhurikund the farm owns the canal road valued at Rs.55,700 and pays interest and depreciation besides the maintenance cost although the road is in greater use of the public. Similar is the case with some roads and irrigation channels at other farms also and these do not in any way make an exhaustive list.

MEANS OF COMMUNICATION :

There has been a constant improvement in this field on most of the farms and barring Andeshnagar in Lakhimpur-Kheri (about 4 miles kachcha), Niblett in district Bara Banki (about 200 yards kachcha piece) and Arazi Lines in Varanasi (2 miles Katcha) all farms are now connected with a pucca road most of which is reasonably good. These farms are in out of way places and means of communication are a very important necessity. The main reasons for the failure of Kamyar Farm was lack of means of communication. Lack of communication or bad and dusty roads reduced the value of the farm produce and told heavily on the life of the transport vehicles. The cost of fuel, oils and other things taken to the farms also increased, thereby raising the cost of production of crops.

STAFF:

In the beginning the staff was mostly recruited from the Agriculture and Animal Husbandry Departments and the mechanical staff working on the tractors and workshop was all had, from the Department of Agricultural Engineering.

The last 3 Deputy Directors were from the Agriculture Department and the present one has been recruited by the Public Service Commission direct. His position as at present is an anomalous one. He is supposed to belong to the Department of Animal Husbandry and the budget of the Department is also controlled by the Animal Husbandry Department. But his and other posts of the Department are supposed to be ex-cadre; yet for purposes of confirmation, etc., rules of the Agriculture Department apply to him.

The Managers of the farm who are gazetted officers mostly come from the Agriculture Department. The only thing which needs mention about them is that in spite of the fact that they have been here for the last ten years not one of them has been confirmed. Most of them have not even been approved by the Public Service Commission and efforts so far made in this direction have all failed. They carry a feeling of disappointment and frustration. The Managers have worked in the past under most trying conditions, living for years together in thatches under most unhealthy environments and have certainly put in hard work. Some have not even until this day been provided with suitable quarters. They do deserve something better.

The Veterinary and Poultry staff working on these farms is borne on the cadre of the Animal Husbandry Department. These members of the

staff particularly the Veterinary Officers and the Veterinary Assistant Surgeons are not happy to stay on the farms. Firstly because farm work is hard and exacting and does not allow Sundays and holidays as is generally had elsewhere and secondly because they have no chance of outside practice. Most of these farms are situated in out of way places and do not provide modern amenities. People do not bother so much about their low or high income, but the dissatisfaction comes because of the comparison they make with the incomes and facilities of others. These Veterinary Doctors, therefore, do not like to stay on the farms and they try to get themselves transferred from the farms even before they have joined them. As a result not unoften many of those rejects who are not wanted in the Department are sent as a matter of punishment or they go only in stop-gap arrangements. The doctors knowingly show slackness in their work and give ground for complaint so that the farm itself may get fed up and ask for their transfers. As a result of all this there have been too many and too frequent changes which can be seen from the following statement.

Details of the Veterinary Officers posted at the different Mechanized State Farms

Serial no.	Name	Period worked on the farm		Total stay in Yrs. M.D.
		From	To	
<i>Babugarh</i>				
1	Sri Z. A. Ansari ..	March 31, 1951	January, 1955	3 10 0
2	Sri R. N. Chowdhary ..	February, 1955	March, 1955 ..	0 1 0
3	Sri Z. A. Ansari ..	April, 1955 ..	November, 1956	1 7 0
4	Sri G. P. Srivastava ..	November, 1956	November, 1956	0 0 1
5	Sri B. T. Chandramani, ..	December, 1956	March, 1957 ..	0 3 0
6	Sri R. G. Mehrotra ..	April, 1957 ..	June 1958 ..	1 3 0
7	Sri D. P. Verma ..	July, 1958 ..	To date.	
<i>Madhurikund Farm</i>				
1	Sri R. S. Singh ..	March, 29 1951	November, 1952	1 8 0
2	Sri Manzural Haq. ..	November, 1952	August, 1953 ..	0 9 0
3	Sri J. D. Bist ..	August, 1953 ..	January, 1955	2 5 0
4	Sri Harbance Singh ..	February, 1955 ..	June, 1956 ..	1 4 0
5	Sri D. S. Chowdhary ..	July, 1956 ..	December, 1956	0 5 0
6	Sri Rameshwar Dayal ..	December 18, 1956	May 14, 1957	0 4 13
7	Sri S. N. Sharma ..	May 15, 1957 ..	June, 1958 ..	1 1 0
8	Sri R. C. Gupta ..	October 4, 1958	To date ..	

Serial no.	Name	Period worked on the farm		Total stay in Yrs. M. D.
		From	To	
<i>Hastinapur Farm</i>				
1	Sri M. N. Molasi ..	January 1, 1952	January 31, 1952	0 1 0
2	Sri Baldeo Sachdev ..	January 1, 1953	March, 1953 ..	0 2 15
3	Sri S. S. Ahluwalia ..	April, 1953 ..	April, 1953 ..	0 0 15
4	Sri R. P. Tangri ..	May and June ..	May and June ..	0 1 0
5	Sri K. I. Alexander ..	July, 1953 ..	July, 1953 ..	0 0 15
6	Sri J. P. Singh ..	August, 1953 ..	December, 1953 ..	0 4 0
7	Sri D. P. Verma ..	January 12, 1954	May 22, 1955 ..	1 4 11
8	Sri S. C. Manglik ..	May 23, 1955 ..	August, 1957 ..	1 3 0
9	Sri O. P. Gupta ..	January 20, 1958	To date ..	
<i>Bharari Farm</i>				
1	Sri K. R. Saxena ..	April 4, 1951 ..	January 3, 1954	2 9 0
2	Sri B. N. Singh ..	January 2, 1954	April 23, 1955 ..	1 1 23
3	Sri K. P. Srivastava ..	April 23, 1955 ..	July, 1955 ..	0 3 0
4	Sri Indra Gupta ..	July, 1955 ..	October, 1955 ..	0 3 0
5	Sri Mahipal Singh ..	October 13, 1955	December, 1957 ..	2 2 0
6	Sri Mohammad Wasi ..	January, 1958 ..	December 1958 ..	0 11 0
7	Sri D. P. Gangawar ..	December, 1958	May, 1959 ..	0 5 0
8	Sri R. M. Singh ..	Just joined.		
<i>Nilgaon farm</i>				
1	Sri R. S. Raghuvanshi ..	February, 1952 ..	August, 1953 ..	1 6 0
2	Sri Dilbhadr Singh ..	September 1953	December, 1953 ..	0 3 0
3	Sri S. H. Naqvi ..	December, 1953 ..	December, 1955 ..	2 0 15
4	Sri J. P. Sharma ..	January, 1956 ..	January, 1956 ..	0 5 0
5	Sri K. L. Sahni ..	July, 1956 ..	November, 1956 ..	0 4 0
6	Sri M. E. Charles ..	November, 1956	January, 1957 ..	0 2 0
7	Sri M. N. Zuberi ..	January, 1957 ..	April, 1957 ..	0 3 0
8	Sri J. P. Sharma ..	April, 1957 ..	November, 1957 ..	0 7 0
9	Sri B. P. Singh ..	December, 1957 ..	to date-	

Serial nc.	Name	Period worked on the farm		Total stay in
		From	To	
	<i>Arazi Lines Farm</i>			Yrs. M. D.
1	Sri Udai Narain Singh ..	February 4, 1952	August 1957 ..	5 6 20
2	Sri Yogendra Singh ..	September, 1957	To date	
	<i>Hastinapur Farm</i>			
1	Sri R. K. Gurg.* ..	October 9, 1958 ..	To date ..	0 7 23
	<i>Andeshnagar Farm†</i>			
1	Sri Ganesh Prasad Srivastava.	September 29, 1953	October 25, 1954	1 0 27
	<i>Manjhra Farm†</i>			
1	Sri S. P. Kikshal ..	December 13, 1950	February 11, 1952	1 2 0
2	Sri G. P. Srivastava ..	January 1, 1953..	July 17, 1953 ..	0 6 17
3	Sri D. B. Singh ..	February 16, 1955	April 5, 1955 ..	0 1 21
4	Sri J. M. Dhirmalani ..	March 28, 1955 ..	March 28, 1956 ..	1 0 1
	<i>Babugarh Farm</i>			
1	Sri Tahawar Ali ..	February 7, 1948	October 18, 1949	1 8 12
2	Sri Parasar Dhondial ..	October 8, 1949..	June 7, 1952 ..	2 7 17
3	Sri Hasmat Ali Qureshi ..	June 2, 1952 ..	November 8, 1954	1 5 57
4	Sri Ganesh Prasad Srivastava.	November 2, 1954	January 9, 1957..	2 2 8
5	Sri Qadam Singh Balyan..	December 30, 1956	June 7, 1957 ..	0 5 9
6	Sri Krishan Lal Shani ..	May 24, 1957 ..	August 10, 1958..	0 9 23
7	Sri S. P. Agarwal ..	August 8, 1958 ..	To date ..	0 5 24
	<i>Bharari Farm</i>			
1	Sri R. S. Misra ..	April 19, 1949 ..	June 17, 1950 ..	1 2 0
2	Sri T. S. Shastri ..	June 7, 1950	April 20, 1951 ..	0 10 4
3	Sri Mohammad Ali Khan ..	September 1, 1951	July 30, 1954 ..	2 11 0
4	Sri S. A. Khan ..	July 24, 1954 ..	October 19, 1956	2 2 26
5	Sri S. A. Rizvi ..	October 17, 1956	October 26, 1958	2 0 10
6	Vacant. ..			

*The Veterinary Officer had been looking after this work in the past.

†The farm did not require the services of a V. A. S. after the dates given above.

At the Mechanized State Farms, Arazi lines and Nilgaon the Veterinary Officer looks after the work of the V. A. S. also.

Serial no.	Name	Period worked on the farm		Total stay in Y. M. D.
		From	To	
<i>Madhursikund Farm</i>				
1	Sri K. S. Dwivedi ..	..	October 15, 1949	..
2	Sri Sheo Tahal Singh ..	October 6, 1949..	May 20, 1950 ..	0 7 15
3	Sri R. N. Varma ..	May 20, 1950 ..	August 31, 1950	1 3 12
4	Sri D. P. Yajava ..	August 25, 1950	January 13, 1953	2 4 24
5	Sri M. S. Tomar ..	February 11, 1953	January 12, 1955	1 11 9
6	Sri Q. S. Balian ..	March 12, 1955 ..	December 22, 1956	1 10 11
7	Sri Jagraj Singh ..	December 19, 1956	August 20, 1957	0 8 2
8	Sri O. P. Pathak ..	December 3, 1957	to date	

These statements are self-explanatory and need no comments. Such arrangements do not permit the staff even to get acquainted with the livestock with which they work and none can be held responsible for any lapses as most of them are removed before the results of inseminations can even be tested. The consequences of such an arrangement are a foregone conclusion.

Besides the Veterinary Officers are transferred and granted leave without even the knowledge of the Farm Managers and they are not under the control of the managers or that of the Deputy Director, Mechanised State Farms.

Our lot in the Poultry Section has not been so bad but it has not been without difficulties either. For months the section has remained poorly staffed even during the busiest seasons. There is, therefore, a genuine need to find a way out.

It must be appreciated that the cattle of these farms form the foundation of our future programme of development. They, therefore, deserve better attention and should get the best that we can provide. Some suggestions as to how we can do it are given below :

The present Veterinary Officer is not an employee of the Farm. He is there to inseminate the farm cattle and also the cattle of the neighbouring villages. He is also to look after the work of the sub-centres lying several miles away, and is supposed to remain away from his headquarters for several days in a month. He cannot, therefore, look after the farm work efficiently.

The Committee recommends that the Farm Veterinary Assistant Surgeon should be one who is trained and experienced in Artificial

Insemination work also. He should look after the entire work of the section and should be responsible for the herd. He should also be Incharge of the Artificial Insemination Centre and the field staff should get only semen from him for village work.

Only really good men be selected for these posts who have a reputation for hard and sincere work. The Veterinary Assistant Suregons can even be consulted before they are posted and only those who are eager to work on the farms should be sent there. The Organisation hardly needs half a dozen persons and it should be possible for the department to provide this small number. These men once appointed should be there at least for five years and in order to compensate their loss due to non-availability of practice and as an incentive and also because there is extra work being given they should get an allowance of Rs.50 per mensem. The Committee feels that this arrangement would work ; failing this, these men (Veterinary Officers) should be put on the cadre of the organization itself and the Deputy Director is convinced that he can manage the things within two or 3 years at the most.

2. If these things are not possible the practice of inseminating the animals artificially should be dropped and natural service be allowed. It would be at least as good as now if not better and much of the trouble due to human element will be gone.

3. The lower staff, e.g. the stockmen, compounders, should be borne on the cadre of the farm itself.

Regarding poultry staff also only the best men should be provided on these big farms which act as feeders for a large part of the State.

A word about the tractor mechanics will not be out of place. Some of these mechanics are really good but as they are not educated (i.e. cannot effectively read or write) they have not been able to pass the departmental examination and so they are not eligible for confirmation and their increments have been stopped. As a result there is hardly any difference between their pay and that of the operators. Exceptions should be allowed in such cases and efficient mechanics should be exempted from passing the examinations. For future only such hands should be taken in who besides being good mechanics should be capable of taking up the examination.

The tractor staff in general has not been as good as it should have been and this has been a great handicap. Most of the operators were inexperienced and unqualified. They were only working as cleaners in the Department of Agricultural Engineering from whom the machines and the staff was had in the year 1950. Just before the actual transfer of the staff the Agricultural Engineer, Lucknow made whole-sale promotions and a large number of cleaners were promoted to the post of operators. The authorities of the Mechanised State Farms had a feeling that all good hands were withdrawn and the reject of the department were transferred to this organisation. The transfer orders came as a boon to the Department of Agricultural Engineering inasmuch as it provided an opportunity to them to get rid of their surplus and broken machinery and useless men. Such mass scale promotions at the eve of the transfer was neither wise nor fair. However, things are being adjusted as best as possible.

There is nothing particular to mention about the other field staff.

At the Headquarters of course there is yet another post of a very anomalous nature and that is that of the Accounts Officer. The post is borne on the cadre of the Agriculture Department. In other words if this post falls vacant one of the senior accountants of that Department is to be promoted and sent to this organization. It also means that the accounts staff of this organization, i.e. the accountant and other hands are not entitled to any promotion on the basis of their seniority either in this department itself or the Department of Agriculture. This is ridiculous. It is, therefore, recommended that the accounts officer of this organization should be borne on the cadre of the Mechanised State Farms Organisation itself so that there is room for promotion of the staff working in this section.

ACHIEVEMENTS :

So far the scale used for the measurement of the achievements of this organization has been the profit or losses in terms of rupees and naye paise as exhibited in the annual balance-sheets. Notwithstanding the *strictly non-commercial nature* of the activities of the organization, viz. developmental and research the manner in which these annual statements are prepared are neither justified nor are followed even for strictly commercial projects. The farms of the Agriculture Department follow a different set of rules in the preparation of these accounts and the farms of the Animal Husbandry Department also are not put to the same stress and scrutiny. It is also evident that the developmental activities of the farms of the two departments are comparatively more limited than those of the Mechanised State Farms and they definitely occupy better situations particularly those of the Agriculture Department. The farms of the Agriculture Department do not have any cattle except on a few ones and those of the Animal Husbandry Department maintain only milch breeds. The draft and dual purpose breeds are left over for the farms of this organization only.

Ridiculous as it may look but it is still a fact that different methods are being followed by the different departments of the same State in preparation of the balance-sheets of the farms running under them. Although there is no comparison between the farms of the Agriculture Department and those of this because of wide variation in the quality of land, situation, susceptibility to natural calamities like floods and droughts, nature of activities, facilities for irrigation, and presence and absence of livestock and their breed, etc., etc., but even so if the balance-sheets of the farms of this organization are prepared on the same lines it would give an altogether different picture. These farms which at the moment show losses will begin to show profits. Some of the major differences in the preparation of the balance-sheets of the two departments are given below :

(1) Classification of commercial and non-commercial items of the farm. All farms in the Agricultural Department classify their assets in these two categories. In most places pucca buildings, inspection houses, if any, pucca road, fencing, etc., etc. are all classified as non-commercial items and the farms do not bear any interest or depreciation on the same.

(2) Even the full pay of the staff is not taken into account and a good portion is supposed to be treated as non-commercial.

(3) On many of the farms one watchman goes as non-commercial for every 50 acres of cultivated area.

(4) There are similarly other items as growing of special crops for which compensation is allowed.

(5) There is difference in the rate of interest and depreciation which is charged on different investments.

(6) On farms where dairy animals are kept 20 per cent of the total expenditure incurred is supposed to be non-commercial and is treated in that manner.

(7) Compensation is allowed on every acre of crop that is put under experiments.

(8) Surplus equipment, if any, is not accounted for in the balance-sheet.

(9) No charges are made in the balance-sheets on account of pension contribution of the staff.

On the other hand on the farms of the Mechanised State Farms Organization every expenditure is taken in the balance-sheet irrespective of the fact as to whether or not the item can be treated as commercial. There is no compensation of any kind not even for the experiments of the Agriculture Department which are carried on the farms for which they themselves claim compensation. All capital whether required or not, e.g., surplus machinery and buildings, all staff and even the investments made by other departments in the past in connection with research schemes, etc. are all taken into account. This has been briefly indicated before and there is hardly any need for repetition here.

However, this has been the way the achievements have been measured and valued so far. The organization has been criticised in and out but only on these grounds. It is really most unfortunate. It has been most misguided and harmful. False values have come to the forefront and the purpose for which these farms are there and the real values have not only fallen in the background but have been completely lost sight of. Real and correct criticism should have been that the quality of seed and animals produced is below the standards expected, the amount of research work done has been far from sufficient, more land should have been developed and so on and so forth. That would have been the correct and an intelligent appraisal of the work and worth of the organization. It would not be advisable for any businessman to take up sub-marginal land and do cattle breeding in out of way places with draft and dual purpose animals and still hope to earn an interest of $4\frac{1}{2}$ per cent on the investments. It would be still more inadvisable to run the farms in the manner they are run with a view to make money on them.

Then if directly earned money is not the measure of the efficiency what actually is? What is the value of the organization and why must the exchequer keep on meeting the losses and how long can it continue to do so?

The real worth of all research and developmental work lies not in the value of what it produces by itself but in the gains accruing to the people on that account. An example will not be out of place here. On a research farm after years of work the plant breeder is able to produce a handful of seeds of promise. The value of these seeds cannot in any

way equal the money spent in all these years. A handful of wheat seed produced stands against an expenditure of several thousand rupees. But when these seeds are multiplied, and disseminated in the countryside and even if it improves the production by a maund per acre the value goes in lakhs and that is the real value. This increase goes to the pocket of the farmer and not that of the Research Farm which produced it. The gains to the State through the new varieties of cane, wheat, gram, barley, etc., etc., are all such gains and owe their origin to the handful of seeds which were produced after years of labour and tons of money.

In case of cattle and buffaloes the value of good bulls is definitely even more than this. The entire expenditure in developing a breed is very high and is time consuming. It should not be expected that all this expenditure can be met with by sale of these animals particularly in this country of small farmers of meagre resources and where people are not yet pedigree minded.

A good bull will improve milk yield and draft quality of its progeny. This basic fact has to be accepted or else there is no purpose in maintaining the department and the sooner it is closed the better.

A single bull will produce at least 40 calves in a year of which 10 per cent may die out and of the rest, half may be male and half female, i.e. 18 males and 18 females. It has been checked that there is easily a difference of Rs.50 to Rs.200 or more between the price of the male calves from an average bull supplied by the Department and that of an average local bull. Even at a moderate Rs.10 per calf the improvement comes to $18 \times 10 = 180$ within a year. It may be presumed that on the average a bull will give four years of service (it will give more) and so in four years the improvement through the male calves alone will come to $\text{Rs.}180 \times 4 = 720$.

Similarly in four years the bull will give $18 \times 4 = 72$ female calves or cows. If there is even a slight increase in the milk yield of these daughters because of the use of the improved bull—say $1/3$ lb. every day—every cow registers an increase of 100 lb. of milk in a lactation or the increase amounts of $72 \times 100 = 7,200$ lb. in one single lactation and taking only 4 successful lactation from a cow the total direct increase comes to 28,800 lb. and this valued at 5 lb. a rupee comes to Rs.5,760

The figures taken above are much below the average gains that are expected but all the same it can be seen that the contribution of a single bull is of the value of over Rs.6,000 in its lifetime. Some of these bulls may not be able to add to the milk but ample margin has been kept for such factors in the above calculations.

To many skeptics these arguments would appear like the story of "SHAIKH CHILLI" and many others will say that it is a jugglery of figures. They only show their ignorance of basic scientific facts. These are hard facts and all research and development schemes are taken up only with an aim to reach such targets.

It is only on this account that the dairymen say that 'The bull is half the herd. In U. S. A. single bulls have fetched prices as high as forty-three thousand dollars and in Great Britain even stud rams have cost several hundred guineas. This is because they know the value of pedigree and realize the importance of research.

At Pashulok, Rishikesh, the quality of the wool of the progeny of the Bikaneri sheep has been improved and the yield has been nearly doubled

in the first generation and nearly trebled in the second. The expected gains by the use of the stud rams produced at the farm cannot be measured by the difference in the income and the expenditure of the Pashulok farm.

These examples have not been cited with a view to beg condonation of the recurring losses of the organization and it is not going to serve any purpose in that direction. These are there only to illustrate and bring in front the value of the work and to educate all those who are concerned as to what to expect and what to look for. Direct profits of the farm are of secondary value rather these are false values and must be given only the place and the importance it deserves, i.e. to check wastage and inefficiency in the working. The front place must, however, be given to the quality of work, the quality of livestock, the quality of seed produced and the quality of research work done.

It must be frankly admitted that over emphasis on the profit and loss accounts have come in the way of long range development plans and has done more harm than good. The organization is ideally suited to take up research work both in the field of Agriculture and Animal Husbandry and wisdom lies in making the maximum use of it.

In order, however, to assess as to how far the objectives for which the organization came into being has been fulfilled it is necessary to present here the physical figures which may give an idea of the work done. In its mere ten years of life the organization has broken and reclaimed over 11,000 acres of land which was lying waste and unproductive. (Some of this land had to be abandoned for the time being on account of various reasons). The following figures may be of interest (up to 1957-58 only):

1. Waste land reclaimed	..	..	..	11,000 ac.
2. Food and seed grains produced	..	..	..	4,89,463 mds.
3. Vegetables produced	..	..	..	40,300 mds.
4. Sugarcane produced	..	..	..	29,65,000 mds.
5. Dry fodder produced	..	..	..	9,08,500 mds.
6. Green fodder produced	..	..	..	29,79,600 mds.
7. Breeding bulls issued	..	..	..	4,206
8. Rams and bucks issued	..	..	..	1,326
9. Poultry birds issued	..	..	..	53,300
10. Eggs issued	..	..	..	3,90,000
11. Milk produced	..	..	..	1,75,200 mds.

NOTE :

The transfer of Mechanized State Farm, Hempur to Tarai State Farm and of Hastinapur to this Organization and again of Ganjari to Animal Husbandry Department have not permitted exact and upto date compilation. The above figures indicate the production on the farms that remained in this Organization only.

According to the balance-sheet (up to 1957-58) the up to date financial position of the Organization is as follows :

Loss in cattle section	..	..	..	47,32,232
Profit in cultivation	..	..	..	5,19,961

(17)

	Net loss ..	42,12,271
Total interest paid to Government .. ..	..	15,13,758
Total depreciation paid to Government .. ..	..	16,70,716
	Total ..	31,84,474

Value of improvement on land 20 lakhs

Main break up of losses.

Loss on account of bulk culling of livestock 3,50,000.

Loss on account of surplus buildings and machinery.....

Recurring normal losses including losses on account of natural calamities.

Another service that the Organization can justly claim to its credit is the healthy employment that it provides to more than 1,500 persons.

CLARIFICATION OF OBJECTIVES

The various terms of references have been dealt with in the chapters that follow. Before entering the discussions, however, it must be stated here and now that the Committee fundamentally disagrees with one basic conception contained in G. O. no. G-3181/XII-E-908-1958, dated October 9, 1959, which reads as follows :

“The question of reorganization of the Mechanised State Farms Organization with a view to converting them into profitable units has been engaging the attention of Government for sometime”.

The Committee is strongly of the opinion that the organization is not a commercial concern and profit making is not its objective. If that were so the entire concept of working would have been different. Such land would not have been selected and cattle breeding would not have been taken in such remote areas where there is little or no market for milk. It follows, therefore, that it is purely a developmental and research organization and the value of such an Institution must not be judged by the profit or losses which the annual balance-sheets exhibit. It is ridiculous to expect of a Research-cum-Development Institution to pay interest on the investments. The income which accrues is only a by-product. There is, however, nothing wrong if even such an Institution is able to meet part or a major portion of the expenditure incurred on it or earns a profit. It only goes to the credit of the management, but development and research activities must neither be retarded nor sacrificed for the sake of profits. The Committee has regretfully reached the unfortunate conclusion that undue emphasis has been laid on profit and losses in dealing with the Mechanised State Farms Organization and it has *definitely come in the way of the progress of the developmental plans*. It has harmed both Agriculture and Animal Husbandry activities, retarded development of land and cattle and research work on allied problems.

Doubtless, all out effort should be made to effect economy in expenditure and to obtain maximum production and income, but the objective of establishing the organization should be clearly kept in mind and those must not be allowed to be sacrificed on any altar.

The Government will, therefore, have to decide once for all whether they are running these farms for making profits or for developmental research work. It is perhaps not necessary to reiterate that research and profit making do not go hand in hand. This Committee is of the definite opinion that development of more and more of unproductive land which is lying waste, production of improved seeds, improved livestock and poultry and search of solutions of various Agricultural and Animal Husbandry problems are problems that have immense bearing on the Agricultural economy of the State and can be tackled by the State alone. The Mechanized State Farms Organization is best suited to handle these problems. There is need to expand such work and it may require more and more investments. The Committee is certainly not in favour of any wastages but undue emphasis on the commercial aspect of the organization will be detrimental to the interests of the State as it has been hitherto.

MECHANIZED STATE FARM, ANDESHNAGAR, DISTRICT LAKHIMPUR-KHERI

SITUATION

This farm is situated at a distance of about 7 miles from Railway Station Lakhimpur-Kheri (N. E. R.) A bifurcation on the Lakhimpur-Bhira Road at 4 miles 6 furlongs leads to the farm. The first 2½ miles from the Railway Station is pucca cemented road, another one mile is ill-maintained Kankar Road and the rest of it is Kacha and is in very bad shape.

HISTORY

Prior to its acquisition for this farm, this land belonged to Raja Sanoo of Mahewa and was under the management of Court of Wards. It was lying *banjar* at the time it was taken over by this Organization in 1949-50. It is said that about 20-25 years earlier parts of this land were under cultivation, but, due to the unhealthy climate and spread of some epidemic most of the cultivators died and the few that remained, shifted to other nearby villages. Thus abandoned, it had become *banjar* again.

An area of 1144.89 acres, was acquired by the Government on May 13, 1949 for which compensation amounting to Rs.25,187.81 was paid.

GENERAL INFORMATION

The farm was started with a view to produce pedigree seeds and to multiply and upgrade selected breeds of cattle and the local livestock respectively. It was decided to rear female calves of Murrah and Haryana breeds at this farm till they calved and then to transfer them to other farms where prospects for the sale of milk might be better.

Some other details about this farm are given below:

Total area of the farm—	..	..	1144.89 acres.
1. Cultivated area ..	..	858 acres	This includes 125 acres under river bed).
2. Area lying waste ..	..	..	168.31 acres.
3. Forest ..	..	..	16.92 ,,
4. Buildings, roads, channels, etc.	..	..	101.66 ,,
Total	..	..	1144.89 acres.

Investments	Rs.	Rs.
Original cost ..	.. 25,159.81	} 73,938.81
Land.	..	
Improvements ..	.. 48,779.00	
Irrigation channels ..	.. ..	.. 57,525.00
Buildings ..	.. ..	.. 2,30,960.00
Roads and fencing ..	.. ..	.. 1,321.00
Bullocks ..	.. ..	.. 3,861.00
Tube-wells ..	.. ..	.. 66,182.00
Tractors ..	.. ..	.. 68,063.00

				Rs.
Trucks and vehicles	..	..	..	8,403-00
Other machinery	..	..	..	3,735-00
Office equipments	..	..	..	1,678-00
Implements	..	..	..	32,803-00
Dead Stock	..	..	..	8,077-51
			Total	5,56,849-32

The farm has two sections, viz. (i) Cultivation Section, (ii) Cattle Section. Each of these sections is dealt below separately:

CULTIVATION SECTION

General—The area under revenue producing crops indifferent years is given below :

Year	Net cropped area
1949-50	397 acres.
1950-51	673 ..
1951-52	603 ..
1952-53	742 ..
1953-54	746 ..
1954-55	736 ..
1955-56	748 ..
1956-57	720 ..
1957-58	751 ..

The up to date total investment on the land is as per details given below:

			Rs.
(i) Compensation paid	..	..	25,159-81
(ii) Improvements	..	..	48,779-00
(iii) Construction of Irrigation channels	..	..	59,525-31
		Total	1,33,464-12

On the entire area of the farm it calculates to Rs.116.56 per acre and on the cultivated area it comes to Rs.177.71 per acre.

The land of this farm is sandy loam in texture, and poor in organic matter and is of average fertility. The river-bed area which is heavy and fertile is fit for paddy cultivation but is subject to floods.

The main crops being grown at this farm are sugarcane, wheat, *rai*, paddy, *bajra* and *jowar*.

IRRIGATION

The farm has four tube-wells 2 in North Block and 2 in South Block, run by Oil Engines. Each of these has a discharge of about 25,000 gallons per hour. The area commanded by the above tube-wells is as under:

	Acres
Tube-well no. 1	182
Tube-well no. 2	182
Tube-well no. 3	208
Tube-well no. 4	120
Total	692

PRODUCTION

Cost of Production per acre and per md. are given in the following table:

Years	Area in acres	Total production in terms of grains	Total expenditure	Cost of production per maund	Production in terms of grain			Cost of production per acre
					M.ds.	s.	ch.	
1949-50 ..	397	3,226	50,063	16.54	8	5	6	126.04
1950-51 ..	673	10,239	87,861	8.55	15	8	13½	130.35
1951-52 ..	603	8,918	1,30,027	14.56	14	31	9	215.63
1952-53 ..	742	14,316	1,71,331	11.97	19	11	12	331.05
1953-54 ..	746	13,751	1,96,923	14.32	18	11	0	263.61
1954-55 ..	736	15,771	1,85,801	12.00	20	29	9	251.42
1955-56 ..	748	16,156	2,34,835	14.50	21	23	15	313.53
1956-57 ..	720	14,364	2,50,117	17.41	19	36	14	346.90
1957-58 ..	751	11,441	2,03,434	17.90	15	18	11	273.57

The last two years, specially 1957-58 have been bad for the entire State as far as the Agricultural Production is concerned. It will be observed from the above table that the cost of production per acre has been rising almost steadily from 1949-50 to 1956-57 (Interest and Depreciation charges in the first few years have been very low as may be seen on the next page). The causes of this rise are as follows:

1. Rise in rates of interest and depreciation from year to year.
2. Rise in the cost of fuels, spares and machinery resulting into heavier expenditure on these items year after year.
3. Increase in wages is another factor responsible for increased cost of production.

4. The introduction of paid weekly holidays to daily paid labourers as per provisions of labour laws had added a sum of Rs.2,695 to the total expenditure.

5. Increase in the D. A. of monthly paid labourers on establishment is another factor for increase in the total expenditure to the extent of Rs.1,000 per annum.

6. The farm had been burdened with surplus and unwanted machineries worth Rs. on which a sum of about Rs. had to be paid as depreciation and interest every year.

FINANCIAL RESULTS

The financial position of this section since inception is given below:

Year	Financial results		Interest	Depreciation
	Profit	Loss		
	Rs.	Rs.		
1949-50	7,275	..	..	..
1950-51	69,291	..	3,992	7,721
1951-52	26,234	..	4,246	8,673
1952-53	46,763	..	7,468	8,898
1953-54	..	7,127	12,501	31,314
1954-55	10,660	..	14,809	13,904
1955-56	..	12,406	20,459	56,298
1956-57	11,189	..	24,013	28,383
1957-58	..	28,285	24,482	31,189
Total	1,71,412	47,818	1,11,970	1,86,380

It will be seen from the above that barring some losses in three years this section has been giving profits. The last three years have, however, been very bad for the entire State.

The farm is faced with a severe threat of constant water erosion which is taking place over a large area due to the sloping nature of the fields and light texture of the soil. There are 2 streams passing through the farm and many of the plots are sloping towards them. Efforts are being made to check this menace.

CATTLE SECTION

This section occupies a minor place at this farm. Transport of milk from this place is well-nigh impossible during the rains and hence only growing stock is now being maintained. At the moment only 27 animals are there but this strength is to go up to 150 or more. The past financial results of the section are given below:

Year	Average no. of cattle maintained	Profit or loss
1950-51	286	(-) 53,647
1951-52	107	(-) 24,500
1952-53	73	(-) 31,128
1953-54	35	(-) 15,929
1954-55	22	(-) 5,360
1955-56	35.5	(-) 3,584
1956-57	14	(-) 4,954
1957-58	11.5	(-) 1,025
Total		(-) 1,30,228

With the present policy that is being followed there is no possibility of any loss on account of maintenance of the animals, but the indirect expenditure in the form of interest and depreciation on buildings and supervision cost, etc., add to the tune of Rs.1,096 per annum. The share per animal will depend on the number maintained and is rather heavy for the present.

SUMMARY

The farm was started in the year 1949-50 by acquiring 1144.89 acres of banjar land from Court of Wards, Mehewa Estate. The land was reclaimed and much of it has been slowly levelled.

During its existence as Mechanized State Farm, the financial position of the farm has been as follows:

Year	Agriculture section	Dairy section	Net Results	Depreciation	Interest
1949-50	7,275	..	7,275	..	..
1950-51	69,291	(-) 53,647	15,644	7,721	3,992
1951-52	26,234	(-) 24,500	1,725	8,673	4,246
1952-53	46,763	(-) 31,128	15,635	9,898	7,468
1953-54	(-) 7,127	(-) 15,929	23,056	31,831	13,031
1954-55	(-) 10,660	(-) 5,360	5,300	14,016	14,805
1955-56	(-) 12,406	(-) 3,584	(-) 15,990	56,385	21,196
1956-57	11,189	4,954	16,143	28,403	24,049
1957-58	28,285	(-) 1,025	(-) 29,310	31,381	24,496
Net results	1,23,594	(-) 1,30,228	(-) 6,634	1,88,308	1,13,283

It will be seen from the above that the *pro forma* accounts of the farm have so far exhibited a total loss of Rs.6,634. The financial results of the farm include a sum of Rs. 1,88,308 as depreciation and Rs.1,13,283 as interest at a high rate of 4½ per cent. The appreciation on the land of this farm according to the assessment of the value of the land made by the Revenue Authorities amounts to Rs.90,522. It will thus be seen that the financial results of the farm have been quite satisfactory and even after meeting the heavy losses of the cattle section and interest and depreciation

on the surplus machinery the farm has earned an interest on the total investments at the rate of nearly $4\frac{1}{2}$ per cent. The Committee is convinced that the farm is doing well and with the facilities suggested below further improvements will be effected both in development and financial aspect.

RECOMMENDATION

1. *Agriculture section*—Early erection of *Bandhies* along the river banks is very important to save the soil from further erosion. This may be taken up as quickly as possible. The Deputy Director, Mechanised State Farms, the Committee understands is already negotiating on this point with the Government. Such *Bundhies* will not only check erosion and save soil fertility from being washed down the stream but will also gradually tend to improve the level of the slopy fields.

2. *Levelling*—The soil of the farm is light and subject to easy erosion. Considerable area has been levelled already but there is need for more levelling. Better levelling will reduce the chances of erosion and will economise the use of irrigation water and will be of definite assistance in getting better yields.

3. There are at present four tube-wells. These have to be run either by help of oil engines or by tractors. These means are expensive as compared to electric power. Efforts have, therefore, to be made to take the advantage of the electric line which is to be installed by the Hydel Department in this area. The running of the pumps have to be switched over to electric power as soon as the same is available.

4. Some of the fields are not fed by any pucca channel. As the soils is very light there is greater wastage of water. Pucca channels may be provided to such fields.

5. The streams flowing through the farm are circuitous and shallow. There is need to deepen them and where possible these may be straightened. This will clear out the rain water quickly save damage from floods and also make larger areas available for paddy cultivation for which the river-bed soil is very good. The weeds in the river-bed also need control.

6. The Banjar land adjoining the forest should be planted and the forest should be tapped as best as possible for all possible revenues.

7. The boundary of the farm can be planted with *babool* interspersed with *shisham* or *sal*. This will provide fencing, demarcation and also income.

RECOMMENDATION

Cattle section—This farm has at present a small number of 27 cattle. The farm being 9 miles away from Lakhimpur-Kheri City has difficulties in the matter of disposal of milk but good facilities exist at the farm for the maintenance of cattle as the farm has sufficient pasture land. In order to stabilize the economy of the farm and to maintain a herd most economically it seems necessary that its strength should not be less than 150, so as to make proper use of the fodder and *bhusa* produced at the farm. The farm will also get farmyard manure which is so badly required here.

General—There is an urgent need to improve the communications by making the road *pucca*. The farm supplies nearly 64,000 mds. of sugar-cane every year to the factory and transportation of the same become a problem. Besides the above quantity several lakh maunds of cane produced by the cultivators and Pipra Farm are also carried by this road. Great difficulty is experienced during the rains when the roads are muddy and for days under water. Efforts have to be made to get the road made *pucca*.

MECHANISED STATE FARM, ARAZI LINES, VARANASI

SITUATION

This farm is situated at a distance of 20 miles from Varanasi Cantt. Railway Station (N. R.) and 10 miles from Raja-ka-Talab Railway Station (N. E. R.) on the Varanasi-Allahabad route. It is on the borders of Varanasi and Mirzapur districts and land from both the districts are included in the farm area. The Farm is connected by road from Varanasi of which the last two miles are *katcha* and the rest 18 miles are *pucca*.

HISTORY

Originally the land formed a Military camping ground which was leased out to "THEKADARS" or contractors. They in turn rented out bulk of the land to local cultivators. The Farm was started in the year 1948-49 and the total area acquired for the purpose was 1530 acres. The acquisition of all this area lead to serious troubles and agitation from the cultivators and ultimately (1950-53) bulk of the area (1184.43 acres) had to be returned to the original tillers. Farm crops standing on this land at the time of its return were given over to the cultivators without getting any compensation for the same. Thus now only 345.57 acres remain with the farm of which 115.62 acres are in Mirzapur district and 229.95 acres in Varanasi. It may be mentioned here that 188.91 acres of the land released in the district of Varanasi now comprises a co-operative farm managed by the cultivators who originally owned that land.

GENERAL INFORMATION

The farm was started with a view to grow pedigree seed of improved varieties for supply to the cultivators of the Eastern districts.

It was also desired to improve the local breed of cows of this area (*Gangatri* or *Shahbadi* breed) and *Murrah* buffaloes for supply of bulls and pure-bred animals to the local farmers. However, due to reduction in the area of the farm the number of cows had to be reduced and no buffaloes could be introduced. The farm at Arazi Lines is the only Mechanised State Farm in the Eastern districts and the only one in the State where this breed is being kept. Other details of the farm are as follows:

Total Area	..	..	..	..	345.57	acres
Area under cultivation	..	..	..	..	310.00	„
Area under gardens	..	..	..	..	3.59	„
Area under roads, buildings and threshing floor, etc.	..	..	..	..	31.98	„
<i>Investments —</i>						Rs. a. p.
Cost of land	..	..	..	..	2,43,419	6 0
Cost of improvement on land	..	..	..	..	8,640	1 3
					2,52,059	7 3
Total	..	..	..	..	2,52,059	7 3

				Rs.	a.	p.
Irrigation channels	..	..	..	25,721	0	0
Buildings	..	..	..	2,42,301	0	0
Roads and fencing	..	..	..	17,660	0	0
Machinery and implements etc.	..	..	..	56,666	0	0
Bullocks	..	..	..	5,614	0	0
			Total	3,47,962	0	0
			Grand Total	6,00,021	7	3

The farm has two sections viz., (i) Cultivation Section and (ii) Cattle Section and it would be advisable to discuss each of these sections separately.

CULTIVATION SECTION

General—The area under cultivation in different years is given below:

Year	Area of the Farm in acres	Area under cultivation in acres	Remarks
1948-49	1,530	1,500	Was mostly with the cultivators.
1949-50	1,530	1,475	
1950-51	1,030	995	
1951-52	534.48	500	
1952-53	345.57	310	
1953-54	345.57	310	

The reduction in the area from 1,530 acres to 345.57 acres was due to the return of land to the cultivators which was done during 1950-51, 1951-52 and 1952-53 as detailed below:

1950-51	..	..	500 acres to cultivators of Mirzapur District.
1951-52	..	..	495.52 acres to Cultivators of Mirzapur District.
1952-53	..	..	188.91 acres to Co-operative Farm, Varanasi District.
Total	..	..	1184.43 acres.

The total investment on the land which is still in possession of the farm comes to Rs.2,77,780 which includes the compensation paid, cost of improvement of the land and layout and construction of irrigation channel, etc., or Rs.805 per acre and calculated on the basis of cultivated area it comes to Rs.896 per acre.

The land is mostly level and is of an average quality. It is, however, poor in organic matter but conducive to treatment.

The main crops of the farm are gram, barley wheat, pea ,paddy and *bajra* and *juar*, *oats* and *barseem* are cultivated for fodder for cattle.

IRRIGATION

The farm has had until last year almost no arrangements for irrigation. In the beginning it had been planned to lift water from the Ganges for which two huge pumping plants had been purchased. With the reduction in the area of the farm which included all the area on the river bank this programme had to be abandoned. Construction of a tube-well was started by the Agricultural Engineer in the year 1950-51 but it could not be completed and its discharge also was very poor (10-12 thousand gallons an hour). There is now a *State Tube-well* on the farm which is run by the Irrigation Department and it has now been possible from this year to get water from this well. This well supplies water both to the Farm as well as to the villagers and the supply to the farm is far from sufficient to meet its full requirements. Efforts are, however, in progress and it is hoped that this difficulty would be removed before the next *Rabi* Season.

PRODUCTION

Cost of production and other details are given in the following table. It may be noted that the farm does not grow any sugarcane or for that matter any other cash crop:

Year	Total production in terms of grain			Total expenditure in cultivation section			Cost of production per maund			Production in terms of grain per acre		Cost of production per acre	
	Mds.	s.	ch.	Rs.	a.	p.	Rs.	a.	p.	Mds.	Rs.		
1952-53	3,957	39	0	45,519	0	9	11	8	3	12.77	147		
1953-54	5,665	29	0	53,965	8	0	9	8	5	18.28	174		
1954-55	5,033	30	0	48,678	6	10	9	10	9	16.24	157		
1955-56	7,096	3	0	72,081	11	11	10	2	9	22.28	237		
1956-57	5,988	6	0	73,478	3	10	12	4	4	19.28	237		
1957-58	5,562	17	8	95,153	59		16	84		17.94	307		

The last three years have been rather bad for the entire state and particularly the last one (1957-58). It would be observed from the above table that the cost has been increasing year after year and it has been highest during the last three years. This is more because of high depreciation and interest charges as compared to the previous years (actual figures are given below). Other reasons for increased cost of production are—

- (i) High cost of fuel oils and of spares and machinery expenditure on these items has been increasing continuously.

(ii) *Increase in wages*—There has been an increase in wages without commensurate returns. According to labour laws now enforced on all farms since the last agricultural year, casual labourers on daily wages are being allowed weekly paid holidays. This has increased the expenditure by about Rs.3,000 per year.

(iii) Similarly there has been an increase in the dearness allowances of all labourers on the establishment since August 1, 1957. The increase on this account comes to about Rs.1,300 per year.

FINANCIAL RESULTS

The financial position of this section since its inception is given below:

Year	Losses	Depreciation	Interest	Remarks
	Rs.	Rs.	Rs.	
1948-49 ..	7,997	..	..
1949-50 ..	7,266	1,498	1,900	Increased losses in the year 55-56, and onwards were because of increased interest and depreciation charges only.
1950-51 ..	15,247	2,914	2,262	
1951-52 ..	10,004	2,825	1,890	
1952-53 ..	16,997	3,412	1,848	
1953-54 .	15,429	6,283	2,718	
1954-55 ..	6079	7,606	4,693	
1955-56 ..	46,719	13,459 18,109	19,011 32,009	These figures stand for the charges of the previous years which had not been levied on account of non-receipt of valuation from Agriculture Engineering Department.
1956-57 ..	18,018	12,151	21,213	
1957-58 ..	25,214	11,03	20,352	

It is clear from the above that the section has always been giving losses. The main causes for the losses are discussed below:

The losses in the first year were because part of the land was acquired in November and much of it had already been sown. The farm spent money on watching but it was later decided to let the cultivators get the harvest. The balance of the losses were on account of maintenance of bullocks, etc. and charges on establishment. Agitation and disturbances continued until 1952 and even later. All this is of course by the way and the main causes which are responsible for the losses are:

(a) *Lack of Irrigation*—Now that irrigation has been provided and the same is expected to become sufficient from the next *Kharif* or *Rabi* there would be no losses in this section.

(b) *High interest on cost of land*—As said before the per acre cost of cultivated land comes to Rs.896 and at the rate of 4½ per cent the interest charges amount to Rs.40.18 per acre per year as against Rs.6 per acre prevalent in the locality. The extra expenditure amounts to Rs.10,595 for the farm.

(c) *High interest on cost of buildings*—As said before the initial area of the farm was 1,530 acres. Buildings like bullock shed, seed godowns, office buildings and buildings for the storage of oils, lubricants and miscellaneous articles were planned and constructed to meet the needs of this entire area. But this acreage was later reduced to almost 22 per cent of the planned area. The expenses on account of depreciation and interest on account of these buildings come to Rs.51 per acre.

(d) *Expenditure on surplus machinery*—The details of the machinery and how these were acquired has been dealt with in a separate chapter dealing with tractors and machinery. It would only suffice to say here that the surplus and unwanted machines have been of the value of Rs.35,339 and on an average the charges on account of depreciation and interest on the surplus machines has been Rs.3,534 and Rs.1,590 per year respectively. Total interest and depreciation on account of tractor and machinery only (both surplus and required) amount to Rs.40 per cultivated acre.

It would thus be seen that the indirect charges in the form of land rent (Rs.40—18) interest and depreciation on buildings (Rs.51) interest and depreciation on tractors and machinery (Rs.40) alone amount of Rs.131.18 per cultivated acre. Add to it the charges on account of supervision (Rs.31) per acre and this comes to Rs.162.18 per acre as against an actual loss of Rs.151, Rs.58 and Rs.81 per acre in 1955-56, 1956-57 and 1957-58 respectively in the last three years. The expenses on supervision could certainly be further reduced if the area was larger as almost the same staff could have sufficed for a larger area.

From the above it appears that under the circumstances the farm was placed in, i.e. dry conditions, it had done fairly well. The future is bright. Water for irrigation is now available, surplus machinery has been removed and it is recommended that surplus building be declared non-commercial for they are there for no fault of the management. This section is bound to run on profit.

DAIRY AND CATTLE SECTION

The Farm maintains a herd of *Gangatri* or *Shahabadi* breed of cows. Some 350 animals were purchased by the Animal Husbandry Department from the villages mostly from Ballia District in the year 1949-50. Animals of this breed are found in some of the Eastern districts of Uttar Pradesh and are also available in good numbers in Chhapra, Arrah and Shahabad districts of Bihar. The breed was hitherto unknown. Arazi Lines Farm is the only one where the State Government are trying to improve this breed of cattle. The work done has been excellent and is highly promising. The breed has become very popular and there is a great demand for

the animals of this breed now. The details of production are given below:

Year				Total no.	Milking average in lbs.	Overall average in lbs.
1950-51	..	..	..	350	4.2	2.2
1951-52	..	..	..	373	5.9	2.9
1952-53	..	..	..	293	6.9	3.4
1953-54	..	..	..	243	6.2	3.6
1954-55	..	..	..	151	7.4	4.4
1955-56	..	..	..	204	8.3	5.4
1956-57	..	..	..	214	8.3	5.1
1957-58	..	..	..	186	9.3	5.5
1958-59	..	..	..	158	12.0	above 8 expected for the year.

The average of 12 lbs. over the year may probably be the highest for all farms of the State for the cow of dual purpose breed and perhaps for all breeds. Better feeding and management has increased the calving percentage and has induced early maturity in the heifers. The average age at which the heifere are now calving is below three years.

The financial position of the section is given below:

Year	Loss in	Depreciation	Interest	Remarks
	Rs.	Rs.	Rs.	
1948-49 ..	..	..	..
1949-50 ..	(-) 24,728	..	950	
1950-51 ..	(-) 6,656	2,915	2,262	
1951-52 ..	(-) 58,018	2,825	1,890	
1952-53 ..	(-) 24,371	3,412	1,848	
1953-54 ..	(-) 77,513	6,282	2,717	
1954-55 ..	(-) 30,400	1,335	928	
1955-56 ..	(-) 78,814	4,720	10,419	These figures stand for the charges not levied in the past years.
		11,000	19,118	
1956-57 ..	(-) 38,963	1,693	7,475	
1957-58 ..	(-) 38,147	4,676	7,334	
	(-) 4,64,298	38,858	54,941	

This section has also been giving losses year after year. Cattle rearing and milk production are in general unprofitable professions. The losses increase still further if there is absence of a good market for milk and if the herd is to be raised with the idea of improving the same. The main reasons which have lead to these losses at the Arazi Lines farm are discussed below:

(a) Heavy initial purchases brought in some poorer animals also and maintenance of such animals was a source of loss in the first few years.

(b) Such animals had to be ultimately culled out because of their poorer yield and also because the area of the farm was reduced which made maintenance of large numbers difficult. The initial heavy cullings done in the year 1952-53 when 173 animals had to be culled and auctioned inflicted a loss of Rs.98,864 in auction and Rs.20,650 on their maintenance.

(c) Reduction in the area made it necessary to purchase large quantities of fodder from outside and this also added to the losses for about a year or more.

(d) *Low rate of milk*—Milk produced on the farm has to go to Varanasi town at a distance of 20 miles from the farm. The rates at which milk has to be sold is far below the cost of production. The following table gives the cost of production of milk and the rate of sale:

Year	Cost of production per maund of milk			Income per maund		
	Rs.	a.	p.	Rs.	a.	p.
1950-51	37	7	9	3	10	5
1951-52	38	8	2	9	15	2
1952-53	28	10	6	15	0	2
1953-54	33	10	5	15	3	10
1954-55	20	12	2	16	9	6
1955-56	21	0	8	12	0	0
1956-57	20	8	0	13	11	0
1957-58	24	12	3	15	0	11

The exceptionally poorer rates in the first two years are because of lack of transport facilities which have now improved (only two miles of the road now remains *katcha*) and the rates are better. There is, however, still a big gap between the cost of production and the rate of sale.

The present high cost of production is because of rise in the price of concentrated foods like gram, barley, bran and oil-cake and higher rate of wages to labourers which has increased without any rise in the price of milk.

(e) Depreciation and interest on buildings. As said, before, the strength of the herd had to be reduced because of reduction in the area of the farm. Some of the buildings became surplus on this account. Interest and depreciation is, however, paid on all these buildings. The expenditure on account of interest and depreciation on the buildings, that fall in the share of this section comes to over Rs.12,000 per year or about Rs.65 per animal per year. In other words every animal young or old has to pay a house rent of about Rs.5-8 per month. This is of course exclusive of light and water taxes.

(f) While talking of buildings it may be further added that a section of the buildings is used by the Department of Animal Husbandry for doing artificial insemination work of the block and also for training of bulls in Artificial Insemination work which are sent out for breeding after they have been trained. The total value of such building comes to Rs.23,034.62. Expenditure on maintenance of these buildings, including their repairs and charges on account of interest and depreciation are met by the farm without charging any rental from the Department which uses them.

(g) Lack of any pasture land. All stock is completely stall fed which also increases the cost of production.

FUTURE

As said before cattle rearing is not a paying proposition. It is, however, the duty of the State to improve the livestock and supply improved pure-bred animals to the cultivators. The indirect benefit is so huge that direct losses of a few thousand rupees a year are insignificant. The section should not be expected to earn interest on the capital investment.

It would be commendable even if the section is able to meet the direct expenditure incurred on it. The herd is very promising and the future prospects are bright. Any reasonable amount of labour and money spent on it will be worth its while.

RECOMMENDATIONS

CULTIVATION SECTION

1. *Irrigation*—The present arrangements do not meet the need of the farm adequately. It is, therefore, recommended that more water should be made available from the tube-well than is being done now. The Deputy Director Mechanised State Farms had had a talk with the Executive Engineer Irrigation concerned and the latter has promised to increase the supplies. It would, however, be necessary that the incomplete tube-well constructed by the Agricultural Engineering Department and which is now lying idle and is on the land now being run as Co-operative Farm be transferred to the Irrigation Department who should keep it as a stand-by and run it in peak season to meet the needs of the Co-operative Farm. This will release much of the pressure on the tube-well now being used and the total needs of the farm can then be satisfied easily. The Deputy Director, Mechanized State Farms has already moved the Government for this and the Committee recommends that this may be approved at the earliest. The tube-well now lying idle would also be saved and the money spent on it will not become infructuous.

2. The farm owns irrigation channels worth Rs.26,721. These channels were constructed in the year 1953 and the farm has paid on this item Rs.6,781 as interest and Rs.6,945 as depreciation alone. These channels are now utilized by the Irrigation Department for supplying water both to the Farm and to the cultivators. The Irrigation Department is now responsible for the maintenance of these channels. These should, therefore, be taken out of the books of the farm and transferred to the Irrigation Department. The Deputy Director, Mechanised State Farms has moved the Government for their approval and the Committee recommends that the Government may be pleased to accord their approval at the earliest.

3. The land on which these channels stand and the farm roads are all being used by the public. These may remain in the books of the farm but the farm should not be required to pay any interest on the cost of such land.

CATTLE SECTION

1. The chaffing of fodder, grinding of concentrates and pumping of drinking water, etc., are all being done by help of an oil engine or tractor power. This is expensive. Electricity is now available at the farm and power connection should be granted.

2. Facilities for washing of cattle, cattle sheds and for providing plenty of drinking water to both the staff and the livestock are wanting. An overhead tank should be provided to meet these needs. A tank is already available and it is understood that necessary action is being taken in this connection in consultation with the Executive Engineer Irrigation.

If possible a tank for washing the animals should also be provided.

3. Murrah buffaloes should also be introduced on the farm as there are none on any of the farms in the Eastern districts of the State. There will, however, be need for more land.

GENERAL RECOMMENDATION

There is scarcity of quarters for staff. Minimum and essential requirements should be met by constructing new quarters for staff and labourers.

(2) The post of Farm Superintendent is non-gazetted and is in Group I i.e. Rs.200-350 scale. He should be declared gazetted. The scale may remain the same. This has been done for a large number of posts in other departments, e.g., District Livestock Officers of the Animal Husbandry Department. Drawing powers should be delegated to him. The present arrangements are not satisfactory and cause delay.

Summary—The Farm was started in the year 1948-49. It has been running on loss ever since and the losses have been recorded both in Agriculture Section as well as Cattle Section. The up to date total losses are given below:

	Agriculture section	Cattle section	Total	Depreciation	Interest
1948-58 ..	1,68,070	4,64,299	6,32,369	1,18,151	1,62,837

These losses could roughly be divided as follows:

	Rs.
1. Loss due to return of land Direct	1,091
Indirect	40,827
2. Loss due to bulk culling of animals	98,864
3. Loss due to surplus machinery	35,868
4. Recurring losses	4,55,719

The last item includes the rental on land (Rs.40.18 per acre per year) which is excessive. It also includes the losses on account of lower rate of milk which has averaged at (Rs.3-10 to Rs.16 per maund), i.e. Rs.12-2 for the entire period and also all other expenses direct or indirect.

On the whole the farm is running satisfactorily. Now that irrigation is being provided Agriculture section will start running in profit. There would be considerable improvement even in this current year. The Cattle section is in an excellent form and the herd is most promising. Necessary facilities as recommended above should be provided as early as possible. The losses could be sufficiently minimized if atleast the area released for the formation of the Co-operative Farm (188 acres) was returned back to the farm. This would reduce the overhead cost sufficiently. It would perhaps not be out of place to say that the Department had paid Rs.88,466 as compensation and had spent Rs.6,204 on the development of this land. The Co-operative Farm has done nothing to repay this amount.

The Committee is convinced that the cultivation section would soon start giving profits while the recurring losses in the cattle section would also be considerably reduced if not completely wiped out. The Farm should continue with all its activities as at present.

MECHANISED STATE FARM, BABUGARH, DISTRICT MEERUT

SITUATION

This farm is situated at a distance of about one mile from Babugarh Station (Northern Railway) on the Delhi-Moradabad Line. By road it is at a distance of 28 miles from Meerut and 8 miles from Hapur on the Delhi-Garhmukteshwar Road, leading further to Moradabad.

HISTORY

This farm came into existence in the year 1946. Formerly it was a part of the Remount Grass Farm, Babugarh under the Government of India. An area of 856.24 acres of this farm was transferred to the U. P. Government (Animal Husbandry Department). This land mostly consisted of sand-dunes and was undulated and uneven. It had no irrigation facilities and being highly sandy was used by the Remount Depot for meeting their requirements of thatching and bedding material. After closing down of the Remount Depot, most of the area was used for stationing regiments of horses and mules during the war time. These regiments had their hutments and tentage scattered all over the area of the present Mechanised State Farm. Besides, there were mule and horse standing spaces, pucca latrines, urinals, hospitals wards, single officer quarters and few old residential quarters. When this portion of land was declared surplus by the Defence Department, the Animal Husbandry Department accepted the offer with a view to start a Live stock and Dairy Training Centre. It was taken on lease in the year 1947 and a beginning of cattle breeding work was made through the purchase of 12 Murrah buffaloes and transfer of heifers from other farms. Poultry and piggery units were also started. Piggery was later on discontinued and the stock was transferred to Central Dairy Farm, Aligarh. The farm continued to function till July 1948 under the administrative control of the Deputy Director, Animal Husbandry, Meerut.

In July 1948 this farm was included in the scheme of Mechanised State Farms, U. P., and was transferred to this organization. The status of the incharge of the farm was also raised from non-gazetted Group I to that of class II of Provincial Veterinary cadre. Since then the farm has been functioning under the administrative control of the Deputy Director Mechanised State Farms, U. P., Lucknow.

The total area of the farm, as taken over from the Defence Department was 856.24 acres out of which 50 acres has been given on lease to the Government of India for establishment of Central Potato Research Station. Thus the area left with the farm is 806.24 acres. This area is divided into two blocks. The main block of about 500 acres lies to the north of the railway line while the remaining area is a long strip of land on the Southern side of it.

GENERAL INFORMATION

The main aim of this farm at the time of its establishment in the year 1946 was to train ex-soilders in Animal Husbandry and Dairying and also

to serve as a breeding centre for buffaloes and to grow more food under the "Grow More Food campaign."

After the inclusion of this farm under the Mechanised State Farms Scheme it was assigned the following functions:

1. To grow pedigree seed of improved varieties for supply to the cultivators through Agriculture Department.
2. Building up of the pedigreed herds of Haryana cows and Murrah buffaloes through selective breeding.
3. Production and raising of pedigreed bulls of the above two breeds for supply to farmers for upgrading of village cattle.
4. Production and raising of rams and poultry birds for stud purposes and distribution in N. E. S. blocks.

Other details of the farm are as under:

Total area	806.24 acres.
Area under cultivation	565.24 ..
Area under Gardens and plantation	24.00 ..
Area under Roads, buildings, channels, etc.	217.00 ..
Cost of land	Nil (taken on lease from Defence Department.)
Cost of improvement on land	Rs. 70,599.41

INVESTMENTS.

	Rs.
1. Tube-wells and irrigation channels	39,967.32
2. Buildings	3,08,127.25
3. Roads and Fencing	34,519.37
4. Machinery and Implements	1,43,407.90
5. Bullocks	15,014.00
Total	5,41,035.84

The farm has three sections, viz. (i) Cultivation Section, (ii) Cattle Section and (iii) Poultry Section and it would be advisable to discuss each of these sections separately.

CULTIVATION SECTION

General—The area under cultivation in different years is given below:

Name of the year	Area of the farm in acres	Area under cultivation in acres	Remark
1948-49	856.24	398.00	
1949-50	856.24	469.00	
1950-51	856.24	536.00	
1951-52	856.24	598.00	
1952-53	856.24	613.00	
1953-57	856.24	615.25	
1957-59	806.24	565.25	

The land of this farm like that of Remount Grass Farm was a zamindari land leased out to the Defence Department long before the year 1857 on a nominal malikana charges and before the abolition of zamindari the farm had to pay a sum of Rs.80 as annual malikana charges but now after zamindari abolition, no such charges are paid. The farm has to bear the interest on the expenditure incurred on the development of this land which works out to Rs.5.80 per acre.

The soil varies from highly sandy to sandy loam. The Northern Block mostly contained sand dunes and was infested with *kans* and other coarse grasses. This area had to be levelled year after year and the texture of soil had to be changed through provision of irrigation, growing of green manure crops and addition of *okhla* manure. Hundreds of wagon loads of manure was obtained from Okhla Sewage Works near Delhi for this purpose.

The soil of the Southern Block is not so sandy but due to its slope towards rivulet on the eastern side, it was under the process of washing away year after year and deep gullies had been formed which made it almost unsuitable for cultivation unless a strong *kachcha* embankment was constructed to regulate the flow of water and the levelling of the area was taken up. The process of development is not yet completely over and still the land is slopy and much work is to be done.

In the North Block, a forest belt comprising of *sheesham* plantation has been provided all along the Western boundry of the block under the advice of the Forest Department to check further formation of sand-dunes. An area of about 70.00 acres is still unlevelled and consists of bare sand and requires much work to improve it and it is even now unirrigated and single cropped.

The main crops of the farm are Wheat, Sugar cane, Barley, *Bajra*, *Juar* and Berseem are grown for fodder for cattle.

IRRIGATION

This farm had no irrigation facilities when it was taken over from the Defence Department in 1946. One tube-well was constructed by the State Irrigation Department (Tube-wells) in May 1946 which has a discharge of about 28,000 gallons per hour. The three existing *pucca* wells were fitted with electric pumping sets each capable of giving a discharge of

about 5,000 gallons per hour. Two more tube-wells each of about 30,000 gallons were constructed by the Agriculture Engineering between 1950-54. Out of these one is in the North Block and the other in the South Block. As a matter of fact the area under the command of the State Tube-well of Irrigation Department is comparatively more than it can control and soil of this area is extremely sandy due to which about 70·0 acres of land still remains unirrigated on the Western boundry of the North Block.

PRODUCTION

Cost of production and other details are given in the following table:

Year	Total production in terms of grain (in maunds)	Total expenditure of cultivation section	Cost of production per maund	Production in terms of grain per acre	Cost of production per acre
	Md.	Rs.	Rs.	Md.	Rs.
1949-50 ..	14,750	1,62,302	11·00	31·45	346
1950-51 ..	14,872	1,97,989	13·31	27·74	369
1951-52 ..	16,455	2,05,615	12·50	27·52	344
1952-53 ..	14,030	1,89,833	13·53	22·52	305
1953-54 ..	14,634	1,87,901	12·84	22·52	289
1954-55 ..	18,752	1,95,912	10·45	28·85	301
1955-56 ..	19,070	1,79,832	9·43	29·34	277
1956-57 ..	21,508	2,10,983	9·81	33·09	325
1957-58 ..	18,643	1,72,153	9·23	31·07	287

It is clear from the above that the cost of production per maund of grain has considerably come down even though the farm had to incur extra expenditure on the following:

1. High cost of fuels and lubricants, spares of machinery and concentrates.

The rise in prices of the above items has resulted in an extra expenditure of about Rs.1,500 per year.

2. *Increase in wages*—Weekly paid holidays are allowed to daily labours according to labour laws enforced on all farms since last year. This has resulted in an increased expenditure of about Rs.5,000 per year.

3. There has been an increase in the dearness allowance of all labourers which are on establishment and this has resulted in an increase of about Rs.2,500 per year.

FINANCIAL RESULTS

The financial position of this section since its inception is given below:

Year	Profit	Depreciation	Interest	Remarks
	Rs.	Rs.	Rs.	
1948-49 ..	12,474	5,391	2,175	
1949-50 ..	39,358	6,071	3,038	
1950-51 ..	84,867	7,485	4,212	
1951-52 ..	19,955	6,375	4,851	
1952-53 ..	17,471	12,880	8,660	
1953-54 ..	(-) 5,637	13,953	13,099	Loss during the year 1953-54 is due to the payment of Rs.21,052 as proportionate charges of maintenance of road of Remount Grass Farm used by the M. S. F. during the previous four years.
1954-55 ..	17,132	14,358	12,578	
1955-56 ..	61,009	16,709	15,032	
1956-57 ..	70,027	27,092	15,290	
1957-58 ..	65,070	18,636	12,180	
Total ..	3,81,726	1,28,950	91,115	

The financial position of the section is quite sound though it had to pay about Rs.22,000 as depreciation and interest per year which comes to Rs.36 per acre.

For the last three years the profit is ranging between 60 and 70 thousand rupees while the fodders are being fed to farm cattle at the cost of production on no profit no loss basis. Besides, there are few more factors affecting the profits as under:

EXPENDITURE ON SURPLUS MACHINERY

The details of machinery are being dealt with in a separate chapter dealing with tractors and implements.

It would be sufficient to mention here that the surplus and un-wanted machines have been of the value of Rs.62,672 and on an average the amount of depreciation and interest on such machinery has been Rs.6,267 and Rs.2,820 respectively. Total depreciation and interest on account of tractors and machinery only (both surplus and required) amount to Rs.40 per cultivated acre.

DAIRY AND CATTLE SECTION

The Farm maintains Hariana cows and Murrah buffaloes. These animals were purchased from the Punjab by the Animal Husbandry Department for all the Mechanized State Farms and Babugarh being the nearest to the purchasing centre, all these animals were sent to this farm temporarily and from here the distribution to other farms was to be effected. But unfortunately the animals carried cow-pox with them from Punjab and there was a severe outbreak of the same on the Farm. Under

such conditions the cattle were not transferred to other farms. In spite of the best care and treatment many animals lost their teats and milk and subsequently in the year 1952-53 heavy culling had to be done. The details of the production of the herd is given below:

Year	Total number		Milking average		Overall average	
	Haryana	Murrah	Haryana	Murrah	Haryana	Murrah
1949-50 ..	173	198	6.01	9.78	2.74	4.6
1950-51 ..	173	183	5.07	9.08	2.33	5.03
1951-52 ..	105	103	7.2	11.09	2.72	7.03
1952-53 ..	72	96	8.3	11.00	4.05	7.00
1953-54 ..	66	91	9.1	12.2	5.2	7.68
1954-55 ..	83	94	8.6	12.00	4.9	8.02
1955-56 ..	82	58	8.5	12.5	4.8	7.43
1956-57 ..	80	68	8.9	12.1	5.13	8.07
1957-58 ..	69	74	8.1	10.9	4.8	7.3
1958-59 ..	60	75	8.5	11.5	5.00	7.8 Expected

The production is almost at a stand still for the last eight years.

The financial position of the section is given below:

Year	Loss in	Depreciation	Interest	Remark
	Rs.	Rs.	Rs.	
1948-49 ..	1,08,446	..	200	
1949-50 ..	1,41,711	491	273	
1950-51 ..	32,862	..	..
1951-52 ..	85,853	6,388	4,851	
1952-53 ..	1,41,996	1,945	6,924	
1953-54 ..	58,209	1,899	8,750	
1954-55 ..	24,729	2,422	10,016	
1955-56 ..	47,240	1,500	9,000	
1956-57 ..	27,426	3,430	10,153	
1957-58 ..	62,758	8,892	13,089	
Total ..	(-)7,31,230	26,977	63,261	

This section has been giving losses year after year. Cattle rearing and milk production are in general unprofitable professions but the losses increase still further in the absence of a good market for milk and when the herd is raised with the idea of improving the same.

The following table shows the number of bulls and rams issued since 1947-48 for improvement of village cattle:

Year	Haryana	Murrah	Sahiwal	Rams	(Bikaneri)
1947-48	28	2	4	..	..
1948-49	114	20	36	..	..
1949-50	80	54	3	..	..
1950-51	46	28	..	..	..
1951-52	49	29	3	59	..
1952-53	75	29	..	19	..
1953-54	120	26	2	64	..
1954-55	133	24	3	..	..
1955-56	87	36	4	16	..
1956-57	188	33	1	72	..
1957-58	240	20	2	40	..
Total	1,160	301	58	279	..

(The figures include the number of bull calves which have been supplied by the Animal Husbandry Department for rearing and have then been lifted.)

The main factors which have resulted in losses in Dairy and Cattle Section of Babugarh farm are given below :

(a) Heavy initial purchases brought in some poorer animals. Maintenance of such animals was a source of loss.

(b) Outbreak of mastitis and cow-pox in the purchased animals decreased production and caused heavy losses.

(c) All such and other uneconomic animals were culled out in 1952-53 because of their poor yield and defective teats. This shot up the figures of losses in that year to Rs.1,41,995.

(d) *Low rate of milk*—Remunerative prices have not been forthcoming and milk had to be sold at prices far below the cost of production.

For the current year (1959-60) the contract of sale of milk has been given for Rs.17.10 per maund. This improvement is encouraged

and will enhance receipts by about Rs.9,000. The following table gives the cost of production of milk and the rate of sale :

Year				Cost of production per maund of milk			Income per maund		
				Rs.	a.	p.	Rs.	a.	p.
1950-51	..	..	..	27	14	8	18	12	8
1951-52	..	..	..	28	6	3	13	7	5
1952-53	..	..	..	23	11	5	16	6	7
1953-54	..	..	..	24	1	0	15	1	0
1954-55	..	..	..	20	8	6	16	1	5
1955-56	..	..	..	20	8	9	14	5	4
1956-57	..	..	..	20	5	0	13	4	0
1957-58	..	..	..	24.96			13.55		

The milk of the farm has now found a market in Delhi and is fetching a better price. There is still a wide gap between the cost of production and the rate of sale.

The present high cost of production is because of rise in price of concentrated foods like Gram, bran and oil-cakes and higher rate of wages to labourers. The expenditure on concentrates has increased by Rs.6,300 and on monthly and daily labourers on account of increase in dearness allowance and weely paid holidays by Rs.1,560 and Rs.1,400 respectively.

(e) *Buildings*—The land when transferred from Remount Grass Farm, Babugarh, had a few *pucca* buildings constructed more than 50 years ago and all the remaining ones were temporary hutments for the Horse and Mule regiments.

As the above buildings could not serve our purpose and were only of a temporary nature a sum of Rs.3,25,000 was placed at the disposal of the Chief Agriculture Engineer for the construction of cattle sheds and modification of the existing buildings. All this work was executed by the Agricultural Engineer, Meerut Circle. The work was not satisfactory and as such was brought to the notice of Government. An enquiry was conducted into the whole affair and Agricultural Engineer and Assistant Agricultural Engineer responsible for this deplorable quality of construction work were dismissed from service. The punishment though met the ends of justice yet has given no relief to the farm which has to bear heavy depreciation and interest on the investment shown on these buildings which comes to Rs.18,054 per year.

Thus, though a huge amount has been spent on the construction and remodelling of buildings but the condition is not satisfactory and some have already finished their useful life. The strength of cattle has also been reduced and some cattle sheds are surplus to the requirements but the depreciation and interest is being paid on all

these buildings. The expenditure on account of interest and depreciation on the buildings that fall in the share of this section comes to about Rs.12,000 per year or about Rs.30 per animal per year. In other words every animals young or old has to pay a house rent of Rs.2-8 per month, exclusive of light and water charges.

(f) In regard to buildings it may be further added that a section of the buildings are used by the Department of Animal Husbandry for doing Artificial Insemination work of the block and also for training of bulls in Artificial Insemination work which are sent out for breeding after they have been trained. Besides, the farm is also a training centre for stockmen in Artificial Insemination work and for poultry breeders of N. E. S. blocks in poultry work. So some buildings are used by these trainees for residential purposes. The total value of such buildings comes to Rs.31,386 and charges on account of interest and depreciation as also the expenditure on maintenance of these buildings including their repairs are met by the farm without charging any rent from the Department which uses them.

(g) *Lack of pasture land*—All stock is completely stall fed which also increases the cost of production.

FUTURE

As said before cattle rearing is not a paying proposition. It is, however, the duty of the State to improve the live stock and supply improved pure bred animals to the cultivators. The indirect benefit is so huge that direct losses of a few thousand rupees a year are insignificant.

It would be commendable even if the section is able to meet the direct expenditure incurred on it, and any reasonable amount of labour and money spent on it will be worth its while. The herd is well maintained and has better prospects.

POULTRY SECTION

The farm maintains a flock of white leg-horn birds and now the entire strength of layers is out of the chicks imported under the T. C. M. Scheme. The demand of birds of this breed has increased to a great extent and hence the activities of the section have also been expanded. The working of Poultry since the inception of the scheme is given below :

Year	Number of layers main- tained	Number of eggs produced	Average eggs produced per bird per year	Number of eggs issued to Develop- ment Block
1952-53	205	14,529	70	2,200
1953-54	100	14,070	40	3,854
1954-55	119	17,415	145	4,757
1955-56	135	19,963	148	5,765
1956-57	168	27,000	152	7,000
1957-58	247	40,281	163	9,927
1958-59	250	50,000	200 (expected)	9,100

The average egg production per bird has commendably increased and issues of eggs to Development Block are also quite encouraging.

The section has a Secura Incubator run by electricity. It has a capacity of hatching 3,800 eggs at a time. The hatching results and percentage of mortality in chicks is also given below :

Year	Number of eggs	Number of chicks produced	Percentage of hatching ability	Percentage of mortality in chicks	Number of birds issued to Dev. blocks
1952-53	4,800	3,135	68	62.6	1,802
1953-54	4,100	3,110	77.7	19.9	1,888
1954-55	5,669	4,188	75.7	8.9	2,509
1955-56	5,723	4,262	76.2	7.3	2,615
1956-57	7,718	5,730	75.6	5.8	5,331
1957-58	9,602	6,553	75.5	5.0	6,195
1958-59	11,181	8,409	78.0	5.0	6,200 (Expected)

The work of the section has been enlarged to a great extent and there is improvement in every sphere of the activity.

The financial results of the section are given below :

Year	Profit or loss	Rs.
1948-49	(-)	2,191
1949-50	(+)	625
1950-51	(+)	2,763
1951-52	(+)	2,707
1952-53	(-)	18,049
1953-54	(+)	1,673
1954-55	(+)	20,238
1955-56	(+)	23,721
1956-57	(+)	24,088
1957-58	(+)	26,937
	(+)	82,512

The section is a profitable one and with the expansion of activities the profits have also increased.

It is hoped that the section will record further improvements. The rate of sale of table eggs during summer has increased to Rs.13.75 per 100 for the year 1959-60 against Rs.8.75 in 1958-59. The annual sale of table eggs in the off-season is about 20,000 with the increase of Rs.5 per 100 the receipts are also expected to increase by about Rs.1,000 on this score alone.

SUMMARY

The farm was started in the year 1946 under the control of Animal Husbandry Department and was transferred as Mechanised State Farm in the year 1948. It has recorded over all profits after meeting the losses of Dairy and Cattle Sections since 1954-55. The upto date position of the total profits and losses is given as follows :

Year	Agricultural section	Cattle section	Poultry section	Total	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1948-58 ..	(+)3,81,726	(-)7,31,230	(+)82,512	(-)2,66,992	1,69,119	1,62,529

The total losses over the last 10 years come to Rs.2,66,992 or Rs.36,699 per year which is insignificant in view of the achievements. There was a total loss of Rs.3,98,916 at the farm up to 1953-54 but since 1954-55 the farm is giving profits and a loss of Rs.1,46,069 has already been made up. These losses are inclusive of losses on account of heavy initial culling as explained earlier.

On the whole the farm is running satisfactorily. It is earning on an average a profit of Rs.40,000 annually. The Poultry Section is in an excellent form and doing good service by distribution of eggs and fowls in the N. E. S. Block. The cattle and sheep section is also doing commendable service by issue of 150 bulls and 75 rams for uplift of the village live stock.

Necessary facilities as recommended below in each section may be provided so that further improvement may be effected both in development and financial aspects.

The Committee is convinced that the cultivation and Poultry sections would still yield more profits while the recurring losses in cattle section would be considerably reduced if not completely wiped out. As a whole the farm promises a better future. The farm activities should continue as they are :

RECOMMENDATION

AGRICULTURE SECTION

Irrigation—The existing facilities fall short of the demands of the farm. The soil responds well to manuring and irrigation and if adequate arrangement for irrigation is afforded it shall certainly improve production and consolidate the economy of the farm. To get it implemented the Committee is of the view that one *pucca*, well (well no. 3) may be provided with electric motor and pump. For the sandy and dry area on the Western boundry of the North block, the Committee recommends that one of the wells already constructed in that area be bored and fitted with electric motor and pump of about 12 h.p. The electric energy may be provided from the main transmitter which is quite near the wells. Then it shall be possible to irrigate the whole area of the farm and intensive cultivation will be feasible which shall increase the production and the financial position considerably.

Channels—For well no. 3 no extra channel will be required and the channel of the State tube-well constructed beside the well no. 3 will serve the purpose. For the other well it will of course be necessary to provide about 900 yards of irrigation channel. This should be completed as early as possible.

The main approach road of the farm is a private road but is being used by the public. This may remain the property of the farm but no depreciation or interest which comes to Rs.2,500 per annum should be charged. However, maintenance charges may be borne by the farm.

CATTLE SECTION

1. The chaffing of fodder and grinding of concentrate are being done by tractor power which is expensive. As electricity is available at the farm a power connection should be granted.

2. The Dairy Milking sheds are in a deplorable condition and have almost outlived their utility. It is essential to construct new sheds for the cattle. And in view of what has been said about the buildings earlier; the existing buildings will have to be dismantled. The loss on this account should not fall in the share of the farm.

3. Provision of some pasture land for the cattle is most desirable. This can be provided if some land is transferred by Government of India from Remount Grass Farm to this farm across the railway line adjoining the South Block of the farm.

4. Facilities for washing of cattle, cattle sheds and for providing plenty of drinking water both to the live stock and staff are wanting. An over-head tank may be provided on well no. 2 along with pipe line to meet these needs.

POULTRY SECTION

1. *Pucca* brooders are recommended for this farm.

2. The arrangement of pipe line for providing water to the chicken runs is very essential. It can conveniently be made by a connection from surface well no. 2 which is just near the chicken line.

3. Due to expansion in hatching and rearing 16 more foster mothers and 10 chicken lines are required.

GENERAL RECOMMENDATIONS

There is electricity and there are a few overhead tanks on the tube-wells at the farm but the staff has not been provided with running water and lighting facilities. These essential facilities available as they are on the farm should be provided to the staff also.

MECHANIZED STATE FARM, BHARARI, DISTRICT JHANSI

SITUATION

The farm is situated at a distance of about 6 miles from Jhansi City and about 8 miles from the Jhansi Railway Station on the road leading to Unnao (Balaji), Madhya Pradesh. This road makes the Eastern boundary of the farm. The Western boundary is formed by Pahuji river and village Lakara. In the South is situated village Bhojla and in the north village Isagarh.

HISTORY

With a view to produce pedigreed bulls of Hariana breed of cows and Murrah buffaloes for upgrading the indigenous non-descript breeds of cattle of Bundelkhand in particular and of the State in general, the Government of U. P., acquired 2,125.11 acres of land in 1927, under *Gazette* notification no. 1094/XII-A—189, dated November 17, 1927, on a payment of Rs.54,054-4-3 as compensation.

Originally all this land comprised of uncultivated area full of undulations, ravines and bushes. In the beginning the entire activities were confined to the cattle development work alone and as such only a very limited area was put under cultivation.

Later on during the year 1941-42 some 300 acres were cleared off and broken for cultivation of tobacco. During the II World War there was difficulty in obtaining Virginia Tobacco from abroad. The Department of Agriculture was, therefore, asked to take up cultivation of Virginia Tobacco at this farm in co-operation with the India Leaf Tobacco Co., After the close of the War this Scheme was given up. In the year 1944 the farm was transferred from the Agriculture Department to the control of Animal Husbandry Department and it continued to remain in the charge of that Department until August, 1948, when it was included in the Mechanised State Farms Organization.

Since the transfer of the farm to Mechanised Scheme an expenditure of Rs.65,092.33 has been incurred on the improvement of this area in cleaning of jungle, levelling and layout, etc.

In 1956-57 another 212.55 acres were added. This area was formerly used as camping ground for the Military and was later on leased out by the Defence Department of the Government of India to private graziers on an annual lease basis. The farm has paid Rs.11,322 as cost of this land. The present area of the farm is thus 2,337.66 acres.

The farm is now working as a mixed farm with both Agriculture and Animal Husbandry activities running side by side.

Other details of the farm area are given below :

	<i>Acres</i>
Total Area	2,337.6
Area under cultivation	900.0
Area under roads building, threshing floor, etc. ..	307.6
Jungle, rocky, unculturable and pasture-area ..	1030.0
Total ..	2,337.6

INVESTMENTS

	<i>Rs.</i>
Cost of acquisition of land	65,826.0
Cost of improvements on land	65,092.0
Total ..	1,30,918.0
Irrigation Channels and Wells	78,587.0
Buildings	2,64,500.0
Roads and fencing	12,695.0
Machinery and implements	1,06,547.0
Livestock (Bullocks)	13,170.0
Deadstock	59,942.0
Total ..	5,35,443.0

The farm has 4 sections viz., Cultivation, Dairy and Cattle, Sheep and Goat and Poultry.

The position of each section is discussed below :

CULTIVATION SECTION

About 800 acres was taken under cultivation and the same remain until 1956-57 when another 100 acres was reclaimed. At present 900 acres are being cultivated.

The total investment on the land which includes compensation, cost of improvement, layout, construction of irrigation channels and repairs wells comes to Rs.2,09,606.50 or Rs.89.60 per acre. On the basis of cultivated area the per acre cost amounts to Rs.232.78. The topography of the farm land is very bad. The area is undulated and subject to severe erosion. The soil is mostly *rakar*, which is poor in plant food and does not retain water, necessitating frequent irrigations. The main crops

IRRIGATION

No satisfactory irrigation facilities exist. Construction of tube-wells has not been feasible so far due to the presence of rock bed. Masonry wells are also not successful and irrigation is completely dependant on a seasonal feeder canal originating from a dam over a local river. It does not ensure full irrigation as the water in the dam often remains below the required level. Availability of water depends mostly on the rainfall during the year.

This dam provides water to the City of Jhansi and, therefore, supplies of water to the canal has to be cut short considerably during years of scarcity, thereby adversely affecting the farm crops.

PRODUCTION

Total production and other details of the past 6 years are given below :

Year	Total production in term of grain	Total expenditure in cultivation	Cost of production per md.	Production per acre	Cost per acre
1952-53	16,778	Rs. 2,26,236.0	Rs. 13.36	21 26 0	Rs. 291.92
1953-54	16,061	2,39,132.0	14.90	19 9 0	287.42
1954-55	15,283	2,08,762.0	13.66	14 0 0	198.0
1955-56	14,271	1,94,452.0	13.62	14 33 0	208.92
1956-57	14,834	1,79,703.0	12.10	16 33 0	204.32
1957-58	12,162	2,38,390.0	19.60	14 19 0	283.8

1957-58 was a very bad year in general. The *Rabi* crops also suffered heavy losses on account of hailstorm.

The production cost per acre has risen mainly due to high depreciation and interest charges. The other factors responsible for high cost are :

1. High Cost of fuels, machinery and spares.
2. Increase in wages due to the enforcement of labour laws, allowing weekly holidays to temporary labour and increase in the D. A. of labourers on establishment.
3. Depreciation and interest paid on surplus machines and implements not required for farm use. The farm had to pay a sum of about Rs.4,000 annually as depreciation and interest on such stock.
4. Depreciation and interest on surplus buildings. The tobacco buildings existing at the farm cost Rs.46,945 entailing depreciation and interest to the extent of Rs.2,690. These buildings have not been and can not be profitably utilized. Besides there are other non-residential buildings worth about Rs.12,800 which are used for Research Work on Animal Nutrition and the farm has to pay depreciation and interest to the tune of over Rs.500 per year for them.

FINANCIAL RESULTS

The financial position of the section is summarised below :

Year	Profit	Loss	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.
1948-49	10,102	..	1,814	3,256
1949-50	10,122	.	1,942	3,592
1950-51	56,275	..	5,510	5,578
1951-52	33,818	..	8,305	8,545
1952-53	61,340	..	10,300	10,440
1953-54	10,855	..	14,364	14,319
1954-55	45,512	..	13302	14,751
1955-56 .. ..	..	48,451	93,169	20,769 This included depreciation and interest on machines, etc, for the last 5 years.
1956-57 .. ..	..	4,224	30,215	26,235
1957-58 .. ..	..	47,144	24,885	20,338
Total	2,28,024	99,819	2,03,806	1,27,823

Thus barring the last 2 years when the farm was a serious victim to natural calamities which visited the entire State, the cultivation section had all along given profits. During the year 1955-56 accumulated depreciation and interest on the machinery relating to the previous years amounting to Rs.75,738 was also charged resulting in loss in this section, although the section had yielded a profit of Rs.27,287 during the year. Further the farms has to bear all the expenses connected with the experiments conducted by the different officers of the Agriculture Department. Which sometimes lead to total failure of crops or in very poor yields. The area under various experiments have varied from 14 to 22 acres during the past years. Considering the poor nature of soil and lack of proper irrigation facilities the above results may be considered to be satisfactory. If the depreciation and interest charges on the surplus assets are eliminated the financial results would be still better.

DAIRY AND CATTLE SECTION

As already stated above cattle breeding work was started at this farm in the year 1927. The aim had been to produce pedigreed bulls of Hari-ana Cows and Murrah buffaloes. In order to produce a larger number of bulls after the partition of the country the number of cattle was increased considerably. This increased the pressure of cattle population and affected their proper maintenance. The position became more acute with the introduction of other breeds like Tharparkar cows and *Bhadawari* buffaloes. *Bhadawaris* are poor animals and their maintenance has resulted in heavier losses. This breed, however, is good for the locality and, therefore, its maintenance is helpful to the farmer.

The land of the farm is below average and was badly infested with shrubs and bushes. It, therefore, involved considerable labour and expense to reclaim it. The per acre production of fodder is not high and in years of scanty water supply the yields are considerably cut down thereby raising the per maund cost of fodder.

Besides the cost of concentrates has been rising as can be seen from the figures given below :

			Rs.
1955-56	..	..	54,269
1956-57	..	..	88,459
1957-58	..	..	82,500

All the above factors have combined to make cattle breeding expensive.

In the table given below is shown the number of cattle maintained during the past eight years and the net and over all averages of the three breeds now located at the farm:

Year	Total	Wet average			Over all average		
		Hariana	Thar-parkar	Bhadawari	Hariana	Thar-parkar	Bhadawari
1950-51	592	4.2	4.0	6.0	2.6	2.4	3.9
1951-52	680	4.9	4.5	3.8	3.0	2.7	2.3
1952-53	663	6.9	5.7	4.9	3.7	3.0	2.5
1953-54	626	7.6	7.6	7.7	3.8	3.8	4.0
1954-55	655	8.3	7.0	7.9	4.15	3.5	4.0
1955-56	633	7.8	7.3	6.6	4.6	4.7	4.2
1956-57	591	8.3	7.3	7.7	5.1	4.17	4.4
1957-58	556	8.09	7.97	7.8	4.24	4.66	4.07

Although the above results show that there has been improvement in the Milk production of all the three breeds but the improvement effected is not yet to the required standard.

FINANCIAL RESULT

Financial position of cattle section is given below :

Year	Loss	Profit	Depreciation	Interest paid
1948-49 ..	62,177	..	5,620	6,511
1949-50 ..	110,384	..	4,227	7,182
1950-51 ..	..	32,739*	4,574	5,672 Profit obtained due to revision in valuation.
1951-52 ..	92,990	..	4,152	4,272
1952-53 ..	81,330	..	4,200	4,205
1953-54 ..	60,739	..	9,000	8,000
1954-55 ..	88,012	..	6,000	9,000
1955-56 ..	71,326	..	5,000	8,000
1956-57 ..	96,115	..	1,929	4,878
1957-58 ..	71,906	..	4,386	7,820
Total ..	7,34,979	32,739	49,088	65,540

But for the year 1950-51 when the valuation of the livestock was revised, this section has resulted in losses all along. As a matter of fact cattle rearing for development purposes is not a profitable proposition and specially so when the dual purpose breeds of cattle like Hariana and Tharparkar and a poor breed of buffalo like the *Bhadawari* are maintained.

The other factors contributing to high losses in cattle section are :

- (1) Heavy cost of concentrates as stated above.
- (2) Poor quality of stock necessitating heavy culling.
- (3) The farm sustains a direct loss of about Rs.5,000 per year on the maintenance of animals for experimentation and Research Work being conducted at the farm under the Animal Nutrition Section of the U. P. College of Veterinary Science and Animal Husbandry. There are indirect losses also.
- (4) High cost of production and low selling rate of milk.

Milk produced at the farm has to go to Jhansi Town at a distance of about 6-7 miles. The rate on which it is sold is much below the pro-

duction cost as will be seen from the following data.

Year	Cost of production per md. in rupees			Rate of sale per md. in rupees		
	Rs.	as.	p.	Rs.	as.	p.
1950-51	28	8	0	18	12	1
1951-52	34	0	0	25	1	8
1952-53	35	8	8	19	5	6
1953-54	30	3	4	16	1	6
1954-55	25	1	0	13	15	5
1955-56	23	11	0	13	14	8
1956-57	27	15	8	15	12	0
1957-58	27	14	6	18	5	3

From the above it will be seen that the cost of production of milk at the farm has always been higher than the selling rate. The loss on this account amounts to more than Rs.50,000 annually.

SHEEP AND GOAT

Experimental flocks of sheep and goats are maintained for production of rams and bucks. Although the flock of goats is purely an experimental one and the expenditure for their maintenance is provided by the Animal Husbandry Department, the losses are added to the Profit and Loss accounts of the farm. The financial results of this section are included in the results of cattle and Dairy Section.

POULTRY SECTION

White Leg-horn Poultry birds are being maintained on the farm. A small flock of ducks has also been introduced recently. This section is working satisfactorily and yielding profits as will be seen from the following results :

1948-49	..	..	4,830
1949-50	..	..	3,082
1950-51	..	..	4,409
1951-52	..	..	4,263
1952-53	..	..	15,804
1953-54	..	..	12,369
1954-55	..	..	13,245
1955-56	..	..	15,012
1956-57	..	..	20,244
1957-58	..	..	20,618
Total ..			76,104

Barring the two years when the losses were on account of spread of epidemics this section has always yielded profits. It is hoped that this section will show further improvements.

SUMMARY

The farm was included in the Mechanised Farms Scheme during the year 1948-49. The area on which the farm was established was badly infested with shrubs and bushes. Large scale clearance operations had to be undertaken resulting in heavy cost on the clearance. The tractors and other machinery transferred from the Agriculture Engineering Department was in a very bad shape and had to be repaired and major overhauling had to be affected. A sum of about Rs.75,000 had to be incurred on the major repairs of the machinery in order to make it useable for agricultural operations. These tractors, prior to their transfer to this organization were employed on reclamation and other tractorization work. Bharari Farm alone had to pay a sum of Rs.60,223 as tractorization charges. Absence of adequate irrigational facilities hampers the progress of the Farm. The Cattle breeding section has never been profitable. The aim has been to produce pedigreed bulls of Haryana cows and Murrah Buffaloes and to distribute them for upgrading the indigenous and non-decript breeds of cattle in the locality.

The upto date financial position of the farm since its inception has been as follows :

Year	Agriculture section	Dairy and cattle section	Poultry	Net	Depreciation	Interest
1948-49 to 1957-58	(-) 128,205	(-) 702,240	(-) 76,104	(-) 497,931	263,022	199,563

The ultimate position is that the farm on the whole has given a loss of Rs.4,97,931 against which a total sum of Rs.4,62,585 has been paid towards Depreciation (Rs.2,63,022) and Interest (Rs.1,99,563).

The losses could roughly be divided as follows :

	Rs.
(1) Loss due to culling	28,172
(2) Loss on account of maintenance of Research Animals	44,696
(3) Loss on account of Depreciation and interest paid on the surplus implements and machinery	40,000
(4) Loss on account of depreciation and interest on surplus buildings	31,900
(5) Recurring losses	353,165
Total ..	494,931
or say ..	49,793

per year.

The appreciation on account of the improvement effected on the land is of the value of over Rs.3 lakhs. The losses on account of sale of milk alone amount to Rs.50,000 annually.

The Committee is convinced that barring naturally bad years the Cultivation Section will always show profits. The losses in the cattle section will also be considerably reduced. The future of the farm is bright.

RECOMMENDATIONS

AGRICULTURE SECTION

Provision of Irrigational facilities—(1) Agriculture, without proper facilities for irrigation, is a gamble. Since masonry wells are not successful in these areas, boring of a tube-well may be tried. The Irrigation Department may be requested to conduct an experiment in this regard.

(2) Due compensation should be paid for the experiments conducted by the Agriculture Department.

(3) The loss on the disposal of surplus implements may be written off.

(4) Surplus buildings should not be a burden on the farm.

(5) There is an acute problem of illicit grazing of the crops by outside cattle and other wild animals. Lot of damage is caused to the crops. It is, therefore, absolutely necessary that the entire farm area should be properly fenced. A sum of about Rs.14,000 will be needed to fence the newly acquired area of the farm which remains unfenced.

CATTLE SECTION

(1) The quality of the present pasture is poor. The yield is scanty. This must be improved to provide maintenance requirements during *Kharif* and good quality hay for the rest of the year. This will minimise the cost of rearing of the cattle. A phased programme spread over five years may be followed for this.

(2) The pressure of cattle at the farm may be reduced to 400 heads.

(3) *Bhadawari* buffaloes may be replaced by *Murrah* buffaloes.

(4) The indigenous stock of small animals should be regarded as experimental stock for Research Section. The farm has at present to bear a loss of about Rs.5,000 each year on this account.

(5) Due compensation should be paid for the experiments conducted by the Animal Husbandry Department. Experimentation work with about 70 heads of Cattle is going on at the farm under the Animal Nutrition Section of the Veterinary College for several years. The Farm has sustained a loss of Rs.44,694 on this account so far.

MECHANISED STATE FARM, HASTINAPUR, DISTRICT MEERUT

SITUATION

Hastinapur farm is located in Tehsil Mawana of District Meerut and is about 26 miles from Meerut City and 7 miles from Mawana, all three being linked by a metalled road. There is a regular bus service between Meerut and Hastinapur. The Dairy Section of the farm is located in Hastinapur Central Town but the Agriculture Farm is $1\frac{1}{2}$ miles further down towards *Khadar* area, which has been colonised and is linked with Hastinapur town by a metalled road which passes through the farm and leads to the colonized villages.

HISTORY

The Gangakhadar Colonization Scheme was started by the Government in December, 1947. Primarily designed for ex-servicemen of U. P. returning from World War II, it later embraced displaced persons of West Punjab due to the partition of the Country in 1947 and other categories of settlers as well. Political sufferers, unemployed agricultural graduates and diploma-holders were also allowed land in the scheme in accordance with the instructions of the Government on the subject. The Land was reclaimed by the Central Tractor Organization under the control of the Administrative Officer Gangakhadar Colonization Scheme. Soon after reclamation by the Central Tractor Organization, the layout of the whole area was completed. The broken area was laid into blocks and these blocks were later sub-divided. Except for 1,500 acres reserved for State and Dairy Farm, the rest of the broken area was allocated to the settlers of the Colony. Some area was also reclaimed by the Provincial Tractor Organization and by private parties, total being 22,000 acres. An agricultural farm was started in the year 1948-49 by the Colonization Department on an area of 1,000 acres out of the 1,500 acres reserved for the Farm. Later on in the year 1950-51 horticultural activities were also taken up on an area of 98 acres. In the year 1950-51 a Dairy Section was also established under the charge of a Farm Superintendent with an Agricultural Wing of 651 Acres reclaimed adjacent to 1,000 acres of the farm already established in *Khadar*. In view of there being possibilities of availability of milk in large quantities in the surrounding area it was intended to launch a Comprehensive Milk Collection and Marketing Scheme. The settlers were to be encouraged to keep cattle as a side business and the scheme was intended to help the settlers financially by finding good markets for their produce. The plan was to collect the maximum quantity of milk in bulk partly from the settlers of the colony newly settled in *Khadar* area, who had no source of disposal of their milk and partly from the surrounding villages of round about Central Town and Hastinapur. The collected milk was proposed to be processed for being supplied to Delhi Administration for distribution to the public of Delhi. In order to implement this scheme a pasteurization plant was installed in the Dairy at a total cost of Rs.1,89,818. Unluckily this plant could not be utilized

as the Milk Collection Scheme proposed to be launched in collaboration with Government of India at the farm could not materialize, due to circumstances which could not be foreseen at the time of the purchase of the said plant.

There were originally two farms. The area on the south of the *pucca* road, which passes through the farm was known as Dairy Farm and the area lying towards the north comprising of 1,000 acres in *Khadar* was known as Agricultural Farm. All the three units of the farm viz., State Agriculture Farm, Horticulture Section and Dairy Farm was amalgamated into one in the year 1950-51 and thus the State Agriculture and Dairy Farm Hastinapur was formed. All through the farms were being run under the control of the Colonisation Department until the institution was transferred to the control of the Deputy Director, Mechanized State Farms, U. P., Lucknow in April 1954, *vide* G. O. No. C-II/XXXII-B-775-1949, dated March 31, 1954, as a result of new set up of the Colonization Schemes of U. P.

GENERAL INFORMATION

Gangakhadar is an elongated compact piece of low lying land running north to south along the Ganga. *Khadar*, as opposed to *Banjar* is a local name for the riverine tract on the either side of the river. The area, which is under the possession of the farm was formerly the original bed of the river Ganges, which has since receded. The entire area is, therefore, lowlying. As a matter of fact the old stream of the river now known as "*Burhi Ganga*" forms one of the boundaries of the farm. Many small rivulets or streams pass through the Farm. The main current of the present river is, however, away from the farm. The soil of the tract therefore, varies according to the nature of the silt, which was deposited and accordingly both heavy and light and sandy soils are met with. Most of the land during the monsoon season remains under several feet deep water and even during the rest of the year considerably large tracts remain submerged under 1' to 6 feet water. The drainage is most defective. Large pieces of alkaline and saline land are spread all over the area and its reclamation is made most difficult on account of high water table. The land is infested with deep rooted weeds and grasses and is subject to vagaries of floods. The minimum temperature varies from 34°F to 32 F and the maximum from 113°F to 116°F. The average rain fall of the year is about 35". The land was originally full of pools of stagnant water *nullahs* ravines and marshy patches over grown with palm trees, bushes and tall grasses harbouring mosquitoes and wild animals like pigs, Sambhar, Nilgai and Panthars, etc. Successful efforts have, however, been made to develop this area in order to bring it under cultivation and there has been considerable improvement. This is still a difficult farm, the main section being situated in lowlying *Khadar* tract where water level is high and the entire area of the farm is subject to heavy floods. The farm land is alkaline and uneven. The average pH value is 8.5 and in some cases, it varies from 9.2 to 9.5.

The area of the farm has not been constant. At times some area was added to it and again it had to be released by the Administrative Officer, Colonization. This was according to the needs of the settlers. The matter regarding the actual area of the farm is still under dispute and is in correspondence with the District Magistrate.

Other details of the area under the possession of the farm are as follows:

	Acres.
A—Total area 1,489·31 acres.	
(i) Agriculture Section including garden in <i>khadar</i> ..	1382·23
(ii) Agriculture Section at the Central Town Block ..	107·08
	<hr/>
Total ..	1,489·31
(Out of this area about 87·08 acres of land belonging to Town Development Board is under the possession of the farm).	
B—Area cultivable	1,386·15
C—Area under roads, buildings, Nalas threshing floors and tube-wells, etc.	103·16
	<hr/>
Total ..	1489·31
<i>Investments —</i>	
	Rs.
1. Land.	
Cost of land	52,151·27
Cost of improvement of land and layout	176,518·27
	<hr/>
Total ..	228,669·54
2. Buildings	717,740
3. Irrigation channels	47,705
4. Fencing	12,712
5. Dead stock	44,852
6. Vehicles	14,245
7. Machines and implements	182,218
8. Bullock and mare	15,383
	<hr/>
Total ..	1263,524·54

The farm has two sections namely, (i) Cultivation Section, (ii) Cattle Section. In view of the grave odds the financial results of Agriculture Section have not been very unsatisfactory. These, however, vary greatly from year to year on account of damages due to natural calamities which are beyond human control. Due to abnormally low rate of milk being obtained coupled with high cost of investment on the provision of pasteurization Plant as also the construction of buildings connected therewith, the financial results of the cattle section have been affected considerably. The farm has to bear about Rs.89,000 per year on account of interest and depreciation on the capital investment.

The two sections, viz. the Cultivation Section and the Cattle Section are discussed separately in the following pages :

Name of the year	Area of the farm	Area under cultivation
1948-49	1,000 plus 846	1,846
1949-50	1,000 plus 27.7	1,027.7
1950-51	1,000 ..	719.30
1951-52	1706.5 ..	1,406.10
1952-53	1,335.75 ..	1,243.5
1953-54	1,451.47 ..	1,208.09
1954-55	1451.47 ..	1,065.84
1955-56	1,549.47 ..	1,214.90
1956-57	1539.31 ..	1,219.31
1957-58	1,439.31 ..	1,060.65
1958-59	1,489.31 ..	1,085.46

^aThe additional area was cultivated by the farm out of the area which was to be allotted to the settlers by the administrative officers but could not be allotted during the years.

The total investment on the land which is in the possession of the farm amounts to Rs.2,84,790 which includes compensation paid, cost of improvement, layout and construction of irrigation channels with syphons and threshing floors. This works out to Rs.191.2 per acre and calculated on the basis of the cultivated area it comes to Rs.262.3 per acre. As stated earlier the land in Ganga Khadar is alkaline and is over grown with perennial deep rooted grasses and weeds which grow luxuriously owing to the presence of moisture in the soil all the time. Out of the cultivable area of 1,386.15 acres, it is only about 170 acres, which is good for cultivation and can pay a good return. About 900 acres of land is subject to damage by heavy floods and water-logging. The bed of Burhi Ganga being silted and drainage of Khadar being defective, this area is always under floods whenever there are heavy rains. Nothing except sugarcane can give remunerative return in this area. Some of the land which is wholly unsuitable has to be excluded out of this area even from sugarcane cultivation. The rest of the area is heavily alkaline.

CENTRAL TOWN BLOCK

The entire area originally consisted of Bhur and was uneven and full of gullies. The farm has developed about 45 acres of this land by levelling and adding plenty of manures. The rest of the land has to be developed. About 87.08 acres of land belonging to the Town Development Board Hastinapur is under the possession and cultivation of the farm in this block. This land is stretched behind the Dairy buildings at Central Town

Hastinapur. The land in question was brought under cultivation under the verbal orders of the then Administrator (Sri Radha Kant), who was also the Director of Colonization and under whose control Hastinapur farm was running previously. This piece of land is being cultivated by the Dairy and State Farm Hastinapur for growing fodder crops. The total area here is 107.08 acres out of which only 20 acres belong to the farm and the rest 87.08 acres to Town Development Board and as stated above was allowed to the Dairy Section of the Farm for growing fodder crops. If the farm is deprived of this area then the cattle and Dairy Section of the Farm will be adversely affected in respect of fodder supplies. The main farm area is situated at a distance of about $1\frac{1}{2}$ miles and is low lying and gets inundated during the rains and the soil is also alkaline. It does not grow sufficient quantity of fodder to meet the daily requirements and the cost of cultivation is also high. It is, therefore, in this land that the main fodder crops are grown in order to supplement the fodder requirements of the dairy herd which consists of about 500 heads of cattle.

IRRIGATION

In the year 1950 four tube-wells in Khadar Farm and one at Central Town Block were constructed by the engineering authorities of the Irrigation Department with no irrigation channels. These could not therefore, be used. Government, however sanctioned the departmental construction of irrigation channels and syphons on two tube-wells vide G. O. no. A-70/XIIC-122-VIII-54, dated February 18, 1956. The construction was taken up by the Farm management in the year 1955-56 and 3 miles 2 furlongs of channels with 21 syphons involving an expenditure of Rs.42,705, has been constructed up to the end of March, 1959. These channels are now utilized for irrigating the crops but in view of the fact that there is no channel on the other two tube-wells and also for the defective working of the diesel installed Electric Plant in the town, maximum advantage of the tube-wells can not possibly be derived. The Central Town tube-well always goes out of order during October which delays sowing and reduces yield of *Rabi* fodders.

PRODUCTION

Cost of production and other details are shown in the following table. Sugarcane is the only crop, which has paid during normal years :

Year	Total production in terms of grain	Total expenditure	Cost of production in terms of grain per md.	Production in terms of grain per acres in md.	Cost of production per acre
		Rs.	Rs. a. p.	acres md.	
1952-53 ..	21,262	3,04,331	14 5 0	16.58	244.7
1953-54 ..	24,359	3,01,116	12 5 10	18.91	149.1
1954-55 ..	21,093	3,08,716	14 10 0	16.9	289.6
1955-56 ..	20,352	3,43,127	16 8 0	16.4	282.4
1956-57 ..	21,020	3,31,121	15.7	17.2	271.2
1957-58 ..	17,942	2,85,752	15.9	16.9	269.4

The above table will show that the cost of production per maund is on the increase and it has been the highest during the year 1955-56. This is due to high depreciation and interest as compared to previous years. Other reasons for increase in the cost of production are :

(i) Owing to the perennial and deep rooted grasses the soil requires a large number of operations.

(ii) Due to the presence of alkaline patches even in the best fields the yield is reduced.

(iii) On account of floods, water-logged conditions and oozing of water from the soil, the crops do not flourish well. This results in very poor yields.

(iv) Because of susceptibility to serious floods and the area being lowlying with poor drainage proper preparation for *Rabi* is not possible and sowing are delayed affecting the yields and consequently the cost of production increases. The problem is particularly bad when October rains occur.

(v) Interculture operations in sugarcane crops which is the only cash crop can not possibly be done as the rain water stagnates.

(vi) High cost of fuel oils spares and machinery. Expenditure on these items has been showing constant increase.

(vii) The expenditure has also increased due to increase in wages on account of paid holidays under labour laws to labourers on daily wages and due to recent increases in the dearness allowances of monthly paid staff.

FINANCIAL RESULTS

The financial position of this section is given below :

Year	Loss in	Profit	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.
1948-49	18,827	..	7,584	2,150
1949-50	17,914	..	5,861	2,324
1950-51 .. ..	..	58,244	7,104	4,960
1951-52 .. ..	..	24,854	16,483	8,762
1952-53 .. ..	..	7,633	14,603	10,503
1953-54 .. ..	..	24,338	11,392	17,048
1954-55 .. ..	..	10,827	14,890	18,000
1955-56	33,364	..	25,432	22,798
1956-57 .. ..	..	3,382	26,244	24,250
1957-58	67,493	..	27,717	24,532
Total ..	137,598	129,278	157,310	135,327

From the above table it will be seen that this section gave losses in 1948-49, 1949-50, 1955-56 and 1957-58.

The main causes responsible for reduced profits or losses in the Agriculture Section are as follows :

- (1) Alkanity in *Khadar*.
- (2) Presence of perennial weeds.
- (3) High water table.
- (4) Floods.
- (5) Heavy rains.
- (6) Water logging.
- (7) Interest and depreciation on surplus buildings and machinery.

The past three years have been bad for the entire state and even normal areas have given losses. The conditions at Hastinapur were much worse during these years. Occasional floods during rainy season supplemented by heavy rains affected almost all the Kharif crops and their yields which are already low at this farm were further reduced.

Late rains in October did not allow proper cultivation and also delayed *Rabi* sowings.

CATTLE SECTION

This section of the farm came into being in the year 1949-50 and has since then been maintaining Murrah and Hariana breeds of cattle. The Dairy at this farm had originally started with a capital of Rs.7 lakhs but could not fulfil its object for want of the envisaged development of the town. The milk collection scheme for which the aforesaid capital investment was made did not materialize and the farm has to bear heavy interest and depreciation on its surplus assets. There is no market even for the present produce of milk of the farm and on occasions the milk has to be separated for making *Ghee*. The selling rate of milk is also very low. Due to non-implementation of milk collection Scheme, as stated earlier the buildings and pasturization plant costing about Rs.1,89,818 are a heavy burden on the farm and the farm continues to pay heavy interest and depreciation of the buildings and machinery not in use. Milk collection and disposal was not a part of the cattle breeding plans but was brought in on account of Colonization Department. This should not be allowed to burden the farm accounts.

The cattle strength at the farm was built up in the manner indicated in the table given below :

Year	Source of receipt	Animals		Number
		Breed	Class	
1950 ..	Direct purchases by the then Farm Superintendent Hastinapur from the Punjab.	Murrah Murrah Murrah Hariana	Bufs. Heifers Bull Cows	65 19 1 22
1950 ..	Transferred from Mechanised State Farm, Babugarh, district Meerut.	Hariana	Bull	1
1950 ..	Transferred from Tarai State Farms, Naini Tal.	Hariana ..	Cow Bull	91 Poorest possible 4 surplus animals were transferred to the farm.
1951 ..	Direct purchases by the then Farm Superintendent Hastinapur (27 heads from Punjab and 4 locally).	Murrah Hariana	Bufs. Cow	30 1
1952 ..	Transferred from Central Dairy Farm, Aligarh.	Murrah Murrah Hariana Hariana	Bufs. Heifers Cows Heifers	2 6 1 2
1955 ..	Transferred from Mechanised State Farm, Babugarh.	Murrah Murrah Hariana Hariana Hariana Murrah	Heifers Bullocks Heifers Bull calves Cows Bufs	9 9 7 8 7 10

The stock received from Tarai State Farms was very poor. The following table will show the total number of animals, milk production in lb. and the overall average during various years :

Year	Total no.	Milking average		Over all average
		Bufs.	Cows.	
1950-51	249	13.1	6.3	5.8
1951-52	460	11.15	6.15	4.25
1952-53	439	12.8	7.00	4.55
1953-54	443	12.6	7.5	5.28
1954-55	432	12.37	8.31	4.69
1955-56	497	11.83	6.56	4.73
1956-57	433	11.22	7.31	4.96
1957-58	381	11.00	7.00	5.43

From the above it will be seen that the average milk of cows is 7 lb. and that of buffaloes is about 11 lb. which is not very satisfactory.

The financial position of the section is given below :

Year	Losses in rupees	Depreciation	Interest	Remarks
	Rs.	Rs.	Rs.	
1948-49 ..	9,998	637	1,008	*Profit of Rs. 28,112/ in Agriculture Wing of Dairy Section and loss of Rs. 75,109, in Dairy itself,
1949-50 ..	1,652	1,813	2,805	
1950-51 ..	46,997*	5,174	3,995	
1951-52 ..	111,015	6,709	5,410	
1952-53 ..	180,281	13,777	15,721	
1953-54 ..	77,970	9,655	24,793	
1954-55 ..	67,407	10,097	26,312	
1955-56 ..	69,874	13,961	36,054	
1956-57 ..	84,910	9,361	32,712	
1957-58 ..	30,101	9,020	28,177	
Total ..	680,205	80,204	178,987	

It would be seen that the losses were very heavy during 1951-52 and 52-53. The average strength of cattle herd had increased from 249 in 1951 to 460 in 1952. In the year 1951-52 a large number of dry and poor cattle were dumped on the farm from the Tarai State Farms and those besides other causes increased the losses considerably. During the year 1952-53 the loss increased still higher. As will be seen from the table it was Rs.1,80,281 as against Rs.1,11,015 in the year 1951-52. The principal factors which contributed to this difference were the following :

	Rs.
(a) Higher Interest and depreciation charges ..	15,721
(b) Depreciation on dead stock buildings, Electric fitting etc.,	28,622
(c) Depreciation on Livestock	6,964
(d) Mortality	1,768
(e) Culling of cattle	16,191
Total	69,266

The animals are susceptible to 'Foot and Mouth and Rinderpest' diseases, for which the *Khadar* area is notorious. Summing up the main factors for the losses in this section are as follows :

- (1) Heavy capitalization.
- (2) Low rates of milk.
- (3) High Cost of maintenance of cattle.
- (4) High rate of interest.
- (5) Poor cattle.

The farm has been paying depreciation and interest on the following surplus assets :

<i>S. No. Surplus buildings</i>		<i>Value</i>
		<i>Rs.</i>
1.	Dairy main building	88,818
2.	Other sheds and buildings	75,500
		1,64,318
<i>Surplus machinery</i>		<i>Value</i>
		<i>Rs.</i>
1.	Pasteurization Plant	1,01,000
2.	Power chaff-cutters	9,574
3.	Platform balance	1,660
4.	Electric motor	2,884
		1,15,118
Grand Total		2,79,436

There is no justification for charging depreciation and interest on the above investments which are not required by the farm.

The tract is surplus in milk and the selling rate of milk has always been lower than the cost of production as will be seen from the following table :

Year	Cost of production per md. of milk			Selling rate per md.			Total Milk production in mds.		
	Rs.	as.	p.	Rs.	as.	p.	Mds.	sr.	ch.
1950-51	29	5	0	18	6	3	2,610	0	0
1951-52	30	6	0	14	3	3	3,836	0	0
1952-53	31	15	0	13	9	0	3,894	0	0
1953-54	17	10	3	12	12	0	4,015	0	0
1954-55	18	4	3	16	7	0	4,393	26	0
1955-56	23	4	11	13	5	2	4,950	20	0
1956-57	29	10	0	12	14	2	4,021	10	0
1957-58	26	11	3	14	12	0	3,818	13	8

The farm has on an average produced 3,943 maunds and 18 seers of milk per year. The average selling rate per year works out to Rs.14-8-6 per maund as against the average rate of production of Rs.25-14-3 per maund. The Farm has thus sustained at an average a loss of Rs.44,918 per year on the sale of milk alone.

The farm has on an average produced 3,943 maunds and 18 seers of to be paid on huge buildings dead stock, fencing and machinery, etc.

worth lakhs of rupees including those which are not in use. The expenditure on account of interest and depreciation on buildings alone works out to Rs.33,150, i.e. about Rs.87 per animal per year or Rs.7 per month excluding the charges of light, water, cleaning and maintenance of premises etc.

SUMMARY :

The Agriculture Section of the Farm started in the year 1948-49 and the Dairy Section during the year 1949-50 with an Agricultural Wing in 1948-49. The dairy section has been running on loss ever since whereas the Agriculture Section gave profits as well as losses. The up-to-date position of the financial results is given in the following table which will also show the amount of depreciation and interest paid so far.

Section	Year	Loss	Profit	Depreciation	Interest	Total
		Rs.	Rs.	Rs.	Rs.	Rs.
Agriculture Section.	1948 to 1958.	8,320	..	1,57,310	1,35,337	2,92,647
Dairy Section ..	Ditto	6,80,208	..	80,204	1,76,987	2,57,191

The ultimate position is that the farm as a whole gave a loss of Rs.688,525 against which a total sum of Rs.5,49,838 towards depreciation and interest (Rs.2,37,514 depreciation plus Rs.3,12,324 interest) has been paid. The losses on account of bulk culling alone amount to Rs.22,800 which was spread over two years.

The appreciation on account of the improvement effected in the quality of land as per assessment made by the Revenue authorities during the year 1955-56 amounts to Rs.1,32,934.

The main causes leading to the losses in Agriculture Section are extremely poor quality of land which is subject to easy and severe flooding and in the Dairy Section high cost of maintenance, low rate of milk and high depreciation and interest and poor cattle. However, it is creditable that even such a poor land is now producing food and is more than meeting the expenses incurred on it. It is felt that the area did not develop because more attention happens to be paid to the colonization work in Tarai and this area was comparatively neglected. Granted certain facilities this farm is bound to show improvements. It is learnt that a sugar factory will soon be established in Hastinapur Town. When established and in working order, this will increase the income of the farm considerably.

RECOMMENDATIONS

AGRICULTURE SECTION

1. Canalization of *Burhi Ganga* to check floods. It is understood that a scheme for the canalization of *Burhi Ganga* as worked out by the Colonization Department has already been submitted by the Collector, Meerut to Government for inclusion in the plan schemes. The completion of the schemes will bring about considerable improvement by minimizing damages from floods. This will benefit a very large number of farmers also.

2. Construction of channels on the rest of the two tube-wells in *Khadar* by Irrigation Department and transfer of channels already constructed departmentally to Irrigation Department which is supplying water to farm against charges. In all cases where the tube-wells are owned by the State Irrigation Department, who sells water to the farmers, the wells as well as the channels are owned by the Irrigation Department. It should be done here too.

3. Transfer of the entire area (at present about 87 acres) in the Central Town from Town Development Board to the Farm. This piece of land belongs to the Hastinapur Town Development Board but is in the possession of the Farm. It is recommended that the same may be permanently transferred to the farm. On this land alone depends the future economy and prosperity of our herd maintained here.

4. Supply of energy to tube-wells from hydel line which has recently been laid to ensure proper and long hours of working.

5. *Improvement of drainage system*—In the event of the scheme for canalisation being sanctioned by Government it will automatically improve.

6. An orchard standing on an area of 98 acres was transferred to this organisation by the Colonization Department in the year 1954. This was valued at Rs.98,000 or Rs.1,000 per acre. The value is grossly inflated. The annual return from the sale of fruits never went beyond Rs.800. It is in bad shape and bulk of it can never flourish. It is recommended that it should be correctly valued and the losses, if any, may be written off without affecting the Balance Sheet of the year.

7. No depreciation and Interest should be charged on surplus assets.

8. *Provision of a pumping plant on a trolley*—The Deputy Director, Mechanised State Farms has the matter under consideration.

9. Agriculture Chemist to Government U. P. Kanpur may carry out pilot reclamation experiments at the farm and render advice to take up practical methods to improve the land. This will also be of great help to the farmers of the area.

CATTLE SECTION :

1. The water for consumption in the dairy is supplied by the Water Works, under the control of the Deputy Administrator, Town Development Board Hastinapur at a flat rate of Rs.100 per month. On occasions the Diesel plant installed in local power house fails to work and dislocates the water supply to the dairy. It is, therefore, recommended that a surface well fitted with a persian wheel should be provided as a stand-by.

2. Due to the failure of the Power House the tube-well stops to function and fodder crops grown in the Central Town Agricultural Block adjacent to the Dairy, suffer considerably due to want of irrigation. This further reduces the yield and fodder has to be purchased from outside. Provision of the persian wheel will help in irrigating at least a part of the area.

3. No interest and depreciation should be charged on surplus capital assets.

4. The correspondence resting with Sri Mehrotra's D. O. letter no. 3982 (GEC), dated November 8, 1958 addressed to the Deputy Director, Mechanized State Farms in connection with the observations of the Prime Minister of India regarding the working of the Hastinapur farm was also placed before the Committee.

The Committee are in agreement with the view expressed by the Deputy Director, Mechanised State Farms contained in his D. O. letter no. 2235, dated September 9, 1958 (appended below). The Committee strongly endorses the view that it will not be possible to reduce the area of the farm without seriously affecting the economy of this institution, which, with ceaseless efforts, has considerable scope for economic development.

MECHANISED STATE FARM HEMPUR, DISTRICT NAINI TAL

The farm is situated in Naini Tal District at a distance of about 8 miles from Kashipur and 13 miles from Ramnagar. It is at a distance of 2 miles from Kashipur—Ramnagar *pucca* road, and is connected by a feeder road. The Railway line (meter gauge Moradabad-Ram Nagar Route) runs along the borders of the farm and there is also a stoppage (Railway Station) on the farm boundary, which is known as Gaushala-halt.

HISTORY :

This farm was originally established in the year 1924 as a Cattle Breeding Farm of the Tarai and Bhabar Government Estate. The *Ponwar* and *Kherigarh* breeds of cattle were maintained at this farm for supplying breeding bulls for development purposes. It continued to function under the management of Tarai and Bhabar Estate up to the year 1932, when it was transferred to the control of Agriculture Department. In March, 1943, the farm was transferred to the control of Animal Husbandry Department, where it remained up to July 1948, when it was included in the Mechanised State Farms Organization. The farm functioned as an unit of the Mechanised State Farms Organization up to the year 1954, when it was decided by the Government, vide G. O. no. C-11/XXII-B-775-49, dated March 31, 1954 to transfer this farm to the control of the Deputy Director, Tarai State Farms, now designated as General Manager, Tarai State Farms. This farm, although still called Mechanized State Farm, Hempur, does not at present form a unit of the Mechanized State Farms Organization. The entire area of the farm was originally lying waste covered with perennial grasses, shrubs, bushes, kans, *dhak* and *semal trees*, etc. It was also infested with wild animals. The entire area had to be cleared and developed before it could be brought under cultivation. The land of this farm is generally uneven and undulated which makes drainage of surplus rain water very difficult and allows it to accumulate in lowlying blocks. Major portion of the farm is badly infested with *kans* and *narkul*. Prior to the transfer of the farm to the Mechanization scheme in the year 1948, only a little area was under cultivation. The cattle, which were maintained at the farm used to live mostly on grazing. Emphasis on its development as a mixed farm was laid only after its inclusion in the Mechanised Scheme.

GENERAL INFORMATION :

As said before, the farm was originally started purely as a cattle breeding farm with a view to upgrade the local breeds of Cattle by supplying pedigree bulls, to the cultivators. After its transfer to this organization in the year 1948, it fell in line with the other units and started working as a mixed farm so as to cater to the needs of both the Departments of Agriculture and Animal Husbandry. The farm maintains *Ponwar*, *Murrah* and *Hariana* breeds of cattle. The total area of the farm is 5,234.74 acres; out of which 3,000 acres were brought under cultivation up to the year 1950-51. No new area has been opened since then. Other details are as follows :

	<i>Acres</i>
1. Total area of the farm	5,234.74
2. Area under cultivation (This includes 16 acres under garden)	2,800.00

3. Area under roads, buildings and pasture land ..	1,832.94
4. Area under fish tank	180
5. Area under river, nalas and channels	600.00

INVESTMENT :

1. Land—

Cost of land	27,708.77
Cost of improvement of land	3,31,174.87
Total	3,58,883.64
2. Buildings	4,35,298.34
3. Roads and fencing	1,48,504.00
4. Machinery and Implements	5,94,628.79
5. Bullocks	11,355.00
6. Fish tanks, etc.	2,735.83
	15,48,425.60

The farm has two sections viz. (i) Cultivation Section and (ii) Cattle Section. Each of these sections is discussed below separately:

CULTIVATION SECTION :

The area under cultivation in different years is given below :

1948-49	1,316	Acres.
1949-50	2,000	
1950-51	3,000	
1951-52	3,000	
1952-53	2,800	
1953-54	2,800	
1954-55	2,800	
1955-56	2,800	
1956-57	2,800	
1957-58	2,800	

Some of the area came in the bed of Dhela river due to a change in her course and had to be left out of cultivation. *The old and worn out condition of tractors is mainly responsible for non-tackling of new area and to some extent for the reduction in the area under cultivation.* The soils of the farm vary from clay to sandy loam. The total investment on the land, which is in the possession of the farm comes to Rs.3,58,883.64 n.P. which includes the cost of land and expenditure on improvement and layout, etc. On the entire area of the farm it calculates to 68.55 per acre and calculated on the basis of cultivated area it comes to Rs.128.17 per acre. The land of the farm is mostly unlevelled and is of fairly good quality. The main crops of the farm are sugar cane, paddy, wheat, gram, barley and oats. Berseem is grown for fodder.

IRRIGATION :

The area under cultivation at the farm at present is 2,800 acres. Out of which 2/3rd of the area is unirrigated. There is only one lift-pump fixed at the Dhela river, which is run by the Irrigation Department. The river does not have sufficient water all the year round and irrigates only

about 600 acres in the Rabi. About 200 acres is irrigated by canal water. The rest of the area remains unirrigated depending entirely on nature.

TRACTORS AND MACHINERY :

A large number of tractors, combines and implements were transferred to this farm from the Agriculture Engineering Department in May 1950 in an old and worn out condition. A sum of about Rs.1,79,000 was spent by the farm on the repairs of a part of them so as to bring them in working order. Surplus implements worth about Rs.1 lakh have been dumped at the farm, which have never been used. Besides a number of implements, which were received at the farm from Bigwara Depot in the year 1950 are also lying unused. A list of all such implements, which have never been used at the farm along with a list of tractors and other machines which are either surplus, or unserviceable together with those rendered uneconomical is given at the end of this chapter. It would be seen that a large number of tractors, combines and implements have been rendered unserviceable and a very few of them are in working order. This results in delaying the preparation of land and sowing of the crops.

PRODUCTION :

The cost of production and other details are given in the following table :

Year	Total production in terms of grain		Total Expenditure in cultivation section		Cost of production per maund		Production in terms of grains per acre in mds.		Cost of production per acre		
	Md.	sr.	Rs.	a. p.	Rs.	as. p.	Md.	sr.	Rs.	a.	p.
1951-52	39,825	30	5,71,149	4 5	14	5 6	10	1	344	13	0
1952-53	44,983	11	5,43,127	11 0	12	1 3	18	30	226	12	0
1953-54	25883	26	6,01,331	3 3	23	3 8	10	21	244	11	6
1954-55	44,618	35	4,83,511	3 6	10	15 2	16	33	184	4	4
1955-56	42,213	11	5,97,463	9 4	14	2 6	15	34	225	1	10
1956-57	36,584	0	6,57,347	84	17	9 8	14	23	259	20	0
1957-58	34,382	0	5,62,418	37	16	35	13	6	215	83	

Reasons for the high cost of production are as follows :

(i) Rise in the cost of fuels, spares, and machinery resulting in heavier expenditure on these items year after year. The old and worn out condition of tractors necessitates heavy repairs frequently.

(ii) Rise in the rates of interest and depreciation from year to year.

(iii) Increase in the wages of daily labour and grant of paid holidays have resulted in an extra expenditure of about Rs.4,000. Similarly, the increase in the Dearness Allowance of monthly paid establishment has resulted in an extra expenditure of about Rs.2,500 per year

(iv) The farm produces about 3 lakh maunds of sugarcane. Bulk of the sugarcane is supplied to the Sugar Factory at Kashipur, which is at a distance of about 8 miles. 70,000 to 80,000 maunds of sugarcane has, however, to be supplied to other three factories, namely Bilari, district Moradabad, (2) Rampur and (3) Dhampur, district Bijnor, which are at distances of 62, 48 and 50 miles respectively. The cost of transport to these distant factories comes to about 7 to 8 annas per maund. This increases the expenditure by about Rs.25,000.

(v) The farm being located in tarai areas, the growth of *kans*, *Narkul* and other weeds is in abundance. Considerable expenditure is incurred on picking, cleaning and weeding of crops, resulting in the increase of cost of cultivation. Extra tractor operations have to be done to overcome the menace.

FINANCIAL RESULT :

The financial position of this section since its inception is given below :

Year	Profit	Loss	Depreciation	Interest
	Rs.	- Rs.	Rs.	Rs.
1948-49	2,303	..	2,055	2,054
1949-50 .. ..	..	41,335	3,193	2,970
1950-51	125,637	..	5,095	5,761
1951-52	53,807	..	12,260	10,486
1952-53 .. ..	..	46,457	31,966	23,402
1953-54 .. ..	..	1,44,991	84,422	49,378
1954-55	90,617	..	75,903	53,563
1955-56	25,239	..	69,057	51,057
1956-57 .. ..	..	66,624	54,353	46,254
1957-58 .. ..	..	53,682	59,760	49,867
Total	(+)297,603	(-)3,53,089	398,064	2,94,792

It will be seen from the above table that the cultivation section has resulted in a net loss of Rs.55,486 at this farm. An examination of the *pro forma* accounts maintained at the farm, however, revealed that necessary depreciation and interest on the following stock which was transferred to the farm from the Bigwara Depot was not accounted for in the balance sheet of the farm. Approximately such stock costs about Rs.75,000 and the amount of depreciation and interest on these assets would have amounted to Rs.10,000 per year.

1. Johndeer MB Plough 77	..	..	22
2. Mower Bullocks Power	..	..	7
3. Manure Spreader	..	..	1
4. Mc. Deering Disc. Plough 99	..	..	1

Besides the above there are a number of machines fitted in the Rural Workshop and the Mobile workshop worth about Rs.2 lakhs, which does not find a place in the farm accounts. This machinery was transferred to the charge of the farm in the year 1953 and depreciation and interest on these would have amounted to about Rs.29,000 a year. In case depreciation and interest on all these stock were accounted for, the loss in the section would have been higher by Rs.39,000 per year. This is indeed an unsatisfactory position. Natural calamities, lack of adequate irrigational facilities and unsatisfactory condition of tractors and other machinery are perhaps responsible for such a state of affairs. But at the same time, the condition of the farm and the machines, etc., showed that the farm had probably been neglected and could not perhaps receive the attention that was due. The quality of land, the climate and possibility of growing large quantities of cane indicate that there was no reason why this section should not run on a substantial profit.

CATTLE SECTION :

The farm maintains the following breeds of livestock :

1. Ponwar	..	..	..	180
2. Murrah	..	..	..	105
3. Haryana	..	..	..	3

Ponwar cows are poor milkers and are not milked at all. 36 Murrah buffaloes which were transferred to this farm from Babugarh in the year 1950 are C class. The details of production are given below :

Year	Total no. of animals	Milking average in lbs. of cows per day per head	Overall average in lbs.	Milking average in lbs. of Murrah buffs. per day	Over all average in lbs. per day per head
1948-49 ..	223	Record not	available burnt in fire.		
1949-50 ..	423	3.1	0.5	6.5	1.2
1950-51 ..	498	2.5	0.45	6.3	1.6
1951-52 ..	579	2.5	0.4	6.7	2.4
1952-53 ..	615	2.7	0.37	7.5	3.5
1953-54 ..	578	2.5	0.3	6.7	2.7
1954-55 ..	487	2.00	0.6	8.5	5.5
1955-56 ..	466	1.0	0.3	8.2	4.3
1956-57 ..	469	No milking done	..	8.5	4.5
1957-58 ..	428	No milking done	..	9.0	3.3

There is also a big gap between the cost of production and the rate of sale obtained from milk produced at the farm. This will be seen from the table given below :

Year				Cost of milk production per md.			Income per md.		
				Rs.	a.	p.	Rs.	a.	p.
1948-49	..	..	..	..			..
1949-50	..	..	..	..			..
1950-51	..	..	..	21	4	0	14	12	0
1951-52	..	..	..	25	10	0	15	6	0
1952-53	..	..	..	28	10	0	13	11	0
1953-54	..	..	..	32	0	0	16	9	0
1954-55	..	..	..	35	7	0	16	9	0
1955-56	..	..	..	42	8	0	14	4	0
1956-57	..	..	..	35	7	0	14	9	0
1957-58	..	..	..	52	8	0	17	1	0

The cost of milk production is the highest at this farm. The financial position of this section will be seen from the following table :

Year	Profit	Loss	Interest	Depreciation	Audit charges
	Rs.	Rs.	Rs.	Rs.	Rs.
1948-49	..	35,446	1,338	372	..
1949-50	—	71,292	2,070	3,193	1,239
1950-51	75,098		2,726	5,094	2,198
1951-52	..	1,41,316	9,309	7,306	2,700
1952-53	..	1,39,457	13,006	11,000	1,200
1953-54	..	1,27,355	10,331	4,915	1,200
1954-55	..	54,399	18,000	8,000	1,200
1955-56	..	90,961	18,000	12,000	1,500
1956-57	..	1,29,331	24,000	22,000	2,300
1957-58	..	1,42,578	21,000	19,000	2,000
Total	75,098	9,32,135	19,780	92,880	15,537

It will be seen from the above that barring the year 1950-51, when there was profit in this section due to change in the valuation, this section has been giving very heavy losses year after year. It would be seen that

the loss amounts to about Rs.350 per animal per year. This is after deducting the income that had accrued from this section. The loss, therefore, comes to more than Rs.450 per animal per year, which is too much. An examination of the accounts, however, revealed that the position has not been correctly exhibited. The total charges on accounts of interest and depreciation on this section during the year 1956-57 and 1957-58 amounted to Rs.24,000, Rs.22,000 and Rs.21,000 Rs.19,000 respectively. The total charges on account of supervision amounted to Rs.22,000. All these figures are on the high side. The system adopted for charging interest and depreciation on this farm at flat rate, sharing the entire expenditure on this account between the Agriculture and the Dairy Section in the ratio of 2 : 1 is defective and is obviously unfair. The contingent expenditure on the cattle section is much less (about Rs.30,000 only) than that in the Agriculture Section. The charges on account of interest and depreciation should have, therefore, been levied on the per rupee basis. The adoption of wrong procedure has obviously inflated the losses in this section and has considerably minimised that in the cultivation section. Although the staff engaged in this section is already in excess of the requirement yet while calculating the supervisory charges on this section unduly large sums are added over and above the actual expenditure.

The quality of foundation stock was poor and many animals had to be rejected. The initial bulk culling was done in the year 1952-53 and the total loss sustained by the farm on this account amounted to Rs.60,243.

Timely culling is an essential factor and should be a regular feature of any herd but this has not been done on this farm resulting in accumulation of a large number of unwanted stock. These uneconomic animals have been a constant drain on the over all economy of the farm and are telling upon the efficiency of the herd as a whole.

One hundred and sixty two animals were declared uneconomical and were culled by Director of Animal Husbandry in the year 1954. Even these have not been disposed off so far. Out of these only 10 had been auctioned while 61 had since died and 91 are still being maintained at the farm. Retention and maintenance of uneconomic cattle has resulted in a huge loss to the farm. The expenditure on the maintenance of the cattle, which has been culled out in the year 1954 and have not been disposed off works out to about Rs.56,000 besides the loss of those that have died. This loss could have been avoided. It was felt that the measures, which ought to have been adopted in accordance with the existing Government orders so as to reduce the pressure of uneconomic cattle at the farms were wanting and this is one of the reasons for such heavy losses in this section. Even since the transfer of this farm from the Mechanised State Farms Organisation there appears to have been a sort of general neglect in such matters.

There have also been abnormal delays in lifting of the bulls, of Murrah and Ponwal breeds particularly of the latter by the Animal Husbandry Department. The fact is that there is no demand for these bulls and they should not have been raised. In many cases the bull calves were more than 6½ years old but have not been lifted. This had also been a source of loss to the farm.

SUMMARY :

The farm was started in the year 1924, as a Cattle Breeding Farm of Tarai and Bhabar Government Estate. In the year 1932, it was transferred to the control of Agriculture Department and in March 1943, it was transferred to the control of Animal Husbandry Department, where it remained upto July 1948, when it was included in the Mechanised State Farms Organization. It was then transferred to the Tarai State Farms in the year 1954. The area of the farm is 5,234.74 acres including cultivated areas, *nalas*, buildings, and pastures etc., At present the area under cultivation is only 2,800 acres. Out of the cultivated area, 16 acres are under fruit crops. The main activities of the farm are Agriculture and Cattle Development.

The financial position of the farm since the year 1948-49 is given below :

Year	Agriculture section	Cattle section	Net results	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.	Rs.
1948-49 to 1957-58	(-)55,486	(-)8,57,037	(-)9,12,523	4,90,944	4,14,572

It will be seen from the above that the *Pro forma* accounts of the farm have so far exhibited a total loss of Rs.9,12,523. This would actually be more if the interest and depreciation on the articles which have not been included in the stock but are there is also included. The financial results of the farm include a sum of Rs.4,90,944 as depreciation and Rs.4,14,572 as interest.

Losses on account of initial bulk culling amounted to Rs.60,243. Appreciation on the land, as per assessment made by the Revenue authorities in the year 1956 works out to about Rs.15 lakhs. The farm is capable of showing much improvement in the financial results :

RECOMMENDATIONS

AGRICULTURE SECTION :

(1) All the old and worn out tractors, together with surplus stock of implements and machinery must be disposed off immediately.

Huge stock of surplus or useless tractors and machinery are lying at the farm, their value being more than all such stock of all the other Mechanised State Farms combined.

(2) The farm requires at least 10 new tractors immediately to cope up with its work. The replacement of old tractors is very necessary and it is recommended that 6 wheel type and 4 chain type tractors with matching implements may be provided to the farm as early as possible.

(3) It is necessary to construct at least 4 tube-wells at the farm with *pucca* channels. Electricity is already available to run these tube-wells. This arrangement will ultimately prove economical and will provide adequate irrigation to the farm. It would be better if the Irrigation Department could take up this work and charge the farm for supply of water. Drainage system also needs improvements.

(4) Heavy amount is spent every year on transportation of sugarcane from the farm to the various factories. The cane is supplied to the factories very late, which dislocates the harvesting of other crops, which are ready in March and April, and it also does not permit the utilization of sugarcane fields for taking Rabi crops. The farm produces nearly 1 lakh maund of sugarcane ratoon and there is no reason why bulk of this cannot be finished by the end of the December or middle of January. The financial position of the farm can considerably improve if the Cane Department extends its co-operation in this behalf. The transportation of the cane by rail will definitely be cheaper and may be considered. A small railway station, known as Gausshala halt exists at the farm boundary. It would be to the advantage of the farm, if a Cane Centre is established at this railway station. The Deputy Director, Mechanized State Farms had already sent his suggestion to the Government and it is understood that the Cane Department is examining the possibilities of establishing a centre there.

In case, it is not possible to transport the cane by rail then 4 Diesel trucks may be provided, so as to minimise the cost of transportation, which is at present done on contract. The old petrol trucks available at the farm have nearly out lived their utility and are very uneconomical. These may be disposed off.

The Electric line, which is available at the farm may be extended to the Workshop and other buildings of cattle and cultivation Sections for efficiency and economical working of the machinery.

(5) A large area of the farm upto 300 acres may be put under orchard.

(6) Provision of a Jeep for the supervision of the farm is very necessary and may be made.

(7) A large part of the farm is under water during rains and even the roads are flooded. Proper supervision is almost impossible. It is recommended that the farm be provided with two elephants. These will provide transport to any corner of the farm in the worst of floods and can be tried for agricultural work also when necessary.

(8) The bullocks are very old and insufficient in number. Their replacement has not been done since long. It is, therefore, suggested that surplus Ponwar bulls may be converted into bullocks and in addition a few pairs of Haryana bullocks may be had for heavier work.

(9) Some of the staff at the farm is in excess of the requirement in the tractor section. There is need for reduction. At least 8—10 persons are surplus in the section.

RECOMMENDATIONS

CATTLE SECTION :

(1) Old and useless Ponwar cattle should be transferred to Gausadan. There are as many as 13 such animals at the farm.

(2) All the culled animals should be disposed off.

(3) Ponwar and Murrah bulls which have been castrated should be utilized as bullocks in the cultivation Section and those that are left surplus should either be transferred to other farms where required or should be auctioned.

(4) 27 Ponwar bulls have attained the age and are fit for service. However, only 10 have been selected for distribution in the field and the rest 17 have been rejected by the Deputy Director, Animal Husbandry, Bareilly, who has advised for the use of these animals for draft purposes after castration. These animals should be selected before they attain the age of one year, so that the farm is saved from the losses on account of feeding useless animals. Such heavy rejections have to be avoided.

(5) The Farm Manager should dispose-off all surplus female calves, while they are below one year in age. Even the surplus male calves, which are not required even for draft purposes should be disposed off in the open market, while they are below one year in age. Necessary powers for the disposal of Female Calves have already been delegated to Farm Managers vide G. O. no. 9815/XIIE—742-52, dated February, 13, 1954.

(6) Some of the cows and heifers which may be acceptable to farmers may be given away under the scheme of multiplication of pure breed cattle. As there is no demand for cows and bulls of this breed only a nucleus herd of 25 cows should be maintained and the rest should be disposed off slowly. These should be milked and kept in the regular manner.

(7) The existing strength of establishment in the cattle section is in excess of the requirements.

At least 5 members of the superior staff can be easily retrenched without affecting the efficiency in any way.

(8) Regular culling of the animals should be done.

(9) The cattle section of the farm may be regarded as non-commercial.

(10) The entire expenditure that is incurred on the maintenance of Ponwar cattle should be treated as experimental.

GENERAL :

(1) At least 4 miles of farm roads need improvement. Their level has to be raised.

(2) Electricity is available at the farm but the residential buildings and offices have not been provided with the same. This may be done.

(3) There is need for more residential quarters, at least 6 quarters including one for the Farm Manager needed urgently.

(4) This farm was transferred to the Tarai State Farm with a view to improve supervision and control as it was quite close to it. This hope has been completely believed. And now that the Tarai State Farm is going to be a part of the Rural University at Rudrapur, the Mechanized State Farm, Hempur, should revert to its parent organisation.

*List of implement which have never been used at the Hempur farm
(received from the Agriculture engineer in 1950)*

Serial no.	Description	Service- able	Repair- able	Unservic able
1	Johndeere Disc. plough .. ..	..	..	1
2	M. H. Disc. Plough 504 .. ..	..	..	1
3	Ditt 606 .. ..	..	2	2
4	M. H. 509 One Way .. ..	..	6	6
5	M. H. 509 seeding attachment .. ..	..	4	2
6	M. H. Light harrow .. ..	..	..	1
7	M. H. 44-K Mounted cultivator	1	..	..
8	Jamboo plough	1	..	..
9	Jombo o harrow	1	..	..
10	Dyre offset 24 disc. .. ..	..	..	1
11	Oliver plough .. ..	..	..	1
12	M. S. Deering (MB plough no. 10)	2	..	..
13	Fordson cultivator with redgerset .. ..	..	..	3
14	Ransom cultivator C-173	1	..	..
15	Big. Athence	2	3	2
16	Rome Model 'B'	2	1	1
17	Bush Breaker	1	1	..
18	Fordson Mounted MB plow	2	..	..
	Bigwara Implements			
1	Johndeere MB plough no. 77	22	1	..
2	Mower Bullock power	6	1	..
3	Mower spreader	1	..	..
4	MC deering plough no. 99 .. ..	..	1	..

*List of the surplus and unserviceable tractors and other machinery
at mechanised State farm Hempur district Naini Tal (U.P.)*

Serial no.	Description	In working order	Requiring heavy re. pair	Unserviceable	Total no.	Book value	Remarks
1	2	3	4	5	6	7	8
1	H. D. 7 12070 Tractors.	..	..	1	1	19692.99	Already survey reported by F. M.
2	H. D. 7 14986 Tractors.	..	..	1	1	16141.13	Already survey reported by F. M.
3	H. D. 7 15846 Tractors.	..	..	1	1	15707.04	Already survey reported by F. M.
4	H. D. 7 15530 Tractors.	..	..	1	1	18048.31	Already survey reported by F. M.
5	H. D. 7 15535 Tractors.	..	..	1	1	19089.63	To be survey reported.
6	H. D. 7 15523 Tractors.	..	..	1	1	12248.53	To be survey reported.
7	H. D. 7 15848 Tractors.	..	1	..	1	24611.9	Uneconomical.
8	H. D. 7 15665 Tractors.	..	1	..	1	21446.36	Ditto.
9	H. D. 7 14974 Tractors.	..	1	..	1	23340.04	Ditto.
10	M. H. 55 K 2516	..	1	..	1	10567.14	Use economical.
11	„ 3653 Tractors	..	1	..	1	10901.13	Ditto.
12	„ 2630 „	..	1	..	1	11668.36	Ditto.
13	„ 2454 „	..	1	..	1	11893.70	Uneconomical.
14	„ 2331 „	..	1	..	1	12488.47	Ditto.
15	„ 2487 „	..	1	..	1	18197.46	Ditto.
16	„ 2650 „	..	1	..	1	13184.24	Ditto.
17	„ 2642 „	..	1	..	1	12432.87	Ditto.
18	M. H. 44 K 1713 Tractors.	..	1	..	1	7985.18	Ditto.
19	Fordson Major 1073825 Tractors	..	1	..	1	7842.53	Ditto.
20	Fordson Major 1072525 Tractors.	..	1	..	1	7128.68	Ditto.
21	Ferguson 83359 Tractors.	..	1	..	1	4431.15	Petrol engine uneconomical without implements.

Serial no.	Description	In working order	Requiring heavy repair	Unserviceable	Total no.	Book value	Remark
1	2	3	4	5	6	7	8
22	IHC 1255P Combine 5731.	..	1	..	1	10888.35	Uneconomical
23	Cremo Engine ..	1	..	..	1	2952.45	Not required.
24	Calmo Millia Engine.	..	1	..	1	2461.96	Ditto.
25	Delta Pump ..	2	..	..	2	826.68	Ditto.
26	Petrol truck IHC. 7977.	1	..	..	1	6563.91	Almost out live its utility Uneconomical.
27	Petrol truck IHC. 7833.	1	..	..	1	4401.70	Ditto.
28	Petrol truck Ford V-8 7038.	..	1	..	1	5207.22	Ditto.
	Total ..	..	..	..	..	319148.32	Contd.
29	Jonder Disc plough 605.	..	..	1	1	4,407.12	Unserviceable.
30	KH. Disc, plough 504	..	..	1	1	2,245.91	Ditto.
31	KH. Disc, plough 606,	2	2	1	5	11,160.26	Not required.
32	KH. Disc. plough 509 one way.	..	6	6	12	21,969.48	Unserviceable.
33	MH. 509 one way seeding attachment.	..	4	2	6	265.76	Not required.
34	Light Harrow MH	..	..	1	1	1,116.02	Unserviceable.
35	MH. 44K Mounted cultivated.	1	..	..	1	797.17	Unassembled no required.
36	Jamboo plough ..	1	..	..	1	5,258.61	Not required.
37	Jamboo Harrow..	1	..	..	1	1,879.21	Ditto.
38	Dyre offset 44 Disc.	..	..	1	1	1,953.57	Unserviceable.
39	Olliver plough 5 Disc.	..	1	..	1	1,065.50	Ditto.
40	MAC Clearing no. 10 M/E.	2	..	..	2	2,494.69	Not required.
41	Fordson cultivator with ridger set.	..	..	3	3	2,140.74	Unserviceable.
42	Ransom cultivator no. C.173.	1	..	..	1	1,193.08	Not required.
43	Big Athence ..	2	..	2	7	3,595.26	Heavy implement not required.
44	Rome bodle (B) ..	2	1	1	4	24,466.95	Ditto.
45	Bush Braker ..	1	1	..	1	1476.96	Not required.
46	Tank trolley 250 gallons capacity.	..	2	..	2	797.17	Ditto.
47	Tank callasiable..	..	3	..	3	2,251.54	Unassembled no required.
48	Filter Assembly ..	1	1	..	2	2,000.00	Not required.
49	Nil filter ..	..	3	..	3	792.18	Ditto
	Total ..	..	..	..	..	424,880.53	

KAMYAR FARM DISTRICT, BARABANKI

The land of Kamyar Mechanized State Farm (activities' abandoned since the year 1955-56) is situated at a distance of about 16 miles from the nearest rail-head, both Daryabad and Sarjoo Railway Stations being equidistant. In order to reach the place one has to go to Tikaitnagar by road, a village at a distance of about 6 miles from Daryabad Railway Station broad gauge (N. R.) and from there one has to cover the distance on foot, after crossing the intervening Ghagra river by boat. The farm has 3 separate blocks known as the Western, Central and Eastern blocks. Central block is situated at a distance of about 7 miles from the Western and 3 miles from Eastern blocks. There are a large number of small rivulets all the way from the Western to the Eastern block. These rivulets generally dry up during the late winter and begin to flow again with the setting in of the rains. The entire farm area is situated along the northern bank of *Ghagra river*. Means of communication and transport are, therefore, very difficult.

HISTORY :

This farm was started in the year 1948-49 as a development project and acquisition proceedings were started for acquiring 5,768 acres of land. Originally, it was proposed to reclaim this land for settlers, but subsequently it was decided to run it as an agricultural farm in connection with the "Grow More Food Campaign". Prior to its inclusion in the Mechanisation Scheme in the year 1949, this farm was under the administrative control of the Deputy Director, Basic Seed Stores and Farms of the Agriculture Department. Due to certain disputes with the local tenants and unsatisfactory financial position of the farm, however, it was decided in 1951-52 to curtail the agricultural activities and to reduce the area to 2,402 acres only. The Kamyar project was placed under the charge of the Deputy Director, Mechanised State Farms, vide Colonisation Department G. O. no. C—1843/XIIA—15-1948, dated April 22, 1949. In the beginning when the land was in the possession of the Colonization Department of the State, the project was not functioning as a farm, but as a subsidised development project. The land used to be broken by tractors and was then let out to cultivators either on *batai* or on rental basis for cultivation. Very little had been done by this way when in view of the acute shortage of foodgrains in the country, it was decided to convert this project into a Mechanised State Farm, so as to utilise this area for growing food crops by the state and accordingly the Mechanised State Farm, Kamyar, was established. The initial investment on the establishment of the farm was of the order of about 4 lakhs. There had always been a difference of opinion about the exact area in the possession of the farm. This was due to the nature of river Ghagra a good deal being subject to vagaries of the river.

GENERAL INFORMATION :

The main aim at the time of acquiring the land for the project was to rehabilitate the refugees, but subsequently it was converted into the

Mechanised State Farm in order to supplement the food shortage of the country. Other details in respect of the farm are as under :

Total area of the farm 1949-50 to 1951-52 5768.0 acres.
1952-53 to 1955-56 2402.0 acres.

The farm comprised of the following 3 blocks at the time of suspension of activities :

Total area in acres		Cultivated area in acres
		Aores
Western (Kusheri) block	1,402 acres	700
Central or Kamyar block	700	300
Eastern or Bansgaon	300	300
Total	.. 2,402	1,300

The Western block was the Headquarters of the Farm Manager and Centre of the activities for the whole farm. It was about 7 miles from the Central block and 10 miles from Eastern block. The distance between Central and Eastern block, being 3 miles. There were 76 families who occupied a portion of the land in the farm. They had been doing labour on the State Farm and also cultivating land on *batai* system. The land had been in their possession for a long time, in some cases for periods over 7 years. The soil of the land is sandy and subject to flood hazards of the river Ghagra. A number of small streams, all of which are the tributaries of Ghagra, cross the land here, there and all over and present a net work of rivulets. River Ghagra on the bank of which this land is located is notorious for its ravages and effective safeguard against flood hazards is not possible. The only course open, therefore, was to curtail *Kharif* programme to a minimum and concentrate on *Rabi* crops, but in view of the light nature of the soil and uncertainty of rains this course was also fraught with the danger of crop failures due to drought and consequent losses.

INVESTMENTS:

1. Land—

Compensation paid	.. .. .	Rs. as p.
Development	.. .. .	.. 85,427-7-0
		.. 68,993-9-0
		<hr/> 1,54,421-0-0
2. Buildings (prefabricated houses).	.. .. .	.. 22,754-0-0
3. Fencing.	.. .. .	.. 3,954-0-0
4. Livestock.	.. .. .	.. 8,976-0-0
5. Dead stock and machinery.	.. .. .	.. 12,700-0-0
6. Jeep and Tractors etc.	.. .. .	.. 1,18,800-0-0
Total :	.. .. .	<hr/>3,21,605-0-0

The farm had only an agricultural section and the area under revenue producing crops in different years was as follows :

Year.	Area Sown Acres.
1950-51	1267.21
1951-52	959.00
1952-53	1183.10
1953-54	1237.00
1954-55	1113.90

Paddy, sugarcane, wheat, barley, oats, linseed and dhanya used to be sown in the area.

IRRIGATION :

The farm was devoid of any irrigational means as on account of the peculiar conditions obtaining here, it was not possible to have the conventional type of irrigation system with the fixed pumping plant and pucca water channels and perhaps alternative methods were not tried.

TRACTORS AND MACHINERY:

Like other Mechanized State Farms, the land of this farm was broken and other tractor operations done by the Agricultural Engineering Department to whom a payment of Rs.53,587-12 was made on this account. As on other farms the tractors and machines were taken over by this organisation in 1950. On account of the sandy nature of the soil, the machines were exposed to grit and dust necessitating frequent repairs. The fast moving parts of the machinery gave way rapidly. Quite a heavy amount had to be spent on the maintenance and repairs of the tractors and other machinery, so as to carry on the work. In view of the farm being situated at an out of way place, even these repairs were sometimes most difficult, resulting in abnormal delays.

PRODUCTION :

The Kamyar farm land is very poor in plant food and is subject to yearly floods. Stable agriculture is virtually impossible. The Central block is most susceptible to the floods while the Eastern block is least affected. In the following table is given the total production in terms of grains and cost of production per maund of grains.

Year	Total production in terms of grain			Cost per maund of grain		
	Md.	sr.	ch.	Rs.	as.	p.
1950-51	6,561	23	0	21	3	0
1951-52	8,270	9	0	22	11	0
1952-53	8,430	30	0	24	2	0
1953-54	9,946	9	0	17	4	0
1954-55	7,882	16	0	20	6	4

From the table given above it will be seen that the expenditure incurred on raising the crops was quite high. The yields per acre obtained from these soils were extremely poor, which will be seen from the table given below :

Name of crop	Yield per acre in different years					
	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55
	Md. sr. ch.	Md. sr. ch.	Md. sr. ch.	Md. sr. ch.	Md. sr. ch.	Md. sr. ch.
Paddy. ..	4 9 12	1 10 5	3 33 2	1 11 8	3 33 12	2 33 0
Barley. ..	1 17 4	5 33 15	2 39 6	3 34 2	5 23 0	4 19 0
Oats. ..	1 3 4	4 28 14	4 38 14	2 23 5	7 30 0	4 10 0
Linseed ..	1 4 10	1 19 0	3 1 5	1 28 4	.. .	..
Dhania. ..	1 20 0	3 11 1	3 19 15	2 8 4	2 8 0	0 18 6
Wheat ..	..	..	3 27 4	9 33 1	5 24 0	5 6 0
Sugarcane	..	..	647 22 5	253 6 8	364 13 10	338 10 0

FINANCIAL RESULTS :

The financial position of the farm in different years remained as below :

Year	Profit	Loss	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.
1948-49 .. ..	..	6,604	..	..
1949-50 .. ..	..	15,461	202	718
1950-51	8,930	..	9,516	5,309
1951-52	235	..	13,768	5,676
1952-53 .. ..	..	1,46,779	12,061	5,443
1953-54 .. ..	..	53,623	12,869	8,021
1954-55 .. ..	..	78,512	13,232	8,250
Total ..	9,165	3,00,979	61,648	33,417

It will be seen from the financial results given above that the farm during the period of its working up to the year 1954-55 sustained a loss of Rs.2,91,814. These heavy losses may be attributed to the following reasons.

- (1) Recurring floods.
- (2) Difficult means of communication.
- (3) Poor soils and lack of irrigational means.

(4) Want of strict supervision due to the existence of the 3 blocks at considerable distance from each other.

In view of the persistent heavy losses at the farm due to annual floods, and on account of only limited scope for improving the economics on this account, the Government vide G. O. no. 1209/XII-E-625-1950, dated April 27, 1955, decided to maintain only a bare skeleton staff at the farm to look after the assets of the farm till Government finally approved the most suitable method of disposal of the land. All movable assets have been removed from the farm and the activities abandoned since then. The skeleton staff, consisting of one Grade II Assistant in the scale of Rs.120-6-210-10-250 per mensem and 2 Chaukidars are being maintained at the farm to look after the land till it is finally disposed off. A period of more than 4 years has since passed and the expenditure on the maintenance of this staff is being incurred. Nothing definite has so far been decided with regard to the disposal of this land. Originally, it was decided to transfer the aforesaid land to the Government of India for the rehabilitation of the refugees from East Bengal. The Relief and Rehabilitation Department, who were negotiating on behalf of Government of India, however, intimated that they were no longer interested in taking over this farm land. Subsequently it was considered that the farm in question could be utilised for jute cultivation by the Agriculture Department. This proposal also could not materialise. Thereafter, it was considered to retain the farm for being used as State Gosadan. The matter with regard to the establishment of a State Gosadan at the Kamyar farm land is still under the consideration of Government. The Jail Department had also shown interest in taking over this farm for growing food for the prisoners but this idea has also been dropped.

RECOMMENDATIONS :

It is recommended that Government should take immediate decision with regard to the future of this farm. This may either be utilized as a State Gosadan or transferred to the Jails Department if that department needs it. In case, however, immediate decision cannot be taken with regard to the above and it is considered desirable to revive the activities of this farm by the Mechanised State Farms Organisation again then this can also be done. With the experience gained so far it is hoped that the results would not be as bad as they were in the past. It must, however, be noted that the farm is opened to the ravages of the notorious river Ghagra and the results can be disastrous during certain years. In others, however, it can be very satisfactory due to deposit of rich silt from the floods. In case the Government decides to start the activities of the farm afresh, a scheme will be submitted. It will require an initial investment of about 4 lakhs or more and would provide employment to about 20 to 30 superior staff and a few hundred labourers, tractor operators, etc.

This committee is of the opinion that the land should not be allowed to remain idle. Some suitable arrangement should be made to utilise the land and if no other scheme finds favour the old activities may be revived. No interest should be expected from the investments. It should be considered to be satisfactory if the working expenses and depreciation on machines, etc. is returned. Provision for permanent employment to so many and production of food on idle land is in itself a good return for the investments.

MECHANISED STATE FARM MADHURIKUND DISTRICT MATHURA

SITUATION

Madhurikund farm is situated on the right bank of Agra Canal (Lower Jamuna Canal) at the 78-79 miles in the Mathura District. It is nearly 14 miles from the main Mathura Town and is approachable by the Mathura-Goberdhan Road through a small *pucca* link of two miles, constructed on the right bank of the Agra Canal from the Aring bridge.

HISTORY

The farm was originally established by the Civil Veterinary Department in the year 1913 and was transferred to the Agriculture Department in the year 1922. During the II World War it was handed over to Government of India for Rubber Plantation and was again transferred to the Animal Husbandry Department of the State in September 1945. It remained under the Live Stock Research Section of the Animal Husbandry Department up to August 1946 and from September of the same year it was placed under the control of the Principal, U. P. College of Veterinary Science and Animal Husbandry Mathura. This farm was included in the Mechanised Farms Scheme from September 1948. Primarily the farm was started for cattle breeding and live stock improvement of the state; but subsequently it also embraced large scale mechanised cultivation which aimed at the production of improved seeds, for developmental purposes. At the time the scheme of mechanical cultivation came into being at the farm the major area of the farm was under a sort of undeveloped natural pasture, which was being used for grazing of the live stock and cultivation was limited to an area of 110 acres only. In the subsequent years, with the progress of the Mechanised Scheme, the area under cultivation increased to over 700 acres. The total area of the farm from the very beginning is 1,396.29 acres, which is at present occupied in the manner given below:

	Acres
(1) Area under cultivation	742.12
(2) Afforestation block (orchard)	240.00
(3) Forest and pastures	366.88
(4) Roads (14.80 acres) and channels (32.49 acres)	47.29
Total	1,396.29

Other details are as follows:

INVESTMENTS

(i) Land

	Rs.
(a) Initial value	65,792.88
(b) Cost of improvement	21,426.35
	87,219.23

	Rs.
(ii) Irrigation channels	29,543.31
(iii) Buildings	3,08,358.52
(iv) Roads and fencing	6,395.17
(v) Machinery and implements	1,65,102.58
(vi) Bullocks and mares	13,257.37
Total	5,22,656.95
	5,22,656.95

Grand total .. 6,09,876.18

The farm consists of three sections, namely (i) Cultivation Section, (ii) Cattle Section, (iii) Goat and Sheep Section. A brief account of each of these sections is given below separately:

AGRICULTURE SECTION

The area under cultivation during the different years is given below:

<i>Year</i>	<i>Area under Cultivation</i>	Acres
1948-49	400
1949-50	729.24
1950-51	782.74
1951-52	796.74
1952-53	796.74
1953-54	741.95
1954-55	760.95
1955-56	742.12
1956-57	742.12
1957-58	724.12

The total investment on the land in this farm as compared to other farms is rather low. In all it comes to Rs.1,16,762.54, which includes the cost of irrigation channels also. On total and cultivated area basis it comes to Rs.84 and Rs.157 per acre respectively. The cultivated land is representative of the locality and from the fertility point of view it may be regarded as 'Average'. It has higher pH, and *usar* patches are scattered here and there even in the cultivated fields. A sizable area is completely *usar*. General level of the land is good. The area is, however subject to floods and it has suffered heavily on this account during the last 2 or 3 years. The soil with an average humus content ranges from heavy loam to loam and is fairly suitable for cultivation. The main crops grown are, wheat, barley, gram, oats and berseem in the Rabi and *juwar*, and Paddy in the *Kharif*, oats, berseem and *juwar* are exclusively raised for meeting the fodder requirements of the farm cattle.

IRRIGATION

The farm is canal irrigated but it is all lift and, therefore, comparatively expensive. The water is lifted by means of oil engines. The farm owns 5 pumping sets 3 of which are located at the main Agra Canal and 2 at its

Aring distributary. Normally these 5 sets should have been sufficient, but for want of regular supply of water in the Aring distributary, due to introduction of roster system, the requirements of the farms are not fully met.

In order to arrest the losses of irrigation water through seepage, the farm has progressively made its main channels *pucca* at about a cost of Rs.30,000. The progressive increase in the length of *pucca* channels has lent a substantial help in increasing the area of crops, specially the wheat crop, which has helped in rehabilitating the farm economy. There is, however, need for more channels and improvement of the old ones.

PRODUCTION

The farm does not grow sugarcane for want of a Sugar Mill in the vicinity. The production of crops, both grain and fodder has been satisfactory. The cost of production and other details are given in the following table:

Year	Total production in terms of grain			Total expenditure in cultivation section	Cost of production per md.	Production in terms of grain per acre			Cost of production per acre
	Md.	sr.	ch.			Rs.	Md.	sr.		ch.	Rs.
1948-49 ..	9,313	37	1	1,95,356	20.97	23	11	6	488.27
1949-50 ..	15,153	9	14	2,16,317	13.61	20	31	7	282.89
1950-51 ..	14,865	15	10	2,41,185	16.21	18	39	6	307.73
1951-52 ..	15,355	10	10	2,29,260	14.93	19	10	10	287.63
1952-53 ..	14,481	20	15	2,24,528	15.53	18	6	9	282.08
1953-54 ..	18,690	4	6	2,24,529	13.29	25	7	8	334.74
1954-55 ..	17,061	13	13	2,06,105	12.06	22	16	12	269.16
1955-56 ..	17,774	7	5	2,14,189	12.05	23	38	10	288.65
1956-57 ..	18,630	26	15	2,25,467	12.11	25	4	6	304.07
1957-58 ..	17,452	2	9	2,05,196	11.76	23	20	12	276.58

It will be seen from the above that the farm has succeeded in keeping down the cost of production and has also maintained the level of total production in the last 5 years. The expenditure on cultivation has gone down in spite of increased rates of wages and grant of paid holiday to labourers, as required under labour laws and also increased rates of fuel oil and lubricants, etc.

FINANCIAL RESULTS

The financial results of this section are given below:

Year	Net profit	Depreciation	Interest	Remarks
	Rs.	Rs.	Rs.	
1948-49 ..	47,072	2,041	4,214	
1949-50 ..	43,262	9,616	6,950	
1950-51 ..	27,734	10,498	7,018	
1951-52 ..	11,422	9,290	7,072	Failure of monsoon.
1952-53 ..	50,324	15,957	8,200	
1953-54 ..	32,513	16,800	12,921	
1954-55 ..	28,328	14,285	10,000	Low market of seed grains.
1955-56 ..	92,643	21,215	16,136	
1956-57 ..	100,995	20,931	16,707	
1957-58 ..	80,963	26,802	18,132	
Total ..	(+)5,15,256	1,47,436	1,07,350	

It will be seen from the above financial results that the Agriculture Section of the farm is earning good profits from its very inception, even after meeting the full share of depreciation and interest on its capital assets. It is unfortunate that the farm could not gain the benefit of sugarcane, the most paying cash crop for want of a mill in the vicinity, otherwise the financial results of this section would have registered further improvements. The section is, however, capable of showing still better results, if better irrigation is made available.

CATTLE SECTION

The farm is maintaining Hariana cows and Murrah buffaloes and also sheep and goats in the interest of State Live stock development. The strength of various live stock, as has been maintained in the past 10 years is given below:

Year	Haryana	Murrah	Total herd	Sheep	Goat
1948-49 ..	..	..	810	176	..
1949-50 ..	..	..	824	166	126
1950-51 ..	587	117	704	239	94
1951-52 ..	574	96	670	336	138
1952-53 ..	641	92	733	302	141
1953-54 ..	581	114	695	195	104
1954-55 ..	483	124	607	290	64
1955-56 ..	433	131	564	370	68
1956-57 ..	383	129	512	524	78
1957-58 ..	359	130	489	480	105

The live stock at the farm was purchased and supplied by the Animal Husbandry Department. In order to disseminate cattle development activities in the State at a rapid pace after partition, the Animal Husbandry Department had in the initial stages purchased large numbers of cattle for these farms. Madhurikund farm was one of them. As is usual, these bulk purchases brought in some poor types of animals also. Quite a good number of animals suffered from diseases, like Brucellosis, and cow pox, etc. Some of the animals were old and poor milkers. Out of the stock received at this farm, 177 suffered from cow-pox alone. Such cattle affected the economy of the farm seriously and gave a definite setback. A large number of animals had to be culled and the losses on this account amounted to Rs.16,805.

The details of production are given below:

Year	Average no. of adult female		Number of animals in milk		Percentage of animals in milk		Average milk yield per animal per day in lb. (wet)		Over all milk yield per head per day in lb.	
	H	M	H	M	H	M	H	M	H	M
					Per cent					
1950-51 ..	284	74	94	22	33.01	29.98	7	9	2.2	2.6
1951-52 ..	299	46	92	22	33.7	48.00	6	10.5	2.0	5
1952-53 ..	310	48	88	22	28.4	46.00	5.8	9.5	1.8	4.5
1953-54 ..	229	42	74	24	32.3	57.11	6	9.5	2.0	4.7
1954-55 ..	183	41	72	23	39.3	56.1	5.8	9	2.2	5.2
1955-56 ..	176	44	60	24	34.1	55.00	6	8.5	2	4.7
1956-57 ..	144	49	66	27	45.8	55.1	7	9.5	3.2	5.2
1957-58 ..	156	58	83	35	53.2	60.3	6.8	10.2	3.4	6

The farm has been a serious victim of brucellosis (contagious abortion) and at the moment all such animals of the State (from most of the farms) are being maintained here for study and research. The percentage of dry animals as against the wet ones has always been very high and has easily been the most potent factor in inflicting heavy losses in this section.

The financial position of the section is given in the following table:

Year	Total loss or profit		Depreciation	Interest
	Rs.		Rs.	s.
1948-49	(-)	36,720	600	3000
1949-50	(-)	1,85,197	568	2,089
1950-51	(-)	60,337	603	2,156
1951-52	(-)	1,11,882	687	2,100
1952-53	(-)	1,34,693	597	2,142
1953-54	(-)	1,82,788	871	3,578
1954-55	(-)	93,097	8,000	8,865
1955-56	(-)	1,53,563	2,833	5,730
1956-57	(-)	1,33,879	2,695	5,370
1957-58	(-)	1,13,106	1,116	3,900
Total	(-)	10,84,588	18,570	38,930

It will be seen from the above that this section is losing heavily year after year. It needs no emphasis that cattle rearing and milk production are in general unprofitable professions. The losses on such pursuits increase further with non-milch breeds. Poor market rate for milk and high interest and depreciation on capital assets are other important factors. The loss in this section may be attributed to the following causes:

(1) Poor foundation stock.

(2) Concentration of brucella positive animals for purposes of investigations. Presence of brucellosis causes loss of animals and milk and the percentage of dry stock is always very high. This causes a great loss. Besides the dry period of individual animal is also lengthened which increases the losses.

(3) High cost of production of milk and uneconomic rates for the sale of the same as can be seen from the table given below:

Year	Cost of production of milk per md.			Receipt or rate per md.			
	Md.	sr.	ch.	Rs.	a.	p.	
1950-51	44	22		15	2	0	Cow and Buffs.
				11	4	0	Goats milk.
1951-52	47	4	6	Ditto.			
1952-53	51	3	0	14	0	0	
1953-54	47	0	7	12	5	5	Cows and Buffs.*
				8	0	8	Goats.
1954-55	41	10	0	10	10	0	
1955-56	38	12	6	9	0	0	
1956-57	41	3	6	10	12	0	
1957-58	31	0	6	13	1	0	

*The above rate was operative only for 4 months and for 8 months milk was turned into Ghee and interm of milk fetched a rate of Rs. 8 per md. only.

It will be seen from the above statement that there is a big gap between the cost of production and the selling rate. The cost of production of milk is also very high which is on account of factors mentioned below e.g.:

- (i) Low yielding cows.
- (ii) Large gaps between calvings, which result in long uneconomic dry periods.
- (iii) High brucellosis incidence; percentage ranging from 15 to 20 per cent resulting in abortions and consequent loss of animals and narrow wet and dry ratio.
- (iv) High cost of concentrates on account of the upward trend of the market.

The loss on milch stock amounts to about Rs.86,000 a year.

GOAT

This farm is also a goat breeding centre. A small flock of Jamunapari goats is maintained in the farm and the budget is provided by the Animal Husbandry Department. This farm was selected for this purpose in the hope that these animals will thrive better under such desert conditions where shrubs and bushes were available in plenty. Unfortunately these hopes were believed and the goats did not flourish well. The financial position of the section which is also included in the financial results of the Dairy and Cattle section of the farm is given below separately:

Year	Goat Section	
1950-51	(—)	7,427
1951-52	(—)	3,678
1952-53	(—)	2,952
1953-54	(—)	779

Year					Goat Section
1954-55	..	..	..	(—)	1,238
1955-56	..	..	..	(—)	1,346
1956-57	..	..	..	(—)	2,197
1957-58	..	..	..	(—)	723
				(—)	20,340

SHEEP

A sizable flock of Bikaneri sheep is maintained in the farm for supply of rams and ewes to the village shepherds. The main work is to improve the quality and quantity of wool by selective breeding. Good progress has been achieved. The accounts of the section are not maintained separately and it goes with the Cattle Section. However, it is felt that the section will maintain itself.

SUMMARY

The farm was started in the year 1913. It came under Mechanised Farms Scheme in the year 1948-49. It comprises of an area of 1396 acres, out of which about 750 acres are under cultivation. It has at present 503 heads of cattle 470 sheep 18 goats. The cultivation section of the farm is running on sound commercial lines from the very beginning while the cattle section has been giving heavy losses. The up-to-date financial position of the farm is as below:

Year	Agriculture section	Dairy and cattle section	Net position	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.	Rs.
1948—58	(+) 5,15,256	(-) 10,84,588	(-) 5,69,332	1,66,005	1,46,280

The losses are inclusive of depreciation amounting to Rs.1,65,964 and interest Rs.1,45,141. The losses on account of initial bulk culling at this farm amounted to Rs.16,805. The farm has been paying a sum of about Rs.7,100 per year as depreciation and interest on the surplus machinery valued at about Rs.41,200 left by the Agricultural Engineering Department. A sum of Rs.8,300 is being charged as depreciation and interest in *pro forma* accounts of the farm on surplus buildings of workshop, etc., and the main road valued at about Rs.93,800. Natural calamities have also taken a heavy toll.

RECOMMENDATIONS

AGRICULTURE SECTION

The agriculture section of the farm is running on sound economy. Further improvements are possible which can be brought about if the following suggestions are implemented:

- (1) The incomplete channels should be completed and some more *pucca* channels should be constructed.

(2) The 'Kulaba' in the Aring distributory should be lowered so as to ensure proper and timely irrigation of about 230 acres of land which usually suffers because of insufficient supplies of water.

(3) Effective drainage of the blocks is necessary. In the event of heavy rains the farm gets flooded and crops suffer due to water-logging.

(4) The alkaline patches interspersed in the plots should be reduced by mechanical and chemical means. It is recommended that reclamation work should be taken up of such *usar* patches in consultation with the soil Chemist.

(5) *Interest and depreciation on surplus machinery and buildings*—The farm has been paying unnecessarily heavy interest and depreciation on surplus machinery and buildings, which have not been used and are not needed for use in the cultivation section. Such surplus buildings and machines mostly belong to the Rural Workshop and were left at the farm by the Agricultural Engineering Department. The farm has also to pay depreciation and interest on the cost of the main road (Rs.55,700) which is mostly used by the general public. The value of these surplus items comes to about Rs.1,35,000 on which a sum of about Rs.15,400 (Rs.9,400 depreciation and Rs.6,000 interest) is charged on the accounts of this section. There is absolutely no justification for it. The Deputy Director, Mechanised State Farm, has taken up the matter with the Government. This Committee is of the opinion that the road should be taken over by the Public Works Department if this is not acceded to atleast the farm should not be made to pay any interest and depreciation for this road.

CATTLE SECTION

Brucella positive animals from other institutions are being transferred and maintained at the farm, as a separate unit, which are a source of loss to the farm. The farm has to incur an extra expenditure of Rs.5,000 on this stock on labour charges alone. Temporary sterility prevails in the herd as an after effect and the dry period is increased during which the animals have to be maintained. The farm is, however, already heavily infected and in order to keep all the other farms clean their infected animals are brought over to Madhurikund. Besides, the close vicinity of this farm to the Mathura Veterinary College makes it more suitable for investigations into causes and control of Brucellosis. An All-India Scheme on Brucellosis running under the auspices of the Indian Council of Agriculture Research is functioning at this farm. The present arrangement has, therefore, to continue. All that is necessary, therefore, is to treat the herd here as an experimental herd and 50 per cent of the expenditure on live stock should be debited to experimentation. In short, this is a sanatorium for Brucellosis and by making it such we have now been able to clean all our farms of Brucellosis, and infection which is widely prevailed in most of the farms in the country.

2. There is need for more cattle sheds and paddocks.

3. The expenditure in the live stock section is incurred exclusively for the breeding, multiplication and development of the cattle, wealth of the country and not for the sake of profits. The present losses in the farm

are exclusively on account of the cattle breeding and maintenance of live stock for developmental purposes. It should, therefore, be treated as non-commercial.

GENERAL

(1) Two units of labour quarters each consisting of 15 rooms are needed and should be provided immediately. At present, barring a few unhealthy cells there is no accommodation for the farm labourers. The labourers continue living with much inconvenience and trouble and do not stick to the farm on this account,

(2) Construction of a *bhoosa* godown at the farm is also a necessity. If one with about a capacity of 10,000 mds. is provided, the fodders can be protected from being wasted.

(3) The staff and labour quarters existing at the farm are in a miserable state. Some of them are very old and some temporary. These have outlived their utility. These quarters should be replaced by new ones.

(4) The present facility for providing water for washing the cattle and cattle sheds is inadequate. The pipe line should be extended to all cattle sheds.

(5) The old fencing around the farm boundary has completely outlived its utility. A lot of damage is caused to the farm crops by stray cattle. Provision of new fencing is, therefore, necessary.

(6) It is gathered that the hydro-electric line is to pass to Goverdhan through Aring village in the near future. In case, the electric line is installed in the vicinity of the farm facilities should be provided to useful electricity supply to the farm. This will be of considerable advantage for economic benefit to the farm apart from proving an essential amenity.

MECHANISED STATE FARM, MANJHRA, DISTRICT LAKHIMPUR, KHERI.

SITUATION

The farm is situated at a distance of about 6 miles from Lakhimpur Kheri Railway Station (N. E. Rly) on Lakhimpur-Nighasan Road. It lies on the right of this road. Bulk of the area is surrounded on its 3 sides by river Kandwa and on the fourth side are the fields of the cultivators.

HISTORY

This is perhaps the oldest farm of the U. P. Government. The entire area was originally owned by Raja Saheb of Mahewa. A piece of 550.55 acres of this banjar was acquired by the Government in the year 1910, *vide* G. O. No. 65/7-979, dated March 1, 1910 for being used as a grazing ground for sheep brought from Tibet. Pigs were also maintained on this farm. These schemes were, however, abandoned later on and in the year 1916 it was decided by Government to establish a Cattle Breeding Farm on this land. Accordingly, the Agriculture Department started it as a State Cattle Breeding Farm in the year 1916 with a view to produce improved bulls for distribution to the cultivators of the Province. The farm remained under the charge of the Agriculture Department up to the year 1944 when it was decided to transfer it to the Animal Husbandry Department. It was transferred to the Mechanised State Farms Organisation in the year 1948. In the year 1949 an additional area of 400 acres (all *banjar*) was also taken over from the Court of Wards in connection with the "GROW MORE FOOD CAMPAIGN", thereby raising the total area of the farm to 950.55 acres. It was also decided to improve the local breeds of live stock of the area (Kherigarh Cows and Tarai buffaloes) for the supply of bulls and pure bred animals to the local farmers. Lakhimpur Kheri being the home district of *Kherigarh* breed, great emphasis was laid on its rearing and breeding on this farm. Buffaloes were introduced at this farm in the year 1950 after distribution of Sahiwal cows to Military Farm and Jails Department. Almost the entire area was lying *banjar* and was being used as pasture when the farm was passed on to this organization in the year 1958.

Other details of the farm are as follows:

	Acres.
(1) Total Area	950.55
(2) Area under cultivation	650.00
(3) Area under gardens	9.00
(4) Area under roads, buildings and threshing floor, etc	50.00
(5) Pasture land	235.55

INVESTMENTS

1. Land—

				Rs.	as.	ps.
Cost of land	..	..	..	14,996	11	0
Cost of improvement of land	..	..	..	33,696	5	0
Total	..	..	..	48,693	0	0
				Rs.		
(2) Tube-well and pumping plants	..	..	..	48,693		
(3) Irrigation channels	..	..	..	9,718		
(4) Buildings	..	..	..	73,518		
(5) Roads and fencing	..	..	..	1,21,358		
(6) Machinery and implements	..	..	..	6,806		
(7) Bullocks	..	..	..	81,339		
Total	..	..	..	3,53,612		

The farm has 3 sections (i) Cultivation Section, (ii) Cattle Section and (iii) Poultry Section. All these sections are discussed below separately.

CULTIVATION SECTION

General—The area under cultivation in different years is given below:

Name of the Year	Area of the farm in acres	Area under cultivation in acres
1948-49	950.55	368.64
1949-50	950.55	529.24
1950-51	950.55	534.00
1951-52	950.55	564.00
1952-53	950.55	564.00
1953-54	950.55	662.00
1954-55	250.55	549.00 (More area left fallow).
1955-56	950.55	562.00
1956-57	950.55	622.00
1957-58	950.55	623.00

The total investment on the land which is in the possession of the farm comes to Rs.1,31,929. This includes compensation paid, cost of improvement of land and layout and construction of tube-wells and irrigation channels, etc., or Rs.138.80 per acre and calculated on the basis of cultivated area it comes to about Rs.203.

The land is mostly sandy and un-levelled and is of poor texture. The depth of the soil in a large area ranges between 4" to 6" and below it is all sand, hence this layer of soil cannot be disturbed much for levelling purposes as otherwise rank sand of the subsoil may appear. It is very poor in organic matter and needs improvement. The soil being sandy, the moisture holding capacity is poor. The main crops grown on the farm are sugarcane, wheat, barley, oats, berseem, pea, lahi, paddy, juar and *bajra*. *Juar*, berseem and oats are grown for fodder.

IRRIGATION

The farm has 3 pumping plants and one tube-well. The pumps have been installed on the river for lifting water for irrigation purposes. The discharge of one is over 100,000 gallons per hour while that of the 2nd and 3rd is about 15,000 and 4,000 gallons per hour respectively. The tube-well is out of order for want of replacement of spares of the Mallila Engine.

The bigger unit commands 332 acres of land and nos. 2 and 3, 60 and 20 acres respectively. The total area of the farm under cultivation is 650 acres. Thus at the moment there was no water to irrigate the remaining 238 acres. The U. D. 6 could irrigate about 8-10 acres a day under normal conditions but it commands only 4 to 5 acres a day depending upon the weather and season. The sandy nature of the soil and poor levelling are the main limiting factors. Larger area could be commanded by this pump (U. D. 6) if the fields were level. It is, however, not possible to have complete levelling in all the fields due to the shallow nature of the soil.

The tube-well when put in working order will command about 100 acres very easily. There is need to change the smaller pump fixed at the river. It will require re-shaping of the channels to hold increased quantities of water but it will be worth its while. The room which houses the pump is cracking and will require special repairs. A new site might be selected to fix this pump.

PRODUCTION

Cost of production and other details are given in the following table:

Year	Total production in terms of grain			Total expenditure	Cost of production per md.	Production in terms of grain per acre			Cost of production per acre
	Md.	sr.	ch.	Rs.	Rs.	Md.	sr.	ch.	Rs.
1950-51	9,895	38	0	90,755	9.18	18	23	0	170.0
1951-52	6,164	31	0	1,33,959	21.58	10	37	0	236.0
1952-53	8,312	27	6½	73,448	8.84	14	30	0	130.50
1953-54	9,006	2	3	1,67,096	18.55	14	38	0	277.57
1954-55	10,316	13	0	1,23,882	12.09	18	31	0	225.65
1955-56	11,132	0	0	1,73,045	15.54	19	32	0	307.90
1956-57	12,058	0	0	1,57,733	13.00	19	15	0	253.59
1957-58	10,201	0	0	1,70,698	16.73	16	15	0	273.11

Recently there has been an increase in the cost of production and the efforts to reduce this expenditure have been nullified because of:

- (1) Increase in cost of fuels, lubricants and oils. The rates are increasing year by year.
- (2) Increase in wages of daily paid labourers on account of grant of paid holiday as required under Agricultural Labour Laws.
- (3) Increase in Dearness Allowance of monthly paid labourers.
- (4) Increase in expenditure under depreciation and interest from year to year. It comes to Rs.43 per acre (depreciation Rs.24 and interest Rs.19) of cultivated area.

FINANCIAL RESULTS

Financial position of this section since its inception is given below:

Year	Profit	Loss	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.
1948-49	14,749	..	1,508	900
1949-50 .. ..	..	33,035	1,610	..
1950-51	54,061	..	2,445	3,604
1951-52 .. ..	..	9,932	7,535	3,904
1952-53	40,486	..	11,295	4,522
1953-54 .. ..	..	25,681	7,000	7,108
1954-55	7,659	..	9,331	8,234
1955-56 .. ..	..	5,832	12,227	9,965
1956-57	347	..	13,286	9,830
1957-58 .. ..	..	20,120	15,919	12,006
Total	1,17,302	94,600	82,166	60,073

Profits and Losses have alternated every successive year. The exact causes cannot be easily pinpointed but the poor nature of the soil is responsible to some extent. The last three years have been rather bad for the entire state but it is hoped that this story of alternate bearing will not be allowed to repeat itself and there would not be a loss in this section any more.

The main reasons responsible for the losses are:

(1) *Lack of Irrigation*—In the beginning there were no irrigation facilities, hence the yields were poor and the farm showed heavy losses. Now water has been provided for a good portion and this facility is being improved year after year.

(2) *High rate of interest*—The per acre cost of cultivated land comes to Rs.203 and at 4½ per cent the interest charges amount to Rs.9 per acre per year against Rs.2 per acre prevalent in the locality. This extra expenditure amounts to Rs.4,550 for the farm. Besides interest and depreciation has shown a general rise from year to year.

(3) Expenditure incurred on the maintenance of surplus machinery (in the form of interest and depreciation) has been to the tune of about Rs.4,000 per year. These surplus machines were transferred from the Agriculture Engineering Department in the year 1950. The total interest and depreciation paid on this amounts to Rs.6 per acre of cultivated area. It would thus be seen that the extra indirect charges borne by the farm i.e., land rent Rs.9 interest and depreciation on surplus tractor and machinery at Rs.6 per acre, comes to Rs.15 per acre of cultivated area. Addition of supervision charged at Rs.13.8 per acre raises it to Rs.28.8 against an actual loss of Rs.30 in 1957-58 and Rs.9 per cultivated acre in 1955-56.

CATTLE SECTION

The farm maintains a herd of *Kherigarh* cows, Murrah and *Tarai* buffaloes. *Kherigarh* cows were purchased by the Animal Husbandry Department from the villages of Gonda and Bahraich districts.

This is the only farm where *Kherigarh* cows and tarai buffaloes are being maintained. The *Kherigarh* breed was popular in the beginning for draught purposes but now-a-days there is no demand for it as *Hariana* is taking its place in this region also.

The details of production are given below:

Year	Total no. of animal	Kheri-garh	Buffa-loes	Milking average			Over all		
				Kheri-garh	Mu-rrah	Tarai	Kheri-garh	Mu-rrah	Tarai
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1948-49	389	316	73	..	..	..	..	..	..
1949-50	427	309	118	..	8.24	5.7	..	..	..
1950-51	522	312	210	3.9	4.2	5.2	.1	2.5	2.3
1951-52	541	322	219	3.1	7.3	6.4	.1	3.2	1.8
1952-53	501	327	174	1.9	7.1	3.3	.1	2.6	1.3
1953-54	503	265	238	1.2	5.1	3.5	.5	1.5	1.2
1954-55	378	158	220	.04	5.8	3.7	.2	2.0	1.5
1955-56	367	166	201	3.9	7.9	6.9	1.9	1.9	1.7
1956-57	344	136	208	3.6	8.1	7.2	2.3	4.0	3.2
1957-58	372	151	221	4.6	9.00	4.00	2.2	4.0	3.0

The financial position of the section is given below:

Year	Loss	Depreciation	Interest
	Rs.	Rs.	Rs.
1948-49	(—) 39,201	1,483	1,801
1949-50	(—) 62,404	1005	..
1950-51	(—) 28,136	1,260	1,801
1951-52	(—) 38,130	3,366	1,907
1952-53	(—) 56,473	1,500	2,000
1953-54	(—) 52,595	2,615	2,329
1954-55	(—) 75,250	1,500	2,650
1955-56	(—) 18,035	1,600	2,362
1956-57	(—) 37,447	1,600	2,100
1957-58	(—) 2,936	1,504	1,203
Total .. .. .	..	17,433	17,553

This section is losing year after year and has given a total loss of Rs.2,85,799 from 1948-49 to 1957-58 i.e., 10 years. The average loss per year comes to Rs.28,579 although during the year 1957-58 it has come down to less than Rs.3,000. This loss has been contributed by all classes of animals maintained at the farm i.e., Kherigarh, Murrah and Tarai buffaloes.

The main reasons for these losses are as follows:

1. *Maintenance of un-economic Kherigarh cattle*—This breed is now being maintained at the farm for purposes of preservation only. It is a draught breed and has no milking capacity. Only a few animals are milked and the rest are allowed to roam freely. They only have enough to suckle their own young ones. Its yields varies from 1 to 2 seers per day during lactation period. Haryana animals are now becoming popular and there is no demand for bulls of the Kherigarh breed. The female stock was not wanted even in the past. There is a demand for the bullocks but the prices offered are comparatively low. The farm on an average in the last 10 years has mentioned 270 heads of cattle of this breed per annum and losses on this account have been heavy. The strength is, however, being reduced gradually.

2. *Low milk yield of buffaloes*—Two breeds of buffaloes i.e., Murrah and Tarai are kept at this farm. As would be seen from the figures given before, the averages are very poor. It is indicative of the fact that the foundation stock has been poor.

Culling losses—Large scale culling had to be done to reduce the number of animals of the Kherigarh breed. This initial heavy culling at this farm resulted in loss of over Rs.one lakh.

Difference in cost of production and its return per maund—It is encouraging to note that the milk is fetching a good price in this district. The details of cost of production of milk and rate of sale are given below:

Year				Cost of production of milk			Selling rate		
				Rs.	a.	p.	Rs.	a.	p.
1950-51	..	..	..	30	0	9	23	10	5
1951-52	..	..	..	28	13	0	24	7	9
1952-53	..	..	..	27	0	0	23	1	0
1953-54	..	..	..	25	0	0	23	15	4
1954-55	..	..	..	25	9	9	21	9	0
1955-56	..	..	..	22	7	1	20	15	11
1956-57	..	..	..	26	1	0	21	12	0
1957-58	..	..	..	26	6	0	22	7	6

From the perusal of the above table it is clear that there is still a big gap between the cost of production and rate of sale i.e., about Rs.4-10 per maund plus the cost of distribution which comes to about Rs.2 per maund.

High rate of concentrates—There has been a regular rise in the price of concentrates without a similar rise in the price of milk.

POULTRY SECTION

The farm maintains a flock of white Leghorn and R. I. R. T. C. M. birds. A statement showing the working results of this section is given below. The loss in certain years was due to attack of contagious diseases. The condition of the pens and chicken lines is very unsatisfactory. There is an urgent need to replace the wooden posts and old wire netting.

Year	Eggs distributed for development	Birds sold for development		Financial result	
		Adult.	Chicks	Profit	Loss
		Rs.	Rs.	Rs.	Rs.
1947-48	..	159	80	..	893.97
1948-49	..	2,745	242	..	666.00
1949-50	..	1,979	351	..	3,794.00
1950-51	..	1,943	319	17	281.00
1951-52	..	4,860	1,069	..	6,763.00
1952-53	..	3,235	1,247	..	14,285.06
1953-54	..	4,758	1,152	..	2,781.14
1954-55	..	4,874	1,487	32	8,629.00
1955-56	..	3,090	1,638	85	2,729.00
1956-57	..	1,958	1,782	7	1,740.00
1957-58	..	3,357	1,844	67	11,876.00

SUMMARY

The farm was included in the Mechanized State Farm Organization in the year 1948-49. The up-to-date position of profits and losses is given below:

Year	Agricultural section	Dairy section	Poultry section	Net result	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1948-49 to 1957-58.	(+) 22,702	(-) 285,799	(-) 1,012	(-) 264,109	1,02,362	79,556

The ultimate position is that the farm as a whole has given a loss of Rs.2,64,109 so far against which a total sum of Rs.1,81,918 towards depreciation and interest (depreciation Rs.1,01,362 and interest Rs.79,556) has been paid. The losses on account of bulk culling alone amount to over rupee one lakh. As against this the appreciation on account of the improvement effected in the quality of land as per assessment made by the Revenue authorities during the year 1955-56 amount to about Rs.55,000.

The main reasons for losses at this farm are the poor quality of the soil, lack of adequate irrigation facilities, high rate of interest and maintenance of un-economic Kherigarh cattle.

The farm has begun to yield promising results and it is expected that with the implementation of the recommendations of the Committee, the financial position will considerably improve. The committee is convinced that the cultivation and Poultry Section at the farm would still yield more profits and the Cattle Section may also become able to meet the two ends before long. On the whole the farm promises a better future. The farm activities should continue as they are.

RECOMMENDATION

AGRICULTURE SECTION

1. *Irrigation Facilities*—The present arrangements do not meet the full requirements of irrigation of the farm. It is, therefore, recommended that the following changes should be made:

(a) The Hallet pump of Manjhri should be replaced by a bigger one which will command more area at less cost per acre. It should be possible to lift ten to fifteen thousand gallons per hour.

(b) A new engine should be installed on the tube-well in place of Mallila. This will command the central portion of the farm and release pressure on U. D. 6. The total cost on this will be about Rs.8,000 to Rs.10,000.

(c) One portable pump and engine may be provided to meet the needs of the Garden and Poultry Sections.

(d) *Irrigation channels*—The farm still needs about 2 miles of *pucca* channels in length on its southern, eastern and western portions and should be slowly provided. As the soil is sandy *pucca* channels become a necessity.

2. *Construction of buildings*—(a) *Bullock shed*—There is no bullock shed at this farm it may be constructed for keeping 10 pairs of bullocks.

(b) *Threshing floor*—Two big threshing floors need to be constructed.

3. *Electricity*—Electric line should be had as soon as the Hydel Department's lines are ready and all stationary power work should be switched over to electric power.

4. The farm is divided in two portions by the river Kandwa. On one side are the dairy and the cultivation sections while on the other are the Poultry and Horticulture Sections. The latter alone is connected by the road which lead to Lakhimpur. There is a genuine need for a bridge over the river Kandwa to connect the two sections. The river is at present crossed by boat during the rains. Whenever there are heavy rains no material can be transported and the place becomes an island. There is great difficulty in day-to-day working.

CATTLE SECTION :

5. The farm roads need repairs. The road on both sides of the river need immediate attention to avoid erosion and possible mishaps. It should be made *pucca*.

(1) The stock of *Kherigarh* animals should be reduced and these should be made more docile. It is essential to keep a small nucleus herd so that it may be possible to fall back upon for future work if need be.

(2) About 20 good Murrah buffaloes be supplied to the farm. Increased production per animal will cut down the cost of production of milk. These will also provide material for future replacements.

(3) Facilities for the distribution of milk in the town should be improved. Carriage by help of cart is too slow. A milk delivery van or cycle rikshaw may be tried.

(4) A milking shed is lying incomplete for the last 2½ years on account of certain differences between the P. W. D. and the contractor. It should be completed immediately.

(5) The existing buildings (cattle-sheds) are very old (1916) and need special repairs remodelling. This should be taken up at the earliest.

POULTRY SECTION:

(1) The old pens are in a dilapidated condition and require immediate replacement.

(2) There is need to expand the Poultry farm further to avoid crowding and to enable greater production.

(3) There is no building provided in this section. There is an urgent need of a store, incubator room and office building and three labour quarters. This essential requirement should be provided urgently without any avoidable waste of time.

MECHANISED STATE FARM, NIBLETT, DISTRICT BARABANKI

SITUATION :

The farm is situated at a distance of 6 miles from Bara Banki and 3 miles from Jahangirabad Railway Station (Meter Gauge) on Lucknow—Katihar Route. The farm is connected by road from Bara Banki on which the last 2 miles is cement-concrete track. About 200 yards piece is *kachcha* but this is soon going to be changed into the Cement Concrete track which will extend upto Jahangirabad during next monsoons. There is no road to Jahangirabad Station and the way passes through Jungle which is not very safe. Hence this station, though nearer to the farm, cannot be used.

HISTORY :

It was in the year 1947 that the land of this farm was taken over on lease by the Agriculture Department from the Jahangirabad Estate. Originally the land consisted of *Dhak* Jungle, belonging to the Estate. Since the land was mostly saline, and the Estate was sustaining heavy losses, therefore, the Court of Wards which was managing the Estate affairs agreed to give this land to Agriculture Department on lease in the year 1947. In the year 1948-49, the farm was included in the Mechanised State Farms Organisation. The total area of the farm when taken was about 600 acres, but later on 7.34 acres of this area had to be returned to the cultivators of village Marhia as a result of Court decision in some old pending case of acquisition of land. Thus now only 594.89 acres remain with the farm of which only 230 acres is under cultivation and the remaining area consist of *Usar* land. In spite of a long drawn correspondence with the Estate the terms of the lease could not be settled and the matter remained pending on account of one controversy or the other. No lease deed could be executed under such circumstances. A lump sum payment of Rs.38,645-8 as per details given below was, however, made to the Estate as sanctioned by Government, *vide* G. O. no. 9198/XII-D, dated March 16, 1950 :

		Rs. a.
(1) Seeds	681	3
(2) Standing crops	2,993	13
(3) Livestock	900	0
(4) Jungle	12,750	0
(5) Buildings	13,582	0
(6) Roads and culverts	6,500	0
(7) Tank	1,237	8

From the details furnished above it will be seen that a sum of Rs.12,750 was paid to the Estate for the Jungle. The payment was made at the rate of Rs. 17 per acre for an area of 750 acres of Jungle, but until this day control over an area of 450 acres of this Jungle on account of its being recorded as 'BANGAR' in the records of the Patwari has vested in the Gram Samaj.

GENERAL INFORMATION :

The farm was started with a view to grow pedigree seed of improved varieties in connection with the "GROW-MORE-FOOD CAMPAIGN". Other details of the farm are as follows :

	Acres
Total area	594·89
Area under cultivation	230·00
Area under mango orchard	3·66
Area under roads, buildings and threshing floor, channels and Nala, etc.	43·63
Area under tank	2·25
Usar Area	315·35

INVESTMENTS—

1. Land.		Rs.
Initial cost		2,446·48
Cost of improvement		63,717·50
	Total	66,163·98
2. Irrigation channels		10,009·50
3. Buildings		56,754·93
4. Roads and fencing		8,450·38
5. Machinery and implements, etc.		31,837·67
6. Bullocks		3,370·00
	Grand Total	1,10,422·48

The farm has two sections, viz. (i) Cultivation Section and (ii) Cattle Section which are discussed below separately.

CULTIVATION SECTION :

General—The area under cultivation during different years is given below :

	Acres
1948-49	110·0
1949-50	150·0
1950-58	150·0
1958-59	200·0
1959-60	230·0

The total investment on land which is in the possession of the farm comes to Rs.76,173. This includes cost of improvements and layout and construction of irrigation channels, etc., or Rs.380·86 per acre of cultivated area.

All the uncultivated area of the farm is highly saline. Even the cultivated area barring the 37 acres of acquired land is not free from salinity. In the early years of the establishment of the farm, large tracts of this *usar* land were broken as a part of 'Grow-More-Food Campaign'. But in the absence of proper irrigation water to leach down or wash away the soluble salts, these faithful efforts to increase crop production by extensive

cultivation did not succeed due to the saline character of newly broken land. On the contrary this ploughing of saline land spoiled the low lying fertile land in the neighbouring fields because as a result of ploughing, the *Usreili* grass which acted as a cover to safeguard the washing away of soil was destroyed and the *usar* land was left naked. The sweeping rains washed away the top soil and left it in the low-lying areas on either side of *Jamuria nala*. A number of efforts were made to increase the cultivated area but it remained constant at 150 acres from 1949-50 to 1957-58 and a sort of shifting cultivation was practised for a number of years without any appreciable increase in the total production. Thousands of tons of gypsum was also used to improve the saline land. Here again, due to the absence of sufficient irrigational facilities to wash the soil treated with gypsum no success was achieved.

An area of 50 acres was reclaimed during the year 1957-58 by straightening and deepening a shallow *nala* which used to flow in a zigzag way and by levelling and *daulbanding* the land so released. Use of press-mud and filling of water to leach down salts has been much helpful in reclaiming this land.

Another 30 acres of land has been reclaimed during 1958-59 and it is proposed to reclaim and put under paddy 25 acres of land every year until the cultivated area is increased to 450 acres.

IRRIGATION :

The Marhia Block of the farm is irrigated by a tube-well which controls about 60 acres of land.

Hapapur Block (40 acres) and newly broken land in *Jamuria* Block (75 acres) is irrigated by *Nigri* minor.

The remaining area of the farm has no irrigational facilities and this is the hinderance in the way of speedy reclamation of *usar* land.

PRODUCTION :

Cost of production and other details are given in the following table :

Year	Total production in terms of grain	Total expenditure in cultivation section	Cost of production per md.	Production in terms of grain per acre	Cost of production per acre
	Md.	Rs.	Rs.	Rs.	Rs.
1948-49	1,204.61	88,375	73.36	10.95	803.41
1949-50	2,445.24	71,146	29.09	16.32	474.37
1950-51	3,759.98	60,775	16.16	25.07	405.17
1951-52	4,331.85	68,604	15.83	28.87	457.36
1952-53	4,037.13	58,864	14.59	26.91	392.43
1953-54	2,552.34	58,865	23.60	17.01	392.43
1954-55	5,419.58	57,816	10.66	36.13	335.44
1955-56	4,462.15	67,917	15.22	29.75	452.78
1956-57	3,647.79	65,527	17.96	24.52	436.85
1957-58	4,391.19	65,002	14.33	29.27	433.35

The last three years have been rather bad for the entire state and particularly the last one (1957-58). It would be observed from the above table that the cost of cultivation during the 1st four years was very high (1949—52) and then it was somewhat lower during the next three years (1953-54) and it again went up during the last three years (1956-58). The reasons for the increased cost of production are :

(i) High cost of fuel oils and of spares and machinery. Expenditure on these items has been increasing continuously.

(ii) *Increase in wages*—There has been an increase in wages without commensurate returns. According to labour laws, now enforced on all farms, casual labour on daily wages is being allowed weekly paid holidays. This has increased the expenditure by about Rs.3,000 per year.

(iii) Similarly there has been an increase in the Dearness allowance of all labourers on establishment. The increase on this account comes to about Rs.1,200 per year.

(iv) Interest and depreciation on investment has also increased during the last few years :

FINANCIAL RESULTS :

The financial position of this section since its inception is given below :

Year	Profit	Loss	Depreciation	Interest	Remarks
	Rs.	Rs.	Rs.	Rs.	
1948-49 ..	..	60,582	1,553	1,408	
1949-50 ..	..	8,635	3,186	2,481	
1950-51 ..	21,947	..	2,124	1,821	
1951-52 ..	18,594	..	2,344	1,823	
1952-53 ..	..	19,491	2,919	2,097	
1953-54 ..	..	18,588	4,241	4,117	
1954-55 ..	26,821	..	3,805	4,875	
1955-56 ..	12,537	..	11,134	3,300	Depreciation and interest of previous years.
			5,500	5,617	
1956-57 ..	5,276	..	4,086	5,667	
1957-58 ..	10,233	..	5,524	7,597	
Total ..	95,408	1,47,296	46,968	40,862	

It is clear from the above that after giving losses in the initial two years and again during 1952-53 and 1953-54, the section has now been giving profits year after and in spite of the fact that the last two years have been very bad throughout the State on account of unfavourable weather conditions, the section has shown profits during these years though at lower levels.

CAUSES OF LOSS:

Fortunately this farm is now running at a profit. Hence the question of loss does not arise. However, the factors which restrict crop production at the farm and reduce the amount of profits are mentioned below:

(a) Due to large blocks of land being saline 2/3rd of the farm area is still lying uncultivated with the result that the share of indirect crop charges per acre of cultivated area is very high as will be evident from the fact that a sum of about Rs.100 per acre has to be accounted for as indirect charges. Had the entire area or say even 500 acres of land been under cultivation the cost of indirect charges per acre would have been reduced to Rs.40 per acre. Thus high indirect charges are responsible to a great extent in reducing profits.

(b) As has been explained above the cultivated areas is interspersed with large patches of saline soils with the result that while all the agricultural operations including manuring and sowing have got to be done in the entire area, crop yields are obtained only from comparatively smaller area as seeds generally do not germinate in saline patches.

(c) The reclamation of saline land is a slow and costly process which increases the cost of cultivation.

(d) *Scarcity of labour*—Since paddy is the main *kharif* crop at this farm and the area under this crop is increasing year after year as it tolerates salinity better as compared to other farm crops, sufficient labour is not available at the transplanting and harvesting periods. Delay in either of these operations effects crop yields and reduces profits.

(e) Small plots (the plots have got to be kept small to fill in water for leaching of the salts) scattered blocks (the blocks are not compact as land of comparatively milder salinity is tackled first) and high water table are the other factors which increase cost of cultivation and reduce crop yields. These three factors are thus also responsible for reduction in the profits.

Besides the above the following causes also contribute towards reduction in the profits of the section :

(1) *High interest on land, buildings and machinery*—The annual interest on investment comes to Rs.7,597 per year which comes to Rs.50 per acre of the cropped area. Thus interest alone is responsible for nearly 12½ per cent of the cost of cultivation.

(2) *Lack of Irrigation*—The progress of reclamation of *Usar* land is hampered by non-availability of sufficient irrigation water. With the provision of a pump and engine on trolley the problem will be partly solved as the water can be lifted from the Jamuria Nala and tank to irrigate the unirrigated areas.

(3) *Buildings*—The funds for the construction of buildings at the Mechanised State Farm, Niblett, were placed at the disposal of the Agricultural Engineering Department who constructed the following buildings during the year 1949-50 at a cost of Rs.56,435 :

- (1) Tractor and Implement Shed.
- (2) Two Staff quarters.
- (3) An Engine House on the tube-well.
- (4) Seed and Implements Godown with drying floor.

After the completion of the above buildings, serious structural defects were noticed in them and, therefore, these buildings were not taken over by the farm from the Agricultural Engineer.

The matter with regard to the rectification of defects in the buildings to make them suitable and safe for occupation is still under correspondence. The Deputy Director, Mechanized State Farms has been constantly

pressing this matter but unfortunately these buildings have still not been repaired. The Chief Engineer, Public Works Department (B and R) has been requested by Government to submit proper estimates for the special repairs of these buildings. Besides the above there is need for two threshing floors for the threshing and processing of *rabi* and *kharif* grains specially wheat and paddy. Since severe losses are caused to paddy due to rains in the last week of September and October when the processing of paddy is in full swing the necessity of threshing floors is all the more essential so as to avoid losses.

CATTLE SECTION

The farm used to maintain young female calves of Ganjaria Farm. These calves were usually sent to the farm when they were over one year old for rearing and were taken back when the animals were either in advance stage of pregnancy or had actually calved. The transfer of these animals from Ganjaria to this farm and again from this farm to Ganjaria was on the basis of book value in accordance with the age chart. As reported above the calves were sent to the farm when they were over one year in age, i.e., on a book value of Rs.350 to Rs.400 and were transferred to Ganjaria when the animals were between $3\frac{1}{2}$ to 4 years in age on a book value of Rs.700. In this way this farm used to get Rs.300 to Rs.450 per head of animals for their maintenance at the farm for 3 years. Thus an amount of Rs.150 per head per year or Re.0.41 per head per day was received. This amount was further reduced as the farm had to bear the losses on account of deaths and cullings. In this way the farm had to bear heavy losses specially in the Second and Third year of maintenance of these heifers when the animals had sufficiently grown up during this period and there was little appreciation in their value while their maintenance cost was high.

The details of animals (from Ganjaria Farm) maintained during different years and profits or losses incurred on them is given in the table below :

Year	Average no. of animals maintained during different year	Financial position	
		Profit	Loss
	Rs.	Rs.	Rs.
1949-50	90.00	..	19,383
1950-51	80.56	18,397	..
1951-52	43.88	..	13,852
1952-53	35.30	..	16,190
1953-54	73.00	4,424	..
1954-55	82.00	..	23,775
1955-56	61.15	..	26,846
1956-57	24.76	..	18,995
Total	490.65	22,821	1,19,041

From the above it is evident that the maintenance of heifers of Ganjaria Farm at this farm was a permanent source of loss to the farm and within 8 years a net loss of Rs.96,220 was sustained.

From the year 1957-58, however, the practice of raising heifers of *Chak-Ganjaria* farm has been discontinued and the farm is now relieved of this loss. The farm is maintaining its own livestock and it is hoped that it would be able to meet the two ends and there would be no losses. The cattle utilize the surplus fodders and the farm gets the manure. The farm is engaged raising of young stock and at the moment it has 35 heads of cattle (21 Murrah and 14 Haryana).

SUMMARY

The farm was taken in the year 1947 by the Agriculture Department and was passed on to Mechanized State Farms Organization in the year 1948-49. It has since maintained a cultivation section and a small cattle section. The financial position of the farm is given below :

Year	Agriculture section	Cattle section	Total Net loss	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.	Rs.
1948—58	(-)11,888	(-)96,220	(-)1,08,108	58,726	52,457

The losses in Cattle Section were due to the heifers of Ganjaria Farm whose appreciation in value was not sufficient to meet their cost of maintenance. Now this source of loss has been eliminated and the farm will definitely be running on profit year after year.

RECOMMENDATIONS

AGRICULTURE SECTION

(1) *Irrigation*—The present arrangements do not meet the needs of the farm adequately. It is not enough even for 60 per cent of the needs. It is, therefore, recommended that 2 more tube-wells should be installed one each in Nathu Pir and Gadrai Purva blocks. This will enable reclamation of another 150 acres of area in the above two blocks.

(2) There is an acute problem of wild animals specially the *Nilgay* (or the Nilghur) and in spite of utmost watch lot of damage is caused. The area should therefore, properly fenced by fixing angle iron in cement concrete foundation and giving 5 bands of barbed wire all round.

(3) There is need for two threshing floors which should be constructed immediately.

GENERAL RECOMMENDATIONS

There is scarcity of quarters for staff and they have to live under thatched hutments which are very unsafe. Minimum and essential requirements should be met by constructing new quarters. Special repairs to the existing buildings should be taken up without further delay so as to avoid further loss to Government.

Similarly there are no labour barracks at the farm. Since the local labour is scarce, it is essential to provide necessary accommodation to the labour which might be imported from outside. Necessary arrangement for the construction of labour barracks to accommodate 20 labours should be made.

2. There is need to improve the farm road.

3. The post of Farm Superintendent is non-gazetted and is in Group I, i.e., Rs.200—15—350 scale. He should be declared gazetted. The scale may remain the same. This has been done for a large number of posts in other Departments e.g., District Live-Stock Officer of Animal Husbandry Department. Drawing powers should be delegated to him. The present arrangements are not satisfactory and cause delay.

MECHANISED STATE FARM, NILGAON, DISTRICT SITAPUR

SITUATION

This farm is situated in Sitapur District at a distance of 12 miles from Railway Station Sidhauri (N. E. Railway) on the Sidhauri-Nilgaon Road. It is on the borders of Sitapur and Bara Banki Districts.

HISTORY :

The entire area of this farm once formed the hunting grounds of the Taluqdar of Nilgaon. With the death of the Taluqdar in the year 1945, and in the absence of any major heir to the deceased the whole of his Estate went under the Court of Wards. In the year 1947-48 the major portion of the area which once formed the SHIKARGAH was taken on lease from the Court of Wards by the Department of Agriculture for the establishment of an Agricultural Farm in connexion with the "GROW-MORE-FOOD CAMPAIGN". Shortly afterwards on July 1, 1948 it was turned over to Mechanized State Farms Scheme.

Most of the area taken, was either under thick Jungle growth or was low-lying subject to severe flooding during the rains. *Usar* patches were scattered all over the area.

The total area originally acquired was 2,052 acres which after the release of some area in favour of the local cultivators has been reduced to 1,938 acres.

Prior to its inclusion in the Mechanized State Farms Scheme only a negligible area was under cultivation.

GENERAL INFORMATION

The farm was started with a view to improve the land that was lying waste and to grow pedigree seeds of improved varieties for supply to the cultivators. Later on it was also considered necessary to maintain a herd of Haryana cows and Murrah buffaloes for supply of bulls and pure bred animals to the farmers for developmental purposes. Cattle breeding was, therefore, introduced in the year, 1951-52. Other details of the farm are as under :

	Acres
Total area	1,938
Area under cultivation (<i>Usar</i> patches are scattered all over the fields)	595
Area under jungle pasture and <i>usar</i>	445
Area low-lying, water logged and under tanks	800
Area under roads and buildings	98

INVESTMENTS.

	Rs. a. p.
1. LAND—Initial cost (compensation paid for 80·10 acres of land)	7,011 8 0
Cost of improvement of land	1,89,305 5 3
Total	1,96,312 13 3
	1,96,312 13 3

2. Irrigation channels	22,779	0	0
3. Installation of three tube-wells	56,883	0	0
4. Machinery and implements, etc.	73,649	0	0
5. Dead stock	11,550	0	0
6. Bullocks	6,405	0	0
7. Roads and fencing	19,026	0	0
8. Buildings	1,75,858	0	0
Total	5,62,262	13	3

The farms has two sections viz. (i) Cultivation Section and (ii) Cattle Section and each of these sections are discussed below :

CULTIVATION SECTION

General—The area under cultivation in different years is given below:

Name of the year	Area of the farm	Area under cultivation	Remarks
	Acres	Acres	
1948-49	2,052.59	210	
1949-50 .. .. .	..	790	
1950-51 .. .. .	..	648	
1951-52 .. .. .	..	1,006	} Due to return of land to cultivators in exchange.
1952-53	1,938.02	932	
1953-54 .. .. .	..	971	
1954-55 .. .. .	..	1,120	
1955-56 .. .. .	..	767	
1956-57 .. .. .	..	558	
1957-58 .. .. .	..	595	

It would be seen that the area under cultivation has gradually decreased and from about 1,100 acres it has come down to a meagre 600. This needs a little explanation.

The entire farm is low-lying. It is more like a saucer in that area where surplus water from over 20 square miles finds its way and the land is under several feet water for months together. This condition has further deteriorated during the last three or four years because of the activities of the Irrigation Department. A canal minor (Bhandia distributory) ends in the farm area and discharges its surplus water there. It is the tail end of the distributory and little, if any, water is available for irrigation at the time of need, but when there is no need and water is surplus it discharges its contents freely. It is more of a nuisance to the farm.

Besides, the Irrigation Department has been trying to provide drainage channels to save the locality from floods and these drains have also ended in the farm area. So although these have helped the villagers to some extent it has put the farm in a miserable condition. The outlet for this surplus water is a small one. The drain ultimately discharges itself in the Kalayni river through the farm but the capacity of the river itself is so low that the water stagnates for weeks together. The damage to farm as also to the nearby villages is considerable. The villagers have at several occasions forcibly cut down the farm road in the hope of sowing their crops but without any significant relief. The present position is that even when the rains are not so heavy to cause floods in the locality the farm gets inundated from accumulated waters of the entire area and severe damage is caused to crops. Irrigation Department has ended all the drainage channels and the canal minor in the farm area causing serious damage and necessity demands that the work must be completed and the drainage channel must be carried further beyond the farm and discharged in the river which provides natural escape. While constructing these drains (which were to end in the farm area) it is understood that the Irrigation Department had written to the Government that in case these drains were completed (i.e. as planned to end in the farm) Government may have to abandon the Mechanized State Farm, Nilgaon altogether. The Deputy Director, Mechanized State Farms, who has been negotiating with the Irrigation Department for long, has brought these facts to the notice of the Government. It is also understood that the Irrigation Department has submitted a scheme costing about a lakh, which when implemented will not only save the farm but will save thousands of acres of land belonging to the villagers. Looking to the magnitude of the problem and the great advantages, it is recommended that the Government in the Irrigation Department may be moved to take up this scheme in right earnest.

The entire farm is dotted with *usar* patches, their size varying from a few square yards to several acres. Areas with smaller patches are being cultivated but those fields which have larger patches have made cultivation difficult and much uneconomic. These have, for the time being abandoned. Expert consultation is in progress to improve such areas and efforts will continue to improve such lands and bring the same under the plough.

These factors and the ever worsening conditions have forced the farm to shrink its area year after year.

The floods and the presence of *usar* patches all over make Nilgaon a very difficult and problem farm.

The total investment on the land in the possession of the farm comes to Rs.2,75,775 which includes compensation paid, cost of improvement of the land, layout and construction of Irrigation channels and installation of tube-wells, etc., or Rs.143 per acre and calculated on the basis of the present cultivated area it comes to Rs.450 per acre.

The main crops of the farm are Sugarcane, Paddy, Wheat, Gram, Barley and Pea, Oats and Berseem are cultivated for fodder for cattle.

IRRIGATION :

There are three tube-wells at the farm which were installed by the Agriculture Engineering Department during the year 1949-50, 1950-51 and

1952-53, respectively in each of the three blocks of the farm. Irrigation water is also available from the canal minor for a very small area.

PRODUCTION :

Year	Total production in term of grain	Total expenditure in cultivation section	Cost of production per md.			Production in terms of grain per acre	Cost of production per acre
	Md.	Rs.	Rs.	a.	p.	Md.	Rs.
1952-53 ..	9,292	1,17,577	12	10	5	9.97	126
1953-54 ..	9,180	1,74,397	18	15	9	9.46	179
1954-55 ..	11,121	2,15,323	19	4	3	9.90	192
1955-56 ..	8,692	1,91,559	22	0	6	11.30	249
1956-57 ..	8,411	1,69,958	20	8	3	15.07	304
1957-58 ..	4,445	1,42,260	32	0	0	7.47	237

It is evident from the above table that the per acre production of the farm is very low although some improvement has been made and the maundage has increased from about 10 to 15 per acre. The year 1957-58 was certainly a very bad year and heavy damage was caused on account of floods and natural calamities. Another thing that is clear from the table above is the higher cost of production per maund. This is because of the lower yields on the one hand and higher expenditure on cultivation on the other. The presence of *usar* patches (15 to 30 per cent) in the area increases the expenditure on ploughing and seeding, etc., without yielding any returns. The reduction in the area under cultivation increases the share of overhead charges per acre which is by no means a small sum. Losses on account of damage due to floods have been heavy and have reduced the yields per acre affecting the cost of production significantly.

Besides the above, as on other farms, the increase in the prices of fuel oils and lubricants, tractors and their spares and increase in the rate of wages of daily labourers and dearness allowance of the low-paid employees and weekly holidays to daily paid labourers have affected the cost of production considerably.

Successful efforts have, however, been made and there has been a significant reduction in the expenditure and progress is being expected in the current Agricultural year.

FINANCIAL RESULTS :

The financial position of this section since its inception is given below :

Year	(-) Losses	(+) Profits	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.
1948-49 .. ..	..	+ 5,312	140	..
1949-50	(-)30,173	..	3,027	..
1950-51	(-)62,766	..	4,602	4,762
1951-52	(-)14,659	..	5,597	5,016
1952-53 .. ..	..	+ 23,561	5,283	5,412
1953-54	(-) 901	..	6,306	12,370
1954-55	(-)25,624	..	7,860	17,031
1955-56	(-)1,46,068	..	82,735	26,252
1956-57	(-) 40,398	..	19,008	24,540
1957-58	(-) 71,286	..	18,598	22,965
Total	3,91,875	28,873	1,72,557	1,40,463

It is clear from the above that the section has always been giving losses except during the years 1948-49 and 1952-53.

These losses amount to Rs.3,91,875 or Rs.39,187 per year. This includes one of the worst years for the State (1957-58 when crops had failed even on normal soils and the State faced a grave danger in the form of famine). This loss (of Rs.39,187) includes interest at Rs.14,046 per year besides depreciation of Rs.8,968 which is inclusive of depreciation on some of the surplus stock. The net loss is of just about Rs.10,000 per year which under the circumstances the farm is placed cannot be considered to be high and which will certainly be overcome.

The main causes of the losses are (1) poor quality of land including large patches of *usar*; (2) water logging over a large area almost from June to December, (3) susceptibility to serious flooding and consequent damage on this account.

HIGH INTEREST ON COST OF LAND :

As said before the per acre cost of cultivated land comes to Rs.450 and at the rate of $4\frac{1}{2}$ per cent the interest charges amount to Rs.20.25 per acre per year as against Rs.5 which would be the maximum for such lands.

HIGH INTEREST ON COST OF BUILDINGS :

The expenses on account of depreciation and interest on account of the buildings come to about Rs.12 per acre.

EXPENDITURE ON SURPLUS MACHINERY :

Surplus and unwanted machines at this farm have been of the value of Rs.52,784 and on an average the charges on account of depreciation and

interest on the surplus machines have been Rs.5,278 and Rs.2,375, respectively. The total interest and depreciation on account of tractor and machinery only (both surplus and required) amount to Rs.25 per cultivated acre.

It would thus be seen that the indirect charges in the form of land rent (Rs.20.25) interest and depreciation on buildings (Rs.12) interest and depreciation on tractors and machinery (Rs.25) alone amount to Rs.57.25 per cultivated acre. Add to it the charges on account of supervision (Rs.20 per acre) and this comes to Rs.77.25 per acre as against an actual loss of Rs.48, Rs.67 and Rs.119 per acre in 1955-56, 1956-57 and 1957-58 respectively in the last three years. It is much too much to expect any interest on investments on such land and it would be really creditable if the production can meet direct expenditure only.

DAIRY AND CATTLE SECTION :

The farm maintains a herd of Hariana and Murrah buffaloes and cows consisting of 'C' Class animals only transferred from other farms of this organization. A herd of 80 Hariana heifers was transferred from Andeshnagar farm to this farm during June 1951. Later on one cow with calf and 2 Hariana heifers were also received from the same farm during that year. The rest of the stock come from the Mechanized State Farm, Babugarh during the years 1951, 1955 and 1958. Murrah buffaloes came only during 1955 and 1958.

The details of production are given below :

Year	Total no.	Milking average in lb.	Overall average in lb.
1961-52	156	2.6	0.9
1952-53	191	3.1	1.0
1953-54	189	3.2	1.1
1954-55	136	4.2	2.2
1955-56	164	6.6	3.6
1956-57 Murrah Hariana	{ 20	8.6	3.9
	{ 140	6.5	3.0
1957-58 Murrah Hariana	{ 24	11.03	5.14
	{ 124	7.3	3.24

From the above figures it may be seen that the yield is very poor and can not be economical. It is, however, increasing from year to year.

The financial position of the section is given below :

Year	Losses	Profit	Depreciation	Interest
	Rs.	Rs	Rs.	Rs.
1951-52 .. ..	..	+16,168	600	500
1952-53	(-) 17,494	..	1,217	1,249
1953-54	(-) 42,013	..	552	1,000
1954-55	(-) 10,351	..	605	1,210
1955-56	(-) 26,352	..	898	1,347
1956-57	(-) 12,554	..	588	2,633
1957-58	(-) 22,377	..	980	3,620
Total	(-)1,31,141	..	5,440	11,559

This section has also been giving losses year after year. The main reasons for the losses are as under :

(1) The stock consists of 'C' Class animals transferred from Babugarh Farm out of the purchased stock and their progeny. They showed further deterioration due to infection of Liver Fluke, Nasal Granuloma and poor quality grazing due to water logging conditions. The diseases mentioned above are the most common ones for the area.

However, it helps in the distribution of stock that have already been acclimatised for the area.

(2) A good number of animals had low and uneconomic production and many had to be ultimately culled out because of their poorer yield etc., and yearwise losses due to culling of these animals are given below :

Year	Number of culled animals auctioned	Loss by auction	Loss on their maintenance
		Rs.	Rs.
1951-52	10	Nil	2,070
1952-53	37	2,200	8,880
1953-54	61	17,292	13,115
1954-55	1	175	319
1955-56	9	3,665	3,069
1956-57	22	5,041	5,324
1957-58	1	Nil	248

(3) Lower sale rate of milk in the absence of ready market in the locality results in lower receipts. The following table gives the cost of production of milk and the rate of sale :

Year	Cost of production per maund of milk			Income per maund		
	Rs.	a.	p.	Rs.	a.	p.
1951-52	53	2	0	16	0	0
1952-53	66	13	0	17	0	0
1953-54	65	11	0	15	8	0
1954-55	25	2	0	16	4	0
1955-56	30	5	8	14	2	0
1956-57 Hariana Murrah ..	33	11	3	15	6	0
1957-58 Hariana Murrah ..				18	1	0
	25.80	n.P.		13.92	n.P.	
	12.98	n.P.		17.12	n.P.	

The Dairy and Cattle Breeding section of this farm is situated in the remote corner and there is no ready market for sale of milk and the milk products. The milk was being sold through the vendors who carried milk to Sidhauri and Mahmudabad at a distances of about 12 and 15 miles respectively from the Dairy. Disposal of milk at local rates is not economical. At times milk is not sold at all and it has to be turned into *khoa* resulting in further reduction of the sale proceeds.

The present high cost of production is because of rise in the price of concentrates like gram, barley, bran and oil cakes and higher rate of wages to labourers which has increased without any rise in the price of milk.

The interest and depreciation on the buildings, etc., that fall in the share of this section comes to Rs.4,600 per year or about Rs.31 per animal per year. In other words every animal young or old has to bear an expense of Rs.2.8 per month on this account.

SUMMARY :

The farm was started during 1947-48 by the Agriculture Department and was transferred to this organization since 1948-49. It has been running of loss almost ever since excepting for two years. The up-to-date losses are given below:

Year	Agriculture section	Cattle section	Total	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.	Rs.
1948-58	3,63,002	1,14,973	4,77,975	1,77,997	1,52,022

The losses could roughly be divided as follows :

	Rs.
1. Loss due to culling and maintenance of uneconomical animals	61,398
2. Loss due to surplus machinery	23 000
3. Recurring losses	3,93,577 o. 39,357 per year.

The loss of Rs.39,357 a year is only after paying Rs.15,202 as interest on investments which should not really be expected from such lands.

The improvement in the value of the land as estimated by the Revenue Department in the year 1955-56 comes to Rs.2,20,797.

In view of constant recurring losses the Committee also gave thought to the idea of winding up this farm altogether and reached the conclusion that it would not be advantageous in any way to abandon the project. The following were the broad considerations which helped to arrive at the above conclusion.

(1) *Firstly*, it is felt that if the State can not build up such lands it is beyond the scope of private farmers to take up cultivation on such land and such submarginal lands have got to be improved constantly.

(2) Ceaseless effects have got to be made to fight soil salinity and the farm area presents a good challenge.

(3) The Committee has no doubt that the drainage of the area will have to be improved not for the sake of the farm but for the benefit of the cultivators all round. The sooner it is done the better, as production is bound to increase once this scheme has been completed. Cultivation of this land will not then remain uneconomical any more.

(4) The total investments on the farm are very heavy (Rs.5,62,263). In case the farm is abandoned most of it would be lost for ever. It would, therefore, be unwise to incur such a loss as against losing the interest only. It does not matter if the investments do not earn any interest whatsoever as long as the principal is safe.

RECOMMENDATION

AGRICULTURE SECTION :

(1) The present capitalised cost of this farm is abnormally high. This should be revised in accordance with the valuation of similar types of land in the locality. The expenditure incurred on the development of such land should be classified as developmental expenditure and need not be capitalised.

(2) Effective improvement in the drainage of the farm area is absolutely necessary. This is the most important single factor. The Committee recommends that the Government may take up this matter seriously at higher levels.

(3) Inclusion of this farm into factory Zone to ensure timely disposal of Sugarcane is necessary.

(4) This is a difficult farm and it is too much to expect such a farm to pay any interest on the investments. No interests on investments should be expected at least for the next 5 to 10 years.

(5) Intensive work on *usar* reclamation should be undertaken as a research and developmental project.

(6) Larger areas should be put under plantation. This is already being done and should continue.

CATTLE SECTION :

1. Replacement of the present 'C' Class stock of animals by better stock (specially buffaloes which are most resistant to the diseases in this area) should be taken up.

(2) Cattle Section may be classified as noncommercial.

(3) Emphasis should be laid on raising of more of Murrah animals and the strength of Haryana cows may be reduced.

The Farm can well serve as a centre for raising Murrah bull calves.

GENERAL RECOMMENDATION :

(1) There is an acute scarcity of quarters for staff. A few *kachcha* hutments which were constructed in the year 1948-49 and 1949-50 have now outlived their utility and have now become absolutely unsafe and dangerous. There is need for 7 quarters for the staff and 20 for labourers. This is absolutely essential and should be taken up at once.

(2) A shed for storage of *bhoosa* and hay near the Dairy buildings is also needed.

MECHANISED STATE FARM SAIDPUR DISTRICT JHANSI

SITUATION :

Saidpur farm is situated in Mahroni Tahsil of Jhansi District and is on the seventh mile on the Mahroni Madaura Road. It is at a distance of 32 miles from Lalitpur—the nearest Rail Head and about 90 miles way from the district headquarters, Jhansi. The farm is connected by a road from Lalitpur via Mahroni. Only a portion of about 12 miles of this road is metalled and the rest is of *kankar*. Barring one or two private buses which ply on this road (Lalitpur to Madaura) there is no other means of transport from Lalitpur to this farm.

HISTORY

Large areas were lying waste in this tract. These were heavily infested with *kans* and were considered to be unculturable. The land was heavily eroded and was getting worse and worse with the passage of time. The State Government had launched a Scheme entitled 'Kans Eradication Scheme' with a view to eradicate the weed and make the land fit for cultivation.

This farm was established on such *kans* infested waste land in the year 1949-50 with a view to reclaim the land for stepping up food resources and for the development of cattle in the Bundelkhand tract. This idea was also to carry out trial on various methods of *kans* control and also to demonstrate improved methods of cultivation in the tract which is agriculturally most backward. The *kans Eradication Scheme* launched by the State Government was thus already in existence in this region. Effective control of *kans* demands deeper cultivation for which mechanization was essential. It was, therefore, considered that the establishment of a Mechanized Farm in this area will serve the people by encouraging them to utilize the land which was hitherto lying waste and it will also serve as a source for supplying improved seeds in the locality and as a centre of demonstration of improved methods and also as an experimental station for carrying out trials of different kinds. It was with these ends in view that the *kans* Infested land, comprising of 2,033 acres, was acquired by the Government in the year 1949-50 and the farm was started. The total area of the farm is distributed in the following villages :

(1) Saidpur	..	..	..	..	945 acres
(2) Karaunda	..	..	..	..	115 "
(3) Garhauili	..	..	..	..	284 "
(4) Largan	..	..	..	..	247 "
(5) Rampur	..	..	..	..	442 "

Saidpur, Garhauili and Largan blocks are located on the left side of the Mahroni-Madhura road, whereas Karaunda and Rampur Blocks are situated on the right. Rampur block is about $4\frac{1}{2}$ miles away from the main block of the farm.

GENERAL INFORMATION

As stated above, the object of starting the farm was to improve the waste land and serve as a source of supply of improved seeds in the locality and as a centre of demonstration of improved methods of agriculture and also to step up food resources and development of cattle in the Bundelkhand tract.

The soil of the farm is mostly *Motti* (blackish soil of the type of *Kabar* and *Mar*). The entire farm area has an undulating topography which makes irrigation and soil conservation work very difficult. The shallow nature of the soil at places and the presence of rocks below the surface makes levelling impossible beyond a certain limit. The soil is very hard when dry and very sticky when wet and it is also very susceptible to severe erosion. However, it is of an above the average quality and responds well to manuring and irrigation. Unfortunately, but for a meagre area of about 60 acres, the farm has no facilities for irrigation and depends entirely on natural precipitation. Even for these 60 acres, not more than one irrigation can be provided.

The land was acquired at about the beginning of the year 1949-50. It was cleared of *Kans* levelled as best as possible and cultivation of crops was taken up in the same year. The farm is also serving as a cattle breeding centre and owns 3 distinct breeds of cattle namely the Kenkatha, the Haryana and the Murrah. Other details in respect of this farm are as follows :

	<i>Acres.</i>
Total area	2,033
Area under cultivation	1,122
Area under buildings, roads, channels and bandhies	403
Area under pastures	508

INVESTMENTS

1. Land—

	Rs.
(a) Initial cost	59,483-00
(b) Cost of improvement of land	1,39,036-00
Total	1,98,519-00
2. Building	1,74,852-00
3. Machinery and implements	1,17,312-00
4. Roads	65,963-00
5. Wells	23,545-00
6. Bullocks	11,825-00
7. Fencing	16,731-00
8. Dead stock	15,253-00
Total	4,25,480-00

Rs.
1,98,519-00
4,25,480-00

GRAND TOTAL 6,23,999-00

The farm has two sections, viz. (1) Cultivation Section and (2) Cattle Section. Both these sections are discussed below separately:

CULTIVATION SECTION

General—The area under cultivation in different years is given below :

Name of the year			Area of the farm	Area under cultivation	Remarks
			Acres	Acres	
1949-50	..	..	1,004	900	Only 1004 acres could be acquired- Only 1,566 could be acquired up to the end of this year.
1950-51	..	..	1,566	807	
1951-52	..	..	2,033	960	
1952-53	..	..	2,033	932	
1953-54	..	..	2,033	1,185	
1954-55	..	..	2,033	1,062	
1955-56	..	..	2,033	1,185	
1956-57	..	..	2,033	1,175	
1957-58	..	..	2,033	1,122	

The variation in the area under cultivation is mainly because of our complete dependence on natural rainfall. Adequate and timely rains allow cultivation of larger area, which has to be left uncultivated when rains are either untimely or scanty. The total investment on the land, which is in the possession of the farm comes to Rs.2,81,213. This includes the compensation paid at the time of acquisition of the land, cost of improvement of the land and lay-out and fencing, etc., or Rs.138-32 per acre and calculated on the basis of cultivated area, it comes to Rs.250-63 per acre. The farm land is susceptible to severe erosion due to defective topography. A major problem of the farm is to check soil-erosion and conserve moisture.

The main crops of this farm are *Juar*, wheat and gram.

IRRIGATION

Almost all our soils in the State require irrigation for intensive cultivation. Irrigation plays a very important role in effecting the economy of our agricultural farms. Unfortunately even after about nine years of its existence, this farm has not so far been equipped with adequate facilities for irrigation. It is only for want of such facilities at this farm that the production has been retarded and the results have not been satisfactory. Originally it was proposed to instal tube-wells and a sum of Rs.40,000 was sanctioned by Government, vide G. O. no. 6282/XIIE-684-1949, dated December 17, 1949 for the purpose, but later on it was found by the expert staff of the Irrigation Department that boring was not possible and therefore, the proposal had to be given up and the money was utilized on the construction of a reservoir, as sanctioned vide G. O. no. 8578/XII-D-684-1949, dated February 24, 1959. Later on a tank was constructed as sanctioned vide G. O. no. 212/XII-E-739(H)-49, dated June 6, 1950, but it is hardly sufficient to provide irrigation for sixty acres. Bundelkhand, on the whole is a dry tract, where means of irrigation are very limited. There being granite hard rocks in the ground, tapping of sub-soil water is not possible at a reasonable cost. Efforts have been made

to store and collect rain water as much as possible and reservoirs in the shape of Largan tank, Saidpur tank and other *bandhies* have been provided. Due to typical soil, topography and climate of the farm, the storage of the rain water and then using it for irrigational purposes is the only course open. However, the *bandhies* so far made are not enough and more have to be made. This work could not be taken up during the last two years as the only bulldozer that was available was lying out of order for want of spares. It has now been repaired and work is in progress. Efforts are also being made to tap all possible sources to further improve the facilities for irrigation at the farm. A culvert has been constructed this year, so as to utilize surplus water from Nainwara *bandhi* and about 20-30 acres of Karaunda Block will now be irrigated by help of the Channel. The Deputy Director, Mechanized State Farms has further submitted a scheme to Government for the installation of a pumping plant at the Jamini river in Rampur Block. The proposal involves an expenditure of about Rs.36,000 and will solve the problem of about 200 acres of land of this block. A few other schemes are also under examination.

PRODUCTION :

Cost of production of agricultural produce and other details are given in the following table :

Year	Total production in term of grain in mds.	Total expenditure in cultivation section	Cost of production per md.		Per acre production in terms of grain		Cost of production per acre
			Rs.	Mds. s/s ch	Rs. a. p.	Per cent	
1949-50	4,975	65,869	13 6 0	4 1 0	54.48		
1950-51	3,782	80,183	21 3 6	4 27 6	99.33		
1951-52	2,884	71,165	24 11 1	3 0 2	74.13		
1952-53	3,290	81,582	24 13 0	3 21 2	87.57		
1953-54	7,191	2,27,012	25 15 0	6 2 9	191.05		
1954-55	11,466	2,93,828	10 11 0	10 31 13	276.67		
1955-56	6,492	2,87,857	15 1 10	5 24 3	248.58		
1956-57	11,216	3,11,338	12 7 4	9 37 11	276.00		
1957-58	5,545	3,46,463	13 3 1	6 15 10	399.61		

*A large area was prepared and manured for Rabi cultivation but on account of failure of rains only a smaller area could be put under crop and the rest had to remain fallow. The total expenditure had thus to be distributed over a small area and hence this difference.

It will be seen from the above table that the figures of production per acre are rather poor as compared to those of other farms but looking to the peculiar circumstances in which the farm is placed it is not unsatisfactory. The cost of production per md. during the last four years is quite reasonable. The striking differences in the production results are attributed in general to weather conditions, specially the rains, as this is a dry farm. In the year 1957-58 the production programme got a severe set back on account of complete failure of rains. Considerable improvements have been made in increasing the production per acre and per rupee but the same is not conspicuous because of increase in expenditure on items beyond the control of management and this is all without commensurate returns. Some of these are :

(1) *High cost of fuel oil and spares of machinery*—Expenditure on these items has been increasing continuously from year to year.

(2) *Increase in Wages*—There has been an increase in wages without commensurate returns. Besides even the labourers engaged on daily wages have to be allowed weekly holidays which only increases the cost of production.

Similarly, there has been an increase in the dearness allowances of all labourers of the establishment. The increase on this account comes to about Rs.2,000 per year.

FINANCIAL RESULTS

The financial position of this section since its inception is given below :

Name of the year	Profit	Losses	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.
1949-50	3,711	..	..	..
1950-51	19,704	..	2,072	2,637
1951-52	..	23,713	4,173	2,580
1952-53	..	22,701	3,562	6,516
1953-54	158	..	8,514	9,368
1954-55	827	..	8,286	11,562
1955-56	..	125,836	98,806	51,025
1956-57	52,252	..	26,138	22,491
1957-58	..	4,638	23,653	21,643
Total	76,652	1,76,888	1,75,294	1,27,825

* This includes Rs.1,08,263 (Rs.76,705 Depreciation and Rs.31,588 interest) on account of depreciation and interest accumulating for previous years on capital assets.

It will be seen from the above that in its total existence of nine years the cultivation section of the farm has been able to give profits during 5 years. (The last year was an exceptionally bad year for the entire State and particularly so to this dry farm and the previous two years were also rather bad). However the net result is a loss of Rs.1,00,236 over the entire period or Rs.11,139 per year. This is of course after paying Rs.1,27,825 in the form of interest and Rs.1,75,294 as depreciation. It is really creditable that the land which had hitherto been lying waste has not only started producing valuable food but is also earning a small interest on the investments after meeting all the expenditure. Besides it provides healthy and economic employment to more than 100 persons. The profits can and will definitely show further increase in the future. The reasons for losses or reduced profits as at present are as follows :

- (1) Failure of rains.
- (2) Lack of irrigation.
- (3) High cost of interest and depreciation.
- (4) Expenditure on surplus machinery.

As said before, the cost of cultivated land per acre comes to Rs.250-63 and at the rate $4\frac{1}{2}$ per cent the interest charges amount to Rs.11.25 per acre per year, as against the highest rate of Rs.5 per acre prevalent in the locality for the best land. This extra expenditure amounts to Rs.7,012-50. The charges on account of depreciation and interest on the surplus machinery amount to Rs.3,265. All this goes to show that this section has done well and there are possibilities of further improvement. With the provision of necessary facilities for irrigation, the position will improve considerably.

CATTLE SECTION

The farm maintains two breeds of cows viz., the Kenkatha and the Hariana and Murrah buffaloes. The Kenkatha is a draft breed with very little milk. The Hariana cattle of this farm are also the poorest and comprise of 'C' Class uneconomic stock of animals transferred from other farms. The third herd consists of only few Murrah buffaloes. The details of production together with the number of animals maintained in the different years is given below :

Year	Number of cattle maintained	Number of cattle maintained in milk	Milk average in lb. of milch herd			Overall average in lb.		
			Hari-ana	Ken-katha	Mur-rah	Hari-ana	Ken-katha	Mur-rah
1949-50	156	..	..	..	..	..	..	..
1950-51	261	21	..	2.0	..	..	0.4	..
1951-52	311	15	..	2.6	..	..	0.5	..
1952-53	331	33	4.8	3.1	..	0.6	0.9	..
1953-54	393	50	5.9	3.4	9.1	1.2	1.1	6.9
1954-55	425	52	5.0	3.5	8.4	1.5	0.9	6.0
1955-56	324	51	4.7	4.6	8.1	1.5	1.4	4.6
1956-57	294	59	4.8	4.5	11.1	1.8	1.4	8.8
1957-58	342	64	5.18	3.64	10.78	2.25	2.11	6.47

.. The farm also maintains brucella positive stock of its own as well as of some other farms. At the moment the strength of stock suffering from Brucellosis is as follows :

Hariana	..	..	..	..	26
Kenkatha	..	..	..	..	13

It is suggested that investigation in Brucellosis should be confined to only one farm and this farm should be cleared of such positive animals.

The milk average of the cattle as given above is low and is, as can be expected from such stock.

Financial position of the section is given below :

Year		Loss or profit	Depreciation	Interest
		Rs.	Rs.	Rs.
1949-50	.. ..	(+) 5,849	..	..
1950-51	.. ..	(-) 34,510	2,072	2,637
1951-52	.. ..	(-) 1,16,374	4,173	2,529
1952-53	.. ..	(-) 61,534	3,562	6,516
1953-54	.. ..	(-) 77,499	3,579	9,367
1954-55	.. ..	(-) 84,495	8,287	11,563
1955-56	.. ..	(-) 1,09,006	11,814	9,000
1956-57	.. ..	(-) 72,358	4,831	7,526
1957-58	.. ..	(-) 50,128	4,735	7,081
Total		(-) 6,00,055	43,053	56,219

This section has been giving losses year after year. Besides the unprofitable nature of the milk production business, there has been no market for milk at this farm. The place is completely isolated and the nearest towns of any consequence are Lalitpur and Jhansi, which are at a distance of 30 and 90 miles from the farm respectively. The disposal of milk, therefore, presents a very difficult problem at this farm. The herd has, however, to be maintained for developmental purposes. This is the only farm, where Kenkatha breed is being maintained. The following factors are accordingly responsible for losses in this section.

(1) *Maintenance of non-milch breeds*—As explained above Kenkatha is a draft breed and the Hariana a dual purpose one. Hariana which are maintained here are poor specimens of their breed. They were transferred from other farms with a view to arrange cheaper maintenance.

(2) Maintenance of animals suffering from Brucellosis is an extra burden on the farm and inflates losses of the section.

(3) Low price for the milk and milk products for want of a suitable market increases the losses. The rate which the milk has fetched and its cost of production at the farm is given below :

Year	Cost of production of milk per md.	Income per md.
	Rs. as. p.	Rs. as. p.
1949-50
1950-51	16 5 0
1951-52	12 5 0
1952-53	8 3 6
1953-54	8 3 8
1954-55	9 4 0
1955-56	7 5 0
1956-57	8 2 6
1957-58	11 8 3

From the above table it will be seen that there is a big gap between the cost of production and the rate of sale. The farm has produced 7,695 maunds of milk during the last eight years or on an average 961 maunds of milk per year. The total loss on account of the sale of milk alone comes to Rs.1,22,272 or Rs.15,284 per year. It may however be mentioned that the cost of production does not include the expenditure which the farm has to incur on distribution and conversion of milk. If these are also added the figure of loss on this account will further increase.

It would be seen that in spite of the poor quality of milch stock provided at the farm the cost of production has been very reasonable and comparatively low, but the losses are there because of the low rate at which the milk is sold.

SUMMARY

Mechanized State Farm, Saidpur, was started on *kans* infested waste land in the year 1949-50 with a view to step up the food resources of the State by improving and utilizing eroded, waste and unproductive land to demonstrate improved methods of agriculture in this part of Bundelkhand, to produce and supply acclimated improved pedigree seeds, and to multiply selected breeds of animals for up-grading the local cattle.

With the above objectives in view, the land was progressively reclaimed, *bundhies* laid out, tanks constructed and finally the areas brought under cultivation. Since the land had been subjected to constant erosion it had been deprived of its fertility leading to the low level of production. This obviously also had an important bearing on the economic aspects of the farm.

The up-to-date financial position of the entire farm including both Agriculture and Dairying is given below :

Year	Agriculture section	Cattle section	Total	Depreciation	Interest
	Rs.	Rs.	Rs.	Rs.	Rs.
1949-50 to 1956-57	(—) 1,00,236	(—) 6,00,055	(—) 7,00,291	2,18,347	1,84,044

The ultimate position is that in the last nine years the farm as a whole gave a loss of Rs.7,00,291 against which a total sum of Rs.4,02,391 towards depreciation and interest (Rs.2,18,347 depreciation and Rs.1,84,044 interest) has been paid. The losses on account of culling amount to Rs.13,600. The total losses on account of sale of milk and milk products amounts to Rs.1,22,272 approximately which is only because of the isolated situation of the farm.

The appreciation on account of the improvement effected in the quality of land as per assessment made by the revenue authorities during the year 1955-56 amounts to Rs.146,000. The land is constantly being improved year after year.

The main causes leading to the losses in Agriculture Section are lack of irrigation and high cost of interest and depreciation and that in the cattle section are low prices for the milk and milk products, maintenance

of uneconomical and poor animals and high rate of depreciation and interest on the investments. But for such unavoidable circumstances beyond the powers of man, the farm is running satisfactorily and given certain facilities with regard to Irrigation, etc. which will be discussed below; it is bound to show better results.

The Committee is convinced that the cultivation section would give profits while the rearing losses in the cattle section will also be considerably reduced. The farm should continue with all its activities as they are:

RECOMMENDATIONS

AGRICULTURE SECTION :

(1) *Levelling and soil conservation*—Now that the Bull Dozer is in working order, *bundhi* and levelling works should be further taken up where possible.

(2) *Exploring of irrigation facilities*—(i) The farm has, hitherto been carrying on dry farming which is, rather, risky. All resources for irrigation should be exploited. About 200 acres of Rampur Block can be made irrigable by installing a pumping plant at Jamini River. The Deputy Director, Mechanized State Farms, Uttar Pradesh, has already submitted a detailed proposal in this regard to the Government. The same should be approved early and funds sanctioned.

(ii) The Saidpur Tank which is in the main block of the farm was constructed at a cost of Rs.45,000 for irrigation purposes. This provides one irrigation to about 60 acres of land. Possibility of increasing the capacity of this tank by raising the height of the bund be examined and taken up if feasible.

(iii) It is recommended that the services of an Overseer be provided to the farm to assist in the execution of irrigation and necessary survey work to help levelling and *bundhi* construction. A temporary post may be created and maximum help should be taken from the Department of Irrigation to provide water for the largest possible area.

(3) The over-head charges on the permanent structures which are included in direct expenditure on crop production works out to about Rs.32 per acre. The over-head charges are nothing but interest and depreciation on capital assets, namely, the Tanks, Wells, Bundhies, Roads and Fencing, etc., constructed for developing the farm land. This is approximately six times of the rental value of the best land in the locality. This is one of the reasons which is making cultivation on the farm expensive despite the fact that the outturn of the crops on the farm compares very favourably with those in the locality. The rates of interest and depreciation should, therefore, be reduced.

(4) It is felt that a hay bailing press might allow the farm to utilise surplus fodders better. One may be provided to this farm.

CATTLE SECTION

(1) Better facilities exist at the farm for rearing young stock at economical rates. The farm may, therefore, be used as a centre for rearing of young stock.

(2) Since cattle have to be maintained for developmental purposes and the farm has surplus cattle feeds, it is recommended that a small herd

of Bhadawari buffaloes may also be maintained at the farm. The existing Murrah buffaloes may be transferred to Bharari Farm.

(3) Brucella positive stock should be removed from this farm and it should become a clean farm.

GENERAL RECOMMENDATION

(1) There are no staff quarters at the farm. Even the Farm Manager has no residence for himself. He is temporarily living in the Inspection House. Construction of residential quarters at the farm, is therefore, of utmost importance so as to relieve the staff from lot of inconvenience. It is, therefore, recommended that a residence for the Farm Manager and 4 Group III quarters may be immediately constructed.

(2) A tin shed should also be provided to house the tractors and machines.

(3) The farm is divided in two blocks which are situated far apart from each other. It is difficult for the Farm Manager to exercise strict supervision on the activities of these blocks without the use of a jeep. It is recommended that the use of the farm jeep may be allowed to the Farm Manager for this purposes so as to ensure better supervision.

The vehicle should also be allowed for essential runs between Lalitpur and the Farm.

(4) There may perhaps be scope for poultry breeding at this farm. It is recommended that a poultry unit of 100 birds may be established at Saidpur camp of this farm. The Director of Animal Husbandry may be requested to explore the possibilities of establishing a poultry unit at the farm out of the plan funds.

TRACTORS AND MACHINERY

As mentioned in the preamble of the report, the Tractorization work relating to this Organization was in the beginning undertaken by the Agricultural Engineering Department under the then Chief Agricultural Engineer. The Agricultural Engineering Department was responsible for reclamation and other tractorization work connected with the Scheme. All the Agriculture machinery and staff functioned under the administrative control of the Agricultural Engineering Department, who used to charge the Organization for the tractorization work done by them at the farms at rates fixed by them for various field operations. The rates of the different operations carried out by the tractors and charged from the Mechanized State Farms were as follows :

	<i>Per acre.</i>
	Rs.
(i) Ploughing Banjar land or initial breaking ..	35
(ii) Ploughing land already under cultivation ..	25
(iii) Initial harrowing	12
(iv) Subsequent harrowing	8
(v) Manuring with the spreader	10
(iv) Sowing with drill	10
(vii) Interculture	10
(viii) Harvesting and threshing with combine ..	45
(ix) Stationary threshing	30
(x) Patela	5

All the tractors and machinery employed by the Agricultural Engineering Department to carry out field operation at the Mechanized State Farms were purchased by them some time during the year 1946-48 for reclamation work of vast tracts of waste land all over the State in connection with the GROW MORE FOOD CAMPAIGN. These tractors and other equipment were utilized for breaking new areas, not only belonging to the Mechanized State Farms, but also that owned by the Colonization Department, *Kans* Eradication Scheme and also the public. The Mechanized State Farms Organization alone had to pay a sum of Rs.5,23,935-9-6 as tractorization charges, as detailed below, during the two years prior to the transfer of the tractors and other machinery to the charge of the Deputy Director, Mechanized State Farms :

	Rs. as. p.
(1) Kamyar ..	53,587-12-0
(2) Nilgaon ..	56,684-11-0
(3) Niblett ..	11,448-3-0
(4) Babugarh ..	30,253-10-6
(5) Saidpur ..	25,865-0-0
(6) Ganjaria ..	28,740-0-0
(7) Arazi Lines ..	71,149-0-0
(8) Bhariari ..	60,222-0-0
(9) Hempur ..	80,579-8-0
(10) Andeshnagar ..	38,122-14-0
(11) Madhurikund ..	33,530-0-0
(12) Manjhra ..	33,750-11-0
Total	523,935-9-6

Under this arrangement the farm was dependant on the Agricultural Engineering Department in so far as the tractor operations were concerned. The tractor staff being completely under the administrative control of the Agricultural Engineering Department did not adhere to the instructions of the Farm Incharges. Field operations were often delayed in the absence of timely arrival of the tractors in the fields and the output suffered. Services were not rendered in time and in accordance with the requirements of the farms. Friction was rampant everywhere owing to complete absence of co-operation and local differences of opinion. It was ultimately decided by Government that the tractors and workshop services in so far as they were to cater to the needs of this Organization should be re-organized. It was accordingly decided *inter alia*, vide G. O. no. C-9/XIIA—1-1950, dated March 1950 that the tractors in Mechanized State Farms shall work directly under the charge of the Assistant Agricultural Engineer who, for all purposes will be under the Deputy Director, Mechanized State Farms and that all personnel for the operation of these tractors, together with the transport allotted for the purpose, will, along with the Assistant Agricultural Engineer, be under the Deputy Director, Mechanized State Farms. The following allotment of tractors and staff was made by Government for the Mechanized State Farms. The allocation for the transport was to follow later :

Number of Tractors	..	..	87
Number of Mobile Workshop	..	..	1
Number of Assistant Agricultural Engineer	..	..	1
Foremen Mechanic	..	..	4
Mechanics	..	..	6
Operators	..	..	100
Cleaners	..	..	44

It will be seen that the total number of tractors allotted by Government for the Mechanized State Farms was 87. The number actually transferred however during May and June, 1950 was 62. A statement showing the then requirements of the tractors together with those received from the Agricultural Engineering Department with their condition is given at the end of this chapter. Out of these 62 tractors received from the Agricultural Engineering Department only 28 numbers were running. The rest were sick and needed complete overhauling. Subsequently 14 tractors were further transferred at different stages by the Agricultural Engineering Department making the total number at the Mechanized State Farms 76. The final position was thus as follows :

Allis Chalmer H. D. 10	..	..	2
Allis Chalmer H. D. 7	..	..	37
Fordson	..	..	13
Massey Harris 55 K	..	..	12
Massey Harris 44 K	..	..	2
Field and Fowler Marshal	..	..	4
T. D. 9	..	..	2
Ferguson	..	..	4
Total	..	..	<u>76</u>

Out of the above 76 tractors 34 tractors were not in working order. Besides the above the following tractors were already existing at the farms noted against each :

T. D. 9	..	2	Madhurikund.
Farmal	..	1	Babugarh.
T. D. 4	..	..	Manjhra.

The first and the second of the above were old tractors and were in need of major repairs; the T. D. 4 was completely unserviceable.

The following implements were also received from the Agricultural Engineering Department along with the tractors :

Name and make of implement	Total no. Workable	
1. Massey Harris 603 Disc. Plough	6	2
2. M. H. 500 series	7	Nil
3. John Deer 600 series	2	1
4. Oliver Disc. plough	3	1
5. Jamboo Disc. plough	1	Nil
6. Fisher Henphory M. B. plough	1	Nil
7. I. H. C. H. B. 4 Furrow plough	17	11
8. Brush Beaker plough	5	3
9. Fordson Mounted M. B. plough	14	11
10. Athens plough	4	3
11. Rome plough	3	1
12. M. H. One Way Disc.	17	9
13. M. H. M. B. 4. Furrow	7	4
14. I. J. C. Harrow	5	5
15. Ransom Maruo plough	10	5
16. Fordson Cultivator	7	6
17. Australia Harrow	2	2
18. 2 Harrow plough	5	3
19. Ransom Harrow	5	2
20. M. H. Light Harrow	5	1
21. Ransom Procromsal 3 Furrow	7	1
22. Master Rome	2	Nil
23. Fisher Ratory cultivators	1	1
24. Pasha Bhai Patel plough	1	Nil
25. I. J. C. 2 Furrow M. B.	4	2
26. Dyre ofset Disc. Harrow	19	13
27. Jamboo Harrow	7	7
28. Case Harrow	4	4
29. Ransom Cigula Siles and Cultivator	10	6
30. M. H. Mower	3	2
31. M. H. Cultivator	1	1
32. Combines M. M. No. 21 and 21	3	2
33. Combines M. M. No. 21A.	2	1
34. I. H. C. Combine 126 RSP	2	Nil
35. Kliffers (Manufacturing Corporation Company)	2	Nil
Total	194	110

Out of the above number, 84 implements were out of commission.

Machinery and equipment worth several lakhs of rupees were lying at the Bigwara Depot. In order to clear this dump it was desired by Government, vide (Colonization Department) Food Production Commissioners

D.O. letter no. G-1511/XII-A-658, dated April 2, 1950, addressed to Chief Agricultural Engineer that attempts should be made to sort out this dump with a view to speedily transfer the machinery to the various Farms. Certain agricultural implements were allotted to the Mechanized State Farms also. On receipt of this allocation the Deputy Director. Mechanized State Farms had written to Government, vide his D. O. letter no. 251043/X-3, dated June 12, 1950, that he will be in a position to say whether these implements will be required at the farms or not only after the transfer of tractors and implements from the P. T. O. to his charge had been completed. It was however, intimated, vide Agricultural Food Production Department G. O. no. C-4652/XII-A, dated July 15, 1950, that no further reference was tenable in view of the orders already issued and that the distribution will hold good. The transfer of these implements without ascertaining the actual requirements of the farms specially when a number of surplus and unserviceable implements had already been transferred by the Agricultural Engineering Departments, proved wholly detrimental to the interest of this organization. The following implements were received from the Bigwara Depot :

1. John Deer M. B. Plough no. 77	..	25
2. John Deer Disc. Plough no. 605	..	7
3. Ransom Marguis M. M. Plough	..	2
4. Massey Harris One way Disc. Plough with seeding attachment no. 509	..	9
5. Mecormic deering 505 disc. Plough	..	5
6. Bullock Driven Mowers	..	20
7. Ensilage Harvester	..	4
8. Manure Spreaders	..	8
9. Forson Ridgers	..	8
10. Fordson Cultivator	..	8
11. Bullock Cultivator	..	2
	Total	100

Out of these implements only the following implements were somehow or other utilized at the farms only because they were there. The rest of the implements could not be used at all :

1. John Deer M. B. Plough no. 77	..	8
2. John Deer Disc. Plough no. 605	..	5
3. M. H. One Way Disc. Plough with seeding attachment	..	9
4. Macormic deering 505 disc. plough	..	4
5. Bullock Mowers	..	6
6. Ensilage Harvestors	..	3
7. Bullock Cultivators	..	2
8. Fordson Riders	..	2

The normal life of a tractor is taken to be five years at the rate of 2,000 hours per year or 10,000 hours work in all. As already stated the tractors transferred to this organization were purchased by the Agricultural Engineering Department between the year 1946 and 1948 and were transferred to this organization in June, 1950. They had therefore put in at least 2 years of hard work in that Department prior to their transfer and at the normal rate of 2,000 hours per year had already worked for at least 4,000 hours. Prior to their transfer these tractors were generally used for land reclamation work which is a very rugged operation and had, therefore, exhausted their useful economical life considerably. This organisation had to undertake major repairs in a majority of cases immediately after transfer in order to make them usable. The book value of the tractors and

implements transferred from the Agricultural Engineering Department to this organization excluding of course the Bigwara dump stock as intimated by the Agricultural Engineering Department was Rs.16,30,176 and that of the implements received from Bigwara amounting to about Rs.2 lakhs totalling to Rs.18,30,176. Of this stock, the implements worth about Rs.3 lakhs were surplus to the requirements of the farms. Although most of the tractors were unserviceable yet no consideration was given to this in charging their prices from the organization. It is believed that the actual depreciation which ought to have been taken into account by the Agricultural Engineering Department was not accounted for. The details of the price of purchase and hours worked have not been communicated so far in spite of repeated requests made by the Department.

A sum of Rs.5,23,935-9-6 was paid by the organization as tractorization charges to the Agricultural Engineering Department for the work done during the years 1948-49 and 1949-50. The charges include an expenditure including interest, depreciation and also overhead besides the direct running charges and essential repairs. The organization had to incur a sum of about Rs.3.5 lakhs on the repairs of this machinery after its transfer. The machinery worth Rs.3 lakhs could only be partially used and only because it was there. It would thus be seen that the farms were overcapitalised in this respect as follows:

	Rs.
(1) Surplus machines including those partially used	6 lakhs.
(2) Wrong valuation of machines by the Agricultural Engineer.	not known.
(3) Cost of repairs of Capital nature	3.5 lakhs

IRRIGATION OUTFIT

Besides the above, the Agricultural Engineering Department had installed 9 Lorimer Diesel Engines for running the tube-wells at the following farms :

(1) Arazi Lines	..	..	2
(2) Niblett	..	..	1
(3) Nilgaon	..	..	3
(4) Andeshnagar	..	..	2
(5) Hempur	..	..	1

These engines were installed in the year 1950-51 and have been giving trouble since their very inception and have never worked satisfactorily. The engines being obsolete and of uncommon makes their spare parts could not be available. It appears that no other types of engines were perhaps available and the Agricultural Engineering Department had probably no option but to install whatever they had. But all the same the fact remains that this organization had suffered due to the installations of unsuitable makes of engines. They are fast running engines and some of their vital parts have either been worn out or broken. In spite of its best efforts this organization has not been able to procure genuine parts for them. Similarly, there are seven Mallila Engines which were installed by the Agricultural Engineering Department in the year 1950-1951. These engines also give lot of trouble since the very beginning being unsuitable for the tropical conditions. The tube-wells for which these engines were purchased have had to be run with the help of tractors which is a costly affair. The total cost of these engines was in the neighbourhood of Rs.1,00,000. In the case of Lorimer engines the same are being run somehow or the other with the locally manufactured parts which do not give proper service and hence result in occasional break-

downs. The Mallila Engines however could not be used in the absence of their vital parts, either genuine or locally manufactured, being not available. Action is, therefore, now being taken for their disposal.

The installation of these unserviceable and untried engines not only hindered the progress of irrigation at the farms but also resulted in considerable loss to the organization in their disposal. The organization has been paying depreciation and interest to the tune of Rs.7,000 annually on the cost of Mallila Engines which have not been used.

Apart from the above it may be repeated that the value of the equipment which the organization got from the Agricultural Engineering Department in 1950 was Rs.18,30,176. The tractorization charges which the organization had to pay to the Agricultural Engineering Department amounted to Rs.5,23,936. Surplus machinery which was thrust upon the organization amounted to Rs. 6 lakhs. In case the Department had made purchases of brand new machines to meet its actual requirements it would not have cost more than a sum of 12 lakhs of rupees which would have also resulted in better efficiency. Losses to the Organization, on this account may just be imagined. Government have since sanctioned the disposal by auction of the surplus and unserviceable machinery vide G. O. no. GEC-3908/XII-E-847-57, dated December 6, 1958. A list of surplus and unserviceable stock is given at the end of this chapter. The exact loss due to the disposal of the machines can be known only later but it is bound to be heavy. In view of the severe restrictions on foreign exchange and non-availability of the desired machines, special care has to be taken in the disposal of surplus machines. All those pieces which can be utilized in some way or the other should be retained. The Deputy Director, Mechanized State Farms will see to this. The rest of the surplus machinery and tractors should be disposed off at once to save deterioration.

Other details, namely (i) which of the machines, etc., have become unserviceable in ordinary course by exhausting their normal span of life, (ii) which of the machines etc., have been used by the Department and are repairable but for which necessary spare parts are not available, (iii) which of the machinery, etc., now being sold were not used at all and were dumped on the organization by the defunct Agricultural Engineering Department have also been noted against each in the statement on page 144-145.

In the year 1952 a number of fourteen Fordson Tractors was taken over from the C. T. O. at a cost of Rs.69,824. These tractors had to be purchased from Government of India in order to meet the requirements of the organization in respect of the light tractors as the soil reclamation work had almost been completed by that time at almost all the farms and light tractors were needed. These light tractors were also required for being utilized for the transport of sugarcane produce by means of the trailers provided at the farms.

After the transfer of Hampur and Ganjaria Farms from the control of this organization the position so far as the tractors are concerned was as follows :

(1) Allis Chalmer H. D. 10	..	..	2
(2) Allis Chalmer H. D. 7	..	..	26
(3) Fordson Major	..	..	25
(4) Massey Haris 55 K	..	..	4

(5) Massey Harris 54 K	..	..	1
(6) Ferguson	..	..	2
(7) Field and Fowler Marshal	..	..	4
(8) T. D. 9	..	..	4
(9) R. D. 4	..	..	1
(10) Farmal	..	..	1
(11) D-50	..	..	1
			<hr/>
	Total	..	71

Tractors.

The above tractors had long back completed their normal span of life of 10,000 hours recommended by their manufacturers. Only timely repairs of such machines has been helping in running this old fleet of tractors but the practice is expensive and cannot continue for ever. Once the life of a tractor is exhausted the repair cost of such tractor becomes uneconomical. The manufacturers recommend an expenditure on repairs only equal to its purchasing value during its life time. All the Crawler tractors have undergone major overhauling costing about Rs.12,000 in each case and have further consumed more than Rs.8,000 in each case on minor repairs. It is, therefore, considered very necessary that these should be suitably replaced. The wheel type tractors have also undergone major overhauling twice costing about Rs.8 to 10 thousand in each case besides minor repairs. They have also completed their normal span of life and require replacement. The actual requirement of the organisation in case new purchases are made suiting to the requirement of the farms is as follows :

		Tractors.
1. Crawler Type tractors	..	20
2. Wheel type tractors	..	30
		<hr/>
	Total requirement	.. 50

(This includes the tractors already purchased in the last 3 years).

In connexion with the Scheme of replacement of tractors and other allied equipment at the Mechanised State Farms included in the II Plan Schemes Government had, with a view to enable the cultivation operations at these farms being carried out satisfactorily and economically, approved *vide* G.O. no. 3783/XIIE—882-55, dated June 27, 1956 the proposal of the Deputy Director, Mechanised State Farms with regard to the replacement of tractors and other allied equipment, etc., at a total estimated cost of Rs.14,25,000 during the II Plan period.

Originally the year-wise break up of the aforesaid amount which was proposed to be spent during the five years of the Plan period was as follows:

		Rs.
1956-57	..	3,00,000
1957-58	..	3,00,000
1958-59	..	3,00,000
1959-60	..	3,00,000
1960-61	..	2,25,000
		<hr/>
	Total	14,25,000

The position of the funds so far sanctioned by Government for the purpose is given below :

(1) During the year 1956-57 a sum of Rs.3,00,000 was provided by Government, *vide* G. O. no. 3783/XIE-882-55, dated June 27, 1956. Out of this provision a sum of Rs.60,000 was diverted by Government, *vide* G. O. no. 9174 (i)/XII-E-882-55, dated nil, 1956 in favour of the Deputy Director, Tarai State Farms in order to meet the requirement of Hempur Farm. This left a sum of Rs.2,40,000 only to be utilized by the organization during the year.

(2) During the year 1957-58 a sum of Rs.3,00,000 was again provided in the budget for the replacement of tractors and other machinery, *vide* G. Os. no. 3474/XII-E747 (73)-56, dated July 30, 1957 and no. 447/XII-E(GEC)-882-55, dated March 12, 1958. Even out of this provision a sum of Rs.24,000 was diverted by Government for the purchase of weigh bridges for the following Departments :

	Rs.
(1) Animal Husbandry Commissioner	12,000
(2) Director of Animal Husbandry	6,000
(3) Principal, U. P. College of Veterinary Science and Animal Husbandry, Mathura	6,000
Total Rs.	24,000

This left a sum of Rs.2,76,000 with the organization out of which it was again ordered by Government, *vide* G. O. no. C-2966/XII-E-888-55, dated September 15, 1958 that two new tractors along with their matching implements purchased out of the aforesaid funds should be transferred to the Hempur Farm. Accordingly, two tractors costing Rs.31,486 were transferred from the organization to Hempur Farm. Only a sum of Rs.2,44,514 could thus remain with the organization to be utilized for the purpose.

(3) During the year 1958-59 only a sum of Rs.1,00,000 was provided by Government, *vide* G. O. no. 3074/XII-E-882-55, dated October 7, 1958 and again this year (1959-60) the same amount of Rs.1,00,000 has been repeated in the budget on this account against the provisions of Rs.3,00,000 proposed to be made in each of these years.

The reduction in the allotment of funds to this organization for the replacement of its old unserviceable machinery has not been conducive to efficiency and is telling upon the economy of the organization. Replacement of old machinery by new ones is a matter of great importance. The following new tractors have so far been purchased for the organization out of the plan funds replacement of the old ones:

(1) Crawler type tractors	6
(2) Wheel Type tractors	17

Twenty-three old tractors will accordingly be disposed off now. This is a slow pace of replacement and needs to be accelerated. The deficit caused in the original proposal by reduction or diversion of funds should be restored in the coming years. Further it is recommended that the losses on account of the disposal of old and unserviceable and surplus machinery should not be debited in the *pro forma* accounts of the farms in view of the factors narrated earlier. These will, however, for purposes of records be kept in the account of the Headquarters.

STATEMENT SHOWING THE REQUIREMENTS OF TRACTORS FOR THE MECHANISED STATE FARMS UTTAR PRADESH IN THE YEAR 1950-51

Name of the farm	Total cultivated area	Tractors required			Present strength			Excess & short		Condition at the time of taking over
		60 H. P.	40 H. P.	30 H. P.	60 H. P.	40 H. P.	30 H. P.	Excess	short	
1. Babugarh	600	..	2	1	1	..	2	..	—	Two out of order. All require immediate overhauling.
2. Madhurikund	1,000	3	..	2	2	..	2	..	1	
3. Bharari	1,000	3	..	2	3	1	2	1	..	Two out of order. All require immediate overhauling. Ditto
4. Saidpur	1,004	4	1	1	3 H. D. 7 2 H. D. 10	..	..	..	1	Ditto
5. Hempur	3,600	10	7	1		4	5	2	..	7	Six out of order. Seven require immediate overhauling.
6. Andeshnagar	900	..	3	3	2	2	3	..	..	Four out of order. five require immediate overhauling.
7. Manjhra	700	1	2	1	2	1	1	2	6	
8. Nilgaon	1,000	5	..	1	3	..	..	..	3	Two out of order. All require immediate overhauling.
9. Ganjaria	800	3	3	1	3	..	1	..	3	Running, require immediate overhauling.
10. Kamyar	2,000	5	5	1	6	..	2	..	3	One out of order, require immediate overhauling.
11. Niblett	3,000	..	1	..	..	1	1	1	..	Four out of order. All require immediate overhauling.
12. Arazi Lines	700	3	..	1	5	..	..	1	..	Running,
Total	13,604	37	21	14	36	10	16	5	24	Three out of order. Two require immediate overhauling.
Required	..	37	21	14	72					
Present		36	10	16	62					
Shortage of 10 Tractors										

LIST OF TRACTORS AND OTHER MACHINERY WHICH ARE UNSERVICEABLE
AND SURPLUS IN THE MECHANIZED STATE FARMS, UTTAR PRADESH,
LUCKNOW.

<i>S. no.</i>	<i>Particulars of machinery</i>	<i>Quantity</i>
Tractors and other Machinery which have been rendered unserviceable in ordinary course by exhausting their normal span of life.		
(1)	Ferguson	1
(2)	Fordson Major Tractor 28 BHP	7
(3)	Follower Marshall Tractor 40 BHP	1
(4)	I. H. C. TD9 Tractor 45 BHP	2
(5)	Field Marshall Tractor 40 BHP	2
(6)	Allis Chalmer Tractor 60 BHP	2
(7)	M. H. 44K Powerine Model Tractor	1
(8)	R. D. 4 Catterpillar Tractor	1
(9)	Formal F12 IHC Tractor	1
(10)	MES Single cylinder oil Engine 10 BHP	1
(11)	Petter Single cylinder 7 BHP	2
(12)	Lister Oil Engine	1
(13)	Petter twine cylinder 8 BHP Engine	1
(14)	Ruston Engine	1
(15)	Flour mill 12" stone	2
(16)	Power chaff cutter	4
(17)	Seed Drill B Drawn	5
(18)	Chassis Trailer	1
(19)	Sultan Care crusher	1
(20)	Hay Rack	3
(21)	Potato digger	2
(22)	Pickup Chev 1948 model	1
(25)	Assorted B. D. Implement	50
(24)	Thistle Mower	1
(23)	Asorted B. D. Implement	50
(26)	Albion Mower reaper	1
(27)	I. H. C. No. 9 Reaper	8
(28)	Reaper bomlet with Engine	1
(29)	Reaper viking bullock drawn	1
(30)	Reaper M. H. Power drawn	2
(31)	Kanpur Harrow	3
(32)	Dyre Off set Harrow 36 disc.	1
(33)	Dyre off set Harrow 24 disc.	1
(34)	Dyre Off set Harrow 22 disc.	2
(35)	Case Harrow Light	1
(36)	Coeple off set harrow 28 disc.	6
(37)	M. H. 23 Disc. Light Harrow	4
(38)	Ransome Harrow 32 Disc.	1
(39)	Battery charger	1
(40)	Therminous Thresher	3
(41)	Cultipacker	3

<i>S. no.</i>	<i>Particulars of machinery</i>	<i>Quantity</i>
(42)	Steam Engine	1
(43)	Suga Disc Plow Johndeer	1
(44)	M. H. 505-5 Disc Plow	2
(45)	M. H. 404 4 Disc Plow	1
(46)	I. H. C. 4F No. 14 M. B. Plow	2
(47)	M. H. Mould Board Plow 4 F. No. 27	1
(48)	Ensilage Harvester	1
(49)	Oilver One way 11 Disc Plow	1
(50)	I. H. C. No. 2 One way Disc Plow	3
(51)	509 One Way 13 Disc. Plow M. H.	6
(52)	Mecornic seed drill	1
(53)	Raansom 7 feed leveller	1
(54)	Hammer Mill	1
(55)	M. H. Cultivator spring tine	1
(56)	Fordson leveller	1
(57)	Fordson Tool bar mounted cultivators	5

Tractor and other Machinery which have been used only because these were available on the Farms and are repairable but spare parts are not available.

(58)	Diamond T. Truck	1
(59)	Hay Rack	2
(60)	M. H-21A Combine	2
(61)	Pesteuration Plant (Brand New)	2
(62)	Mallila Engine 20 HBP.	3
(63)	D-50 Cattipillar Tractor	1
(64)	Tours cultivator Power driver	1
(65)	M. H. Spring Tine cultivators	1
(66)	Cultivators with three tine	1
(67)	M. H. Power Reaper	1
(68)	222 M. H. Combine	1
(69)	Ransom M. B. Trailer Type Plow	1
(70)	Ransom M. B. 5 Plow T. S. 18 B	1
(71)	Bust Breaker I. H. C. Single Furrow	1
(72)	Australinor off set Harrow	2
(73)	Big Home 16 Disc. Heavy Harrow	1
(74)	Big Ram 20 Disc Heavy Harrow	1
(75)	Ransom Harrow 20 Disc.	1
(76)	Fordson M. B. Plow Tractor Type	1
(77)	I. H. C. No. 14 Plow 4F	2
(78)	M. H. 605 Disc. Plow 6 Disc.	1
(79)	Fordson Ridger toll bar mounted	1

Tractor and other Machinery not used in the organization since its very transfer from Agricultural Engineering Department.

<i>S. no.</i>	<i>Particulars of machinery</i>	<i>Quantity</i>
(80)	Atlas Chamber H. D. 7	1
(81)	Palapone Generating Engine with Generator	2
(82)	606 H. M. Disc Plow	1
(83)	Pre-cunsel plow 3 F. M. B.	2
(84)	Ranson 2 FMB. Tractor type Plow	3
(85)	Fisher Himphry M. B. Plow	1
(86)	Fordson M. B. Tractor type plow 2 F	3
(87)	M. H. 4 F.M.B. Plow	4
(88)	Pasha Bhai M.M. Plow 4 F	1
(89)	Fordson Mounted 3 F Plow	9
(90)	Raansom M. B. 3 F Plow	1
(91)	Bush Breaker Single Furlow	1
(92)	C17 J Sub-Soiler Cultivator Ransom	4
(93)	I. H. C. MB Plow 4 F	7
(94)	Fisher Hemphery Rotary Cultivator	2
(95)	Atten 16 Disc Heavy Harrow	3
(96)	Ransom barran 12 Disc Harrow	2
(97)	Manure Spreader	7
(98)	2000 Gallons Diesel Tank	3
(99)	250 Gallon tank	5
<i>Surplus due to closure of Kamyar Farm</i>		
(100)	Prefabricated House	4
(101)	Motor Boat Johnson Engine	1

MECHANIZED STATE FARMS BASE WORKSHOP**LOCATION**

The Base Workshop of the Mechanized State Farms Organization is housed in the temporary tin shed constructed by this Department in the compound of the office of the Deputy Director, Mechanized State Farms, Uttar Pradesh, in Mahnagar, behind the Karamat Husain Muslim Girls' College, which is on the Faizabad Road.

HISTORY

The story of the acquisition of the tractors and implements has already been narrated in the previous pages. These machines were had from the Agricultural Engineering Department. The Department had utilized the machines in breaking new land and cultivation of the broken ones for about 3 to 4 years. The Department did this work not only for this organization but also for many other organizations and private farmers. The tractors and implements had put in about 4,000 hours of work before they were transferred to this organization. Out of the total number of 76 tractors which were transferred, 34 were not in working order. It had been decided that the Agricultural Engineering Department will undertake all repairs pertaining to tractors, vehicles and machines of this organization but this arrangement did not work and want of timely and proper repairs hindered progress. It was, therefore, decided that this organization should have its own workshop at the headquarters. It had also been decided that the spare parts necessary for the repairs will be provided by the Agricultural Engineering Department but unfortunately even this did not work and, therefore, this organization had to fully equip itself for the proper maintenance of the fleet of tractors and implements which it had under its control. A mobile workshop fitted with some essential machines had been provided for effecting on-the-spot repairs, but the work was so heavy that this arrangement was far from satisfactory. The Base Workshop was, therefore, started at the Headquarters under the temporary tin shed which was originally constructed for providing shelter to the Mobile-workshop and vehicles located at the headquarters and sanctioned, *vide* G. O. no. 4668/XII-E—5506-1950, dated November 25, 1950 at cost of less than Rs.2,500 but this space was far from sufficient to accommodate the tractors that were daily pouring in. Government were, therefore, pleased to accord sanction. *vide* G. O. no. 3926/XIIE—106-1950, dated July 10, 1952 for the extension of the temporary tinshed at an estimated cost of Rs.3,000. The initial job was very heavy because of the poor condition of the tractors and the tools and equipment available with the mobile workshop could not meet the demand. A number of other machines and special tools were, therefore, subsequently added to equip the base-workshop. As the space provided could not meet the requirements, the Government was again pleased to sanction a new temporary tin shed, *vide* G. O. no. 8084/XII-E—764-54, dated October 26, 1956 at an estimated cost of Rs.9,700. All this forms the present workshop of the Mechanized State Farms.

STAFF

The following staff was originally engaged in the Base Workshop :

- (1) Foreman Mechanic in the scale of Rs.200—15—350 per mensem. Incharge of Base Workshop.

(2) Mechanics—two in the scale of Rs.120—6—210—10—250 per month.

(3) A few technicians (welders, turners electricians and fitters) were engaged against the existing posts of Tractor Operators and the other staff required to carry on the different jobs was kept on work charged establishment subject to necessary provision in the estimates, the Assistant Agricultural Engineer being responsible for general supervision of the Workshop in addition to his duties with regard to looking after repairs, maintenance and running of the machinery at the farms.

(4) A Store-keeper in the scale of Rs.60—3—90—4—110 and a Store Coolie in the scale of Rs.25— $\frac{1}{2}$ —30 per month were also sanctioned by Government for the spare parts Store.

ACTIVITIES AND OUTPUT

Following types of jobs are carried out in the Base Workshop :

- (1) Major overhaul of all types of tractors and machinery existing in the Organization.
- (2) Repairs of the unit assemblies.
- (3) Replacement of defective spare parts, chain servicing, Cylinder block boring.
- (4) Seat cutting and Valve refacing.
- (5) Electrical works connected with the machines and battery charging.
- (6) Welding of broken parts.
- (7) Blacksmithy.
- (9) Turning and machining, etc.

There are certain activities like Crank shaft Grinding, remetalling of bearings, castings, manufacture of new parts etc.,—which require special heavy machines— are not carried out in this workshop and have to be got done from outside resources *e.g.*, Talkatora Workshop, C. M. E., Kanpur and the local market, as the case may be. With its limited resources the Workshop has been able to turn out the following number of major jobs in different years :

1952-53	..	..	..	133
1953-54	..	..	..	144
1954-55	..	..	..	129
1955-56	..	..	..	13
1956-57	..	..	..	36
1957-58	..	..	..	85
1958-59	..	..	..	95

The extreme decline in the number of jobs completed in the years 1955-56 and 1956-57 was due to mass retrenchment of the Workshop personnel. Non-availability of spare parts due to the difficulties created by the foreign exchange has also been responsible for hampering the progress in the Workshop. In terms of money, the average outturn of the workshop works out to about Rs.2 lakhs per year including the cost of spares. Besides doing the work of this organization the workshop has

taken up repairs for the Chak Ganjaria and the Pashulok farms of the Department of Animal Husbandry and helps in the maintenance of their tractors and implements. This workshop also serves as a training centre for the field staff working at the farms. The Base Workshop has, therefore, fully achieved the aims and objects for which it was established, it is with the help of this workshop that it has been possible for the organization to maintain and run the machinery at the farms satisfactorily. But for the establishment of this Workshop, it is felt that the organization would have faced unsurmountable difficulties in respect of the machinery existing at the farms.

This workshop has not only fully justified its existence by being able to keep the fleet of machines of this department running but has also effected considerable economy towards the cost of repairs. It has been observed that the repair charges of this workshop have been at least 15 per cent to 20 per cent cheaper than the prevailing market rates.

IMPEDIMENTS

The existing resources of the workshop, both in respect of accommodation and staff are not in keeping with the volume of work, which is carried on. The existing temporary tin sheds do not meet the full requirements of the activities in the Workshop. Practically all the space available in the Workshop has been occupied by the machinery under repairs. The fresh arrivals together with those, whose repairs are completed and have to wait for despatch to the farms have to be kept standing in the open exposed to the vagaries of weather. There is also no proper arrangement for housing the office of the Assistant Agricultural Engineer. Facilities for drinking water, sanitary requirements and other such amenities, which essential in accordance with the provisions of the Factories Act do not exist. The original tin shed has almost outlived its utility and requires replacement. It is understood that the Public Works Department are hesitant to furnish a stability certificate in respect of this tin shed, due to which the registration of the Workshop is also held up. The existing staff in the Workshop and in the main store is also inadequate as compared to the volume of work and quantity of stores handled. The inadequacy of the staff presents a number of difficulties in the proper maintenance of the activities in the store.

The difficulty created by the foreign exchange since the year 1956 is another important factor, which hampers the progress of work in the workshop resulting in delays in the execution of repairs.

RECOMMENDATIONS

The Committee is convinced that the Base Workshop at the headquarters of the Deputy Director, Mechanized State Farms has been of immense value and has very successfully achieved the objective for which it was established. The Committee, is further convinced that the maintenance of this Base Workshop is absolutely essential for the efficient working of the farms. In order to fully utilize the services of this workshop, the Committee recommends that the impediments already enumerated above should be immediately removed. It is further necessary that :

- (1) The existing accommodation for the Workshop and Store should be extended by provision of a third tin shed to house the Machinery received for repairs and after repairs.

- (2) The old tin shed should be replaced by a new one.
- (3) Suitable office accommodation should be provided to the Assistant Agricultural Engineer.
- (4) A proper store should be provided to maintain the spare parts. The present store is terribly crowded at the moment.
- (5) Necessary facilities and amenities regarding drinking water, lavatory, etc., which are essential in accordance with the provisions of Factory Act should be provided in the Workshop.
- (6) Government have already incurred some expenditure in the construction of these tin sheds and a lot more is required to be done. Therefore, it is necessary that *action should be taken with regard to the acquisition of the premises*. This arrangement will prove considerably beneficial to the State.
- (7) In order to enable the maintenance of stores accounts systematically and also to conduct periodical verification of the spare parts worth about Rs.5 to 6 lakhs consisting of about 8,000 items it is necessary that a post of Superintendent of Stores be created in the grade of 200—15—350. He should be incharge of the Stores and should be responsible for annual verification. The existing post of Store Keeper in the scale of Rs.60—3—90—4—110 should continue to assist the Stores Superintendent.
- (8) A post of a peon is required to be created for the Base Workshop in the scale of Rs.27— $\frac{1}{2}$ —32.
- (9) The Committee further recommends that immediate action should be taken at the Government level for the allotment of Foreign Exchange requirements of the organization so as to enable it to procure essential spare parts for the repairs of the machinery. It is understood that Deputy Director, Mechanized State Farms has taken up this matter with the Government separately also.

The Base Workshop should continue as it is. The assistance that the Talkatora Workshop may be in position to render to the Organization should be availed of as far as possible and practicable.

A NOTE ON THE WORKING OF THE ENTIRE ORGANISATION

(ALL THE TEN FARMS TAKEN TOGETHER)

Now that we have discussed the various farms individually, it might facilitate examination if the required information is summarized collectively in order to get a birds-eye-view of the working of the Organization in its entirety. As said before, the working of the now abandoned Mechanized State Farm, Kamyar has not been included in these discussions. They also do not include the Mechanized State Farm, Hempur, district Naini Tal which was taken out from this Organization in the year 1954. The results of the Mechanized State Farm, Hastinapur are, however, included though this farm was transferred to this Organization only in 1954.

There are at present ten farms in this Organization. General information about these is given below:

**STATEMENT SHOWING THE REQUIREMENTS OF TRACTORS FOR THE MECHANISED STATE FARMS
PTTAR PRADESH IN THE YEAR 1950-51.**

Name of farm	Total area	Area under cultivation	Average no. of cattle maintained	Capital assets	Profit or loss for all the years			Net result	Depreciation	Interest	Other activities
					Agriculture section	Dairy section	Poultry section				
					Rs.	Rs.	Rs.				
Bharati	2,337.77	1,000	582	6,66,362	(+)1,28,205	(-)7,02,240	(+)76,104	(-)4,97,104	2,63,022	1,99,563	Sheep and goat
Saidpur	2,033	1,175	230	6,23,999	(-)1,00,236	(-)6,00,055	..	(-)7,00,291	2,18,347	1,84,044	Poultry
Madhuri-kund	1,396.29	797	662	4,71,408	(+)5,15,256	(-)10,84,588	..	(-)5,69,332	1,66,006	1,46,280	Sheep and goat
Nilgaon	1,938	600	163	5,62,263	(-)3,63,002	(-)1,14,973	..	(-)4,77,975	1,77,997	1,52,022	..
Manjhra	950.00	650	464	3,53,612	(+) 22,702	(-)2,85,799	(-) 1,012	(-)2,64,109	1,02,362	79,556	Poultry.
Andeshnagar	1,144.89	858	67	5,56,850	(+) 1,23,594	(-)1,30,228	..	(-) 6,634	1,88,308	1,13,283	..
Niblett	594.89	200	51	1,76,587	(-) 11,888	(-) 96,220	..	(-)1,08,108	58,726	52,457	..
Babugarh	806.24	600.24	533	6,11,635	(+) 3,81,726	(-) 7,31,230	(-)82,512	(-)2,66,992	1,69,119	1,62,529	..
Hastinapur	1,489.31*	1,386.15	391	†12,63,524	(-) 8,320	(-) 6,80,205	..	(-)6,88,525	2,37,514	3,12,314	Sheep and Poultry
0. Arazi Lines	345.57	310	250	600,021	(-)1,68,070	(-)4,64,298	..	(-)6,32,368	1,18,151	1,62,837	..
					(+) 5,19,967	(-)48,89,836	(-)1,57,604	(-)42,12,265	16,99,552	15,64,885	

Profit in cultivation section.

Profit in poultry section.

Loss in Dairy

Cattle section.

Net Loss

Interest paid

Actual loss

(+) Rs.5,19,967 value of improvement on land.

(+) Rs.1,57,604 has been estimated at Rs.20,00,000

(-) Rs.6,77,571 Loss due to bulk culling Rs.3,50,000

(-) Rs.48,89,836 Loss on account of sur-

Rs.42,12,265 plus machinery including

Rs.15,64,885 the partially used ones because Rs.1,08,000

Rs.26,17,380 it was there and buildings.

*The matter regarding the actual area of the farm is under dispute.

†Established and capitalised by the Colonisation Department.

The causes leading to these losses on individual farms have been discussed in detail in the previous chapter. Here only the main causes which apply to the Organization in general would be taken.

CULTIVATION SECTION

This section has so far, in the past 10 years, earned a profit of Rs.5,19,967 for the entire Organization or an average of Rs.51,996 per year. This includes some of the worst years which brought in near famine conditions all over the State. However, a sum of Rs.51,996 is rather a small and unimpressive figure when we consider that we are cultivating about 7,700 acres of land. (This is of course after paying Rs.59,860 as rent in the form of interest on the cost of land). It shows a return of only about Rs.6-12 per acre which is rather low. However, the facts are that on account of maintenance of large number of cattle on the farms large areas are under fodder crops and the produce is supplied to the Cattle Section at the cost of production. The actual profits per acre are, therefore, higher than shown above. Even after making allowance for such calculations higher profits are normally expected. The main reasons for low profits are :

(a) *Poor quality of land*—Of the 7,732.03 acres now under cultivation only 1,224 acres were over cultivated before the Organization took over. The rest of the land was lying fallow not because there was no demand for land but because most of the land was considered to be unculturable. It was marginal or sub-marginal and was incapable of economic production of crops. It is evident from the fact that even until this day only 7,732.03 acres of the total of 13,314.40 acres were being cultivated. The rest of the area is still lying *banjar* and most of it does not permit improvement. Large tracts consist of saline and Alkaline soils e.g., at Niblett, Niigaon, Hastinapur and Madhurikund and large areas are low lying subject to severe flooding year after year, e.g., at Nilgaon and Hastinapur and also a good part of Madhurikund. Thousands of acres are eroded and undulated with deep ravines e.g., at Saidpur. Almost all the area owned by the Organization consists of jungle and shrubs besides sand, dunes and so on. It was on such land that the Organization started its working. Heavy investments had to be made to improve the land and this process has got to continue for years to come. The circumstances under which such area had to be taken have already been explained.

Land is Nature's gift, but it ceases to be a gift if it is not constantly improved and saved from getting barren. It is, therefore, the duty of the State to improve all the land that is at present lying waste and in this State of land-starved population it is all the more necessary. In Holland the State keeps fighting the Sea to get chunks of land here and there. The sea is checked by putting expensive dykes, all water has to be pumped out and the salt has to be washed by sweet water which again is pumped out and then the land is levelled and reclaimed. Cost is no consideration. Return in the form of interest on investment is not expected. The sole objective is to produce more food and make the country self-sufficient. Besides, the project provides employment to the population. There is need for more land, there is need to grow more food, there is need to cut down the imports which may otherwise even endanger

the freedom of the country. Even if the investments do not earn any interest the fight has to be continued. If waste land starts producing food the gain is a permanent one. Countries do not maintain armies to earn interest. It has to be maintained and it must. Khadi was adopted not because it was cheap or paying but because it helped us to reach self-sufficiency in our requirement for cloth, it gave employment to millions and it helped us to check imports. Self-sufficiency in food is of far greater importance and has got to be brought about even if the investments on the improvement of land do not earn interest. It would only be to the advantage of the State to develop all such waste land even if the expenditure incurred on the development of unproductive and barren land is to be considered as subsidy or as an item of development expenditure. There can hardly be a better development work in this country than to develop the areas lying waste. All this may not be misunderstood. It is not by way of explaining the losses or a plea to condone the same but as a matter of principle the State must undertake to develop waste lands and make it fit for production of food even if the investments do not earn any interest.

One of the main causes leading to lower and costlier production is, therefore, the quality of land which has been passed on to the Organization. It goes to the credit of this organization that even with such land it has so far earned Rs.5,19,961 as profit after paying Rs.10,50,704 as interest besides reasonable and unreasonable depreciation to the tune of Rs.13,80,159. It is gratifying to note that the land most of which was hitherto lying waste has today improved considerably and is producing valuable food and in terms of money the improvement over the land is of the value of about Rs.20 lakhs.

(b) *Machinery*—It has been said earlier that for the first two years the tractorisation work was done by the Chief Agricultural Engineer Uttar Pradesh. It was he who bought the tractors and machines, ploughs, harrows, combines and engines. He got the work done by staff working under him. It must be remembered that the State has had little experience of mechanised farming before 1947, and it is doubtful if even the Chief Agricultural Engineer had ever used power machines on such huge a scale. Mistakes were only natural. It must also be remembered that soon after the war it was hard to get exactly what was wanted or what was suitable. Thus the two factors e.g., lack of experience and non-availability of the required machines added with the pressing need for quick development of waste lands to rehabilitate an uprooted population of a gigantic magnitude without any loss of time lead to an inevitable addition of surplus and untried equipment. The effect of this can be felt even today. In this Organization alone we have tractors of at least twenty different makes and models and naturally repairs are expensive. There is difficulty in getting supplies of spares for all these makes and there is absolutely no standardization. Present import difficulties are again making standardization difficult. A similar fate befell the choice of pumping plants and oil engines and made untired makes found their way which were only later found to be unsuitable to our conditions.

Besides these difficulties, the working arrangements were very unsatisfactory to start with and lead to waste and losses. The tractor staff was independent of the Farm Management and they could or

could not be available at the time of need. This difficulty was, however overcome by the year 1950 when the tractors, etc. along with the staff were transferred to this Organization.

This however, led to another difficulty. All machines and implements were left over at the farm irrespective of the consideration as to whether or not those were needed and whether they were in order or not. Two things happened (1) That a large number of machines and implements were left over on the farms which were not needed and were surplus to the needs of the Organization. The value of such items comes to Rs.6 lakhs. (2) Large number of tractors which were out of order and needed heavy repairs were passed on to the Organization. It needs mention that the Agricultural Engineering Department was not only working for these farms but they were engaged in breaking land for other Organisations and individuals and had a fleet of tractors. Land reclamation requires harder work and the duty on the machines engaged in such work is heavy. Inexperienced beginners were to handle the tractors and naturally deterioration was also fast. This Organization had to spend a tidy sum of Rs.3.5 lakhs on the repairs of only a portion of the equipment so received most of which had to be capitalised. Further, until communicating the price of these tractors and machinery these were perhaps not properly depreciated. All efforts of the Deputy Director, Mechanised State Farms to get the required information as to the hours these machines had worked in those years and their prices of purchase have so far failed. We appreciated that these conditions were there because of rush and state of emergency and were inevitable and much of it could not probably be avoided. The losses on this account are, therefore, because :

(i) The Organization has to pay a heavy amount of interest and depreciation on machines and implements which are surplus to its needs (97,000 per year).

(ii) It had to spend a huge sum on the initial repairs of these machines—roughly 3.5 lakhs.

(iii) The machines have not been, we believe, properly depreciated and the Organization has had to bear a heavier cost than the actual value of the stock.

(iv) Some unsuitable machines were thrust upon the Organization.

It would be interesting to learn that as late as in the year 1950 machines worth about Rs.2 lakhs were transferred from Bigwara to the Organization although those were not needed.

The value of all equipment which the Organization received from the Agricultural Engineering Department in 1950 was Rs.18,30,176. Tractorisation charges which the Department had paid to the Agricultural Engineering Department during the two years amounted to Rs.5,23,936. If the Department had been allowed to get all brand new machines at the time of transfer according to its needs it would have probably cost the organisation not more than Rs.12 lakhs while it had to account for a sum of Rs.21,80,000 (Rs.18,30,176 plus Rs.3,50,000) for old and worn-out machines for use of which it had already paid Rs.5,23,936.

The losses on this account, therefore, are attributable not to this Organization but to the now defunct Department of Agricultural Engineering.

Efforts are now being made to dispose off the surplus machines although the present import position is exercising a great check and may force modification of the plans greatly. It may be advisable to repair or modify general machine and put them in moth ball for future use.

(c) *Irrigation*—It has already been said that most of the land belonging to the Organization was lying waste. Naturally there were no means of irrigation. But for part of Madhurikund and Bharari none of the farms had any irrigation whatsoever. Irrigation had to be provided and the irrigated area increased year after year. This was all a slow process and even today large tracts are still lying unirrigated, resulting in lower production.

We have discussed above the three main factors which have been responsible for losses or lower profits in the cultivation section. Other factors like natural calamities e.g. flood, droughts, insect epidemics are all there and these areas, lying as they are, under most unfavourable circumstances, are worst victims of these vagaries of nature e.g. light floods which may not harm normally may be too much for Nilgaon and Hastinapur or ordinary droughts which may not affect the normal areas which may cause considerable damage at Saidpur which has no irrigation at all.

Every farm has its own problems and has special types of difficulties. The Committee has gone round the farms and in general was satisfied with the standard of cultivation. Considering the various factors the Committee is convinced that the section has worked satisfactorily and it hopes of still better production in the coming years.

(d) *Cattle section*—Unlike Cultivation Section, the Cattle Section has always been running at a loss. Cattle rearing is an unprofitable business and it is particularly so when there is no market for pedigree animals and people do not care for purity of the breed. Cattle breeding and development is a long term programme and immediate gains or losses have got to be ignored. Immediate gains have to be sacrificed and losses accepted in the interest of future long-term development. Unless this is accepted as a reality, progress of livestock is not possible. With a view to furnish an explanation, an example will not be out of place.

The average age at which a cow will drop its first calf can be taken to be 4 years. It would be a little less in case of cows and a little more in case of buffaloes. (Efforts are being made to reduce this age and considerable success has been achieved but for purposes of striking out an average which we have had so far on our farms this assumption will not be far from correct). Such an animal (a first calver) giving 8 seers of milk can be had for about Rs.150 or so in Mathura or Meerut. But what would be the cost of rearing a calf up to this age. The details are given in the separate chapter dealing with the valuation of the stock and it would be seen that it comes to Rs.1,592 for cows and Rs.1,910 for buffaloes.

The cost of raising of the stock on the farms is, therefore, quite high. But even for really good animals such prices are not obtainable and losses are imminent. A pertinent question can be raised as to how the farmer is able to raise his stock more economically. The fact is that the difference is not much in the actual expenditure but there is a considerable difference in the accounting or the valuation of the various items of expenditure.

The farmer's main stake is not milk business. He does not account for the milk suckled by the calf. In case of male calves many times the farmer allows all or most of the milk to the young stock keeping only a little for himself. However, these farmers who are in actual milk business lose most of their young stock because of poor nourishment. They allow but little milk to the young one and inflict heavy mortality. Similarly the former provides housing but he does not calculate any expenditure on that account. Because of smaller numbers he has to spend more labour per animal but he does not count that. It would thus be seen that three items of major expenditure and one of minor does not find a place in the accounts (mental only for he does not keep any records) of the farmer. These are :

	Rs. n.P.
(1) Milk	120
(2) Labour	216
(3) Housing	144
(4) Supervision	74.86
	<hr/>
Total	554.86
	<hr/>

Further his expenditure on feeding of concentrates and medicine, etc., is also nominal. He feeds only little of concentrates. The growth rate is slowed and maturity is prolonged and the mortality is high. He seldom counts for the fodder, for he feeds crop residues if he has enough or else he spends labour (which is free) and digs out grasses and keeps his stock on that. Because the labour is free and because he does not keep any account he does not bother about late maturity or bothers little about the mortality of the young one. Further he does not maintain any breeding bulls. He has to spend nothing on the maintenance of records and it is because of all these factors that the cost of raising the stock at his end appears to be low.

It should now be amply clear that the raising of livestock which we do on the farms is a losing proposition and in spite of the apparently higher book value (in comparison to market value) the farms are losing on their stock.

Similarly there are heavy losses in the production of milk also. The cost of milk production will vary from breed to breed but with dual purpose animals it may come to about Rs.25 to Rs. 30 per maund. As against this the average selling rate is Rs.14.50 per maund (inclusive of cost of transport, supervision and ministerial

expenditure). Thus the loss per maund comes to more than Rs. 11 per maund. The Organization produces about 23,000 maunds of milk annually and the total loss on this account comes to Rs.2,53,000. It must be mentioned here that milk production is not the job of the Organization and milk is there only because cattle are there and in reality all these losses are attributable to cattle development, the main work, that is being done.

As expected it may now be seen from the table on page 150 that the Cattle Section has been giving losses year after year and the total losses so far incurred since the beginning have amounted to Rs.48,89,836 or on the average Rs.4,88, 983 per year. This includes a sum of Rs.5,07,591 given as interest on investments. Even if this is taken out the loss comes to Rs.4,38,224 per year which in the face of it is very heavy. It is, however, encouraging to note that these losses even after accounting for a high interest have come down to Rs.3,92,484 in the last year and it is definite that as the efficiency of the animals increases and efficiency in the cultivation section is improved the losses will go down further. These losses roughly amount to Rs.139 per animal per year. The position, however, needs examination and the main causes leading to the losses stated above are enumerated here as under :

(1) *Poor Foundation Stock*—Large number of animals were purchased by the Animal Husbandry Department from Punjab in the year 1948-49. The total purchases were of the value of Rs.15 lakhs. Because of these huge purchases a large number of poor animals much below the standard also came in. This was quite natural. Even in small scale purchases some 10 per cent or so of the stock turns out to be poorer than expected and when large-scale purchases are made in a short time good number of poor animals are bound to find a place. Even today and after so much culling the position is not very satisfactory. The detail as to how these animals were obtained on the individual farms is given along with the report on each of the farms. Maintenance of such stock increased losses of the section.

(2) These animals brought in with them cow-pox which broke out on every farm wherever these were sent causing permanent heavy damage.

(3) All these animals were maintained for several years. It was in the year 1952 that a decision to cull out the poorer stock was taken when bull culling was adopted. About 1,900 animals were approved for culling from the various farms and most of them were sold out by public auction. This bulk culling gave a huge loss of about Rs.3,50,000.

(4) As a policy, the Department of Animal Husbandry had decided to maintain local indigenous breeds like Kherigarh and Ponwar cows and Tarai and Bhadawari buffaloes. Besides a herd of Kenkatha cows was also purchased from outside and put on one of the farms. All these breeds named above are poor milkers. These breeds of cattle are meant only for draught and have little milk. Milking is generally not practised in Kherigarh and Ponwar animals. It is not economical to do so. So these

animals did not produce any milk and there was no demand for their young ones and these were maintained purely for saving them from extinction. Shelters had to be provided to these animals and expenses had to be incurred on their feeding and maintenance with little return from them. Therefore, nothing else than heavy losses could be expected. *A zoo could hardly be a source of profit.*

As there is neither a demand for the bulls nor the cows of these breeds it has now been proposed to Government separately that only 25 adult animals of each of these breeds be maintained as a nucleus herd and the rest of them be disposed off. The matter is receiving Government consideration. But what will any one do of the buildings that have been built for them? Interest and depreciation charges on them will have to be borne by the farms. This part of the programme has given considerable loss. In the interest of work, however, these breeds have got to be preserved and should be maintained but should not be expected to earn profits.

(5) *High interest and depreciation charges*—The annual expenditure on this account comes to Rs.1,08,362 for this section or roughly Rs.36 per animal per year or Rs.3 per month. This is actually not too much but this does not give a correct picture. The table below shows this part of the expenditure on each of the farms :

Statement showing yearly depreciation and interest charged to cattle section at the various Mechanized State Farms.

					Depreciation	Interest
					Rs.	Rs.
(1)	Saidpur	..	..	..	4,735	7,081
(2)	Niblett	..	..	..	212	410
(3)	Babugarh	..	..	..	8,892	13,089
(4)	Hastinapur	..	..	..	9,020	28,177
(5)	Andeshnagar	..	..	..	192	14
(6)	Manjhra	..	..	..	1,506	1,203
(7)	Nilgaon	..	..	..	980	3,620
(8)	Arazi Lines	..	..	..	4,670	7,334
(9)	Bharari	..	..	..	4,386	7,820
(10)	Madhurikund	..	..	..	1,116	3,900
Total					35,713	72,848

Grand Total 1,08,361

It would be seen that wherever these charges are low, either we are short of buildings and new ones are coming up or are under consideration. So the charges will actually be higher than this. And these do not include charges on account of light, water, supervision, etc.,

(6) As said before, most of the farms were started on sub-marginal lands. Cost of production of fodder on such lands is naturally higher and consequently the expenditure on the maintenance of the animals is also high.

(7) Experiments are conducted on many of the farms and all the extra expenditure on this account has to be borne by the farms concerned. This also leads to losses. At Bharari farm research work on animal nutrition is going on for the last several years. Similarly at Madhurikund and Saidpur work on control of brucellosis disease is going on for sometime past and all the animals from the various farms suffering from this disease have been collected on these farms for experimental studies. Such expenses should be treated as non-commercial.

(8) Another important factor which has affected the efficiency of the herd is the frequent changes of the Veterinary Officers and Assistant Surgeon. Artificial Insemination is being followed on most of the farms but the officers responsible for looking after the job are frequently changed which can be seen from the statement on pages 8, 9, 10 and 11.

It would be appreciated that such changes cannot be conducive to good work and the herd is bound to suffer. As a matter of fact there is need for really good staff to take up this basic work of building the foundation of all improvement work.

(9) There is a definite shortage of good breeding bulls on the farms and the results have in some places been very disappointing. The policy of using any unknown bull has now been changed and this aspect is being taken care of as best as possible under the existing circumstances.

(10) Last but not the least important cause leading to losses in the Cattle Section has been the undue emphasis on profit and loss account. Because of this overemphasis maximum economy is exercised in feeding the animals and they go on deteriorating. A vicious circle had been formed. This has now been done away with and the Deputy Director, Mechanised State Farms is definite that even if it lead to some losses for sometimes liberal feeding and better management will more than pay for the expenditure incurred. This is correct because it would then be possible to improve the ratio between wet/dry animals, cut down dry period, increase milk yield, bring about early maturity and would also reduce mortality. The policy has been adopted and the advantages are already being felt.

These are some of the common factors which lead to losses in this section. However, in order to meet the growing requirements of pure bred bulls and cows it is but essential to maintain the livestock farms.

For purposes of drawing up of a Profit/Loss Account it is recommended that the expenditure incurred on the maintenances of draft breeds just to save them from extinction be shown as non-

commercial. All expenditure incurred on research and experimentation be also classified as non-commercial. As the farms are doing purely developmental and demonstrational work it is necessary to have better buildings which are bound to be expensive. Farm animals cannot be maintained in the manner in which the *Ghosis* maintain their livestock. Such facilities would be expensive but cannot be avoided. The detailed recommendations for such classification are discussed in a separate chapter that follows :

TERM OF REFERENCE NO. 3

SUBJECT—*To suggest methods of evaluation of cattle at the Mechanised State Farms.*

At present the valuation of dairy cattle at all the Government farms is made according to their age. The table at appendix 'A' gives the value of different breeds of cattle and buffaloes at various ages which is being followed at the present.

The above figures were drawn up in the year 1950 by the Director of Animal Husbandry and the Deputy Director, Mechanized State Farms, Uttar Pradesh. These were based mainly on the basis of cost of raising an animal to adult-hood. It also appears that thereafter (after reaching adult-hood) the prices were kept level for sometime i.e., during the prime of the youth of the animal—and then it goes down slowly i.e., depreciation starts until the animal becomes old and non-productive when the price is reduced to the minimum which averages at about Rs.30 for all animals. The method adopted appears to be sound and reasonable. As would be seen there is no relationship between the values fixed and the market value of the animal. The quality of the individual animal has also not been taken into consideration and fixing the prices. There would be many animals in the herd which may fetch more than the maximum book value but the average value of the livestock owned by the State would, it is believed, fetch a lower price than their book value. This is one reason why there is loss in culling (although only the poorest animals are culled). It has been discussed in the previous pages that dairying is not a profitable profession and cattle rearing is certainly the least paying. However, whether there was a loss or profit cattle breeding work has got to be continued if the cattle of the State are to be developed and, therefore, it is quite correct to fix a value for these cattle which should be based on the cost of raising them. There are besides the above other reasons which justify a higher value for the animals raised on the farms. It would not be fair to compare the price of pure bred pedigreed animals with that of those whose pedigree and purity is not known. In the case of pure-bred animals we are not only sure of the present milk yield but we are reasonably sure of their progeny also. This is important. It would not be out of place to mention that in the western countries bulls have fetched prices as high as forty-three thousand dollars and rams have been sold for several hundred guineas. In this country those who keep cattle are unfortunately not at all pedigree minded or at least they do not attach due importance to this aspect. However, they are slowly recognising this factor and it is hoped that in due course of time even the market value of such stock will be high. It is true that we cannot claim to have produced such outstanding animals but cattle breeding is a slow process and requires patience and hard and efficient work. There is progress and many good animals can now be found on the farms. Those who are engaged in horse racing or lovers of dogs realise the importance of

pedigree more than do the owners of cattle and buffaloes in this country.

In some of the herds which we now own in the State it is hoped that a large number of animals can be sold out at prices higher than their book value. This shows that we are proceeding on the right lines and it can be hoped that pure bred pedigree animals will pave their way.

It is appreciated that these values were calculated during the year 1950 and since then there has been a considerable rise in the cost of labour and concentrates. The rate of interest and depreciation on buildings and machinery have also been enhanced considerably and there has been a similar rise in the cost of fuel oils and lubricants. All these have enhanced the cost of raising the animal considerably but it is recommended that the values already fixed need not be changed at the moment. Detailed data may be collected and examined next year. The figures may, if necessary, be revised every 5 years.

It should, however, be kept in mind that balance sheets of cattle farms present a completely changed picture with a change in the valuation of livestock without any actual gains or losses to the farms. This should be avoided and gains or losses on account of change in valuation should not find a place in the balance sheet of that year.

In short the committee recommends that the present system of valuation of livestock be continued and should be examined every five years for modifications, if any. The first examination should now be taken up in April, 1960.

However, for the benefit of those who care to go through these pages the details of expenditure which has to be incurred in raising an animal to adult hood is also given hereunder.

Book value of Harian, Tharparkar, Gangatri, Kherigarh, Panwar and Kankatha Cattle and Tarai and, Bhadawari buffaloes.

Book value of all breeds of Sahiwal and Sindhi and Murrah Buffaloes.

	Male	Female	Male	Female
Birth to 6 months	150*	150*	150*	150*
7th month to 12 months ..	300*	300*	300*	300*
13th month to 18 months ..	450	450	450	450
19th month to 24 months ..	600	600	600	600
25th month to 30 months ..	700	700	700	600
31st month to 36 months ..	800	700	700	600
37th month to 72 months ..	800	700	700	600
73rd month to 84 months ..	700	600	600	500
85th month to 96 months ..	600	500	500	420
97th month to 108 months ..	500	400	400	330
109th month to 120 months ..	400	300	300	240
121st month to 132 months ..	275	200	200	160
133th month to 144 months ..	150	100	100	80
145th month to onwards ..	50	30	50	30

*NOTE—Government have since fixed nil value in respect of the calves up to the age of 12 months vide G. O. no. 9815 (1) XII-E—742-1952, dated Lucknow, February 13, 1954 and the same principle is being followed in this year.

The various items of expenditure in connection with the raising of animals can be roughly classified under the following heads:

- | | |
|-------------------|--|
| I. Feeding | Milk (during suckling stage) roughages, concentrates, salt and mineral mixture. |
| II. Labour | On the farm, labour is required as graziers who also groom and wash the animals; those who harvest, cart and chaff fodders; sweepers who clean and wash the sheds, waterman if no running water is available; watchmen, etc. etc., The services of the staff like the godownman who issues daily ration, sickline attendant, office peon, etc., etc., are common to all the stock. |
| III. Housing | .. The total interest and depreciation and the expenses on annual repairs of the buildings are shared by the entire stock. |
| IV. Miscellaneous | .. Medicines, lime, rope or tie-chains, use of bullock-carts and vehicles, etc., etc. |
| V. Mortality | .. In spite of all the care a certain percentage will always die. In the young age the rate of mortality is very high in case of buffalo calves while it is comparatively lower in case of the cow young stock. The average mortality can be taken to be 10 per cent in the first year and 6 per cent in the later years. Besides the usual normal mortality, epidemics are also common. However, for purposes of these calculations we may take 6 per cent as an average. |
| VI. Supervisi | .. Besides managerial charges, the pay of staff like the veterinary assistant surgeon, dairy and cattle assistant, store clerk, office expenses, including provident fund and pension contribution of Staff, audit expenses, etc., etc., is also shared by all livestock and other sections. |

Apart from the above items there is expenditure in the form of interest paid on cost of land, under buildings, pastures, roads, etc., etc. The detailed expenditure under the various items can now be worked out as follows :

1. *Feeding*—The detailed expenditure is tabulated below and has been drawn up on the basis of a standard scale.

Statement of expenditure on feeding of Hariana Heifer from birth to four year or age

Age in month over to	Milk at the rate of 5 lb. for a rupee			Concentrate at the rate of 8 lb. of Rs.			Roughages at 3 n. P. per lb.			Mineral mixture and salt at the rate of 2 N. P. up to 12 months and 3 N. P. per over 12 months	Total cost Total of columns 4, 7, 10 and 11	Progressive total
	Rate of daily feed in lb.	Total quantity fed during the period in lb.	Cost	Rate of daily feed in lb.	Total quantity fed during the period in lb.	Cost	Rate of daily feed in lb.	Total quantity fed during the period	Cost			
1	2	3	4	5	6	7	8	9	10	11	12	13
0 to 1 ..	4	120	24.00	..	..	..	..	..	..	..	24.00	24.00
1 to 2 ..	4	120	24.00	½	15	1.88	..	..	..	..	25.88	49.88
2 to 3 ..	3½	105	21.00	¾	22.5	2.82	1	30	.90	0.60	25.32	75.20
3 to 4 ..	2½	75	15.00	1	30	3.75	1½	45	1.35	.60	20.70	95.90
4 to 6 ..	2	120	24.00	1½	90	11.25	2	120	3.60	1.20	40.05	135.95
6 to 10 ..	½	60	12.00	2	240	30.00	4	480	14.40	2.40	58.80	194.75
10 to 12 ..	..	..	..	2½	150	18.75	5	300	9.00	1.20	28.95	223.70
12 to 18 ..	..	..	..	2½	450	56.25	6	1080	22.40	5.40	94.05	317.75
18 to 24 ..	..	..	..	3½	630	78.75	8	1440	43.20	5.40	127.35	445.10
24 to 30 ..	..	..	..	4	720	90.00	10	1800	54.00	5.40	149.40	594.50
30 to 36 ..	..	..	..	4	720	90.00	11	1980	59.40	5.40	154.80	749.30
36 to 42 ..	..	..	..	4	720	90.00	12	2160	64.80	5.40	160.20	909.50
42 to 48 ..	..	..	..	5	900	120.50	14	2520	75.60	5.40	193.50	1103.00
Total for a cow heifer.	..	600	120.00	..	4687.05	585.95	..	11,055	358.65	38.40	1103.00	..

P. S.—The quantity of concentrates can be reduced if good quality roughages are available but such roughages as good quality legume or soil hay, corn silage, etc. cost nearly double of what has been charged above i. e. instead of 3 n. P. it would be more than 6 n. P. per lb. Efforts are being made to find better fodders to replace concentrates and then raising of stock can be cheaper.

The above scale is for feeding an average Hariana heifer. The cost of raising a Hariana male calf and buffalo stock up to the same age will easily be about 20 to 30 per cent more.

2. Ordinarily the concentrates cost Rs.10 per maund (and the calculations have been made at the same rate) but the present rates are rather high.

3. The cost of roughages have been calculated at the minimum. As a matter of fact young stock does not thrive on *bhusa*. It requires good quality legume and cereal hay which costs about Rs.5 per maund but for purposes of these calculations the rate has been kept at only 2.46 per maund.

4. It has been presumed that the average age at calving for cows would be $3\frac{1}{2}$ years. In case of buffaloes it would be 4 years. In order to bring about early maturity as planned the quantity of concentrates and quality of roughages have to be improved. All-out efforts are being made to achieve this objective.

Cost of feeding of livestock is, therefore, as follows :

	Rs.
1. A cow heifer up to the age of $3\frac{1}{2}$ years (when the animal is expected to drop her first calf.	909.50
2. A buffalo heifer up to the age of 4 years (when the animal is expected to drop her first calf i.e., cost for cow heifer + 20 per cent).	1323.60
3. A Hariana bull-calf up to the age of $2\frac{1}{2}$ years (at the age of $2\frac{1}{2}$ years (at the age of issue, cost of cow heifer plus 20 per cent).	895.16
4. A buffalo bull-calf up to the age of 3 years (at the age of issue, cost of cow heifer plus 20 per cent).	974.09

II. Labour.

<i>Calculation for expenditure on labour</i>	Labour unit per animal per day
1. One grazier for every 60 animals ..	.0167
2. One sweeper for every 200 animals ..	.005
3. One fodder man i.e., harvesting and chaffing fodder for every 20 animals. ..	.05
4. One watchman (night) for every 200 animals. ..	.005
5. One godownman, sick-line attendant, waterman, Jamadar, etc., etc., for every 90 animals. ..	.011
Total labour unit per animal per day ..	.0877
Add to it 1/7 for weekly holidays ..	.0125
Total ..	.1002

That is, 0.1 labour unit will take care of one animal.

Hence 1 labour unit will take care of 10 animals.

Labourers on establishment draw a salary of about Rs.49 per month while those on daily wages get from about Rs.42 to Rs. 45 per month. Taking Rs.45 as the average the per day cost of one labour unit comes to Rs.1.50 and distributed over 10 animals it comes to Rs.0.15 n.P. per animal per day or in other words Rs.4.50 per animal per month.

III. *Housing*—This item includes only the interest and depreciation on the buildings which have been provided on the farms. This expenditure differs at the different farms of this organization. It varies from Rs.7 to Rs.2 per animal per month. But in fact in all those places where the charges are low either the existing buildings are not sufficient and new ones are under construction or are planned to come up or the buildings are very old and are in the process of renovation or something of the kind. The growing stock, however, requires less space and fewer buildings and hence for purposes of these calculations, an average figure of Rs.3 has been taken.

IV. *Miscellaneous*—This has been taken at Re.1 per month per animal. This includes expenditure on medicines, ropes, tie-chains, brooms, lime, buckets, etc., etc., and also for use of carts and vehicles.

V. *Mortality*—As explained earlier this had been fixed on an average of 6 per cent of the expenses mentioned above.

VI. *Supervision*—This figure also varies from farm to farm, depending on the number of animals maintained and the pay of the staff posted during the year. It can, however, be calculated on the basis of other expenses and can easily be fixed at 5 per cent of the above expenditure. Actual expenditure is, however, higher than this.

SUMMARY

The total expenditure which has to be incurred in raising of the stock and as discussed above has been tabulated and can be seen on the next page. It would be seen that this expenditure is as follows :

	Rs.
1. For a cow heifer up to the age of 3½ years (when she is expected to drop her first calf)	1,335.43
2. For a buffalo heifer up to the age of 4 years (when she is expected to drop her first calf). Cost of cow heifer plus 20 per cent.	1,911.49
3. For a cow bull up to the age of 2½ years (when it can be issued for service). Cost of cow heifer plus 20 per cent.	1,335.02
4. For a buffalo bull upto the age of 3 years (when it can be issued for service). Cost of cow heifer plus 30 per cent	1,446.27

The above gives an idea of how expensive it is to raise livestock by paid-labourer. This again does not include the rent on land occupied by the cattle sheds, paddocks, pastures, etc., etc. The maintenance charges of the breeding bull (which has to be kept for the heifers) has also not been included. This can now be compared with the value of the stock as fixed for the animals (table on page 162). It explains way the causes

of losses in raising livestock. It is because of these factors that the Military farms of the country do not raise their own stock and depend on fresh purchases mostly. It also very clearly indicates how the farmer is exploited. He survives because (as explained on pages 154 and 155) he does not count the cost of milk suckled by the calf or the cost of labourer put in by him and the members of his family, the cost of housing and supervision, etc, etc. As a matter of fact he does not even take into account even the full cost of feeding the animal.

Age in month	Cost of feed and salt and M. Mix	Labour at 4.50 per animal per month	Housing at 3 per animal per month	Miscellaneous at 1/- per animal per month	Total	Mortality at 6% per annum or 1/2 per month of column no. 6	Total	Supervision at 5 per cent, of column no. 8.	Total	Progressive
1	2	3	4	5	6	7	8	9	10	11
O-1	24.00	3.50	3.00	1.00	32.50	0.16	32.66	1.63	34.29	34.29
After 1-2	25.88	4.50	3.00	1.00	34.38	0.17	34.55	1.70	36.25	70.54
" 2-3	25.32	4.50	3.00	1.00	33.82	0.16	33.98	1.64	35.62	106.16
" 3-4	20.70	4.50	3.00	1.00	29.20	0.14	29.34	1.46	30.80	136.96
" 4-6	40.05	9.00	6.00	2.00	57.05	0.28	57.33	2.86	60.19	197.15
" 6-10	58.80	18.00	12.00	4.00	92.80	0.46	93.26	4.66	97.92	295.07
" 10-12	28.95	9.00	6.00	2.00	45.95	0.23	46.18	2.31	48.49	343.56
" 12-18	94.05	27.00	18.00	6.00	145.05	0.77	145.82	6.28	152.10	495.66
" 18-24	127.35	27.00	18.00	6.00	178.35	0.89	179.24	3.99	188.23	683.89
" 24-30	149.40	27.200	18.00	6.00	200.40	1.00	201.40	10.07	211.47	895.36
" 30-36	154.80	27.00	18.00	6.00	205.80	1.02	206.82	10.34	217.16	1112.52
" 36-42	160.20	27.00	18.00	6.00	211.20	1.05	212.25	10.66	222.91	1335.43
" 42-48	193.50	27.00	18.00	6.00	244.50	1.22	245.72	12.26	257.48	1592.91
Total ..	1103.00	216.00	144.00	48.00	1511.00	7.55	1518.55	74.86	1592.91	..

SUBJECT—*To suggest as to which of the activities of the farm can be classified as "Developmental" and which should be termed as "Commercial".*

Cattle breeding and agriculture are not commercially attractive professions. This statement hardly needs any clarification. The very fact that although agriculture is the oldest industry of the human civilization and one of the most stable and employs the largest number of people yet those who are engaged in the industry are generally the poorest components of the society is ample proof in support of the above statement. Those who are engaged in the industry are not only professionals but have inherited the necessary technical knowledge from their forefathers and are in no way new to the profession. The intelligentsia and the business class were not attracted towards agriculture only because it did not offer even a comfortable living. Investments are high, and risks are great. Had agriculture permitted even a fair return on the investments the industry would have been in the hands of the business community but the fact is that it does not ensure any returns on the investments. It is a tragedy but is also a fact that a brick kiln owner makes more money in two years from a plot of land than does the farmer even in ten years from the same land and the pity is that the former leaves the land poorer and it remains so far years and years while the latter only helps to build it up. Investments of even the smallest farmer runs in atleast four figures but his earnings are probably less than that of a 'Panwala' or a 'Rickshawala' or an ordinary labourer who finds an all the year round employment.

In the strict sense, therefore, for that matter all our farming activities are non-commercial. For the purposes of our discussions, however, it would be possible to classify these activities on some other grounds, e.g. :

I. such activities which are kept purely for demonstration and development or for purposes of research and for which little or no return is possible,

II. such activities which earn a fairly good return either from direct sales or because of Government subsidy or because of both, but still show a loss on account of their nature, and

III. such activities which are profitable in normal years under normal conditions.

I. As would be clear the activities which fall in the first category are to be considered as strictly non-commercial. Some of these are described below :

(1) At the Bharari farm district Jhansi a big herd is maintained for Research Work on Animal Nutrition. There is expenditure on the maintenance of these animals and on the accommodation of the staff. All such expenditure can only be considered to be developmental. Similarly at Madhurikund farm animals suffering from Brucellosis are centred from all over the State and investigations are being carried on them. These investigations howsoever essential, are purely non-commercial activities and must be accepted as such.

(2) Manjhra farm maintains a herd of Kherigarh cows. Hempur maintains a herd of Ponwar cattle. Saidpur has a herd of Kenkatha animals (and similarly Bharari farm maintains Bhadawari buffaloes). All these breeds have been maintained for preservation or to save them from extinction or for their being graded up. Some of the

animals produce milk which is hardly sufficient for their calves, others give but little milk to make them economical. There is no demand for their young ones also. These are, however, maintained with a view to keep these hardy animals there so that some day when we might need them for research and development work they might be available. Expenditure incurred on them should be considered as purely developmental.

(3) Expenditure incurred on experimental work either on crops or on livestock should always be considered as non-commercial.

(4) Such buildings which were actually not meant for farm but were constructed in connection with some other experimental work or scheme should be treated as non-commercial, e.g., tobacco barns and nutrition stalls and laboratories at Bharari Farm and Dairy buildings at Hastinapur Farm. At Arazi Lines Farm buildings were constructed to meet the needs of 1,200 acres but the Government decided to return bulk of the land to the cultivators and now only 345 acres are left. The oversize buildings should proportionately become non-commercial.

(5) Office buildings or Inspection Houses fencing and *pucca* roads, etc., should all be considered to be non-commercial as is done in the farms of the Agriculture Department.

(6) Similarly machinery and equipment lying surplus at the farms may be treated as non-commercial.

(7) Expenditure incurred on permanent improvement of land, e.g., levelling and layout or breaking of new land or on reclamation of *usar* and eroded lands should be capitalized and should be allowed to remain interest free for three years whereafter fifty per cent of it may be treated as a part of commercial expenditure.

In short all research and purely developmental activities should be accounted for as non-commercial and the entire expenditure incurred on these should be debited separately. Capital investments which do not directly help in the production should also be classified as non-commercial.

Such of the activities and investments have been discussed along with the individual farms.

II. In the second group of activities the major problem is of milk production. The return from sale of milk is not commensurate with the expenditure incurred on it. The under efficiency of our stock is not yet so high. The farms are situated at long distances from the consuming centres and the prices obtained are, therefore, poor. This activity can only be considered as semi-commercial.

It may be mentioned that milk production in itself is not the job of the farm. Milk is actually a bye product and is there because the animals are there. The main job is of cattle breeding work which is certainly a non-commercial activity and is a losing proposition. The principle of valuation of the stock has been discussed in the previous chapter and it has been seen that raising of the stock even at the present values is a losing proposition. For obvious reasons the Committee does not recommend revaluation at the cost of production. It is, therefore, quite clear that there is loss in sale of milk and there is loss in raising of livestock and these alone

are the two commodities for sale from this section besides a small income from manure. The Agriculture Department allows a concession of 20 per cent on its dairies in their balance-sheets. It may be noted that they keep mostly milch breeds and have ready markets—while these farms maintain only dual purpose animals with lower milk yields and are away from the towns.

The Committee therefore, recommends that in view of these factors a rebate of 25 per cent may be allowed on the maintenance of milch stock (barring purely draft animals) and the activity may be treated as commercial.

III. In the last category we include the production of crops. These activities should give a profit under normal years and should be considered to be a commercial activity. From the previous chapters it is clear that most of the farms are situated under really abnormal conditions and are subject to losses on account of natural calamities and nature of their soils, etc., but the Committee is of the opinion that the over all production of the organization should be able to cover such areas also. All fodder, however, will have to be supplied to the Livestock section at the cost of production.

Poultry and sheep sections may also be treated as commercial units of the organization.

Term of reference No. 5

SUBJECT—To make experiments in growing fodder of different qualities suitable for different cattle in different areas.

The importance of cheap, good quality roughages (green and dry fodders) in economic rearing of cattle cannot be over-emphasized. Cattle rearing and milk production as practised at present in this country is a losing proposition and, therefore, we find that in spite of our best efforts the progress in this direction is not very satisfactory. The farmer does not get a fair return even for his labour and, therefore, he cannot afford to spend much on the feeding and maintenance of his cattle.

One way to increase his earning through cattle is by providing better prices for the milk and the cattle he produces; but that is beyond the scope of the discussions here.

The other way is to have more and cheaper production per unit. Bulk of the expenditure on cattle rearing is on account of cost of feeds and labour. In case of the farmer, he provides his own labour, he gets help from the members of his family who do not have full time work and thus the expenditure on this item is not so important for him. The important thing for him is to decrease the cost of feeding and increase the production per animal. It would be admitted that maximum production can be possible only by liberal feeding. The animal requires feeds for maintenance and for production whether it is milk, meat, wool or work. Maximum production is not possible unless the above needs have been fully met with.

The feeds can be roughly classified as—

- (1) *Roughages*—Coarse fodders like grasses, legumes, bhusa and hay.
- (2) *Concentrates*—Grain ration, e.g. gram, barley, oil-cakes, bran, etc., etc.

There is scarcity of both in the State. It is estimated that we hardly have 70 per cent of the total requirement of roughages and 30 per cent of the total requirements of concentrated feeds. How then can there be liberal feeding? Any effort towards liberal feeding will increase the demand in relation to the supplies and the prices are only bound to rise higher and higher making production more and more uneconomical. The purchasing power of the people is so low that consumption of milk and milk products as well as meat would decrease with the rise in the prices.

Besides articles like gram, barley, *bajra*, *jowar*, etc., etc., constitute important articles of human diet in which too we are far from sufficient. Consequently the more we divert these articles toward cattle feeding, the greater shortage of human food we create. It would thus be observed that there is a competition between man and his livestock for food.

There is still another important factor which deserves consideration. The capacity to eat is also limited. Even if sufficient roughages are provided it may be that the total energy or calorific requirements of the animal both for maintenance as well as for production may not be met with. The quality of the food, therefore, has to be good enough to meet the entire demand of the animal. Unfortunately not only are we short of our needs in quantity but the quality of roughages is also so poor that even when fed liberally it cannot meet the entire demand of the animal both for production and maintenance. Mostly it does not meet even the maintenance needs.

The following must, therefore, be accepted in principle.

- (1) That the feeding of grain ration to cattle is to be reduced slowly to release the same for human consumption.
- (2) That more and more roughages have to be provided to allow liberal feeding of cattle.
- (3) That the quality of fodder (roughages) has to be improved so that it can meet the needs of the animal.
- (4) Cheaper production of milk is possible only when more milk is had per animal and that in turn is possible by liberal supply of cheap good quality roughages.

Bulk of roughages all over the State consist of paddy straw, wheat or barley straw, *jowar* or *bajra* straw and such other residues of grain harvest. These are certainly not going to serve the purpose. Such residues are generally turned into manure in the Western countries and it best serve as fillers only. Good quality roughages are made available in plenty. Unfortunately in this country there is great lack of good quality fodders, with high yield ensuring supplies all round the year. Our problem could be solved if we were able to find high yielding protein rich fodders which by themselves could meet the total maintenance requirements of our animals plus at least a portion of the production requirements. This is possible. In the West they have been able to develop fodders which can maintain cows producing as high as 20 lbs. of milk on roughages alone. These animals are heavier in weight say about 1,200 lbs. as against ours weighing only 700 to 900 lb. while our buffaloes only weigh 1,000 to 1,200 lb. It goes to show that such fodders can be developed and the nutritional value of some of the existing fodders can also be improved by judicious manuring, treatment and by adjusting the time of harvest. It is also possible to make and store large quantities of good quality hay which can by itself be a maintenance ration.

Although there is possibility of considerable improvements in pasture and work must be taken in hand on this problem also but this is bound to be only a local problem, e.g. in Bundelkhand or in other sparsely populated areas with poor soils as the pressure on land is so heavy that it does not permit large scale pasture facilities to our cattle all over the State. We have got to depend mainly on cultivated fodders and keep our animal mostly stall fed.

Although there is reason to believe that we could in this country also develop fodders which could serve the purpose stated earlier, but our climate does not allow wholesale transplantation of what they have done in the West. In most of the Western countries the rains are rather well spread all over the year and the summers are not so rigorous as to destroy the vegetation. We, have, therefore, got to do intensive research work under our own conditions and the agrostologist and the chemist have to work together towards this end.

The first few attempts have to be confined to finding of suitable grasses (the term is used in its broadest sense meaning fodders and grasses belonging to the family graminea legumes and mixtures of the two). The essential qualities to look for would be their yield, nutritional value, hardiness, ability to give cuttings, ability to stand all the year round, whether these can stand trampling and grazing whether can grow under shade, water requirements, etc. etc.

There cannot be two opinions on the suggestions that such work should be carried on, on all the Mechanized State Farms of the State. These farms provide the ideal set up for such type of work.

If research staff is provided to tackle such problems the same staff can also tackle various other agricultural problems peculiar to the locality in which the farms are situated and standard methods for different operations for those localities can be easily evolved.

The Committee, therefore, suggests that research staff for doing agronomical work should be provided on all the farms in the first instance and intensive work should be undertaken towards the development of cultivated fodders for cattle. Work should also be taken in hand for the improvement of pastures. The staff would also endeavour to find ways and means to utilize waste products like cane molasses, bagasse, molasses yeast, bonemeal, fishmeal, etc., etc. as cattle feed. There is great need for trying articles like leafmeal and molasses turned into tablets. New problems and newer solutions will appear as the work progresses.

The chemistry portion of the work should be confined to four places at the moment, e.g.—

- (1) Bharari, district Jhansi.
- (2) Babugarh, district Meerut.
- (3) Manjhra, district Lakhimpur Kheri.
- (4) Arazi Lines, district Varanasi.

The fifth centre would of course be at the Veterinary College, Mathura. A detailed scheme would be submitted to the Government if the proposal is accepted in principle. Roughly the total expenditure per farm on the agronomical part of it would come to about Rs.7,000 recurring and Rs.1,000 non-recurring and that for the chemical part about Rs.10,000 re-

curring and 50,000 non-recurring. The expenditure at the Headquarters would increase by about Rs.15,000 a year. This is at best a rough estimate and is subject to detailed working.

The Committee suggests that only the first part agronomical be taken up in the first two years. Preparation on the second part be started in the second year and actual work started three years from now.

The Committee also suggests that there should be a small Research Council which should meet once or twice a year to draw out a plan, scrutinize each scheme and to judge the results of the work done in a year. This Committee should consist of the Chief Statistician of the Department of Agriculture, one Economic Botanist of the Agriculture Department, Professor of Animal Nutrition at the U. P. College of Veterinary Science and Animal Husbandry and the Research Staff working at the Headquarters of the Deputy Director and on the farms. The Deputy Director, Mechanized State Farms will act as Secretary and Co-ordinating Officer. The Committee can co-opt other Research workers of the Agriculture and Animal Husbandry Departments and will invite problems from all over the State. The dissemination of the findings and the knowledge gained would be through the farms, community blocks and Officers of the Agriculture, Animal Husbandry and Co-operative Departments. The scheme in the first instance should be sanctioned for five years and the progress watched.

The Committee very strongly hopes that this work will be of immense value and will go a long way in solving our problems of scarcity of feeds and fodders for cattle.

SUBJECT—*Relationship with the Agriculture and Animal Husbandry Departments.*

The Mechanized State Farms are of very great importance and assistance to both the Departments of Agriculture and Animal Husbandry.

In the field of agriculture large scale multiplication of new and improved varieties of seeds, experimental trials of varied nature e.g., manurial, varietal, cultural, etc., etc., on different crops, trials and propagation of different forage crops, fodders and pastures, are all essential activities and a part and parcel of these farms. The utility of such activities needs no explanation. Although much work has not yet been done in this direction but the organization is to provide field for trial of new machines and implements and the study of economics of large scale mechanized farms is bound to attain greater importance in the not too distant a future. This would be the only organization which would be able to guide the coming Co-operative Farms where in the experiences gained on these farms would prove to be of immense value.

Uttar Pradesh is a large State and comprises of large tracts widely varying from each other in the nature of soil, climate, rainfall and naturally in their cropping pattern. The requirements of each of these tracts is also different. The type of implements, seeds, manurial requirements, soil deficiencies, etc., etc., all differ from one another. The various Mechanized State farms situated as they are in different tracts of the State including Tarai and Bundelkhand, they present an ideal set-up for such studies. There are many other things which cannot be done on farms of smaller areas.

The Mechanized State Farms supply about 40,000 maunds of improved seeds to the Department of Agriculture every year. It also supplies seeds and other planting material of improved fodders and grasses for distribution all over the State.

The economic maintenance of all livestock depends on efficient agriculture and agricultural development. The Agricultural Section is, therefore, of great value both for the development of agriculture as well as of animal husbandry.

It would thus be realised that the organization is a very useful one for the agricultural development of the State and even for the economic management of livestock, it is essential to have a strong Agricultural Wing. The economy of the organization itself depends entirely on the success of its Agricultural Section. In short the organization is of great importance for the successful conduct of Agricultural Development activities of the State, for the improvement and multiplication of fodders and grasses and for guidance to the coming large size co-operative farms.

The importance and need of these farms is all the more greater for the animal husbandry development work. These farms provide the basic material and are in reality the life line for such work. Seventy-five or eighty per cent of the livestock wealth of the Uttar Pradesh Government is on these farms. These farms have been meeting the bulk of the demand of breeding stock of the State. Almost the entire supplies of farmreed, pedigreed Haryana, Tharparkar, Gangatiri, Kenkatha, Kherigarh, Bhadawari and Ponwar bulls have been met with exclusively from these farms. Bulk of the Murrah bulls also come from this organization. Besides the organization has been producing, raising, and supplying large numbers of rams and sheep goats and bucks and eggs and poultry birds of improved breeds.

The Indian farmer cannot ordinarily raise his own breeding bull. He does not maintain any records and cannot possibly do it. Production of pedigreed breeding bulls and females and their supply to the farmers has, therefore, got to be done by the State. Besides nutrition, this is the first essential step to improve or even maintain the efficiency of livestock. Production of such breeding stock can only be done on large farms. Almost any work on animal breeding requires large number of animals for whose maintenance there is need for large farms.

These farms provide material and facilities for research on animal nutrition, animal diseases and various other aspects of livestock industry. We have so far only touched the fringes and there is much to be done yet. Maintenance of these farms is, therefore, absolutely essential for all the development work to be done in the field of animal husbandry.

It would now be clear from the above that the organization is not only an important asset to the Agriculture and animal husbandry development work but a unique one and perhaps the only one of its kind in the country. Mixed farming, i.e., both cultivation and cattle rearing is the rule for the whole of India and is absolutely essential. There is no other way for this country. The dependence of animal husbandry work on improved agricultural practices and that of Indian agriculture on its cattle is quite clear and needs no explanation. Mechanized State Farms form a part of that universal pattern of country's agriculture and must continue to remain so.

In order, therefore, that the organization can play its full role in the development of both agriculture and animal husbandry it is also quite obvious that these farms must be closely connected with both the Agriculture and the Animal Husbandry Departments of the State. They are not only to continue to supply the needs of improved seed and breeding stock but also to provide ground for trials to solve important problems of both the departments and of the mixed farming pattern. At the moment both the Departments of Agriculture and Animal Husbandry have several farms working under them separately. The farms of the Agriculture Department have nothing to do with those of Animal Husbandry and *vice versa*. They are allright in their own places and may continue to remain so but maintenance of big mixed farms in the various tracts with equal emphasis both on agricultural and animal husbandry is much more important. The impact of cattle rearing on agriculture and that of agriculture on cattle rearing has got to be studied in greater detail for the benefit of the farmer.

The Committee has given careful thought over this problem and has ultimately and unanimously come to the conclusion that these farms must be closely connected to both the Departments of Agriculture and Animal Husbandry without undue bias towards the one or the other. The Committee in its discussion considered several alternatives e.g.—

(1) To put a few of the farms under the control of the Animal Husbandry Department and a few other under the control of the Department of Agriculture.

(2) To put the entire organization under the one or the other of the two departments.

(3) To maintain the Mechanized State Farms as a separate organization as hitherto.

All the members of the Committee felt that the first or the second solution would not be beneficial. They are satisfied with the general standard of cultivation as well as of livestock management on these farms and felt strongly that any change in the manner suggested above in item 1 and 2 would definitely increase the financial losses of the farms, undo the gains already made and reduce the utility of the organization considerably. This would be retrograde step. There would be change in emphasis and simultaneous and symbiotic development of both agriculture and livestock would not be possible. Common and interdependent problems effecting both the Livestock and Agriculture Industries will not be tackled. Work on forage development would not be effectively taken up. It will result in the weakness of one or the other section without any commensurate advantages.

The members, therefore, strongly feel and recommend that the Mechanized State Farms Organization may be allowed to function independently with equal emphasis both on agriculture as well as animal husbandry. The organization may continue to tackle common as well as independent problems of both the Departments and be a guide to mixed farming pattern of Indian agriculture.

In order, however, that the organization can keep abreast of the current needs and latest developments in the two fields it must be closely connected with both the departments of Agriculture and Animal Husban-

dry. In order to achieve this objective the Committee suggests that there should be an Executive Board (which may meet at least twice or thrice in a year and which should decide the general matters of policy. The Director of Agriculture and the Animal Husbandry Commissioner should be members of this Board. The Deputy Director Mechanized State Farms will work as Secretary. These members should also visit the various farms from time to time and advise the organization on matters pertaining to their respective sections. The Committee also feels that it would be of advantage to have the Chief Engineer Irrigation also on the Executive Board. His advice and help in matters of irrigation and drainage is bound to be helpful. Besides the chalking out of policy matters the main usefulness of the Board would be in giving advice on matters of research and experiment. If the above proposal is implemented the Committee feels that the utility of the organization will grow further and there would be a complete co-ordination between the Mechanized State Farms and the Departments of Agriculture and Animal Husbandry.

The Committee also recommends that the Deputy Director Mechanized State Farms be officially appointed as an advisory officer for the various other farms of the Animal Husbandry Departments, e.g. those at Chak Ganjaria in Lucknow, Kalsi and Rishikesh in Dehra Dun, etc. etc. If there is no insuperable difficulty, the following farms could also be included in this advisory work—

- (1) Dairy Demonstration Farm, Mathura.
- (2) Agriculture College Dairy Farm, Kanpur.
- (3) Nagla Farm, Tarai.
- (4) Sheep Development Farm in the hills.

The Committee believes that this would give all farms a well knit shape, mature advice, and will work out fine.

SUBJECT—*Whether these farms should specialize in breeding different kinds of cattle in different farms.*

Cattle rearing is an integral part of Indian agriculture. Cattle carry the major burden of the profession on their shoulders. They are needed for pulling the plough to provide motive power for bringing water for irrigation and also to provide manure. Indian cattle still form the backbone of village transport. Cows and buffaloes provide milk and milk products for the family and have become an integral part of the family life of the Indian cultivator. They have acquired a *de facto* social status in our villages.

While the above shows the importance of cattle to the farmer, it also indirectly brings into perspective the smallness of our holdings. This obviously means that the farmer cannot keep large number of animals and can not afford to do any systematic cattle breeding work. He can only keep enough to engage the members of his family who do not have full time work and which he can manage easily and derive a side income. It is obvious, therefore, that he cannot afford selections and cullings and is also unable to keep records. He is unable to maintain breeding bulls for his small herd of a few cows and buffaloes. Naturally, therefore, he is entirely dependant on some other agency to supply him studs to cover his animals and to effect improvement.

The age old practice of leaving bull-calves (after the death of aged members of the family) has now become only a ritual and has lost the economic and scientific values which were hidden behind it and now any male-calf (preferably a five rupee one) irrespective of its qualities as a sire is offered and allowed to roam and spoil the progeny. This is prostitution of religion and the practice is continuing on unabated.

It becomes necessary, therefore, for the State to step in to fill the vacuum and supply the breeding bulls to the farmer. It should be reiterated and conceded that no farmer having negligible numbers—can maintain his own bull and, therefore, the bull has to be the property of the village or of the State.

The practice of supplying improved bulls by the Department of Agriculture and Animal Husbandry has been going on perhaps for the last forty-five years or so. Besides those produced on the State Farms large number have to be purchased from the Punjab and this policy is being pursued even today. These bulls are purchased on the basis of their looks and we have no knowledge of their pedigree—not even of purity. The prepotency of the animal is unknown and as far as milk production qualities are concerned they can be good, bad or indifferent. Such unscientific practices of taking chance can only be followed as a stop-gap arrangement and cannot be allowed to go on for ever. Besides supplies from the Punjab have been diminishing and the demands on the State (from other States also) have been mounting up since the partition and with the mass scale production for which there is a ready market the quality of stock has been progressively going down. All these considerations therefore, make it clearer and clearer every day that we must abandon our dependance on the Punjab and build upon a top priority basis our own herd and if possible step in the business and start supplying to other States also. The easiest way to build up our own stock is to give better prices for the stock that the farmer produces. This price incentive will do the trick and deliver the goods.

The two breeds Murrah and Haryana have been popular all over Uttar Pradesh and the demand for their bull calves and cows is high. It has been stated elsewhere that it was in order to reach this target of self-sufficiency that large scale purchases of stock of these two breeds was made during the first two years after partition and naturally all we got under such hurried and heavy purchases was not good. But today we have built up something and we are now able to meet a greater portion of the demand of the State and the real commendable part of it is that we have started getting bull calves from our own farmers in increasing numbers which compare very favourably with those purchased from the Punjab. It is also true that our own demand has also been increasing year after year and even the areas which were previously served by local indigenous draft breeds, demand bulls and heifers of the Haryana and the Murrah. This is a natural development because people can not any more afford to keep too many animals as in the past and, therefore, they wish to have their demands for milk met with by help of smaller numbers. The move is in the right direction and must be encouraged. The Haryanas and the Murrahs have, therefore, replaced a large number of indigenous stock of draft breeds which gave little milk. The department is struggling hard to meet the growing demand for the pure breed Haryana and Murrah and

it is expected that in the course of a few years we may become self-sufficient. May it be mentioned with all humility that we do now have Hariana herds in the State which compare most favourably with the best herds of this breed in the country including those in the Punjab. We are not yet able to claim the same for our Murrahs but given time we will do this also.

Uttar Pradesh is a large State with large tracts varying from each other in matters of soil climate, rainfall, topography and consequently in the quality and quantity of feeds and fodder for cattle. *Khadar* and *Tarai* areas are so different from those in Bundelkhand and there is also considerable difference between the Eastern and the Western districts of the State. While paddy straw forms the staple cattle food for cattle and buffaloes in the Eastern districts the Western districts are able to provide better fodder for the livestock of those areas. The pressure on land also varies and so also the facilities for pasturage. All these factors taken together have also affected the livestock of the tracts and there have sprung several well defined indigenous breeds of the State. These breeds have developed special and very desirable features which have helped them to successfully fight natural adversities prevalent in the less favourable localities in which they have developed. Of the Cattle the following are the important breeds of the State.

(1) *Kherigarh*—Found generally in Lakhimpur-Kheri, Bahraich and Gonda districts. These are hardy animals and withstand the natural adversities of the area very well. They are not much worried by the mosquitoes and ticks, etc., so commonly prevalent in the area. They are light and fast and very active. They are, however, not at all docile and are very poor milkers. These animals are kept only for their male calves which are good for the plough, the bullock cart and which live well on scanty and poor fodders.

Animals of this breed are being maintained at the Manjhra Farm of Lakhimpur-Kheri District.

(2) *Ponwar*—These animals also have in general the same characters as those of *Kherigarh* in as much as they are hardy and stand *Tarai* climate best. They are also poor milkers, are wild but make good draft animals.

This breed is being maintained at Hempur Farm of District Naini Tal.

(3) *Kenkatha*—The specialty of these animals is that besides being hardy and able to maintain themselves on poor and scanty pasture, they are hard footed—their hooves being very strong. They are, therefore, excellent animals for the typical rough and rocky and 'moram' Bundelkhand soils where they make good draft cattle. They are also not good milkers but are better than the *Kherigarh* and the *Ponwar*.

Animals of this breed are being maintained at the Saidpur Farm of Jhansi District, sub-division Lalitpur.

(4) *Gangatiri (Shahabadi)*—These are small and compact animals and the only one of the Eastern districts which when managed well will give a fair quantity of milk and good animals for draft. This breed is most liked by the farmers in the Eastern districts.

While Hariana cows taken to those districts do not prosper very well, these animals stand the climate soil complex better and bring comparatively smaller in size are able to do better with comparatively lesser feed and fodder.

A really good herd of this breed is being maintained at the Arazi Lines Farm of the Varanasi District.

(5) *Tharparkar*—This breed does not belong to Uttar Pradesh. It has its origin in the Thar District of Sindh, West Pakistan. These are, however, good milkers as well as good for draft.

A small herd of these is maintained at Bharari farm of Jhansi District. There is no other herd of this breed in the State.

(6) *Hariana*—This is the most popular breed of cows and animals of this breed are liked by farmers almost all over Uttar Pradesh. They are fair milkers and good draft animals. Although the breed has its origin in the Punjab but is now found in large numbers in the Western districts of Uttar Pradesh. There is a great demand for bulls of this breed from all over the State. This breed is, therefore, being maintained on several farms but even then it has not been possible to meet the requirements of bulls and large number of them have to be purchased from Punjab, even though bulls in good numbers are now becoming available from the Western districts of our own State also.

Cows of this breed are being maintained at Madhuri Kund (Mathura), Hastinapur and Babugarh of Meerut District and Bharari in Jhansi District. A small herd of Hariana cows are also available at Saidpur in Jhansi District and Nilgaon in Sitapur District.

The above are the only breeds of cattle that are being maintained at the various Mechanized State Farms.

As far as buffaloes are concerned the following breeds are being maintained.—

(1) *Bhadawari*—A small herd of Bhadawari buffaloes are being maintained at Bharari, district Jhansi. These are small animals with average milk which is rich in fat. These animals are also good graziers and thrive well even under moderate conditions. It is a good breed for the tract where the animals have to pick up their food from outstretched pastures of poor quality and where most milk has to be converted into ghee, markets for fluid milk being away. Most farmers are unable to maintain Murrah buffaloes under such circumstances and, therefore, Bhadawaris are preferred.

(2) *Tarai*—Tarai buffaloes are well suited for the Tarai areas, but are poor milkers. As even their males are not much in demand for breeding purposes these are now not required. There are only a few animals of this breed at Manjhra, district Lakhimpur, and they are in the process of being eliminated.

(3) *Murrah*—Like the Hariana in cows Murrah is the most popular breed of buffaloes and there is a great demand for cows and bulls of this breed. These are wanted all over and, therefore,

this breed is also being maintained on several farms e.g., Hastinapur, Babugarh, Madhurikund, Bharari, Manjhra and Nilgaon. Even so large numbers will have to be purchased from the Punjab year after year. This is the only way to develop our own Murrah. The maintenance of the various breeds on the State farms is done in order to—

(a) preserve some of the indigenous breeds and save them from extinction, and

(b) to improve the livestock in order to get improved pedigreed bulls for improving the stock of the village cattle owner. Both the milk and the draft qualities need improvement.

It would be seen that the farms of this organization maintain only *draft* or *dual* purpose cattle and not milch breeds. Milch breeds like the Sahiwals and the Sindhis are maintained on the farms of the Animal Husbandry Department. The draft and dual purpose animals are of greater importance for agricultural purposes and are the favourites of the farmers. The milch breeds are popular with those engaged in milk business and are good for cattle owners in the vicinity of the towns where milk pockets and milk zones can be easily created.

The draft breeds were in the past generally kept by the nomadic tribes and were maintained in large herds in the forest where plenty of grazing was available. Very little, almost insignificant expenditure was incurred in their feeding and management. The animals were able to protect themselves from the attacks of wild animals. These animals have certain very good qualities as hardiness and freedom from lot of diseases, agility and ability to live under poorer conditions. But as the forests have been ploughed down and the zamindars are now extinct, natural maintenance of these breeds is almost impossible. These animals have got to be saved from extinction for we may need them again to develop hardy animals. The farms located in the areas should, therefore, be required to maintain these breeds even if the expenditure incurred on their upkeep does not bring any reasonable return.

The Committee, therefore, recommends that a nucleus herd of 25 adult animals and their followers of Kherigarh breed be maintained at Manjhra or Andeshnagar and of Ponwar breed at Hempur. As the Kankatha is a moderate milker and a popular one in the South Bundelkhand it is recommended that a herd of 50–80 adults be maintained at Saidpur and efforts should be made to improve the milking qualities of this breed. It is further recommended that a portion of Kherigarh be crossed with Shahiwals and the results be watched. Similarly a portion of the Ponwar could be crossed with some foreign breed e.g. Jersey or medium sized Holstein fresian and results watched.

Hariana and Therpakar breeds may continue to be maintained as hitherto.

Similarly in case of buffaloes as there is great demand for Murrah this breed may be maintained on various farms as hitherto. It would have been better to have Murrah at Arazi Lines farm also as no buffaloes are maintained on any farm in the Eastern districts but limitations of the area of the farm (Arazi Lines has only 345 acres) does not permit it. This may be kept in mind and the possibilities examined in due course.

Tarai buffaloes are not at all needed and may be eliminated.

Bhadawari's which are now maintained at Bharari may be transferred to Saidpur and Murrahs be substituted in their place.

It would be seen from the above that the farms are maintaining the breeds of cattle indigenous to their tracts. Besides most are maintaining the popular breeds of Hariana cows and Murrah buffaloes for which there is a great demand from all over and it is quite wise to acclimatise. The committee suggests that the following be followed as a general pattern.

(1)	Hastinapur	..	..	..	Haryana	Murrah
(2)	Babugarh	..	..	..	Do	Do
(3)	Madhurikund	..	..	..	Do	Do
(4)	Niblett	..	..	..	Do	Do
(5)	Nilgeon	..	..	..	Do	Do
(6)	Manjhra	..	..	..	Kherigarh/ Shahjewal	Do
(7)	Bharari	..	..	..	Haryana	Do
(8)	Andeshnagar	..	..	..	Haryana/ Kherigarh	Do
(9)	Saidpur	..	..	..	Kenkatha	Bhardwari
(10)	Arazi Lines	..	..	..	Gangateri	Murrahs may also be in- troduced when possi- ble

A SUMMARY OF RECOMMENDATION

The recommendations on the various terms of references have been included in the discussions of the terms in the previous pages. This would, therefore, only be a repetition of what has already been stated, but for the sake of facility in the examination of the various recommendations the same have been put together in the following pages:

The following recommendations are made about the individual farms with a view to improve production, working efficiency and living conditions of staff. (Terms of reference nos. 1 and 2):

I. *Andeshnagar*—(a) Bandhies are to be constructed on both sides and along the rivulets to check erosion.

(b) A survey should be made and possibility of deepening and straightening the rivulets should be examined. This will help in draining out the surplus water quickly and will yield about 100 acres of new land for cultivation of paddy. The soil in the river bed is good.

(c) *Levelling*—This work should be speeded up and more and more fields should be levelled every year.

(d) *Pucca* channels should be provided wherever necessary.

(e) Some of the *banjar* land is being planted with timber trees. It should be done and maximum benefit taken from the existing forest area.

(f) The boundary should be properly demarcated and *babool* and *sheesham* should be planted there. (on the boundary).

(g) The farm has some bamboo groves and small jungle areas right in the heart of the farm. The bamboos are not of good quality. Efforts should be made to dispose off this and the jungle should be cleaned. Good variety of bamboo should be planted in suitable areas.

(h) Sufficient number (up to 150) of cow and buffalo heifers may be raised. It will allow cheap rearing, better utilization of crop residues and incidentally yield valuable manure essential for the building of the farm. Even the Kherigarh herd can be transferred to this farm from Manjhra when the strength of buffaloes at Manjhra has been increased.

(i) Electricity should be provided as soon as hydro-electric line passes by the side of the farm and the tube-wells, etc. should then be fitted with electric motors and pumps.

(j) There is an urgent need to improve the road leading to the farm. Efforts should be made to get help from the cane societies, planning department and the Public Works Department to get the job done.

(k) Large herds of wild cows roam freely in the neighbouring jungle and cause great damages to crops. The Forest Department claims these animals to be their property but they do not keep them under control. They do not allow the farms to catch them. This menace has to be checked by catching the animals and sending them to Gosadan or by putting them to some better use.

II. *Arazi Lines*—(a) The present supplies of water for irrigation are inadequate. The state-tube well lying in the centre of the farm should if possible be allotted for the exclusive use of the farm. The shortage is mostly felt in the peak season when the entire locality wants water at about the same time. Lack of availability of current on account of frequent breakdowns also causes much interruption.

In order to supplement the supplies the incomplected tube-well lying in the area of the co-operative farm should be handed over to the Irrigation Department who may keep it as a standby and use it only in the peak season. Proper arrangements for providing sufficient irrigation is most important.

(b) The farm has to pay to the Irrigation Department for the water it takes from them. According to their terms, the main irrigational channels are to be provided by the Irrigation Department. This is, however, not so at *Arazi Lines*. The channels are owned by the farm although these are now being maintained by that Department. These should be transferred to the Irrigation Department outright. This is all the more necessary now as this channel feeds both the farm and a large number of villagers.

Government orders for the transfer of these channels and the incomplected tube-well referred to above should be issued immediately.

(c) Similarly the farm roads are in greater use of the public than of the farm. The farm should not, therefore, be called upon to pay any interest on the cost of land which is under such public roads, and channels.

(d) The farm has a very small area—345 acres in all. The buildings, etc. were constructed to meet the needs of a larger area. The per acre share of interest and depreciation charges on the buildings and supervision, etc., is very high. It would be better if the 188 acres of the land given over to run a co-operative farm is returned to the farm. Necessary compensation has already been paid for this land. The interest and depreciation charges on the oversize buildings should be proportionately reduced in the balance-sheets.

(e) Electric line (power) is running through the farm. Power connections should be granted to the farm for use in pumping water, chaffing fodder, grinding concentrates, etc.

(f) Provision may be made to provide an overhead tank for supplying running water to cattle and staff.

(g) There is also need for providing a tank for washing the animals.

(h) This is the only Mechanized State Farm with a sizeable herd of cattle in the Eastern districts. Because of shortage of land it cannot maintain any buffaloes. Efforts should be made to keep a small herd of buffaloes on the farm. Eastern districts should not be completely denied the facilities for improvement of buffaloes.

(i) There is an acute scarcity for housing the staff. In the interest of work it is essential to keep the staff on the farm itself, and therefore, necessary accommodation should be provided. There is no suitable house even for the farm incharge.

(j) The farm has an artificial insemination centre which serves the farm as well as the villages. It also houses bulls which are brought for training and are then sent to other centres. The interest and depreciation as well as the cost of annual repairs of the buildings occupied by this section should be debited against the Artificial Insemination Centre and not the farm.

III. *Babugarh*—(a) Facilities for irrigation are needed for about 70 acres of land. This may be provided by boring one or two of the existing wells and fitting electric motors and pumps therein.

(b) Irrigation channels should be provided where necessary.

(c) The forest belt should be completed by filling gaps and by extending the same where necessary.

(d) Power connections should be provided for chaffing fodder, grinding concentrates and for running threshers and winnowers.

(e) The various cattle sheds are in a most deplorable condition. These are expensive to maintain, inconvenient, unhygienic and liable to help in spread of diseases like mastitis. They are there for no fault of the farm. These should be removed from the books of the farm and new sheds should be provided in their place.

(f) Efforts should be made to secure some area (100 to 200) acres from the adjacent grass farm for use as pasture land. This matter should be taken up with the Defence Department at Government level. It will help considerably if the land is transferred.

(g) The farm needs a wallowing tank and this should be provided.

(h) There is need for a *pucca* brooder house in the poultry section.

(i) There is need for 10 more chicken lines and necessary equipment.

(j) Proper and convenient arrangement for watering the birds is also wanting and should be provided.

(k) As electricity and overhead tanks are available the residence of the staff should be provided with light and running water.

IV. *Bharari*—(a) Lot of land is covered by Lantana bushes and shrubs. It should be cleaned and either taken under cultivation or developed as pasture.

(b) Levelling should be undertaken and should be done in as much area as possible.

(c) The farm has plenty of pasture land. There is need to improve the same. Earnest efforts should be made to improve the existing pastures. A hay press may be provided to bail the hay.

(d) If possible Irrigation Department should undertake trials to ascertain the possibility of providing tube-wells on the farm. If this attempt succeeds the production will be assured of protection from drought.

(e) The farm does not have many trees. Plans should be made in consultation with the forest department to plant more trees in the area.

(f) Buildings which were constructed in connection with the tobacco schemes e.g. tobacco curing barns, and also those that were constructed and are utilized for research work in Animal Nutrition should not become a burden on the farm. These should be accounted for separately.

(g) Fencing at essential points should be provided.

(h) The Bhadawari buffalo stock may be sent to Saidpur and Murrah Buffaloes may be kept in their place at this farm.

(i) The goat flock is an experimental one and should be treated as such.

V. *Hastinapur*—(a) The greatest damage to the farm is caused by floods. There is a pressing need to improve the drainage of the farm. This can be done by cleaning the bed of Burhi Ganga. This will benefit a very large number of cultivators also and bring about a general improvement of the area. It is understood that the District Magistrate has taken up this matter with the Government. Relief from flooding will bring about substantial improvement in the finances of the farm.

(b) There are State tube-wells in the area which belong to the Irrigation Department and the farm pays for the water. Some of the wells

are not fully utilized for want of channels. The Irrigation Department may be requested to complete the channels. The channels constructed by the farm should also be handed over to the Irrigation Department.

(c) A major portion of the area that is being cultivated at the Central block belongs to the Central Town Development Board. This area (about 87 acres) should be permanently transferred to the farm.

(d) The farm orchard should be revalued and losses, if any, should be written off without affecting the farm balance-sheet.

(e) Systematic usar reclamation work should be taken up as a developmental project.

(f) A surface well fitted with a persian wheel may be provided at the dairy farm.

(g) Surplus buildings should be taken off the profit and loss accounts of the farm.

(h) Arrangements for immediate disposal of the pasteurization plant and allied equipment should be made at the maximum possible price.

VI. *Hempur*—(a) Ten new tractors with matching implements should be provided to the farm immediately.

(b) All unserviceable and surplus tractors and implements lying at the farm should be disposed off.

(c) There is need to improve irrigation facilities. Tube-wells may be tried and if these succeed at least 4 tube-wells should be provided.

(d) Possibility and economy of the establishment of a sugarcane loading centre at the Gaushala Halt railway station be examined to facilitate despatch of cane to the factory.

(e) If the above is done only one new truck needs to be provided to the farm or else at least four are absolutely essential.

(f) A jeep may be provided to the Manager to enable him to exercise proper supervision and control over this large area.

(g) It is almost impossible to visit the fields during the rains. Several feet of standing water on the roads and tall grasses on the sides do not allow proper supervision. It is, therefore, recommended that two elephants be provided to the farm to help in the supervision and when free these may be utilized in the fields for cultivation operations. It is presumed that there would be no difficulty in meeting the fodder requirement of the animals at the farm.

(h) Ten to fifteen pairs of extra bullocks may be provided to the farm.

(i) The strength of staff in the tractor and workshop section should be reduced by at least eight persons.

(j) Strength of Ponwar animals should be reduced to twenty-five adults and a selected herd should be maintained. These should be milked and made domicile.

(k) Some four or five members of the superior staff of the cattle section should be retrenched.

(l) As electricity is already available at the farm the residential buildings should also be provided with electricity. This is an essential amenity at an out-of-the-way place which should not be grudged.

(m) A few more residential quarters for staff and labour are necessary and should be urgently provided.

(n) Now that the Tarai State Farm is part of the University there is no point in keeping this farm attached to that organization. This farm should be transferred back to the Mechanized State Farm Organization. In fact due to unsatisfactory working of the past an immediate transfer is indicated.

(o) This farm has 2,800 acres under cultivation to which some 500 acres more can be easily added. It would be better to put every 1,000 acres under a Class II Superintendent but for the present it is recommended that a Group I man may be made incharge of each block of 1,000 acres. This would be in addition to the existing staff of the cultivation section.

VII. *Kamyar*—Government must decide at once if they want to run this farm or not. It is no use keeping the land unutilized. It can be developed as a *gosadan* or again as an unit of this organization. The connected aspects of the latter proposal have already been discussed earlier.

VIII. *Madhurikund*—(a) There is need for improvement in the existing irrigation facilities. This can be brought about by remodeling the main channel, and construction of new channels where necessary. Some of the existing *Kulabas* need adjustment which may be brought about in consultation with the canal authorities.

(b) It is absolutely necessary to provide adequate drainage at this farm. Mathura has ceased to be an area of scanty rainfall and the losses on account of water-logging have been heavy during the past three years. There are at present practically no arrangements for draining off of surplus water perhaps because none was required during the past. It should be provided now.

(c) Considerable area of the farm is alkaline or saline. Scanty, if any efforts have been made to reclaim this area. Attempt should first be made to reclaim the patches which dot the cultivated fields. Large scale reclamation should be taken up when success has been achieved in these plots. This work will become easy when drainage facilities have been provided.

(d) A considerable area is used as pasture but there is no pasture in the real sense as the entire coverage is with coarse grasses and shrubs. About 100 acres have been cleaned recently. Efforts should be made to develop a good pasture capable of sustaining the animals for at least 4 to 6 months of the year. Trials have to be made to find the most suitable grasses which will thrive on this soil and provide a reasonable amount of nutrition. The area under the orchard should also be developed, likewise. Expenditure incurred on these trials and developments should be treated purely as experimental and developmental.

(e) There is need for more cattle-sheds and paddocks. Some of the old *gaushalas* which were constructed years back have outlived their utility and are beyond repairs. Besides these are situated in a corner of the farm and have no arrangements for providing even drinking water. They become more or less inaccessible during the rains. Their further repair will mean infructuous expenditure.

(f) The farm maintains a sizeable herd of cows and buffaloes which suffer from Brucellosis or contagious abortion. Animals from other farms which are positive for this disease are also concentrated here. Investigations are in progress under the Veterinary Investigation Officer of the Livestock Research Station, Mathura. Much expenditure has to be incurred on account of this all India experiment. The place is really a centre for this co-ordinated research.

Half of the expenditure of the cattle section should therefore be treated as purely experimental.

(g) A fodder godown to maintain in reserve 10,000 munds of dry fodder should be provided.

(h) There is great scarcity of proper accommodation for staff and labour. The old quarters are in a miserable condition. There is a genuine need for at least 15—20 rooms for the labourers and some four or five quarters for the superior staff.

(i) Facilities for providing drinking water and for washing the cattle should be improved.

(j) The fencing of the farm needs special attention and repairs.

(k) Electricity should be made available at the earliest possible opportunity. It is understood that hydro-electric lines would soon be extended to Goverdhan.

(l) The canal road, which is at present on the books of the farm should be taken over by the Public Works Department. This is in public use and should, therefore, not be maintained at the cost of the farm.

IX. *Manjhra*—(a) Irrigation facilities need improvement. This can be done—

(1) by installing a bigger unit at Majhri in place of the present one and by suitably remodelling the irrigation channels.

(2) by immediate replacing the malila engine of the tube-well,

(3) by providing a portable pump to the farm for use in the orchard area,

(4) by providing *pucca* irrigation channels to the remaining fields.

(b) After this has been done more land should be brought under the plough.

(c) Afforestation over the rest of the land should be taken in hand.

(d) Proper fencing may be provided on the fourth side of the farm.

(e) There is need for a bullock shed and two *pucca* threshing floors.

(f) There is need for a bridge over the river which divides the farm in two. A wooden bridge could be provided. The required wood can be had from Mechanized State Farm, Andeshnagar. This work should be handed over to the Public Works Department.

(g) The stock of Kherigarh cows should be reduced and kept at the minimum.

(h) The present stock of Murrah buffaloes consists of 'C' class animals. At least twenty good murrah should be provided to make milk production economical and to allow replacement of the poor ones by good stock.

(i) The present arrangement or distribution of milk to the town by bullock carts is unsatisfactory. Quick transport should, therefore, be provided. Cycle rickshaws or preferably milk-van should be provided to the farm for this purpose.

(j) One milking shed is lying incomplete for the last $2\frac{1}{2}$ years. It should be completed immediately.

(k) The existing buildings are old (1916) and require special repairs and remodelling. This should be taken up at the earliest.

(l) The farm roads require special attention. One main road from the gate to the office should be made pucca.

(m) In the poultry section the old pens are in a very dilapidated condition and need immediate replacement.

(n) More pens should be provided and the activities should be expanded.

(o) The poultry section is in great need of a small building for use as an office, an incubator room and a store. This should be provided at the earliest.

(p) Two residential quarters should also be provided for the Poultry staff.

X. *Niblett*—(a) There is need for improving the existing facilities for irrigation. It is recommended that two small tube-wells may be tried instead of the regular expensive ones of bigger capacities. Presently, there is need for at least two such wells.

(b) Eighty acres have been reclaimed in the last two years. This process should go on slowly but progressively and the cultivated area should be increased to 400 acres. At the moment it is 200 acres only.

(c) There is need for fencing the farm.

(d) A few buildings which were constructed during 1949-50 and which have not yet been taken over because of serious defects need special repairs and must be attended to immediately. Besides there is need for two threshing floors which should be constructed immediately.

(e) There is need for more quarters for staff and labourers. The existing ones also need special repairs.

(f) The road from the entrance to the farm office needs special attention and should be improved.

(g) Efforts should be made to put at least 100 acres under plantation.

(h) The post of the Farm Superintendent should be made gazetted and drawing and disbursing powers should be delegated to him.

XI. *Nilgaon*—(a) The most important single factor which can make a lot of difference in the production of this farm is the provision of drainage. With improvement in the drainage of the farm damage due to floods will be checked, more land will be available for cultivation and yield per acre will improve. The ending of a few drainage channels and of the canal distributary in the farm in the recent past has only worsened the position. The problem is a huge one and can be tackled only by the Irrigation Department. If the scheme for drainage is completed it will help several villagers of the locality and save several thousand acres from ravages of floods. Government in the Animal Husbandry Department may take up the matter with the Irrigation Department at the Secretariat.

(b) The farm area may be included in the factory zone or some suitable arrangements should be made to ensure speedy supply of cane to the factories.

(c) *Usar* reclamation work should be taken up as a part of a developmental project.

(d) More area should be put under plantation.

(e) Buffaloes thrive here better than the cows. The 'C' class stock of buffaloes should be slowly replaced by better animals and the number of Haryana cows should be restricted to the essential minimum.

(f) There is a very pressing need for quarters for staff and labour. Seven staff quarters and 20 quarters for labourers should be provided at the earliest opportunity.

(g) There is also need for a small godown for *bhusa*.

(h) The farm inspection house has no cutlery or crockery and the furniture provided (transferred from Kamyar) is also insufficient. Provision may be made to equip the inspection house suitably.

XII. *Saidpur*—(a) Wherever possible the levels of the fields should be improved. Even in those fields where it can not be done due to shallowness of the soil or due to other reasons much improvement is possible by subdividing the fields in smaller pieces.

(b) There is an acute scarcity of irrigation facilities. All out efforts should be made to improve this situation. The following suggestions are made in this behalf :

(i) A pumping plant may be fixed at the Jamunia river and water should be pumped from there to irrigate Rampur area.

(ii) Possibility of improving the water holding capacity of Saidpur and other tanks be explored and enhanced.

(c) The farm has surplus fodder. A hay baling press is an urgent necessity and possibility of sale of fodder to other farms and scarcity areas be explored.

(d) *Brucella* positive stock should be eliminated from the farm as and when conditions permit.

(e) The farm has facilities for rearing young stock and this should be utilized to the best possible advantage.

(f) Bhadawari buffaloes may be maintained at this Farm.

(g) There is need for an implement shed to house the tractors and machinery.

(h) There is also need for a fodder godown.

(i) The farm is short of quarters for staff. Even the Farm Manager has none. Quarters for the Manager and for other staff should be provided.

(j) The Farm Manager should be allowed to use the farm jeep for visiting Rampur block which is at a distance of about 5 miles or so. He may also be allowed to use it whenever he has to go to Lalitpur, on Government work.

(k) Possibility of starting a small poultry unit at the farm should be examined.

BASE WORKSHOP

There is a pressing need for more sheds both for work and for providing proper shelter to the machines which are brought for repairs. This must be provided urgently.

The old tinshed has outlived its utility and should be repaired immediately. There is also need for a store and proper office for the Assistant Agriculture Engineer. The workshop should also be provided with necessary facilities like drinking water taps, proper sanitary facilities and if possible a lunch-room for the staff.

The workshop has rendered good service and should remain well-equipped and be allowed to continue as hitherto. Experience has proved that it is an absolutely essential adjunct to the Mechanized State Farms Organization.

Some work of an experimental nature to solve immediate problems of the farms should be taken up for which it is recommended that a foreman mechanic, a mechanic and an assistant mechanic should be provided.

TERMS OF REFERENCE NO. 3

(1) The values of cattle already fixed need not be changed at the moment. The present system of valuation of livestock be continued and should be examined every five years for modification, if any. Detailed data may be collected and the first examination should be taken up in April 1960.

TERMS OF REFERENCE NO. 4

(1) The activities which are kept purely for demonstration and development or for purposes of research and from which little or no return is possible, e.g. Research work on Animal Nutrition at Bharari, maintenance of Kherigarh breed at Manjhra and Ponwar at Hempur and other uneconomic cattle, etc., etc., should be considered strictly as non-commercial and expenditure incurred on them should be considered as purely developmental.

(ii) Expenditure incurred on research and developmental work either in crop or in livestock should be considered as non commercial.

(iii) The buildings which were actually not meant for farms but were constructed in connection with some other experimental work or scheme should be treated as non commercial e.g., tobacco brans and nutrition stalls

and laboratories at Bharari and dairy building at Hastinapur. At Arazi Lines farm buildings were constructed to meet the needs of 1,200 acres but now only 345 acres are left with the farm. The over-size buildings should proportionately become non-commercial.

(iv) Office buildings or Inspection houses fencing and pucca roads, etc., should all be considered to be non-commercial as is done on the farms of the Agricultural Department.

(v) Machinery and equipment lying surplus at the farms should be treated as non-commercial.

(vi) Expenditure incurred on permanent improvement of land, e.g., levelling and layout or breaking of new land or on reclamation of *usar* and eroded lands may be capitalized but should be allowed to remain interest-free.

(vii) All capital investments which do not directly help in the production should be classified as non-commercial.

(viii) A rebate of 25 per cent may be allowed on the maintenance of milk stock (barring draft animals) and the activity, may be treated as commercial.

(ix) The production of grain crops should be considered to be a commercial activity. Rebate may be allowed for research work as is done in the Agriculture Department.

TERMS OF REFERENCE NO. 5

(i) Research Staff should be provided for doing agronomical work on all the Mechanized State Farms so as to enable intensive work being taken up towards the development of cultivated fodders for cattle. Work should also be taken in hand for the improvement of pastures. Intensive work is needed for the production, drying, mixing and storage of balance fodders.

(ii) The chemistry portion of the work should be conferred to four places at the moment, e.g. (i) Bharari, district Jhansi; (ii) Babugarh, district Meerut; (iii) Manjhra, district Lakhimpur-Kheri; (iv) Arazi Lines, district Varanasi. A fifth centre may be opened at the Veterinary College, Mathura, in due course.

(iii) Only the first part of the scheme be taken up in the first two years. Preparation on the second part be started in the second year and actual work started 3 years from now.

(iv) There should be a small Research Council which should meet once or twice a year to draw out a plan, to scrutinize each scheme and to judge the result of work done in a year. The Committee should consist of the Chief Statistician of the Department of Agriculture, one Economic Botanist of the Agriculture Department, Professor of Animal Nutrition at the U. P. College of Veterinary Science and Animal Husbandry, Mathura and the Research Staff working at the Head Quarters of the Deputy Director, Mechanized State Farm and on the Farm. The Deputy Director, Mechanized State Farm to act as Convener and Co-ordinating Officer.

TERMS OF REFERENCE NO. 6

(i) The Mechanized State Farm Organization should be allowed to function independently with equal emphasis both on agriculture as well as animal husbandry. The organization may continue to tackle common as well as independent problems of both the departments and be a guide to mixed farming pattern of Indian agriculture.

(ii) There should be an Executive Board (which may meet at least twice or thrice in a year) which should decide the general matters of policy. The Director of Agriculture and Animal Husbandry Commissioner should be members of this Board and the Deputy Director, Mechanized State Farms to work as Secretary. It would also be advantageous to have the Chief Engineer Irrigation also on the board.

(iii) The Deputy Director, Mechanized State Farms may be officially appointed as an Advisory Officer for the various other farms of the Animal Husbandry Department, e.g. Chak Gajaria, Kalsi, Rishikesh. The Dairy Demonstration Farm, Mathura, Agriculture College Dairy Farm, Kanpur, Nagla Farm, Tarai and Sheep Development Farm in the Hills may also be included in this advisory work if there is no insuperable difficulty.

TERMS OF REFERENCE NO. 7

(i) A nucleus herd of 25 animals and their followers of Kherigarh breed be maintained at Manjhra Farm and of Panwar breed at Hempur. A herd of 50—80 adults of Kankatha breed be maintained at Saidpur and efforts should be made to improve the milking qualities of this breed. A portion of Kherigarh be crossed with Shahiwals and the result be watched. Similarly a portion of the Ponwar be crossed with some foreign breed, e.g. Jersey or medium sized Holstien Fresian and result watched.

(ii) Hariana and Tharparkar breeds may continue to be maintained as hitherto.

(iii) Similarly in case of buffaloes, as there is great demand for Murrah, this breed may be maintained as hitherto.

(iv) Possibilities may be examined in due course to maintain Murrah at Arazi Lines Farm also.

(v) Tafai buffaloes may be eliminated.

(vi) Bhadawaris which are maintained at Bharari may be transferred to Saidpur and Murrahs be substituted in their place. Possibility of the transfer of the Kherigarh stock of Manjhra to Andeshnagar may be examined. The following be followed as general pattern:

(1)	Hastinapur	..	..	..	Haryana	Murrah
(2)	Babughath	..	..	..	Do.	Do.
(3)	Maddurikund	..	..	..	Do.	Do.
(4)	Nilgaon	..	..	..	Do.	Do
(5)	Andeshnagar	..	..	..	Kherigarh and Do.	Do.
(6)	Nible't	..	..	..	Gangateri and Do.	Do
					Do.	Do.
(7)	Bharari	..	..	..	Tharparkar and Do.	Do.
(8)	Manjhra	..	..	..	Kherigarh or Gangateri	Do.
(9)	Saidpur	..	..	..	Kankatha	Bhadwar.
(10)	Arazi Lines	..	..	..	Gangateri	Murrahs may also be introduced when possible.

(vii) The Gangateri herd of Arazi Lines is a very promising one. The herd is however, a small one and is only one in the State. It is strongly recommended that one more herd of about 150 to 200 animals of this breed be developed. It may be done either at Majhra or at Niblett. It may even be necessary to purchase some 25 or 30 animals to start with which should be done.

GENERAL

This committee is convinced that the losses are not on account of any organizational defects or for lack of guidance in the field of agriculture or animal husbandry. The Committee has also gone through the report of Dr. R. N. Singh submitted to Government earlier and circulated to the members *vide* Sri Mehrotra's D. O. letter no. 3841/XIIE (GEG)—908 58, dated December 15, 1958. The Committee agrees with the report in general and testifies that the standards achieved under the circumstances the farms are working—are satisfactory and compare favourably with any other farm of the State.

The Committee has after careful examination arrived at the conclusion that the present methods of preparing the balance-sheets need a drastic change. Such methods are not followed even for strictly commercial concerns. The losses are exaggerated not only because they include the losses in non-commercial activities of the farm but also on purely research undertakings, unwanted and surplus buildings and machinery brought under separate schemes of other departments, on investments used by other departments for public utility and on account of maintenance of items like public roads, etc. etc. These farms are also to serve as demonstrational units and several items like good *pucca* roads, inspection houses, ornamental gardens and plantations, etc., etc., have to be maintained for reasons which cannot be commercial. Similarly maintenance of detailed records, elaborate accounting, etc, etc., only increase the expenditure on staff. Participation in cattle shows, developmental activities and scores of other things only increase the expenditure. It is recommended that methods followed on the farms of the Agriculture Department should be adopted with modifications where necessary. Some suggestions in this behalf are noted below—

(1) All experiments done on crops should be compensated as done on the farms of the Agriculture Department.

(2) Compensation should also be allowed for the cultivation of special crops or varieties desired by the Department.

(3) Inspection houses, *pucca* roads, surplus buildings, etc., etc., should be treated as non-commercial and the farms should be required to pay the maintenance and repairs only, i.e., no interest or depreciation be charged.

(4) Buildings and assets constructed in connection with some other research or developmental scheme and left over at the farms after the close of the scheme are to be treated as non-commercial assets. If the same can be used by the farm after modifications, the expenditure on account of modification should be borne by the farms. If these are to be used just because they are there the farms would bear the charges on account of maintenance and repairs. Each case has to be decided separately and can be done.

(5) Most of the land belonging to the organization is submarginal and the cost of development has been high. At some of the places

no irrigation is available even today. The development brought about has improved the value of the land and the gain is a permanent one. This can be cashed any time it is desired, by the disposal of the land. Interest should, therefore, be charged only on the compensation that has been paid, i.e., the original cost of the land. No interest should be charged on the developmental expenditure. If this is allowed more and more land would be developed and that already under cultivation will further improve by construction of bundhies, perfect levelling, reclamation of salinity etc., etc.,

SUPPLY OF PRODUCE

The farm produce is supplied to the Department of Agriculture at the rates of May 31. The farm has no choice. It has to supply all its produce to the department excepting what is rejected by them. It is a well known fact that the rates are generally the cheapest on May 31, and they tend to rise from July onwards. It would only be once in ten years when the rates in October and March would be lower than those on May 31. The farms, therefore, lose on this account substantially. The difference in rates varies from about Rs.2 to Rs.10 per maund but even if there be a difference of Rs.2 per maund the losses amount to about Rs.80,000. It is a well known fact that the farms would gain by Rs.4 to Rs.5 per maund if they decide to sell rice instead of paddy but they are not allowed to do so. It is, therefore, recommended that the farms must continue to supply all their produce to the department as and when the same is ready but they should be paid at the highest market rates of the year. The details can be worked out once the proposal is accepted in principle.

CATTLE SECTION

1. All expenditure on the maintenance of purely draft breeds like Kherigarh and Ponwar, should be treated as non-commercial.
2. A rebate of twenty-five per cent on the entire expenditure should be allowed on the rest of the herd as is done in case of dairies in the Agriculture Department.
3. In case of Madhurikund Farm which is being used as an asylum for Brucella affected cattle this rebate should be increased to fifty per cent.
4. All buildings which are occupied by other departments should be shown in the books as rented to those departments and all expenditure incurred on them should be shown against departments. Similarly surplus buildings, if any, should not be charged in the balance-sheets.
5. The expenses incurred on research projects should be kept separately and should not find a place in the balance-sheets.

INTEREST

1. Agriculture farming and cattle breeding are not done for earning interest on the investments. The profession is subject to so many serious hazards so much so that even under normal environments the crops would fail during many a seasons. Had this stable and the oldest profession of human civilization been a safe one for investments it would have been in the hands of the business community. It is, therefore, wrong to expect a constant return in the form of interest from agricultural farms, much less from those established on submarginal lands. It is, therefore, recommended that a nominal interest of only 1 per cent be charged on the investments. Depreciation should be charged in full.

MACHINERY

All surplus machinery should be disposed off. Even if these have to be maintained in view of the present import difficulties and also because they are there and heavy interest and depreciation had already been paid on them, these are to be preserved as stock in hand and depreciation and interest should not be levied against them.

The tractors and implements transferred to the organization were only second hand and had been roughly and heavily used. These were not properly depreciated at the time of transfer. This may be done now and the accounts should be corrected so that this organization is not unduly burdened.

ENTERTAINMENT OF VISITORS AND USE OF VEHICLES

The farms are visited by technical workers from outside, scientists and advisors and other officials and non-officials. It is recommended that a sum of Rs.1,000 may be placed at the disposal of the Deputy Director, Mechanized State Farms per year for the entertainment of such visitors.

It is further recommended that a vehicle should be placed at the disposal of the Deputy Director and he should be allowed to visit the farms by road. The Mechanized State Farms are mostly in out-of-way places and a surprise visit to most of them is impossible. The Committee understands that the Deputy Director has written to the Secretary that he does not need any vehicle and that he has returned the one he had. This is in the opinion of the Committee wrong and it is recommended that a vehicle be provided to this office with permission to visit the farms by road. This will increase the expenditure by a few thousand but it will earn good dividend.

These farms are situated at long distances from the nearest towns and distinct headquarters. Some of these farms are divided in blocks which are at considerable distances from each other. It would be useful if the managers are allowed to use farm vehicles in their visits to the towns and headquarters when they go on Government duty. They should also be allowed the use of such vehicles on the farms for surprise checking or for night rounds. This would be done sparingly but permission should be there.

They should also be allowed use of such vehicles on private affairs on payment of 6 annas a mile. It would be advantageous to maintain a jeep on all the farms.

FODDER TO SCARCITY AREAS

Some of the farms like Madhurikund, Bharari, Andeshnagar and Saidpur could save in all about 30,000 maunds of fodder for meeting the requirements of needy areas in bad years. If the department concerned could provide buildings for storage of fodder the required material could be saved and preserved for them. Almost every year the State has to purchase large quantities of fodder to meet the needs of such areas. This proposal may be sent to the department concerned for consideration.

HOUSE RENT

Farm work requires the presence of the staff at the farms all the time. Twentyfour hours presence of some of the staff is required at the farms throughout the year while others are required to be present at the farms all the twenty-four hours during certain periods only. Ordinarily all staff is required to be present on the farms every day, including Sundays

from sunrise to sunset. The staff has also got to attend duty at odd hours e.g. the milkers the dairy supervisors and the milk recorders, have to do milking generally at 2 a.m. to 2 p.m. all the year round. It is, therefore, essential that all such staff resides at the farm itself and they do.

A part of the staff is allowed rent free accommodation, e.g., the Farm Incharge, Assistant Farm Incharge, the Veterinary Assistant Surgeon, Stockmen compounder, Poultry staff, etc., while others like the staff of the cultivation and dairy sections have to pay rent. This is resented.

Besides the living conditions on some of these farms are far from healthy. It would not be out of place to mention here that all staff of the Tarai State Farms is allowed better and rent free accommodation. *Conditions at Tarai State Farms were and are far better than those at Khadar farm at Hastinapur or Mechanized State Farms, Hemptur, Nilgaon, and at many others, but the staff at the latter farms are charged house rent. This is rightly resented by the staff and they feel that there was discrimination. This sort of anomaly should be removed.*

The Committee recommends that :

- (1) In view of their duties, proper accommodation should be provided to the staff on all the farms.
- (2) and that all the staff should be provided rent-free accommodation as is allowed at the Tarai State Farms.

This may cost at the most about Rs.2,000 per year on each of the farms.

EDUCATION OF CHILDREN OF STAFF

At present the farm provides conveyance for the use of children for going to school. Generally a bullock-cart or a horse tonga or both are provided. It is felt that this arrangement is neither very convenient for the children, nor is very economical to the farm. In most places the children belong to lower classes. It is proposed that possibility to employ one to two teachers may be examined. The staff should provide labour and money to erect thatched space for use as school and for furnishing the same. This will allow more children to attend school and would perhaps be healthier and better. In some places the children take one to two hours to reach their schools and equal time in their return journey. In Andeshnagar the children have sometimes to stay behind in the town during the night when it is raining heavily. The proposal does not appear to be expensive and needs thorough examination to ascertain the expenditure and the advantages. It is definitely healthier and convenient to the children. It may also be possible in due course to get help from the Antarim Zila Parishad for this work. The proposal can be examined and put up for the consideration of the Government once the scheme is accepted in principle.

MEDICAL FACILITIES

Reasonable medical facilities should be made available to the staff. It already exists at some of the farms but is not available at others and should be provided.

Recommendations requiring administrative decisions at an early date :

1. Mechanized State Farm, Hempur, may be transferred to its parent organization at the earliest. As Tarai Estate farms now form a part of the Rudrapur University there is no point in attaching the Hempur Farm to the University. (Page 78 of the report) An immediate decision of the status about the M S F, Kamyar-(Bara Banki) then also be taken.—(Page 86 of the report).

2. Possibility of having two more farms in the eastern districts may be examined. This should only be started on good land and both cows and buffaloes should be maintained. The present farms are mostly on the poorest land and two good farms will offset the handicaps as far as the finances are concerned.

3. All farms should have telephone connections. This is absolutely essential for issue of immediate instructions and proper guidance.

4. The question of confirmation of the Gazetted Farm Managers must be decided at an early date. They have been working in the organization for such a long time and no one has been confirmed. (Page 7 of this report).

5. Farm Incharges of the Mechanized State Farm, Niblett and Arazi Lines be declared to be Gazetted and granted drawing powers. This has to be done immediately.

6. The method of preparation of balance-sheet needs revision. (Page 192 of the report).

7. The farms be called upon to take up research studies on the various local and other problems. The Deputy Director should be asked to draw out the details for such work. (Page 172 of the report).

8. The question of granting rent free accommodation to the staff be decided at an early date. (Page 195 of the report).

9. The present office building should be acquired. It would be cheaper in the long run and more convenient for the expansion of the Base Workshop. (Page 148 of the report).

10. Two overseers trained in Civil Engineering should be appointed in the organization to help in the levelling bundhi work channel constructions, drainage, survey and maintenance, etc. etc.

11. It is suggested that a depreciation fund or a sinking fund may be created for the organization. The depreciation that is charged for the various machines and buildings, etc. each year may be deposited in that account. The deposits will earn the usual interest. Replacement of tractors and machinery, construction of buildings, roads and channels, etc. can all be made from this fund. Acceptance of this proposal will avoid new expenditure from the State budget and a fund would always be available to meet the needs of the organization. The establishment of such a fund would help in faster development of the organization and in its expansion without the pressure being felt on the State exchequer. The organization has so far paid Rs.19,37,911 in the form of depreciation.

12. It is also suggested that a scheme for granting incentive bonus to the efficient and sincere workers be introduced. Bonus may be allowed to the employees of the farm who earn profits or who exceed the targets fixed for them. The details of such a scheme can be worked out if the proposal is accepted.

RETROSPECT AND PROSPECT

In the preceding chapters and paragraphs a detailed account has been given of the genesis of the Mechanized State Farm Organization and the working of the individual farms. Though it has been repeated *ad nauseum*, it will stimulate our memory and thinking if it is reiterated that these farms were started at a time of tremendous food stress in the country, which still continue. Since the partition of the country in 1947 the granaries of the undivided India had passed over to Pakistan and our country had to content itself with the balance of the available land, whatever its quality. The mounting pressure of human population and its progressive impact and strain on our limited land, the monetary drain on our exchequer due to constant importation of food grains made it necessary for the country—if it was to survive—to increase its own food production by utilization of all available land, barring that which had passed redemption, to increase our food production. This could be done both by bringing more land under the plough as well as increasing the production per acre. Thus, there was a tremendous urge all over the country to produce many more grains where one or none grew before. This gave rise to the idea of mechanized farming which till then was a practice heard only in the literature. As there was acute dearth of land, whatever barren or *usar* area was available was reclaimed with a view to make it yield something and thus increase the potentiality of our *larder*. In normal times such land would never have been touched. It is common experience in agriculture that even with reasonably good land it takes some years to stabilize farming and make the unit a profitable running concern. With the marginal and sub-marginal land, much of which was barren and waste the period of development necessarily took longer. This is the fundamental point and an axiomatic truth which is very often ignored by those who constantly heap criticism against this infant organization. The brief description given under each farm in regard to the quality of its land would now make it clear, even to the most uninitiated, that you have to go through "blood, sweat and tears" in the course of the birth pangs of the process of establishing a new farm. Some of these farms, for instance, Babugarh in Meerut district meant agricultural production over sand-dunes over marshes in Hastinapur, at Nilgaon Farm in *usar* land and at Bharari of Jhansi district on Ranker soil. How many of our uninformed arm chair critics could have participated in a bold venture of this nature which the State alone had the courage to take up and took up rightly too.

Simultaneously with this drive for increasing food production, there was an urgent call for the rehabilitation and development of our cattle wealth. Our best breeds of cattle, viz. Sahiwal, Sindhi and Tharparkar had all gone to Pakistan. We have few small units of these valuable milch breeds left over in India. Further our cattle breeding area particularly in the north was restricted to a small pocket in Rohtak and Gurgaon districts of the Punjab from where the Haryana cattle and Murrah buffaloes hail. It is in no spirit of snobbery but humble thanks

giving sandwiched with maximum pride that we submit that our State, all through its history, has shown tremendous foresight in anticipating troubles and shortcomings and making efforts in advance to overcome them. In this particular instance also, as would be anticipated, it did not lay behind. It foresaw the danger ahead. It was realized as a result of this foresight that unless prompt measures were adopted to secure as many good animals as we could lay hands on and build up our own stock in a mass scale we would soon feel the pinch of shortage of quality cattle. The Punjab has been, for years at a stretch, constantly drained of its best animals. It was anticipated that the pressure would next fall heavily on the U. P. particularly over the western districts which have been upgrading the Hariana and Murrah stock for some years now. Reverting back to the old theme as to why the Mechanized State Farms were started it will perhaps be worthwhile to recall the observations of the then Minister for Agriculture who had observed, "The Government of the Province has pursued more or less an aimless policy so far as the upgrading of the cattle of this Province is concerned. I am definitely of the opinion that the Government should have breeding farms of their own to build up a good herd of the pure breeds as well as the crosses. The Government has, at present, got sufficient land at Madhurikund, Mathura, Babugarh, Hempur, Manjhra and Bharari where key farming can be tried and experiments can be made for the upgrading of the cattle. If the Government is to run big farms the cultivation has to be mechanized and the work has to be started under the direction of an expert cattle breeder. I would like to have a definite proposal".

Thus, it would be observed that though food production was the initial objective and continued to remain as such the emphasis on the working of these farms had now shifted more and rightly too to cattle breeding. Since the above wise words were recorded, which are more or less prophetic, much has happened in the history of agriculture and cattle breeding activities in the State. Initially there were tremendous difficulties. This would happen and could be anticipated in any new technical venture taken up in the country. No one had any experience of mechanized farming, much less of large scale cattle breeding. Mistakes were thus inevitable and were committed even in as elementary things as purchase of tractors, where owing to complete lack of experience large number of "Makes" were introduced, without any serious attention to harmonising efficiency and control and complete lack of detailed thought to the securing of spare parts and utilization of the tractors in a co-ordinated well knit manner. Not only this a mistake was committed initially in setting up two different organizations, one dealing with agriculture operations and the other with administration and management of these farms. When it was subsequently realized rather promptly that this division of responsibility would cut at the very root of efficiency, measures were taken at once to reduce the steps and as a consequence the entire organization was put under the charge of the Deputy Director of Mechanized State Farms. In spite of all possible forethought all such mistakes were bound to occur initially in any new venture of this kind. Mechanized State Farms, therefore, could be no exception. It is easy to be wise after the event and much easier to act as a critic particularly when there is no responsibility involved.

Next we take the cattle breeding enterprize. The reasons for which the State Government had initiated a large cattle breeding drive was sound and full of common sense and forethought. There was urgency the nation

needed it and U. P. wanted to do it, and from the experience gained so far, has done it. Lots of mistakes were, however, committed initially, there was a desperate hurry, to arrange purchases worth Rs.15 lakhs in a small span of two years. This was perhaps actuated by the then prevailing conditions. It might have been felt that unless U. P. took a bold decision to purchase all available good stock promptly, there would be little left to try to build up our contemplated big farms. General takes a decision quickly and at the spur of the moment and does not wait for the calm and cool decision of a historian, taken in a most comfortable chair away from the din and fray of battle. It is difficult at this stage to actually visualize the way the mind of the State Government was then working but in all fairness to the then planners, it has to be observed that if circumstances had proved otherwise and the country had not settled down so quietly and quickly, their misgivings would not have been entirely ill-founded. Now even when purchases worth Rs.10—15 thousand are made it often happens that you secure despite all precautions—a few animals much below the average standard set for purchase. This happens with the best of judging and best of selection. In a huge purchase of 15 lakhs the percentage of the undesirables, that would naturally creep in, have been—as anticipated—much higher. Again, no sheds were ready for receiving these animals and providing shelter against rain, cold and heat. The land at the farm had not been developed adequately or even in a preliminary manner to provide good and sufficient fodder for these animals which they so sorely needed in the process of acclimatization. Misfortune seldom comes alone and here in this context while all this unpreparedness was there the animals got infection like cow-pox, which is never possible to control and udders of a number of valuable animals were lost as a consequence of this infection. Further, in any cattle breeding enterprise which for years, of its initial development is a losing concern, it is necessary to resort to rigid culling of the undesirables. This is a *sine qua non* of herd building. No such annual culling was resorted to in this plan initially with the result that by the time one of the members of the present Committee took over in this State the quality of the herds had deteriorated tremendously and in an alarming proportion and the number of unwanted animals had increased considerably. The matter was placed before the Cabinet and orders for effective essential culling, which was to be immediately adopted, were obtained. This initial heavy culling, which meant elimination of, nearly 2,000 heads of cattle, necessarily lead to heavy losses. The result now is that after this short labour of 11 to 12 years, wherein wisdom and folly were both sandwiched in the initial efforts, we possess at our farms some of the best animals in the country and most of our farms could compete with the best ones in the country. In fact we have almost become a serious challenge to the Panjab, which once prided itself as the only possessor of the best Haryana and Murrahs in the country.

The Committee has no doubt that the prospects of the organization are bright. Given some more time and facilities it would only improve upon the yeoman service that it has rendered agriculture and animal husbandry development of the state.

FUTURE PATTERN OF ADMINISTRATION

Mixed farming is an accepted pattern for the Indian agriculture. The inter-dependence of cattle on agriculture and that of agriculture on its cattle wealth is unquestionable. The economy of the Indian farmer

depends on successful mixed farming. While agriculture earns him cereals, fibre crops and other cash crops, once or twice a year the cattle provide him with a daily income through milk and milk products besides providing the motive power and manure for successful production of the agriculture crops. The most important thing is that cattle maintained in the family provide an all the year round employment to the farmer and the members of his family whose time could otherwise not be properly utilized. The symbiotic arrangement is so important and of advantage that any large scale deflection may only result in breakdown of the economy of the farmer. It is, therefore, of utmost importance that both dairy farming and crop farming must go hand in hand. The Mechanized State Farms Organization although on a larger scale—is a symbol of that universal pattern. This is a unique organization in the State and perhaps the only one of its kind in the country. We have in the State a large number of farms working under the supervision of the Department of Agriculture and we also have several farms under the Department of Animal Husbandry. These farms deal with their specific problems such as agricultural farms are engaged in production and multiplication of pure seed and are also engaged in research work in agriculture. They even call most of their farms as seed farms. Similarly the farms under the Agriculture and Animal Husbandry Departments are specializing only on livestock problems and milk production, in other words, the agriculture farms do not keep any cattle and they do not undertake any problems pertaining to livestock not even problems on fodder production. Similarly the farms of the Animals Husbandry Department are not at all interested in agricultural problems and cannot properly solve even the problem of feeds and fodders—the most important and the basic requisite for any animal husbandry development work. The farms of the two departments although they serve a very useful purpose in their own places do not solve the common problems which arise in the mixed farming pattern. It can be easily visualized that the farmer is deeply concerned with the mixed farming problems and from his point of view cattle and crop farming cannot be kept separately in the Indian pattern of agriculture. Further the Mechanized State Farms provide an excellent opportunity for study of problems of big farms as well as those of small farms and also for problems of mechanization, use of new implements, development of fodders and grasses and pasture land, etc. etc. There is need for a common study of common problems of both Agriculture and Animal Husbandry and Mechanized State Farms provide the field for it.

It has, therefore, been very wisely decided to keep this organization away from both the Agriculture and Animal Husbandry Departments and still keep a very close link with the two. It is recommended that the future pattern should also be such so as to avoid an undue bias of one or the other.

The best thing, therefore, would be to have an Executive Board consisting of both the Director of Agriculture and the Animal Husbandry Commissioner to guide this organization in their respective fields. The Deputy Director Mechanized State Farms, will work as Secretary of the Committee. In this, Executive Board may also be represented the Chief Engineer Irrigation, who would guide in the development of the farms as far as irrigation, drainage and levelling, etc. are concerned and whose advice will be most valuable. The farms must take special interest in the development of fodders and grasses and also in solving other agricultural problems

as well and they must continue to be centres of research on cattle breeding. The farms have hitherto been concerned only in stabilising their economy and it is good news that they (farms) have become self-supporting to the extent that they are able to meet their entire expenditure including depreciation on the investments. The losses during the last agricultural year are of less than Rs.2 lakhs after paying over 2½ lakhs in the form of interest on investment and Rs.2,38,395 as depreciation. But for natural calamities and forced artificial control on the price of wheat (the organization got a price of Rs.17.50 per maund for wheat plus the usual premium) the year would have shown a net profit even after paying the interest charges. The circumstances under which the organization is working these results are most gratifying. These would compare most favourably with the result of the farms of any other organization of the State. Any comparison either from the point of view of financial returns or from that of development work will weigh heavily in favour of this organization. An important item of examination by this Committee was the reasons for losses. This is being solved by the organization effectively as will be seen for the table at the end which shows an improvement of Rs.2,56,566 during the last agricultural year. The Committee feels that the work being done is creditable. It is true that they have count only a nominal interest of 1.4 per cent on the investments but the state must be satisfied if these farms are able to make the two ends meet while doing such important developmental works with the quality of land and also with the quality and variety of livestock that the organization has. This organization should now switch over its major efforts towards a research programme which should now be launched on these farms and which should be looked after by a Research Committee composed of the following :

1. Chief Statistician, Department of Agriculture.
2. Economic Botanist Cereals Department of Agriculture.
3. Professor of Animal Nutrition Livestock Research Station, Uttar Pradesh.
4. Research staff of the Mechanised State Farms.
5. Deputy Director, Mechanized State Farms, Convenor.

The Committee may also co-opt any other member or members it may decide.

The Committee also recommends that the Deputy Director, Mechanized State Farms, be officially appointed as an advisory officer for the various other farms of the Animal Husbandry Departments, e.g. those at Chak Gajaria in Lucknow, Kalsi and Rishikesh in Dehra Dun, etc. etc., If there is no insuperable difficulty, the following farms could also be included in this advisory works—

1. Dairy Demonstration Farm, Mathura.
2. Agriculture College Dairy Farm, Kanpur.
3. Nagla Farm, Tarai.
4. Sheep Development farms in the hill for pasture development.

The Committee believes that this arrangement would give all farms a well knit shape, mature advice, and will work out fine.

It was the considered view of the Committee that as the Deputy Director, Mechanized State Farms works virtually as the Head of a Department with powers and responsibilities second to none, it would be in fitness of things to change the designation and call it 'Director' instead of a 'Deputy Director'. The grade of the post should also be revised accordingly. It would also help in getting and retaining a really good man at the job. The organization has to play a very important role in the future development of Agriculture and livestock of the state and the direct and the indirect gains through the organizations have been considerable. The Committee has no doubt in their mind that given time and opportunity this organization has potentiality to place the State on top in matters of quality of livestock. It has to lay down the foundation and to become the torch bearer in the field of economic maintenance of all livestock. In the field of Agriculture as well as Animal Husbandry it would serve as the basic store house of all improved and new seeds to be distributed to the State farms and to the cultivators all over the State.

It has to solve the numberless problems in the economy of mixed farming which alone has to remain the pattern of Indian agriculture, perhaps, for ever. Besides uniformed criticisms the organization has not received the appreciation that was due to her and its real importance and value has not yet been recognized.

It is time to accord that recognition and give it a push for the better and a brighter future.

Comments by DR. B. K. MUKERJEE, Director of Agriculture, Uttar Pradesh, on the report of the Re-organization Committee on Mechanized State Farms

1. The Mechanized Farms, as envisaged under the Second Five-Year Plan were to function mainly as seed production units. In the Third Five-Year Plan these farms will serve as a very important link in the whole scheme of A class seed production because the seeds produced by the Economic Botanist will be multiplied, in the first stage, at these farms. This work is now being conducted on these farms, but it is felt that there is room for better co-ordination between the development staff of the Agriculture Department and the seed-producing units, i.e. the mechanized state farms. The seed produced by these farms is meant for supply to the Agriculture Department; hence, it is necessary that those should produce only those varieties of seed which are indicated by the development staff concerned. I, therefore, suggest that before preparing their cropping programme for the coming season the Managers of Mechanized State Farm may consult the Deputy Directors of Agriculture of the respective regions regarding the varieties of different seeds desired to be multiplied. It would be better if this question is discussed by the Deputy Directors of Agriculture in a special meeting prior to the commencement of every crop season, which would be attended by the District Agricultural Officers and all the Managers, Mechanized State Farm in their region.

2. The Mechanized State Farms in addition to being seed production units also carry on the work of cattle-breeding and dairying. These functions, of course, form an integral part of agricultural programmes; and thus the real emphasis should always be on agriculture. This would mean that these farms should have a cropping pattern designed to maintain a proper ratio between the food and fodder crops. Unless this is done, the economy of the farms will not improve.

3. The Committee have suggested separation of the commercial crops from the experimental ones. The same should be the case with the programmes of cattle-breeding and dairying. It is one thing to maintain cattle on an agricultural farm strictly in accordance with its needs and another to maintain them under special programmes. It has often been seen in the case of Mixed Farming Scheme that farms which otherwise were running on profit ran into heavy losses, as a result of introduction of dairying. It would accordingly be proper to maintain, as is being done now, separate accounts of agriculture and dairy and prepare separate balance-sheets for them. Similarly, separate balance-sheets should be prepared for the commercial and experimental crops. This will give us idea as to where we are going and which branch needs improvement economically.

4. It has been suggested that the present post of Deputy Director, Mechanized State Farms may be upgraded to the level of Director enjoying the status of Head of Department with full powers. The suggestion is sound, but it does not appear necessary to categorise this post as "Head of Department". The appropriate designation of the post would be "Joint Director of Agriculture—farms". The scope of the proposed section needs expanding, so as to include all state farms. This will I have no doubt, put the State Farm Organization on a sure and sound footing.

5. The Joint Director Farms can deal effectively with the problems facing the efficient and economic working of our farms and other vital things connected therewith, e.g. proper crop planning, accumulation of farm machinery, buildings, establishment of Regional Research Stations, planning for self-sufficiency in the matter of pure seed on regional basis, and creating a separate 'Farm Service' manned by experienced personnel.

6. Since the Mechanised State Farms have to deal with animal husbandry aspect also, it is necessary that the Joint Director Farms should have ample experience of Agriculture as well as of the management of livestock. Full delegation of powers, at least as much as is at present exercised by the Deputy Director Mechanized State Farms, will have to be given to the Joint Director Farms in order to enable him to perform his functions effectively.

7. Furthermore, I would like to mention the following points for revitalization of the State Mechanized Farms :

(i) Overcapitalization is to a large extent responsible for the continued losses on these farms. It is not likely that they will be able to produce any appreciable results unless a broad policy line is chalked out for their future working.

(ii) These farms are essentially seed farms, carrying a fixed quota of young and breeding livestock for the extension wing of the Animal Husbandry Department. The livestock breeding and development work will, of course, be continued under the guidance of the Animal Husbandry Department as hitherto. The Agriculture Department will take up intensive work on fodder research and development. The real emphasis should, however, be laid on proper crop rotations, so as to use the seed-raising potential of these farms to the full, while producing enough fodder for the requirements of the livestock stationed at each farm. This will immediately bring to the fore the urgent need of properly equipping these farms for the following purposes :

- (a) Raising of pure seed and fodders,
- (b) Research on nutritive fodder,
- (c) Livestock breeding and development.

With this end in view, the following line of action is proposed :

(i) The Mechanized State Farms should immediately come under the control of the Director of Agriculture. The suggestion that these farms should be brought under the control of a Committee would very likely lead to lack of initiative, besides adversely affecting their smooth running, inasmuch as the responsibility of omission and commission under such a joint arrangement would hardly rest on any single individual.

(ii) The farms may continue to be managed by the Joint Director of Agriculture—Farms. He may be given an additional officer in class II to help him in coping with the increased amount of work. In this connection I have a suggestion to offer. It is being observed that our seed multiplication farms running under the control of the Regional Deputy Directors are not receiving their proper attention besides leading to lack of co-ordination. To provide some sort of headquarters' control for keeping a close watch on the working and progress of these farms, it seems necessary to convert the post of the present Deputy Director Mechanized State Farms into that of Joint Director, State Farms, with clearly defined responsibilities and supervisory control over all the State Farms. Since the production of pure seed is the main function of our farms, such a unified control over all State Farms will definitely improve matters and help in solving many of the regional problems of raising pure seed. The Tarai State Farms which so far supplied sizeable quantities of 'A' class seed are going over to the Rural University and its impact on our seed programmes will soon be felt; and the sooner we start planning for filling in the void the better it would be. The proposed unified control will go a long way in this respect and help in achieving self-sufficiency in the matter of pure seed on the regional level.

(iii) As already mentioned above, the creation of a 'Farm Service' composed of experienced men capable of managing the farms efficiently is also of vital importance and needs very careful consideration. Successful farm management is possible only through experienced personnel, possessing knowledge of farm management. It is, therefore, necessary that the farms may be categorized, and the selection and promotions to the posts on farms may be done entirely by the headquarters, so that the work of farm management at regional level may be effectively supervised and the possibility of inexperienced men finding entry in farm management through lack of suitable men at regional level may be done away with.

(iv) At the farm level the present arrangement may continue with necessary adjustments in the context of assignment of work at each farm. The two (*usar*) Farms at Nilgaon and Jehangirabad may be scrapped straight away. The reclaimed area out of these farms is only worth keeping, and they should be run as ordinary seed farms.

(v) There is overcapitalization at the Mechanized State Farms on two items, e.g. machinery and buildings.

It is proposed that overall checking of stocks of machinery at each farm may be taken up and all machinery which is of no use to the farm should be disposed of immediately. As regards buildings, we have a plan for establishing Regional Stations for research; and since all the Mechanized State Farms are situated in typical zones, link stations or Regional Research should immediately be set up as under :

Region	Existing Regional Research Station	Mech. State Farm to function as Link Research Station
Lucknow	Hardoi	Nilgaon (Sitapur) Andeshnagar (Lakhimpur-Kheri).
Meerut	Meerut	Babugarh.
Bareilly	Nawabganj	
Agra .. ..	.. ..	*Madhurikund (Mathura).
Allahabad and Jhansi	Amroha	Saidpur (Jhansi).
Faizabad .. ..	.. ..	*Jehangirabad (BaraBanki).
Varanasi	Varanasi	Arazi Lines (Varanasi).

The above arrangement would undoubtedly strengthen our Regional Research programmes and also enable the existing buildings in the Mechanized State Farms to be usefully utilized.

Comments on the note of Dr. B. K. MUKERJEE by Sarvri H. B. SHAH and R. N. SINGH.

The note of Dr. Mukerjee (page 202 to 205 is mostly of a general nature, covering many topics all of which have been discussed in detail in the respective chapters. Most of the suggestions given are being followed already. A few others are in our opinion incapable of adoption in the larger interest of this organization. Only two specific points made out by him need specific mention.

The first is about the upgrading of the post of the Deputy Director of Mechanized State Farms to the level of Director enjoying the status of the Head of the Department (page 203 para. 4 of his note). This proposal originated from Dr. Mukerjee himself and none else. In point of fact one of the members felt rather embarrassed as it touched him directly and could give ground for misunderstanding but the proposal being sound was accepted after elaborate discussion. It is now for the Government to take a decision of the fundamental issue and we have

* These would function as Main Regional Research Stations for Agra and Faizabad, respectively.

absolutely no objection to accepting either the suggestion made in the report or the new suggestion of Dr. Mukerjee about the designation of the post or even the present position of the Deputy Director of Mechanized State Farms. Our considered view, however, continues to remain the same as expressed in the report. Adding a few more farms like Pashulok, Kalsi and Hempur to this organization, raising the status of the head of the organization (at present designated as Deputy Director of Mechanized State Farms) and a direct contact with Government will, in our considered opinion, ensure an efficient and progressively improved working of this organization. This will be achieved at a very small cost coupled with tremendous advantages to both the Agriculture and Animal Husbandry Departments.

Dr. Mukerjee's second suggestion is that the Mechanized State Farms organization should be placed immediately under the administrative control of the Director of Agriculture. At present the Deputy Director is able to get things done much quicker at Government level. Passage of all the correspondence through the Director of Agriculture office or for that matter the Director of Animal Husbandry will unavoidably delay expeditious action and disposal of work.

In para 7 (ii) of his note Dr. Mukerjee has said "It is being observed that our seed multiplication farms running under the control of the Regional Deputy Directors are not receiving their proper attention besides leading to lack of co-ordination. To provide some sort of headquarters control for keeping a close watch on the working and progress of these farms, it seems necessary to convert the post of the present Deputy Director Mechanized State Farms into that of Joint Director State Farms, with clearly defined responsibilities and supervisory control over all the State Farms". Perhaps it was the unsatisfactory running of the seed multiplication farms of the Agriculture Department which has prompted Dr. Mukerjee to make the above suggestion. We, however, feel that this may become too much of a burden for one person to exercise effective supervision over 200 and odd farms. Besides the problems of small farms of 25 acres will vary greatly from those of the large farms of the Mechanized State Farm Organization.

His contention that these farms were established mainly with the objective of pure seed production is quite contrary to the facts. The Secretariat files will amply bear out this observation. This was doubtless an important item of work of these farms but Government would not have spent over 15 lakh of rupees on establishment of herds of different breeds and another 15 lakhs on the construction of buildings to house the animals had it not been their specific intention that with the partition of the country it had become imperative that Uttar Pradesh should take the lead in the development of livestock in as extensive a scale as its purse permits and thus supplement the efforts of the adjoining cattle breeding areas of the Punjab.

Every one concerned with agriculture is aware that cattle development has been and will remain for centuries the pivot of agricultural progress in this country. It is Government alone who can spend money on improvement of livestock and distribution of improved stock to the cultivators. The indirect gain made by the resultant effect in the field many times out-weighs the actual expenditure incurred at Government farms.

This activity, therefore, is as vital as that of pure seed production. In fact we have already a large number of farms in the State managed by Agriculture Department, where seed production is already in progress and this is being substantially and efficiently assisted by the Mechanized State Farms. The procedure of improved seed production suggested by Dr. Mukerjee will not, in our humble way of thinking, lead to any improvement. The Deputy Directors of Agriculture are consulted where necessary and thus the objective behind the suggestion is already being achieved. Besides the recommended varieties are supposed to be the best and, therefore, also the Farm Managers are bound to grow only the recommended varieties. However, if the method which Dr. Mukerjee has suggested is officially adopted it will only tie the hands of the Deputy Director of Mechanized State Farms and will tend to kill the initiative on his part.

There is no doubt—and Dr. Mukerjee's stress on seed production has only confirmed it—that putting of these farms either under the Director of Agriculture or the Director of Animal Husbandry will definitely result in change of emphasis which would not permit the state to get the maximum benefits from the organization. The first casualty in putting up this work under the charge of the Director of Agriculture will be livestock development. It will be a pity that this should be so particularly when years have been spent on putting livestock improvement work on a proper footing. All this is not mere theorizing. The experience of mixed farming units which the Agriculture Department took up some years back amply bears out this observation. If the Agriculture Department is keen on assisting in livestock development it should even now establish small economic unit with each farm under its charge. This will help the State in expanding pedigree animal production and distribution and putting the Agriculture Department directly in the business of mixed farming. If, Dr. Mukherjee's suggestion is accepted the next stage in the procedure suggested by him will be that Agriculture Department will come up with the proposal that the Animal Husbandry activities at the Mechanized State Farms should be taken over by the Director of Animal Husbandry and the Agriculture part by the Director of Agriculture. (As a matter of fact he held these views to start with). This will be done purely for the reason that Animal Husbandry, if not handled properly by the Director of Agriculture will soon become a drag on the farm economics. To compartmentalise the activities in this manner will make the running of the farms absolutely ineffective. Today the Farm Manager tries to get the best out of the land both with the point of agriculture as well as animal husbandry. When compartmentalisation takes place all the losses on agriculture side will be shifted to animal husbandry because it will be easily justified that animal husbandry is a losing proposal. This was being done a few years back and the process which has been completely controlled now will be repeated all over again with the result that the Government in the long run will suffer the losses and the efficiency that is being brought today will be completely eliminated. Incidentally, no sensible Director of Animal Husbandry who carries his wits well with him, will ever accept this rickety offspring who will be denied sunshine all through its life. These are the considerations which prompt us to strongly oppose the suggestion of Dr. Mukerjee.

Mechanized State Farm Organization is a unique venture of its kind in the whole country. It is definite that it is going to make a success provided we have a little patience and we evolve a method which will be to the best advantage of a joint effort for uplifting both agriculture and animal husbandry on a co-operative basis. Uttar Pradesh has shown the way and this is likely to be adopted in a number of States in the Third Plan. It will in our opinion be unwise for the State to reverse the gear just at this stage when success is within its grips. It will simply mean putting the clock back if we revert to the old practice of putting livestock improvement work, with few exceptions to cater for exceptional circumstances, either under agriculture or animal husbandry departments. The pattern evolved in Uttar Pradesh, after years of labour is answering the problem admirably and we are in the thresh-hold of securing our objective of establishing well balanced mixed farming units. We wish to stress that the original idea and emphasis of these units was on livestock improvement though simultaneously all the essential features of agriculture, including fodder production, were intended to be looked after just as satisfactorily as the present organization is doing. There will, therefore, be no definite advantage in putting this organization under the administrative control of the agriculture or for that matter under the Animal Husbandry Department. In fact it will be a retrograde step which in the best interest of the State must be avoided. Dr. Mukerjee has observed "Full delegation of powers, at least as much as is at present exercised by the Deputy Director Mechanized State Farms, will have to be given to the Joint Director farms to enable him to perform his functions effectively". The Deputy Director Mechanized State Farms as at present is a *de facto* Head of the Department. In such circumstances we fail to appreciate the advantages which would be gained by putting him under the Director of Agriculture and we also fail to understand the objection to calling the Deputy Director Mechanized State Farms as Director which would actually be nearer to and in accordance with the existing facts.

During the course of our discussions a point was made out by Dr. Mukerjee that he had only small farms and that he wanted to have big farms. We appreciate his anxiety but our humble advice is that it would be far better to start big farms for agriculture with the land that would now be available under the ceiling programme approved by Government or with virgin land still available in plenty rather than by mere transfer of whatever has been already built up. Besides, it will not be to any particular credit of the Agriculture Department to take up already built up farms, which some other unified and effective agency built up after years of patient labour. The fun, frolic and achievement lies in building up from scratch and to go through the birth pangs of the entire effort. Only those who have seen the original condition of the *usar* land at Nilgaon, Niblett and Hastinapur, the sanddunes and kans at almost all the Mechanized State Farms can appreciate the difference between what it was and what it is today. We suggest that the Agriculture Department take up the building of only some new big farms if they consider them so essential. Meanwhile, we assure Government that Mechanized State Farms with their bigger and progressively improving energy will contribute much more than what the Agriculture Department anticipates from them in respect of pure seed and fodder production in the State.

Regarding conduct of research work on these farms, the subject has already been dealt within chapter seven (page 169 to 172). There are hardly any surplus buildings which may be suitably utilized for the establishment of research stations.

Finally, we may only repeat that it is our considered opinion that whether the organisation is merged with the Agriculture Department or with that of Animal Husbandry the efficiency of the farms will go down. A comparison of the Mechanised State Farms with those of Agriculture or Animal Husbandry will amply support this observation in case such proof is necessary.

The economic and technical rehabilitation of the Mechanized State Farms organization has already reached a stage where, with in the next five years, these farms, apart from being first class centres for agricultural and animal husbandry development will become a compact viable unit. It will not be an unwarranted prophesy that all the good work done hitherto will be washed away within the same period if these promising units, are just at this stage, tagged on either to Animal Husbandry or to Agriculture Department. Wisdom lies in keeping this organization intact and in further strengthening it. It is our considered opinion that this will be the best course to adopt if State Government wishes to reap the harvest of years of blood, sweat and tears. The experience gained at such a cost must not be allowed to get lost.