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**ANNUAL IRRIGATION REVENUE REPORT,**

**SIND,**

**1915-16.**

# INDEX.

	PAGES.
Letter from the Superintending Engineer, Indus Right Bank Division ...	1
General review of the results for the Indus Right Bank Division ...	3—19
Letter from the Superintending Engineer, Indus Left Bank Division ...	21
General review of the results for the Indus Left Bank Division ...	23—38
Endorsement by the Chief Engineer in Sind ...	38
Table I.—Area of cultivation and consolidated revenue for 1915-16, Government land, and comparison with the average of the previous three years showing increases or decreases under heads kharif, rabi and irrigation share of net consolidated assessment ...	40—43
Table II.—Area of cultivation and canal revenue for 1915-16 and five previous years ...	44
Table III.—Area of cultivation and canal revenue, direct and indirect, for the year 1915-16 ...	45, 46
Table IV.—Area of Jaghir cultivation in Sind and Foreign lands in Khelat, the assessment for 1915-16, total for collection, actual realizations and balances outstanding at the end of the year ...	47, 48
Table V.—Revenue expenditure on new works, maintenance and repairs, and revenue collection charges in the Civil Department and establishment charges of the Public Works Department for 1915-16 ...	49—51
Table VI.—Cultivation, canal revenue and expenditure for 1915-16, as contrasted with the average of the previous three years ...	52, 53
Table VII.—Statement showing receipts from sale of occupancy rights ...	54—56
Table VIII.—Abstract of crop return for five years ending 1915-16, for Government, Jaghir and Foreign lands ...	58—65
Table IX.—Rainfall in the Province of Sind for 1915-16 ...	66
Memorandum showing amount of loss to canals on account of difference between assessments of water-rates on Jaghir lands in Sind and Foreign lands in Khelat and assessments at the ordinary rates in force for Government lands ...	67
Statement showing actual receipts for 1915-16, on account of irrigation share of land revenue from canals in Sind ...	68
Statement of highest readings on Bukkur and Kotri gauges, from 1880 to 1915 ...	69
Hydrograph of the River Indus at Bukkur and Kotri.	
Index map of the Indus Right and Left Bank Divisions.	

No. D-575 of 1916.

PUBLIC WORKS DEPARTMENT.

SUPERINTENDING ENGINEER'S OFFICE,  
INDUS RIGHT BANK DIVISION,  
Camp Jacobabad, 28th December 1916.

From

V. M. GRIFFITHS, Esquire,  
Superintending Engineer,  
Indus Right Bank Division.

To

THE CHIEF ENGINEER IN SIND.

*Subject*:—Annual Irrigation Revenue Report for 1915-16.

SIR,

With reference to Government Resolution No. W. I-5362 of the 7th May 1915, I have the honour to forward herewith the Revenue Report for Irrigation Works in this Division for the year 1915-16.

2. Crop Return VIII-A will follow.

I have the honour to be,

Sir,

Your most obedient servant,

V. M. GRIFFITHS,  
Superintending Engineer, Indus Right Bank Division.

*Accompaniments*:—

Annual Irrigation Revenue Report.

Tables I to IX.

Through

THE SUPERINTENDING ENGINEER, INDUS LEFT BANK DIVISION.

# ANNUAL IRRIGATION REVENUE REPORT.

## INDUS RIGHT BANK DIVISION,

### 1915-16.

The inundation of 1915, as described in the Irrigation Administration Report for 1915-16, and under para. 21 of this report, was on the whole an exceptionally low one and resembled the inundations for the years 1898, 1902 and 1907, as being one of the lowest on record.

The diagram sent in advance of the report compares the inundation of 1915 with those of the previous two years and with the average of the previous ten years.

The following table exhibits the principal features of the year, as compared with the previous year and with the averages of the previous three and the previous ten years :—

	Average of 10 years including 1914.	Average of 3 years including 1914.	1914.	1915.
	Days.	Days.	Days.	Days.
<b>Gauges :—</b>				
Bukkur, 10 feet and over ...	83	71	92	64
Do. 13 do. ...	40	31	45	...
Kotri, 14 do. ...	123	117	136	168
Do. 17 do. ...	76	75	100	66
<b>Irrigation :—</b>				
		Acres.	Acres.	Acres.
Kharif ...	...	1,288,036	1,303,202	1,150,895
Rabi ...	...	392,322	524,503	399,858
<b>Total ...</b>	...	<b>1,675,358</b>	<b>1,827,705</b>	<b>1,550,753</b>
<b>Gross Irrigation Revenue realized</b> ...				
		Rs.	Rs.	Rs.
Gross Irrigation Revenue realized ...	...	44,78,685	48,82,832	45,31,737
Working expenses ...	...	26,67,399	25,52,077	23,75,966
<b>Net Revenue, neglecting simple interest</b> ...	...	<b>18,11,286</b>	<b>23,30,755</b>	<b>21,55,771</b>

\* Area of cultivation—Government, Jagir and Foreign.

2. The gross assessed areas for the year are given, according to classification of works, in the following Statement A :—

STATEMENT A.

Year and class of crops.	MAJOR WORKS.	MINOR WORKS AND NAVIGATION.				Grand total.
	Productive works.	Works for which Capital and Revenue Accounts are kept.	Works for which only Revenue Accounts are kept.	Agricultural works.	Total.	
1	2	3	4	5	6	7
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Average of 3 years including 1914-15. { Kharif ...	385,697	306,950	571,403	18,985	897,338	1,283,035
{ Rabi ...	161,143	46,406	172,838	11,935	231,179	392,321
<b>Total ...</b>	<b>546,839</b>	<b>353,356</b>	<b>744,241</b>	<b>30,920</b>	<b>1,128,517</b>	<b>1,675,356</b>



The total net assessed revenue, as compared with the previous year, shows a decrease of Rs. 4,28,973 and is more by Rs. 57,186 when compared with the average of the previous triennium.

4-A. The area cultivated on "spill" water from the river was 23,868 acres, as compared with the previous year's area of 137,887 acres and 80,029 acres, the average of the previous three years.

5. The average net consolidated assessment per acre on Government land, as compared with the previous year and that of the previous triennium, was as follows:—

	Average of previous 3 years.	1915-16.	1914-15.
	Rs.	Rs.	Rs.
Major Works—Productive ... ..	2.46	2.78	2.59
Works for which Capital and Revenue accounts are kept.	4.14	4.34	4.22
Works for which only Revenue accounts are kept ...	2.96	3.41	2.98
Agricultural works ... ..	2.73	2.67	2.53
Average for all works ... ..	3.07	3.37	3.09

Actual realizations under all heads and the balances outstanding.

6. The following table shows the actual realizations under all heads and the balances outstanding at the end of the year:—

STATEMENT C.

Year.	COLLECTIONS				Balance outstanding.
	Government land and Hakaboy	Miscellaneous.	Four per cent. Irrigation share of proceeds from sale of occupancy rights.	Total receipts.	
1	2	3	4	5	6
Average of past 3 years ... ..	Rs. 49,39,375	Rs. 74,588	Rs. 64,722	Rs. 44,72,685	Rs. 1,42,199
1914-15 ... ..	47,39,012	78,512	65,308	48,82,832	1,46,073
1915-16 ... ..	44,06,902	58,786	66,099	45,31,737	63,072
Increase or decrease as compared with the average ...	67,527	—15,852	1,377	53,052	—79,127
Increase or decrease as compared with 1914-15 ...	—3,32,110	—19,776	791	—3,51,095	—83,001

The balance outstanding at the end of the year shows a decrease of Rs. 83,001 and Rs. 79,127 when compared with the previous year and the average of the previous triennium, respectively.

7. The remissions granted during the year amounted to Rs. 1,04,078 against Rs. 4,12,863 and Rs. 3,94,840 of the previous year and the average of the previous triennium, respectively.

Remissions on Government lands.

7-A. No remissions were granted on Jagir lands.

Remissions on Jagir lands.

7-B. The remissions on lands in Foreign territory (Khelat) amounted to Rs. 2,424 of which Rs. 1,601 were on kharif and Rs. 823 on rabi.

Remissions on Foreign lands.

The following Statement gives detail of the causes of remissions and compares the result of the year under report with that of the previous year :—

REMISSIONS.

Causes of remissions.	1915-16.	1914-15.	Difference.
	Rs.	Rs.	Rs.
Deficiency of water ... ..	72,212	54,986	17,226
Breaches in canals ... ..	548	14,804	— 14,256
Blight or mahalo ... ..	2,431	19,765	— 1,7334
Wire-worms or insects ... ..	6,944	26,889	— 19,945
Frost ... ..	1,270	2,101	— 831
Locusts ... ..	407	3,725	— 3,318
Rats ... ..	2,639	...	2,639
Kalar soil ... ..	2,431	12,893	— 10,462
Other causes ... ..	7,029	19,107	— 12,078
Inundation ... ..	702	2,37,004	— 2,36,302
Erosion ... ..	4	3,788	— 3,784
Adverse winds ... ..	9,885	26,164	— 16,279
Total ... ..	1,06,502	4,21,226	— 3,14,724

8. The difference between the 'Hakabo' or water rate assessed on Foreign and Jagir cultivation, and the assessment at full rates on these areas amounted to Rs. 3,19,680, which represents the loss of canal revenue during the year, owing to the low rates charged to Jagirdars and to Zamindars in Khelat.

9. The total charges during the year on account of maintenance and repairs amounted to Rs. 19,36,906 and is divided as follows :—

	Rs.
Works ... ..	13,53,376
Establishment and Tools and Plants ... ..	3,08,681
Revenue collections ... ..	2,74,849
Total ... ..	19,36,906

Establishment charged to 'Works' amounted to Rs. 2,73,189 and is included in the expenditure on 'Works,' while the net expenditure on 'Works' (clearance and repairs) was Rs. 10,80,187. Compared with the previous year and with the average of the previous three years, the net expenditure on clearance and repairs shows a decrease of Rs. 98,699 and Rs. 1,85,874, respectively. The charges on account of establishment and Tools and Plant show an increase of Rs. 22,599 as compared with the previous year.

10. Of the total charges shown in the preceding paragraph, Rs. 13,77,172 were spent on canals and Rs. 5,59,734 on river embankments.

11. The outlay of the year on new works was Rs. 4,20,879 as shown below :—

	Rs.
Major Works ... ..	{ Capital ... 541
	{ Revenue ... 13,254
Minor Works and Navigation—	
Works for which Capital and Revenue accounts are kept.	{ Capital ... ..
	{ Revenue ... 2,607
Works for which only Revenue accounts are kept	... 83,900
Agricultural works ... ..	... 3,20,577
Total ... ..	4,20,879

Under Major heads 'Capital' Rs. 500 represents the 'Works' expenditure of which Rs. 3 and 497 were spent on the Unharwah and Begari Canals, respectively. The expenditure on the Mahiwah is *nil*. Under Minor Works no 'Capital' expenditure was incurred.

12. The regular establishment charges, as shown below, amounted to Rs. 4,35,420, which is Rs. 10,667 more than that of the previous year and Rs. 3,657 less than that of the average of the previous triennium:—

		Percentage on outlay.
Executive ... ..	Rs. 3,80,453	23.1
Direction—		
Superintending Engineer.	Rs. 24,930	
Secretariat...	30,087	
	Rs. 54,967	3.3
Total ...	Rs. 4,35,420	26.4

13. The general financial results of all the irrigation works in this Division are shown in the following Statement D:—

#### STATEMENT D.

Class of works.	Gross revenue.	Working expenses.	Net revenue.	Simple interest.	Net profit 1915-16.	Net profit 1914-15.	Increase.	Decrease.
1	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Major Works—Productive ...	13,38,667	4,24,437	9,14,130	2,48,602	6,65,528	6,36,769	29,759	...
Minor Works for which Capital and Revenue accounts are kept.	11,56,362	3,73,471	7,82,891	...	7,82,891	10,36,278	...	-2,53,387
Total ...	24,94,929	7,97,908	16,97,021	2,48,602	14,48,419	16,72,047	29,759	-2,53,387
Minor Works for which only Revenue accounts are kept.	19,62,626	6,97,747	12,64,879	...	12,64,879	12,27,424	37,455	...
Agricultural Works ... ..	74,183	8,80,311	-8,06,129	...	-8,06,129	-8,16,413	10,284	...
1915-16 ... ..	45,81,737	23,78,968	21,55,771	2,48,602	19,07,169	20,83,068	-1,75,899	
1914-15 ... ..	48,83,693	26,52,077	22,30,755	2,47,697	20,83,058	...	...	
Increase or decrease ... ..	-3,51,095	-1,76,111	-1,74,984	905	-1,75,899	...	-1,75,899	

13-A. The following statement shows the rate of expenditure on agricultural works per acre of area irrigated after excluding the cost of the surveys for definite project:—

#### STATEMENT E.

Total area irrigated by all classes of works.	Total working expenses and maintenance for canals.	Rate of working expenses per acre of area irrigated. (col. 2÷col. 1.)	Expenditure on agricultural works (excluding the cost of surveys for special projects).	Rate of expenditure on agricultural works per acre of area irrigated. (col. 4÷col. 1.)	Total working expenses per acre of area irrigated including expenditure on agricultural works. (col. 3+5.)
1	2	3	4	5	6
Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
1,550,753	14,95,655	0.96	8,80,311	0.57	1.53



The total working expenses, including expenditure on agricultural works, comes to Rs. 1.53 per acre of total area irrigated, compared with Rs. 1.40 per acre of area irrigated in the previous year and Rs. 1.58 per acre of the average area irrigated during the past three years.

14. There were 1,387 miles of main canals and 1,974 of branch canals—total 3,361 miles—in operation during the year, against the previous year's total mileage of 3,339 (Main canals 1,411 miles and branch canals 1,928 miles). The total length of river embankment was 533 miles against 530 of the last year. The decrease and increase in the mileage is explained at the bottom of table VI accompanying this report.

15. The areas of the principal crops grown during the year were :—

#### STATEMENT F.

Crops.	1915-16.			Average for three previous years.	1914-15.	Increase or decrease as compared with average.	Increase or decrease as compared with 1914-15.	
	Lift.	Flow.	Total.					
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Kharif ...	Rice ...	197	687,876	688,073	678,777	699,524	14,296	— 11,451
	Juari ...	106,051	168,278	274,324	380,289	362,655	— 105,965	— 68,531
	Bajri ...	39,842	113,664	153,506	149,537	162,311	3,969	— 8,805
	Cotton ...	320	219	439	1,866	1,682	— 1,427	— 1,243
	Other crops ...	6,666	27,887	34,553	70,918	76,830	— 36,965	— 42,277
Total ...	152,976	997,919	1,150,895	1,276,387	1,308,202	— 125,492	— 152,307	
Rabi ...	Wheat ...	12,536	219,478	232,014	228,869	295,028	3,145	— 63,014
	Barley ...	698	10,655	11,353	12,421	16,285	— 1,068	— 4,932
	Oil-seeds ...	6,943	126,775	133,718	175,853	254,978	— 42,185	— 121,255
	Other crops ...	1,492	331,917	333,409	271,748	318,924	61,661	14,485
	Total ...	21,669	688,825	710,494	688,891	885,210	21,608	— 174,716
GRAND TOTAL ...	174,645	1,686,744	1,861,389	1,965,278	2,193,412	— 103,889	— 327,023	

As compared with the last year and the average of the previous triennium, there was a decrease of 152,307 and 125,492 acres, respectively, under kharif, and a decrease of 174,716 acres and an increase of 21,603 acres, respectively, under rabi, resulting in a net decrease of 327,023 and 103,889 acres, respectively.

16. The proportions of kharif and rabi, of the total area irrigated in the Division, were 62 and 38 against 60 and 40 of the last year and against 66 and 34 of the past triennium. The highest percentage, viz., 84 of kharif, was in the Karachi Canals District and the lowest 55 was in the Begari Canals District, while the Shikarpur, the Ghar and the Western Nara had, respectively, 60, 61 and 59 per cent. The Karachi Canals, the Ghar Canals and the Western Nara District had, as usual, the largest rice areas, with 202,834, 198,361 and 153,583 acres, respectively, out of the total rice cultivation of the Division of 688,073. The largest areas under juari were in the Begari Canals and the Shikarpur Canals Districts, viz., 113,820 and 68,245 acres, while the largest under bajri, 124,992 acres, was in the Begari Canals District and under cotton, 269 acres, in the Shikarpur Canals District. Of the rabi crops, the wheat was largely grown in the Begari, the Western Nara, the Shikarpur and the Ghar Canals Districts, and oil seeds in the Western Nara, the Begari and the Ghar Canals Districts.

Nine per cent. of the whole area was watered by lift and 91 per cent. by flow against 9 and 91, and 10 and 90, respectively, during the previous year and the past triennium.

#### DUTIES AND DELTAS OF CANALS.

17. The duties and deltas of canals in this division show the usual fluctuations of values.

Duties and delta of canals.

The duty and delta for the year were 113 and 4.8, respectively, as compared with 83 and 4.4, respectively, of the previous year. The increase is due to the canal having flowed for 273 days as against 183 in the previous year and also to the increase in rabi cultivation. The increase in the delta being due to a better and more prolonged supply.

**Desert Canal.**  
The duty and delta were 78 and 4.2, respectively, as compared with 61 and 3.8, respectively, of the previous year. The increase in duty and delta are due to the same causes as mentioned for the Desert Canal.

**Unharwah.**  
The duty and delta were 93 and 4.3, respectively, as compared with 96 and 4.3 of the previous year. The decrease in the duty is due to the increase of rice cultivation on the Begari and the big decrease in other dry crops cultivation. The delta remains the same for the reason that notwithstanding the above facts there was an increase of 18,496 acres under rabi.

**Begari Canal.**  
The duties and deltas in the canals in Rohri, the Chitti and the Gorang show an improvement over those obtained in the previous year. This was due to full advantage having been taken of the supply available. The decrease in the duty and the increase in the delta in case of the Sind Canal and Rajib Canal are attributed to the increase of rice cultivation.

**Canals in Shikarpur District.**  
On the Mahiwah there is a slight improvement in the duty over that of the previous year though the delta remains the same.

**Sukkur Canal.**  
The kharif and rabi duties were 35 and 92, as compared with 36 and 179, respectively, of the previous year, and the deltas were 6.5 and 1.0 as compared with 6.1 and 2.0, respectively, of the previous year. The decrease in delta for rabi is due to very poor inundation, the canal having flowed for only 45 days against 181 days of the previous year.

**Ghar Canal.**  
The duty and delta for the year were 86 and 3.8, as compared with 98 and 3.9, respectively, of the previous year. The decrease in the duty is due to the higher lands remaining uncultivated owing to low inundation.

**Canals in the Western Nara District.**  
The duties of all the canals, except the Western Nara and the canals north of Kotri do not compare favourably with those of last year, which is attributed to poor inundation. The delta in the other canals, except the Phitto and the Wahurwah, is better owing to full advantage having been taken of the supply available. The high delta in the Phitto canal is due to the canal having been allowed to flow for a longer period than that of the previous year and in case of the Wahurwah it is unfavourable because at about the end of the season the old mouth of the canal from the river was opened which brought in supply much in excess of requirements.

The duty of 41 and delta 4.0 of the canals north of Kotri during the year under report compare very favourably with 13 and 16.0 of the previous year, because the average discharge of 251 cusecs was used for 82 days as compared with 1,034 cusecs for 104 days of the previous year.

During the year under report the duties and deltas are satisfactory. The water-supply was generally insufficient except in the upper reaches and rotations and other aids were resorted to, which had good effect, consequently there is an increase in the areas irrigated under kharif from 177,517 of the previous year to 180,867. The inundation and the rain fall being both poor, there is a decrease in the areas irrigated under rabi from 185,194 to 118,522 during the year under report.

The duties obtained on the Sattah, the Kalri, the Pinyari and the Baghar Canals in the Karachi District. Canals were 14, 32, 30 and 8, respectively, as compared with 19, 31, 27 and 7, respectively, of the previous year and the deltas were 15.3, 6.7, 7.1 and 26.7 as compared with 11.3, 6.9, 7.9 and 30.6, respectively, of the previous year. The increases in the duty and decrease in the deltas in all the canals except the Baghar and the Sattah are due to full advantage having been taken of the supply available. The decrease in the duty and increase in the delta in the Sattah are due to a comparatively smaller area having been cultivated. The large delta on the Baghar is attributed, as also stated in previous reports, to a large quantity of water running to waste into the sea.

18. On "Major Works" the figures were 31.72 per cent. and Rs. 0.72 per acre, as compared with 34.09 per cent. and Rs. 0.75 per acre in the previous year.

Under "Minor Works" the figures were 32.60 per cent. and Rs. 1.26 per acre, as compared with 22.23 per cent. and Rs. 0.81 per acre, last year.

19. The total value of crops grown on the irrigated area of 1,861,389 acres was estimated by the Revenue authorities at Rs. 4,68,97,856 which gives an average of Rs. 25 per acre.

20. The agricultural and other conditions of the year under review, as affecting the areas irrigated by the principal works, such as the nature of the seasons, the state of demand and supply, etc., are given in the following paragraph.

21. The principal irrigation works in this Division are the Desert Canal, the Unharwah, the Begari Canal, the Mahiwah, the Sukkur Canal, the Ghar and the Sattah.

The first four are major works and the remaining three minor works for which both capital and revenue accounts are kept.

There are also other irrigation systems, viz., the Sind Canal, the Western Nara, the Baghar, the Kalri and the Pinyari. These, however, with a number of small canals taking off direct from the river, are classed as works for which only revenue accounts are kept. All the canals are inundation canals.

The inundation of 1915, as already mentioned, was on the whole an exceptionally poor one and resembled the inundations for the years 1898, 1902 and 1907, as being one of the lowest on record.

In Sind, the river is not considered to have reached a fair irrigating level until the reading on the gauge at Bukkur is 13 feet and that on the gauge at Kotri 17 feet. During the year under review the reading of 12 feet and over were recorded on Bukkur gauge for 5 days only and the river never reached the fair irrigating level of 13 feet, as compared with a period of 45 days in the previous year, 31 days in the average of 3 years and 40 days the average of the previous ten years. The fair irrigating level of 17 feet on the Kotri gauge was recorded on 20th May but the river soon began to fall and with some fluctuations fell to 14.0 on 3rd July 1915. After this the river began to rise fairly steadily until 19.6 was recorded on 31st August. Readings of 17 feet and over were recorded for 66 days as against 100 days in the previous year and 75 days and 76 days, respectively, in the previous three and ten years. The rainfall during the year was scanty and the kharif crops therefore got little help from this source. Rotations and other measures were, however, resorted to, which considerably improved matters and averted what would otherwise have been a disastrous agricultural year.

The areas irrigated in the whole Division under different crops are given in Statement F, paragraph 15, above. There was a decrease of 327,023 acres as compared with 1914-15 and of 103,889 acres when compared with the average of the previous three years.

22. The following paragraphs give details of different works or group of works and a comparison of the agricultural and financial results of the year 1915-16 with the previous year and the average of the previous triennium, and the main causes of any important differences in results.

## I.—MAJOR WORKS.

### PRODUCTIVE WORKS.

#### A.—Desert Canal.

Capital. 23. No expenditure was incurred under this head during the year under report.

A sum of Rs. 3,318 was spent during the year on (1) constructing syces' quarters attached to Public Works Inspection Bungalow at Kashmor, (2) constructing baulk shed at 19th mile of the Desert Canal, (3) constructing Telegraph office and Signaller's quarters at Kashmor and (4) providing iron barred doors, etc., in the Executive Engineer's office at Jacobabad. This amount includes the sum of Rs. 2,810 which was realized from sale of bungalow for the Assistant Engineer at Jacobabad.

Maintenance and Repairs. The main canal and its branches were maintained in good order at a cost of Rs. 65,389 including Work establishment.

Irrigation. The total area irrigated during the year under report was 201,160 acres out of which 101,264 acres were under kharif and 99,896 acres under rabi, dubari included, against 186,300 acres being the average of the previous triennium and 213,650 irrigated in the previous year. The decrease in area as compared with the last year is chiefly due to the increase in rice cultivation.

Financial results. The gross revenue from all sources amounted to Rs. 3,95,022 compared with Rs. 3,77,265 of the last year and Rs. 3,51,688 the average of the previous triennium. Deducting working expenses Rs. 1,12,044, the net revenue during the year was Rs. 2,82,978 or 10.40 per cent. on the capital outlay to end of the year as compared with 8.85 per cent. of the last year and 7.44 per cent. the average of the last triennium.

General remarks. The remissions granted during the year amounted to Rs. 13,433 against Rs. 45,816 remitted last year and Rs. 40,483 the average remissions of the past triennium. The year's remissions were due to adverse winds and insects, &c.

The principal crops grown were—

					Acres.
Rice	...	...	...	...	20,258
Juari	...	...	...	...	80,147
Bajri	...	...	...	...	47,605
Wheat	...	...	...	...	37,653
Oil seeds	...	...	...	...	25,712

and the value of the whole outturn is estimated at Rs. 60,71,459 or Rs. 30 per acre.

*B.—Unharwah.*

Capital.

24. No expenditure was incurred under this head during the year under report.

Extensions and Improvements.

A sum of Rs. 3,559 was spent under this head on (1) constructing daroga's landhi at Saifal, 17th mile, Unharwah, (2) a stall and syce's room at Saifal mouth, 17th mile, Unharwah, (3) a well at Saifal mouth, 17th mile, Unharwah, and (4) a daroga's landhi at Chook, 25th mile, Unharwah.

Maintenance and Repairs.

The main canal and its branches were maintained in good order at a cost of Rs. 25,552 including Work establishment

Irrigation.

The total area cultivated during the year was 80,136 out of which 44,829 acres were under kharif and 35,307 acres under rabi, as compared with 73,069 acres of the average of the previous triennium and 78,409 acres of the past year. This is due to the very satisfactory working of the canal during the abkalani of 1915.

Financial results.

The gross revenue amounted to Rs. 1,78,222 compared with Rs. 1,68,118 of the last year and Rs. 1,57,928 the average of the previous triennium. Deducting working expenses, Rs. 51,037, the net revenue during the year was Rs. 1,27,185 or 16.12 per cent. on the capital outlay to end of the year as compared with 14.15 per cent of the last year and 13.94 per cent. of the average of the previous triennium.

General remarks.

The remissions granted amounted to Rs. 2,285 against Rs. 12,242 of the previous year and Rs. 9,377 the average of the past three years. The decrease in remissions is due to absence of any disease and consequent good crops.

The principal crops grown were:—

	Acres.
Rice	1,771
Juari	6,698
Bajri	35,117
Wheat	16,877
Oil seeds	4,631

The value of the outturn of the crops grown during the year is estimated by the Revenue authorities at Rs. 27,53,580 or Rs. 34 per acre.

*C.—Begari Canal.*

Capital.

25. A sum of Rs. 497 was spent under this head during the year under report on works in connection with the Choi Branch Project such as water-courses, branch water-courses and land compensation.

Extensions and Improvements.

During the year a sum of Rs. 2,360 was spent under this head on (1) providing taki bricks and bench mark stones along Begari Canal and branches in Khairo Garhi Sub-division, (2) providing taki bricks for various distributaries *ex* Choi Branch, (3) making additions and alterations to Sonwah Head Regulator, (4) constructing forest sluice at mile 3-0 of Choi Branch, (5) constructing a Telegraph office and signaller's quarters at Choi (6th mile regulator, Begari Canal), (6) constructing daroga's landhi at Channa (29th mile, Begari Canal), and on other small works.

Maintenance and Repairs.

The main canal and branches were maintained in good order at a cost of Rs. 1,03,633 including work establishment against the sum of of Rs. 1,04,669 spent during the previous year.

The total are cultivated during the year was 309,048 acres out of which 181,119 acres were under kharif and 127,929 acres under rabi, as compared with 251,577 acres the average of the previous triennium and with 312,174 acres of the previous year. The comparison shows a decrease of 3,125 acres over the cultivation of the previous year which is due to the extension of rice cultivation. There is however an increase of 57,472 acres over the average cultivation of the past three years.

The gross revenue of the year amounted to Rs. 6,26,870 compared with Rs. 6,28,521 of the last year and Rs. 4,83,076 the average of the previous triennium. Deducting working expenses Rs. 1,85,630 and share due to old irrigation Rs. 24,854 the net revenue during the year due to improvements was Rs. 4,16,386 or 16.99 per cent. on the capital outlay to end of the year as compared with 17.38 per cent. in last year and 7.89 per cent. the average of the previous triennium.

The remissions during the year amounted to Rs. 8,250 against Rs. 28,305 of the previous year and Rs. 47,459 the average of the previous triennium. The remissions this year are less than those of the previous year owing to absence of floods, etc.

The principal crops grown were—

	Acres.
Rice	57,514
Juari	76,644
Bajri	39,984
Wheat	25,978
Oil seeds	31,265

The value of the whole outturn of the crops grown is estimated at Rs. 75,41,667 or Rs. 25 per acre.

#### D.—Mahiwal.

26. No expenditure was incurred under this head during the year.

The sum of Rs. 4,162 was spent during the year on constructing rotation regulators on Deharwah and Kander III Branch, etc.

The canal and its branches were maintained in good order at a cost of Rs. 53,892 including work establishment.

The total area irrigated was 56,961 acres of which 36,022 acres were under kharif and 20,939 acres under rabi. When compared with 74,621 of the previous year and 67,724 acres of the previous triennium it shows a decrease of cultivation owing to deficiency of water owing to poor inundation.

The gross revenue amounted to Rs. 1,38,453 compared with Rs. 1,80,643 of the last year and Rs. 1,68,306 the average of the previous triennium. Deducting working expenses Rs. 75,726 and share due to old irrigation Rs. 89,217 the net revenue during the year due to improvements is Rs. —26,490.

The remissions granted amounted to Rs. 579 of which Rs. 459 were on account of kharif and Rs. 120 on account of rabi.

The principal crops grown were—

	Acres.
Juari	17,784
Bajri	10,248
Rice	7,063
Wheat	15,539
Oil seeds	592

The estimated value of outturn was Rs. 11,43,533 or Rs. 20 per acre.

## II.—MINOR WORKS AND NAVIGATION.

### A.—WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.

#### 1.—Sukkur Canal.

Capital. 27. No expenditure was incurred under this head during the year.

Extensions and Improvements. No expenditure was also incurred under this head.

Maintenance and Repairs. The main canal and its branches were maintained in good order at a cost of Rs. 70,414, including "Work establishment" as compared with Rs. 56,643 in the previous year.

Irrigation. The total cultivation was 105,390 acres, of which 60,148 acres were under kharif and 45,242 were under rabi. The total cultivated area, compared with the average of the previous triennium of 99,492 acres and of the previous year of 114,820 acres, was more by 5,898 acres and less by 9,430 acres, respectively. The decrease in cultivation as compared with the previous year is due to the poor inundation.

Financial results. The gross revenue realized during the year under report amounted to Rs. 2,66,479 as compared with Rs. 2,85,606 of the last year and Rs. 2,46,538 the average of the previous triennium. Deducting the working expenses Rs. 1,09,521 and share due to the old irrigation Rs. 71,444, the net revenue during the year due to improvements was 85,514, giving a return of 6.00 per cent. on the capital outlay against 8.58 of the last year and 6.57 the average of the previous triennium. The net revenue due to improvements compared with the previous year and with the average of the previous three years, was less by Rs. 36,863 and Rs. 8,127 respectively. The decrease in net revenue is due to the poor inundation.

General remarks. The remissions granted during the year amounted to Rs. 3,588 against Rs. 5,237 in the previous year.

The principal crops grown were:—

			Acre.
Rice	...	...	40,101
Juari	...	...	16,521
Wheat	...	...	20,727

The estimated value of the whole outturn was Rs. 20,09,610 or Rs. 19 per acre.

#### 2.—Ghar Canal.

Capital. 28. No expenditure was incurred during the year.

Extensions and Improvements. A sum of Rs. 1,984 was expended under this head during the year, of which Rs. 661 were spent on constructing a well in the compound of the Inspection Bungalow at Naudero and the rest on some other petty works.

Maintenance and Repairs. The total expenditure during the year was Rs. 1,47,077 against Rs. 97,199 of the previous year including "Work establishment." The increase in expenditure is due to excavating a new cut to Fordwah.

The total cultivation was 299,316 acres, of which 186,959 acres were under kharif and 112,357 under rabi, against 389,572 acres in the previous year and 372,188 the average of the previous triennium. This shows 90,256 acres less than the previous year and 72,872 acres less than the average of the past triennium. The decrease is due to the poor inundation.

The gross revenue amounted to Rs. 8,68,284 compared with Rs. 10,19,108 of the last year and Rs. 10,02,458 the average of the previous triennium. Deducting working expenses, Rs. 2,47,805 and share due to old irrigation Rs. 1,16,671, the net revenue during the year due to improvements was Rs. 5,03,808, which represents a return of 86.97 per cent. on the capital outlay against 122.97 per cent. of the last year and 117.25 per cent. the average of the previous three years.

The remissions granted during the year amounted to Rs. 17,541, both under kharif and rabi. The principal crops grown were—

	Acres.
Rice	1,58,220
Juari	24,183
Wheat	28,908
Oil-seeds	19,173

The estimated value of the outturn was Rs. 74,46,813 or Rs. 25 per acre.

### 3.—Sattah Canal.

Capital. -29. No expenditure was incurred under this head during the year under report.

Extensions and Improvements. Rs. 110 were spent on this head on constructing a sluice over zamindari karia *ex* Sattah canal.

Maintenance and Repairs. A sum of Rs. 12,151 was spent against this head including "Work establishment."

The total area irrigated including "dubari" in 1915-16 was 10,963 acres, of which 10,455 were under kharif and 508 acres under rabi. The decrease in the total cultivation as compared with the average of previous triennium of 15,035 is 4,072 acres due to the abnormally low inundation of the year. The wastage of water in low lands has been curtailed by the reduction of karia sluices in the first 12 miles. Some deficiency was still experienced in the lower reaches and in its branch, the Rajwah, but this was inevitable with the fluctuating supply available at the canal head.

The gross revenue amounted to Rs. 21,599 compared with Rs. 27,878 of the last year and Rs. 25,268 the average of the past triennium. Deducting working expenses Rs. 16,145 and share due to old irrigation Rs. 6,927, the net revenue during the year due to improvements was Rs. 1,473 or .82 per cent. on the capital outlay against 3.63 per cent. of the last year and 2.43 per cent. the average of previous three years.

General remarks. The remissions during the year amounted to Rs. 62 under kharif against Rs. 47 in the previous year. The principal crops grown were—

	Acres.
Rice	9,281
Bajri	956

and the estimated value of the outturn was Rs. 3,51,400 or Rs. 32 per acre.



B.—WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.

1.—Canals in the Shikarpur Canals District.

30. The principal canals are the Sind Canal, the Rajib, the Chitti and the Garang on the right bank of the river and the canals in the Rohri division on the left bank.

The sum of Rs. 30,946 was spent during the year on (1) raising and strengthening the left bank of Rajib canal, (2) taking over zamindari karia Mirwah *ex* tail of Sind Canal and remodelling it, (3) constructing Public Works Department Inspection Bungalow at Pano Akil, and (4) additions and alterations to the head regulator over Colonel Fife's Channel and a number of minor works.

**Extensions and Improvements.** The expenditure incurred under this head was Rs. 1,21,239 against Rs. 1,11,151, including "Work establishment" in the previous year.

**Maintenance and Repairs.** The total area irrigated under this head was 176,084 acres, of which 105,973 acres were under kharif and 70,111 acres under rabi. When compared with the average of the previous triennium it shows an increase of 8,468 acres. It shows a decrease of 26,063 acres as compared with last year and is due to the poor inundation of the year under report.

**Irrigation.** The total canal revenue realized was Rs. 5,15,917 and maintenance and revenue collection charges Rs. 1,61,138, which amounts to 31.2 per cent. of the revenue and Rs. 1.0, per acre of the area irrigated, excluding dubari. The corresponding figures for the previous triennium were 34.4 per cent. and 1.0, respectively. As compared with the last year and the average of the previous triennium, the canal revenue was less by Rs. 54,337 and more by Rs. 43,409, respectively, and the maintenance and revenue collection charges were more by Rs. 4,735 and 2,672, respectively, than the last year and the average of the previous triennium, respectively.

**Financial results.** The remissions granted amounted to Rs. 2,760 against Rs. 2,579 for the previous year.

**General remarks.**

The principal crops grown were—

	Acres.
Rice ... ..	45,414
Juari ... ..	48,172
Wheat ... ..	32,817

and the estimated value of the whole outturn was Rs. 33,02,752 or Rs. 19 per acre.

2.—Canals in the Western Nara District.

31. The district comprises the following main canals which take off direct from the river:—

The Western Nara with its two feeders (the New Feeder and the Pritohard Canal), the Marvi, the Phitta, the Chario Wahur with the Aral and the Dunstar, the Dadu Canals and the canals north of Kotri.

The Munchar Lake is fed by the Aral, Dunstar, Western Nara and rain-water from the hills, and again drained off for cultivation through the Aral and the Dunstar when the river falls.

A sum of Rs. 29,952 was spent under this head on (1) improvements to Dhamrao Canal *ex* Western Nara, (2) constructing head regulators over the Phitta and the Chario Wahur Canals and on some other small works.

**Extensions and Improvements.**

The total expenditure under this head, including special repairs, amounted to Rs. 1,65,883 and was incurred on ordinary clearance of canals and special clearance of excavating a cut for Phitta Canal from mile 4/7 to 9/0 and, (2) on completing the special repairs of the previous year.

The total area irrigated was 362,437 acres, of which 213,298 acres were under kharif and 149,139 acres under rabi, as compared with 512,469 acres of the last year and 455,267 acres the average of the past triennium. The comparison shows a decrease, which is due to exceptionally low inundation and scanty rainfall during the year.

The total canal revenue was Rs. 9,75,454 as compared with Rs. 10,78,612 the average of the past three years. The revenue and collection charges during the year were Rs. 2,51,782 being 25.8 per cent. of the revenue and Rs. 0.8 per acre of the area irrigated excluding dubari, the average corresponding figures of the previous triennium being Rs. 30.3 and Rs. 0.9, respectively.

The remissions granted during the year amounted to Rs. 40,265 against Rs. 2,45,197. The remissions this year are less owing to absence of floods, &c. The principal crops grown were—

	Acres.
Rice	1,52,487
Juari	49,779
Wheat	46,457
Oil-seeds...	30,556

and the estimated value of the outturn was Rs. 95,58,514 or Rs. 26 per acre.

### 3.—Canals in the Karachi Canals District.

32. The principal canals are the Kalri, the Baghar and the Pinyari.

The expenditure under this head was Rs. 13,575 and was spent on (1) constructing outhouses to 1st class Inspection Bungalow at Mirpur Sakro, (2) providing drainage channel for deh Karampur and Arore, and some other small works.

The expenditure incurred under this head was Rs. 1,52,400 including "Work establishment" against Rs. 1,82,390 of the last year.

The total area irrigated was 227,081 acres, of which 190,237 acres were under kharif and 36,844 under rabi, as compared with 2,34,153 of the previous year and 250,464 the average of the previous triennium. The decrease of 23,383 acres as compared with the average of the previous triennium is due to low inundation and large areas of rabi having remained unflooded.

The total canal revenue realized was Rs. 4,16,796 and maintenance and revenue charges amounted to Rs. 2,00,927 which amounts to 48.2 per cent. of the revenue and 0.9 per acre on the area irrigated excluding dubari, the corresponding figures for the previous year and the average of the previous triennium being 62.2 per cent. and 1.1 per acre and 60.6 per cent. and 1.0 per acre, respectively. The comparison of the revenue for the year under report with Rs. 3,61,744 the average of the previous triennium shows an increase of Rs. 55,052 which is chiefly due to the decrease in the maintenance and revenue charges as compared with the

average charges of the previous triennium of Rs. 2,17,410 and to less remissions granted.

The remissions amounted to Rs. 15,603 against Rs. 54,630 of the last year.  
 General remarks. The principal crops grown were—rice, barley and oil-seeds.

**C.—WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE  
 ACCOUNTS ARE KEPT.**

33. The principal bunds in this Division on the right bank of the river are the Kashmor, the Sukkur-Begari, the Ghar, the Nara, the bunds north of Kōtri and the right bank bunds in the Karachi Canals District; and on the left bank the Kassimpur bund in the Shikarpur Canals District and the left bank bunds in the Karachi Canals District.

The sum of Rs. 2,08,483 was spent during the year under this head. The principal works carried out were (1) constructing a sluice in the Choi Loop near mile 28 of the Sukkur-Begari Bund, (2) raising to full bund section the right bank of Colonel Fife's channel along its length between the front Sukkur-Begari Bund and Adurtakio Loop, (3) improvements to Garkanowah and on other small works in the Shikarpur Canals District, (4) extension of the Western Nara Bunds from mile 69/1 to 80/6, (5) linking up Butho Manjhand Bunds, (6) extension of the Western Nara Bunds from Phittawah to Sehwan and on other small works in the Western Nara District, (7) Public Works Department Inspection bungalow at Gullel and Gungri, and (8) raising and strengthening Sonda Hilaya and Baghar Uchito Bunds in the Karachi Canals District.

The expenditure of maintenance and repairs and special repairs to river embankments, including establishment and tools and plant charges, was Rs. 4,86,585 against Rs. 5,22,385 of the last year.  
 Maintenance and Repairs.

The cultivation during 1915-16 on the canals *ex* Kashmor Bund, on the bunds in the Shikarpur Canals, the Ghar Canals, the Western Nara and the Karachi Canals Districts was 4,776, 11,088, 657, 2,765 and 13,527 acres, respectively, and the revenue Rs. 11,830, 23,776, 2,635, 9,077 and 21,402, respectively.  
 Irrigation and Financial results.

The most important works classed under special repairs were (1) excavating Karia Khanwah in the Begari Canals District, (2) constructing bund across dhoros above Sukkur in connection with training of the River Indus, (3) constructing loops to Sukkur-Begari Bund at miles 4/6 to 7/4 (Garang Loop), at miles 16/4 to 19/0 (1913 Loop), at miles 7/2 to 13/4 (Surfu Loop) in the Shikarpur Canals District, (4) closing breaches in the Thahimani Loop of 1914, (5) constructing a loop for closing breaches in mile 0/2 of Panah-Baghar Bund, (6) new loop to the Mulchand-Shahbandar Bund from mile 31/2 to 32/4 near Belo, and (7) constructing a loop behind miles 9/4 to 10/3 of the Kokawari Bund in the Karachi Canals District.  
 General remarks.

A sum of Rs. 13,721 was spent on the Mathematical Instrument Depôt on establishment and tools and plant.

A total sum of Rs. 1,65,510 was spent by the Chief Engineer, Indus River Commission, of which, Rs. 31,441 were spent on making surveys on the Indus; Rs. 623 on surveying and demarcating the boundary line of the central passage of the River Indus and on some other small works of extensions and improvements; Rs. 23,105 on maintenance and repairs, of which, Rs. 22,208 were spent on maintenance of steamers, gauges and snagging the River Indus and small amount of Rs. 897 on maintenance of other works; Rs. 1,04,454 under regular establishment; and Rs. 5,887 under tools and plant.

34. The expenditure on, and receipts from gardens during the year are compared below with the three previous years' expenditure and receipts ;—

Years.	Expenditure on maintenance of gardens during the year.	Receipts during the year.
1912-13 ...	Rs. 3,816	Rs. 2,043
1913-14 ...	„ 3,712	„ 2,437
1914-15 ...	„ 3,843	„ 1,608
1915-16 ...	„ 4,309	„ 1,791

35. The total number of trees planted during the year in this Division was 130,058, of which 71,800 were babul and the rest principally talli and nim. The total number alive at the end of the year was 588,971, including babul.

<sup>G.C.P.</sup> The number of young trees transferred from nurseries for plantation on canal banks and bunds was 230,882, including babul.

36. The Division was in charge of Mr. F. St. J. Gebbie for 1 month and 19 days, while Mr. B. Krishnarao was in charge for the remaining 10 months and 11 days.

The following officers were in charge of executive districts:—

District.	Executive Engineer.	M.	D.
Karachi Canals ...	Mr. C. M. Lane ...	12	0
Western Nara ...	Mr. B. E. Vachha ...	0	2
	„ E. P. Watson... ..	4	9
	„ A. B. DeSouza ...	7	20
Ghar Canals ...	Mr. M. A. Mirza ...	1	9
	„ W. R. Philpot-Brookes ...	10	22
Shikarpur Canals ...	Mr. N. B. Baxter ...	12	0
Begari Canals ...	Mr. A. Gordon ...	12	0

V. M. GRIFFITHS,  
Superintending Engineer, Indus Right Bank Division.

No. 316 of 1917.

PUBLIC WORKS DEPARTMENT.

Camp Sindhri, 25th January 1917.

From

R. T. HARRISON, Esquire,  
Superintending Engineer,  
Indus Left Bank Division.

To

THE CHIEF ENGINEER IN SIND.

SUBJECT.—*Annual Irrigation Revenue Report for 1915-16.*

SIR,

With reference to Government Resolution No. W.I.-5362, dated the 7th May 1915, I have the honour to submit, for favour of disposal, the Irrigation Revenue Report for Sind for the year 1915-16.

2. The diagram showing the hydrograph of the River Indus mentioned in the report and the Index Map of Sind may please be attached in your office.

I have the honour to be,

Sir,

Your most obedient servant,

R. T. HARRISON,  
Superintending Engineer, Indus Left Bank Division.

Accompaniments :—

As per index attached.

# ANNUAL IRRIGATION REVENUE REPORT, INDUS LEFT BANK DIVISION, SIND. 1915-16.

The inundation of 1915 was on the whole an exceptionally low one and resembled the inundation for the years 1898, 1902 and 1907 as being one of the lowest on record.

The diagram accompanying this report compares the inundation of 1915 with the two previous years and with the 10 years' average.

The following table shows the principal features of the year as compared with those of previous years:—

	Average of 10 years including 1914.	Average of 3 years including 1914.	1914.	1915.
	Days.	Days.	Days.	Days.
<b>Gauges:—</b>				
Bukkur 10 feet and over ...	83	71	92	64
Do. 13 do. ...	40	31	45	...
Kotri 14 do. ...	123	117	136	168
Do. 17 do. ...	76	75	100	66
<b>Irrigation:—</b>		Acres.	Acres.	Acres.
Kharif ...	...	1,271,438	1,223,278	1,187,926
Rabi ...	...	231,624	297,866	298,344
<b>Total</b> ...	...	1,503,062	1,521,144	1,481,270
		Rs.	Rs.	Rs.
Gross revenue ...	...	37,53,923	37,35,936	41,52,253
Work g expenses ...	...	16,73,936	15,49,570	16,89,673
<b>Net revenue, neglecting simple interest</b> ...	...	20,79,987	21,86,366	24,62,580

Area of cultivation—Government and Jagir.

2. The gross assessed areas for the year are given in the subjoined Statement A:—

### STATEMENT A.

Year and class of crops.	MAJOR WORKS.	MINOR WORKS AND NAVIGATION.				Grand total.	
		Productive Works.	Works for which Capital and Revenue accounts are kept.	Works for which only Revenue accounts are kept.	Agricultural works.		Total.
							Acres.
1	2	3	4	5	6	7	
Average of 3 years including 1914-15.	Kharif ...	552,100	465,583	253,755	...	719,338	1,271,438
	Rabi ...	142,877	59,228	29,519	...	88,747	231,624
	<b>Total</b> ...	694,977	524,811	283,274	...	808,085	1,503,062
1914-15	Kharif ...	530,491	446,207	246,580	...	692,787	1,223,278
	Rabi ...	172,367	88,498	37,001	...	125,499	297,866
	<b>Total</b> ...	702,858	534,705	283,581	...	818,286	1,521,144
1915-16	Kharif ...	496,256	461,720	229,950	...	691,670	1,187,926
	Rabi ...	198,367	67,938	27,039	...	94,977	293,344
	<b>Total</b> ...	694,623	529,658	256,989	...	786,647	1,481,270
Increase or decrease as compared with average.	Kharif ...	-55,844	-3,863	-23,805	...	-27,668	-83,512
	Rabi ...	55,490	8,710	-2,480	...	6,230	61,720
	<b>Total</b> ...	-354	4,847	-26,285	...	-21,438	-21,792
Increase or decrease as compared with 1914-15.	Kharif ...	-34,235	15,513	-16,630	...	-1,117	-35,352
	Rabi ...	26,000	-20,560	-9,962	...	-30,522	-3,522
	<b>Total</b> ...	-8,235	-5,047	-26,592	...	-31,639	-39,874

The total cultivation shows decreases of 39,874 and 21,792 acres respectively as compared with that of the previous year and of the average of the

previous triennium. The area under kharif was less by 35,352 acres and 83,512 acres, respectively, while that under rabi was 4,522 acres less as compared with the previous year and 61,720 acres more than the average of the previous three years. The decrease in total cultivation is mainly due to a large decrease in cotton cultivation which is to be accounted for by the war and to Government order (Revenue Department) No. 1519, dated the 8th February 1915, discouraging cotton.

3. The area of "dubari" or twice-cropped land, which is not included in Statement A, was 35,183 acres, of which 9,067 acres were 'watered dubari' in the Thar and Parkar district. The 'dubari' figures for the previous year and the average of the previous triennium were 45,351 and 33,693 acres, while those of 'watered dubari' were 10,020 and 7,937 acres, respectively.

4. The net irrigation assessment for the year, including 'hakabo,' for Jagir lands is given in Statement B.  
Irrigation assessment—Government and Jagir.

## STATEMENT B.

Year and class of crops.	MAJOR WORKS.	MINOR WORKS AND NAVIGATION.				Grand total.
	Productive Works.	Works for which Capital and Revenue accounts are kept.	Works for which only Revenue accounts are kept.	Agricultural works.	Total.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Average of 3 years including 1914-15.	Kharif ... 16,30,040 Rabi ... 4,19,389 Total ... 20,49,429	11,85,214 1,17,605 12,53,019	6,22,449 80,360 7,02,809	... ... ...	17,57,663 1,98,165 19,55,828	38,87,703 6,17,554 44,05,257
1914-15 ...	Kharif ... 15,73,662 Rabi ... 5,12,155 Total ... 20,85,817	12,01,511 1,79,399 13,80,910	6,02,639 1,00,397 7,03,036	... ... ...	18,04,150 2,79,796 20,83,946	33,77,812 7,91,951 41,69,763
1915-16 ...	Kharif ... 14,62,214 Rabi ... 5,92,605 Total ... 20,55,019	12,88,839 1,88,476 14,27,315	5,97,494 66,370 6,63,864	... ... ...	18,86,333 2,04,846 20,91,179	33,48,547 7,97,651 41,46,198
Increase or decrease as compared with average.	Kharif ... -1,67,826 Rabi ... 1,73,416 Total ... 5,590	1,53,625 20,671 1,74,296	-24,955 -13,996 -38,945	... ... ...	1,28,670 6,681 1,35,351	-39,156 1,90,097 1,40,941
Increase or decrease as compared with 1914-15.	Kharif ... -1,11,448 Rabi ... 50,650 Total ... -30,798	87,328 -40,923 46,405	-5,145 -34,027 -39,172	... ... ...	82,163 -74,959 7,233	-29,268 5,700 -23,568

The net assessed revenue shows a decrease of Rs. 23,565 as compared with the previous year but is Rs. 1,40,941 more than the average of the previous triennium.

4-A. The area cultivated on 'spill' water was 1,453 acres as compared with the previous year's area of 10,178 acres and 5,141 acres the average area of the previous three years.  
Cultivation from spill.

5. The average net consolidated assessment per acre on Government land as compared with the previous year and the average of the previous three years is shown below :—  
Assessment rate per acre on Government land.

	Average of previous three years.	1915-16.	1914-15.
	Rs.	Rs.	Rs.
Major Works—Productive ...	3.02	3.03	3.04
Minor Works for which Capital and Revenue accounts are kept.	2.74	3.08	2.98
Minor Works for which only Revenue accounts are kept.	2.73	2.63	2.73
Average for all Works ...	2.88	3.01	2.97

G. The following Statement "C" shows the realizations under all heads and the balances outstanding at the end of the year:—

## STATEMENT C.

Years.	COLLECTIONS.				Balance outstanding.
	Government land and hakabo.	Miscellaneous.	Four per cent irrigation share of proceeds from sale of occupancy rights.	Total receipts.	
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
Average of past three years ... ..	35,63,912	76,694	1,13,317	37,53,923	2,00,077
1914-15 ... ..	35,55,974	61,230	1,18,732	37,35,936	3,30,678
1915-16 ... ..	39,61,490	68,790	1,21,973	41,52,253	76,833
Increase or decrease as compared with 1914-15 ...	4,05,516	7,560	3,241	4,16,317	-2,53,845
Increase or decrease as compared with average ...	3,97,578	-7,904	8,656	3,98,330	-1,23,244

The balance outstanding at the end of the year is Rs. 2,53,845 and Rs. 1,23,244 less than the previous year's balance and the average balance of the previous three years. This decrease in the outstanding balance is very satisfactory and is due to the recovery of the arrears of 1914-15 under suspension. The total outstanding balance at the end of the year on the Jamrao Canal, under both Government and Jaghir lands, was only Rs. 20,188 against Rs. 2,12,890 at the end of the last year and Rs. 97,751 the average outstanding balance of the three previous years.

7. The remissions granted during the year on Government land amounted to Rs. 84,419 against Rs. 1,11,628 remitted last year and Rs. 1,65,718 the average remissions of the previous three years. The remissions on the kharif crop amounted to Rs. 41,753 while that on the rabi crop was Rs. 42,666.

The following statement gives details of the causes of remissions and compares the result of the year under report with that of the previous year:—

## REMISSIONS.

Causes of remissions.	1915-16.	1914-15.	Difference.
1	2	3	4
	Rs.	Rs.	Rs.
Deficiency of water and drought ... ..	77,322	43,190	34,132
Difference between the rates of old and new settlements ... ..	4	34,528	-34,524
Floods and erosion ... ..	15	13,136	-13,121
Locusts ... ..	725	5,699	-4,974
Breaches of canals ... ..	346	4,391	-4,045
Blight or mahlo ... ..	300	4,106	-3,806
Insects or wire-worms ... ..	345	1,998	-1,653
Kalar soil ... ..	1,066	1,788	-722
Written off ... ..	1,553	1,381	172
Grants cancelled and arrears remitted ... ..	797	417	380
Frost ... ..	1,489	196	1,293
Other causes ... ..	457	798	-341
Total ... ..	84,419	1,11,628	-27,209



Remissions on Jaghir lands.

7-A. The remissions on Jaghir lands amounted to Rs. 345, of which Rs. 338, were on kharif and Rs. 7 on rabi.

8. The difference between the 'Hakabo' or water rate assessed on Jaghir cultivation and the assessment at full rates on these areas amounted to Rs. 3,47,741, which represents the loss of canal revenue during the year owing to the low rates charged to Jaghirdars.

Expenditure on maintenance and repairs and establishment charged to works.

9. The total charges during the year on account of maintenance and repairs amounted to Rs. 14,87,590 as shown below:—

	Ra.
Works ... ..	8,98,106
Establishment and Tools and Plant ...	3,65,848
Percentage charges for revenue collection ...	2,28,936
Total ...	14,87,590

Establishment charged to 'Works' amounted to Rs. 1,95,119 and is included in the expenditure on 'Works,' while the net expenditure on 'Works' (clearance and repairs) was Rs. 6,97,987. Compared with the previous year and with the average of the previous three years, the net expenditure on clearance and repairs shows, respectively, an increase of Rs. 19,630 and a decrease of Rs. 18,361, the charges on account of establishment and tools and plant, showing an increase of Rs. 79,359 and Rs. 40,930.

Expenditure on maintenance and repairs separately for canals and river embankments.

10. Of the total charges shown in the preceding paragraph, Rs. 14,41,518 were spent on canals and Rs. 46,072 on river embankments.

Outlay on new works.

11. The outlay of the year on new works was Rs. 4,35,082 as shown below:—

	Ra.
Major Works ... ..	{ Capital ... 2,77,035
	{ Revenue ... 69,690
Minor Works and Navigation—	
Works for which Capital and Revenue accounts are kept.	{ Capital ... ..
	{ Revenue ... 59,463
Works for which only Revenue accounts are kept ...	19,577
Agricultural works ... ..	9,317
Total ...	4,35,082

Under Major head—Capital—Rs. 2,17,299 represent the 'Works' expenditure, of which Rs. 1,30,978 were spent on the Jamrao Canal (Ghotki Flood Diversion Bund in the Shikarpur Canals District), Rs. 80,129 on works in the Eastern Nara District and Rs. 9,310 on the Dad Canal and the Ren Distributary *ex* Dad. The expenditure under Revenue account pertained mainly to Eastern Nara and Nasrat Canals Districts.

12. The regular establishment charges as shown below amounted to Rs. 4,16,117, which is Rs. 63,263 and Rs. 28,912 more than the previous year and the average of the previous three years:—

	Ra.	Percentage on outlay.
Executive Direction—	3,61,447	29.3
Superintending Engineer...	30,062	
Secretariat ... ..	24,608	
	54,670	4.4
Total ...	4,16,117	33.7

Financial results.

13. The general financial results of all the Irrigation Works in this Division are shown in the following Statement D:—

## STATEMENT D.

Class of works.	Gross revenue.	Working expenses.	Net revenue.	Simple interest.	Net profit 1915-16.	Net profit 1914-15.	Increase.	Decrease.
1	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Major Works—Productive ...	21,95,879	8,93,165	13,02,714	6,73,111	6,29,603	3,27,727	3,01,876	.....
Minor Works for which Capital and Revenue accounts are kept.	13,33,945	4,47,930	8,86,015	.....	8,86,015	8,59,771	26,244	.....
Total ...	35,29,824	13,41,095	21,88,729	6,73,111	15,15,618	11,87,498	3,28,120	.....
Works for which only Revenue accounts are kept.	6,22,097	2,93,189	3,28,908	.....	3,28,908	4,01,512	.....	— 72,604
Agricultural Works ...	332	55,369	— 55,057	.....	— 55,057	— 72,696	17,639	.....
1915-16 ...	41,52,253	16,89,673	24,62,580	6,73,111	17,69,469	15,16,314	2,73,155	.....
1914-15 ...	37,35,936	15,49,570	21,86,366	6,70,052	15,16,314	.....	.....	.....
Increase or decrease ...	4,16,317	— 1,40,103	— 2,76,214	— 3,059	2,73,155	.....	2,73,155	.....

13-A. The following statement shows the rate of expenditure on agricultural works per acre of area irrigated after excluding the cost of the surveys for definite projects:—

## STATEMENT E.

Total area irrigated by all classes of works.	Total working expenses and maintenance for canals.	Rate of working expenses per acre of area irrigated (column 2÷1).	Expenditure on agricultural works (excluding the cost of surveys for special projects).	Rate of expenditure on agricultural works per acre of area irrigated (column 4÷1).	Total working expenses per acre of area irrigated including expenditure on agricultural works (column 3+5).
1	2	3	4	5	6
Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
1,481,270	16,34,284	1.10	55,389	0.04	1.14

The total working expenses, including expenditure on agricultural works, comes to Rs. 1.14 per acre of total area irrigated, compared with Rs. 1.02 per acre of area irrigated in the previous year and Rs. 1.12 per acre of the average area irrigated during the past three years.

14. There were 1,021 miles of main canals and 2,970 miles of branch canals—total 3,991 miles—in operation during the year against the previous year's total mileage of 4,018 (main canals 1,019 miles and branch canals 2,999 miles). The increase and decrease in mileage is explained at the bottom of Table VI accompanying this report. The total length of river embankments was 371 miles against the previous year's mileage of 369. The increase of 2 miles is accounted for by the construction of four short bunds across certain dhoro near Laswah in the Nasrat Canals District.

Area of principal crops—Government and Jaghir.

15. The areas of the principal crops grown during the year were:—

## STATEMENT F.

Crops.	1915-16.			Average of previous 3 years.	1914-15.	Increase or decrease as compared with average.	Increase or decrease as compared with 1914-15.	
	Lift.	Flow.	Total.					
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Kharif	Rice ...	3,649	447,950	451,599	402,453	379,394	49,146	72,205
	Jowari ...	87,505	65,940	153,445	130,671	135,716	23,774	17,729
	Bajri ...	290,419	97,802	388,221	389,463	339,749	-1,249	48,472
	Cotton ...	82,886	72,444	154,830	308,418	323,749	-153,583	-168,919
	Other crops ...	19,307	20,525	39,832	40,095	44,355	-263	-4,523
Total ...	483,266	704,661	1,187,927	1,271,100	1,222,963	-83,173	-35,036	
Rabi	Wheat ...	38,082	175,657	213,739	136,304	163,192	83,435	50,547
	Barley ...	553	6,132	6,685	4,445	5,772	2,240	913
	Oil-seeds ...	2,052	44,879	46,931	74,885	104,735	-27,954	-57,804
	Other crops ...	4,094	57,080	61,174	55,545	69,338	5,629	-8,164
	Total ...	44,781	283,748	328,529	265,179	343,037	63,350	-14,508
GRAND TOTAL ...	528,047	988,409	1,516,456	1,536,279	1,566,000	-19,823	-49,544	

As compared with the last year and the average of the previous three years there was a decrease of 35,036 acres and 83,173 acres under kharif and a decrease of 14,508 acres and an increase of 63,350 acres under rabi, resulting in a net decrease of 49,544 acres and 19,823 acres, respectively. With the exception of cotton and 'other crops' under kharif and oilseeds and 'other crops' under rabi, all the crops show an increase as compared with last year; while compared with the previous three years, bajri, cotton, 'other crops kharif' and oilseeds show decreases and the rest increases. The large decrease in cotton crop and consequent increase in wheat crop is accounted for by the reasons already given in paragraph 2 of this report.

16. The proportions of kharif and rabi out of the total area irrigated in the division were the same as last year, *viz.*, 78 and 22. Percentage of kharif and rabi. The highest kharif percentage of 90 was in the Hyderabad Canals District and the lowest 51 was on the Jamrao Canal District, while the Nasrat Canals, Fuleli Canals and Eastern Nara Districts had, respectively, 89, 84 and 76 per cent. The Fuleli Canals and the Eastern Nara Districts had as usual the largest rice areas with 237,436 acres and 140,223 acres, respectively, out of the total rice cultivation of the division of 451,599 acres. The largest areas under bajri were in the Hyderabad and Fuleli Canals Districts, *viz.*, 156,928 and 74,387 acres. The largest area under jowari was, as usual, in the Nasrat Canals District, with 128,010 acres. Of the total area of 154,830 acres under cotton in the division, the area under this crop on the Jamrao was 66,608 acres and in the Hyderabad Canals District 48,266 acres.

Of the rabi crops, wheat was most largely grown, as last year, on the Jamrao and the Eastern Nara Districts, the Jamrao accounting for 118,092 acres and the Eastern Nara 48,710 acres out of a total for the whole division of 213,739 acres. The expansion of wheat cultivation on the Jamrao over that of the previous year was 71 per cent. The smallest area cultivated in wheat

was in the Hyderabad Canals District, *viz.* 7,405 acres. The areas under oilseeds were 25,008 acres in the Fuleli Canals District and 9,059 acres in the Nasrat Canals District out of the total for the division of 46,931 acres.

Out of the total area cultivated during the year 35 per cent. was watered by lift and 65 per cent. by flow against 36 and 64 per cent., respectively, during the previous year.

Duties and deltas of canals. 17. The duties and deltas of canals in the Division show the usual fluctuations of values.

The kharif duty and delta on the Jamrao were 62 and 5.9 as compared with 67 and 5.2 of the previous year. The rabi duty has risen from 50 to 90 and delta has fallen from 7.3 to 4. This increase in duty and decrease in the delta was due to the more economical use of the short supply available. The average discharge measured for 365 days, on which the canal was flowing, was 1,817 cusecs, and as the total area brought to maturity was 268,012 acres each cusec irrigated 145 acres against 120 acres in the previous year.

On the Dad Canal the duty and delta were 30 and 7.1, respectively, against 39 and 5.2 of the previous year. The decrease in duty and increase in delta is due to increase in the average discharge and decrease in the area cultivated.

On the Nasrat Canal the duty and delta were 49 and 4.4, respectively, against 52 and 4.7 in the previous year. The slight decrease in both the cases is due to increase in the average discharge and the decrease in the area cultivated.

On the Mithrao the kharif duty and delta were 49 and 6.9 against the previous year's figures of 49 and 7.5. The small fall in delta is due to the canal having flowed for only 168 days against 183 days in the previous year. The rabi duty and delta on this canal were 75 and 4.5 against 26 and 12.8 of the last year. The increase in duty and decrease in delta is due to the rabi cultivation being more and the discharge less.

On the Hiral Canal the kharif duty and delta were 62 and 5.9, which are nearly the same as the previous year's figures of 63 and 5.8. The rabi duty and delta were 102 and 2.8 against last year's figures of 42 and 8. The increase in duty and decrease in delta are partly due to the rabi cultivation being more and partly to less discharge owing to low inundation.

On the Thar Canal the duty and delta were 52 and 8.2 as compared with the previous year's figures of 45 and 8.6. The small increase in duty and small fall in delta are partly due to the cultivation being more and partly to less discharge owing to low inundation.

On the Khipro Canal the duty and delta of 74 and 5.6 compares favourably with the previous year's figures of 43 and 8.6. The increase in duty and decrease in delta are due to the cultivation being more and the discharge less than the previous year.

On the Fuleli the kharif duty and delta were 48 and 7.6 against the previous year's figures of 44 and 8.3, while the rabi duty and delta were 51 and 7.2 against the last year's figures of 52 and 7.0. The increase in duty and decrease in delta in kharif is due to the record cultivation on the canal and to less discharge and better distribution.

On the Hasanali there is no change, the duty and delta being the same as in the previous year, *viz.*, 30 and 10.1.

18. On "Major Works" the incidence of working expenses on assessed revenue and per acre irrigated were 44.87 per cent. and Rs. 1.30 per acre as compared with 40.79 per cent. and Rs. 1.17 per acre in the previous year.

Under "Minor Works" the figures were 33.89 per cent. and Re. 0.85 per acre as compared with 31.72 per cent. and Re. 0.76 per acre last year.

19. The total value of crops grown on the irrigated area of 1,516,456 acres was estimated by the Revenue authorities at Rs. 3,31,24,734, which gives an average of Rs. 22 per acre.

Value of each kind of crop irrigated.

20. The agricultural and other conditions of the year as affecting the areas irrigated by the principal works, the nature of seasons, the state of demand and supply are given in the following paragraph.

21. The principal irrigation works in the Division are the Eastern Nara System, the Jamrao, the Dad, the Nasrat, the Fuleli, the Hasanali, the Alibhar Kacheri, the Great Marak and the Sarfraz.

The Eastern Nara System comprises the Nara, Mithrao, Hiral, Thar and Khipro Canals; the first four are perennial, while the last flows only during the inundation. The Jamrao has also a perennial supply. The Eastern Nara System and the Jamrao are both fed by the Nara Supply Channel taking off the Indus at Robri. All the other canals are inundation canals, getting their supply direct from the river; the Fuleli, though not perennial, flows nearly throughout the year and gets a rabi supply.

The inundation of 1915, as already mentioned, was on the whole an exceptionally low one. A peculiar feature of the year was an unusually high river at the commencement of the season, giving promise of a very favourable inundation, which, however, was far from realized. What is termed the "fair irrigating level" of 13 feet at Bukkur was never attained throughout the whole abkalan, whereas it was attained and over 45 days in 1914, the average of the three previous years being 31 days. The highest reading on the gauge at Bukkur was 12.7 feet on 26th August. On the Kotri gauge "the fair irrigating level" of 17 feet and over was recorded for 66 days as against 100 days in the previous year and 75 days the average period of the previous three years. The highest reading on the gauge at Kotri was 19.6 feet on the 31st August. The rainfall for the year was scanty and gave but little help, therefore, to the kharif crops. Rotation and other measures were, however, resorted to, which, aided by the favourable set of the river at most canal mouths, considerably improved conditions and turned what otherwise must have proved a bad year for the inundation canals into a satisfactory one as far as this Division is concerned. The supply in the Jamrao Canal was on the whole good during the kharif and for the first two months of the rabi season, but at the end it proved inadequate for the record rabi area under cultivation. The extraordinary low state of the river was the cause of Bukkur going to as low as -1.0 ft. on the 6th February 1916 compared with the previous 10 years' average of -0.2 ft. In this most unfortunate occurrence the river once again showed its perversity, for this was the year of all others when, with its record area under rabi, it was most to be desired the river should behave normally.

The areas irrigated in the whole Division under different crops are given in Statement F, paragraph 15, above. The outstanding features of the year were (1) the exceptionally low inundation, (2) the exceptionally low state of the river throughout the cold weather, (3) the large decrease in the cotton cultivation, and (4) the record rabi cultivation on the Jamrao, notwithstanding the decrease in rabi cultivation for the whole Division as compared with 1914-15.

22. The following paragraphs give details of different works or groups of works and a comparison of the agricultural and financial results of the year 1915-16 with the previous year and the average of the previous triennium, and the main causes of any important differences in results.

## I.—MAJOR WORKS.

### PRODUCTIVE PUBLIC WORKS.

#### 23. A.—Eastern Nara System.

An expenditure of Rs. 80,129 was incurred under this head during the year under report on the construction of the four parallel distributaries *ex* Mithrao Canal mentioned in the previous report. These distributaries came into operation during 1916-17.

Capital.

A sum of Rs. 47,947 was spent during the year mainly on extending the Inner Right and Left Bank inspection paths along the Nara below Makhi Regulator, on constructing a bund across Nara near Akilshah village and Mithrao extension to tail into Nara, on karia head regulators on Mithrao Canal and on constructing a Public Works Inspection Bungalow, class II, at 8th mile Hiral Canal.

Extensions and Improvements.

All the canals in the district were maintained in good order at a cost of Rs. 1,21,530 including "Work Establishment."

Maintenance and Repairs.

The area irrigated during the year was 261,077 acres, of which 199,102 acres were under kharif and 61,975 acres under rabi, as compared with 261,040 acres (kharif 197,166 acres and rabi 63,874 acres) in the last year and with 259,300 acres (kharif 208,867 and rabi 50,433 acres) the average of the previous three years.

Irrigation.

The gross revenue for the year amounted to Rs. 6,94,667 as compared with last year's revenue of Rs. 6,75,520 and Rs. 666,821 the average revenue of the previous three years. Deducting working expenses Rs. 2,48,483 and share due to old irrigation Rs. 3,100, the net revenue during the year due to improvements was Rs. 4,43,084 or 6.33 per cent. on the capital outlay to end of the year as compared with 6.82 per cent. in the last year and 6.51 per cent. the average of the previous three years.

Financial Results.

The remissions granted during the year amounted to Rs. 16,517 against Rs. 11,257 remitted last year and Rs. 25,510 the average remissions of the previous three years. The year's remissions were mostly due to drought.

General Remarks.

The principal crops grown were—

	Acres.
Rice	140,223
Wheat	48,710
Bajri	39,623
Cotton	14,611

and the value of the whole outturn is estimated at Rs. 67,34,822 or Rs. 26 per acre.

24.

*B.—Jamrao Canal.*

The net expenditure during the year was Rs. 1,30,978 after deducting recoveries from colonists, and this amount was spent on the Ghotki Flood Diversion Bund, a work intended to prevent the floods entering the Nara Supply Channel in the Shikarpur Canals District.

Capital.

A sum of Rs. 2,009 was spent during the year on "Works" only on providing Gibb's Patent Improved Modules on the Puran Minor.

Extensions and Improvements.

The canal and its branches were maintained in good order at a cost of Rs. 1,68,691 including "Work establishment." Regrading and clearance of minors was done where necessary. The conditions at the head works in the Nara continued to be satisfactory. During the year the canal did not carry its full supply discharge owing to accumulation of silt in its upper reaches. To remedy this state of affairs it has been arranged to close the canal from March to May 1917 and to clear the first seven miles of the canal.

Maintenance and Repairs.

The total area irrigated during the year was 278,135 acres (kharif 141,690 and rabi 136,445 acres) compared with 259,558 acres (kharif 169,080 and rabi 90,478 acres) in the last year and with 249,488 acres (kharif 173,373 and rabi 76,115 acres) the average cultivation of the previous three years.

The gross revenue of the year amounted to Rs. 10,17,429 compared with Rs. 6,54,343 in the last year and Rs. 7,67,545 the average revenue of the previous three years. Deducting working expenses Rs. 3,71,374, the net revenue during the year was Rs. 6,46,055 or 7.49 per cent. on the capital outlay to end of year as compared with 3.68 per cent. of the last year and 4.97 per cent. the average of the previous three years.

The amount remitted during the year was Rs. 44,914 against Rs. 19,448 remitted last year and Rs. 10,872 the average remissions of the previous three years. The year's remissions were due to drought.

The principal crops grown were—

	Acres.
Wheat	118,092
Cotton	66,608
Bajri	61,269

and the estimated value of the whole outturn was Rs. 41,74,934 or Rs. 15 per acre.

25.

### C.—Dad Canal.

The expenditure during the year was Rs. 9,310 and was mainly spent on the construction of karia head regulators in connection with the Ren Distributary *ex* Dad.

A sum of Rs. 5,940 was spent on "Works" only mainly on the construction of Public Works Inspection Bungalow class II, with outhouses, at Kazi Ahmed.

The canal and its branches were maintained in good order at a cost of Rs. 80,970 including "Work establishment."

The total area irrigated during the year was 89,535 acres (kharif 78,724 and rabi 10,811 acres) as compared with 118,999 acres (kharif 83,479 and rabi 30,520 acres) in the previous year and with 108,396 acres (kharif 85,980 and rabi 22,416 acres) the average of the previous three years.

The gross revenue for the year amounted to Rs. 2,34,592 as compared with Rs. 2,51,850 in the last year and Rs. 2,49,969 the average of the previous three years. Deducting working expenses Rs. 1,30,786 and share due to old irrigation Rs. 38,699, the net revenue due to improvements was Rs. 65,107 or 2.45 per cent. on the capital outlay to end of the year as compared with 1.25 per cent. in the last year and 1.37 per cent. the average of the previous three years.

The remissions granted during the year amounted to Rs. 525 against Rs. 15,718 remitted in the last year and Rs. 10,533 the average remissions of the previous three years.

The principal crops grown were—

	Acres.
Jowari	30,007
Bajri	27,542
Rice	10,896
Cotton	4,065

and the estimated value of the whole outturn was Rs. 21,36,519 or Rs. 24 per acre.

26.

*D.—Nasrat Canal.*

Capital.

A sum of Rs. 1,299 only was spent during the year under this head on paying land compensation.

Extensions and Improvements.

The expenditure under this head during the year was Rs. 727 on "Works" only.

Maintenance and Repairs.

The canal and its branches were maintained in good order at a cost of Rs. 95,767 including "Work establishment."

Irrigation.

The area irrigated during the year was 82,662 acres (kharif 76,740 acres and rabi 5,922 acres) as compared with 88,936 acres (kharif 80,602 acres and rabi 8,334 acres) in the last year and with 95,371 acres (kharif 83,730 acres and rabi 11,641 acres) the average of the previous three years.

The gross revenue amounted to Rs. 2,49,191 as compared with Rs. 2,35,790

Financial Results.

of the previous year and Rs. 2,55,911 the average of the previous three years. Deducting working expenses Rs. 1,42,522 and share due to old irrigation Rs. 53,046, the net revenue due to improvements was Rs. 53,623 or 2.86 per cent. on the capital outlay to end of the year as compared with 4.71 per cent. in the last year and 2.64 per cent. the average of the previous three years.

The remissions granted during the year amounted to Rs. 8,554 against

General Remarks.

Rs. 18,691 remitted last year and Rs. 17,501 the average remissions of the previous three years. The remissions of the year were mainly due to the deficiency of water due to low inundation.

The principal crops grown were—

	Acres.
Jowari ... ..	44,452
Bajri ... ..	16,175
Cotton ... ..	8,526

and the estimated value of the whole outturn was Rs. 15,12,669, or Rs. 18 per acre.

## II.—MINOR WORKS AND NAVIGATION.

### A.—WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.

27.

*1.—Fuleli Canal.*

A sum of Rs. 43,755 was spent on "Works" only, mainly on constructing Inspection Bungalows with outhouses at Raji Khanani and Tando Kaiser, a regulator to the head of Imamwah Janobi and on the construction of the Distributary *ex* Shadiwah Large from Taki 110 left.

Maintenance and Repairs.

The canal and its branches were maintained in good order at a cost of Rs. 1,57,993 inclusive of "Work establishment."

Irrigation.

The area irrigated during the year was 416,970 acres (kharif 346,521 acres and rabi 70,449 acres) compared with 398,375 acres (kharif 324,716 acres and rabi 73,659 acres) irrigated in the previous year and with 392,133 acres (kharif 340,023 acres and rabi 52,110 acres) the average of the previous three years.



The gross revenue amounted to Rs. 10,39,131 against Rs. 9,26,309 realized last year and Rs. 8,36,407 the average of the previous three years. Deducting working expenses Rs. 3,47,398 and share due to old irrigation Rs. 1,28,188, the net revenue due to improvements was Rs. 5,63,545 or 28.40 per cent. on the capital outlay to end of the year compared with 25.43 per cent. in the last year and with 19.23 per cent. the average of the previous three years.

The amount remitted during the year was Rs. 5,740 against Rs. 6,371 remitted last year and Rs. 81,902 the average remissions of the previous three years. The year's remissions were mainly due to drought.

The principal crops grown were—

	Acres.
Rice ... ..	258,316
Bajri ... ..	64,247
Wheat ... ..	23,941
Oil-seeds ... ..	23,263
Cotton ... ..	11,590

and the estimated value of the whole outturn was Rs. 1,05,30,354 or Rs. 25 per acre.

## 28. 2.—*Hasanali Canal.*

A sum of Rs. 973 was spent during the year on Extensions and Improvements. "Works" only.

The canal and its branches were maintained in good order at a cost of Rs. 10,652 inclusive of "Work establishment."

The area irrigated during the year was 17,915 acres (kharif 17,252 acres and rabi 693 acres) compared with 18,230 acres (kharif 17,746 acres and rabi 484 acres) in the previous year and with 18,013 acres (kharif 17,681 acres and rabi 332 acres) the average of the previous three years.

The gross revenue amounted to Rs. 48,307 compared with 48,423 realized last year and Rs. 46,371 the average realizations of the previous three years. Deducting working expenses Rs. 18,867 and share due to old irrigation Rs. 2,458, the net revenue due to improvements was Rs. 26,982 or 8.85 per cent. on the capital outlay to end of the year against 5.11 per cent. in the last year and 5.38 per cent. the average of the previous three years.

The remissions of the year amounted to Rs. 187 against Rs. 65 remitted last year and Rs. 2,484 the average remissions of the previous three years.

The principal crop grown was rice 14,512 acres and the estimated value of the whole outturn was Rs. 5,64,442 or Rs. 31 per acre.

## 29. 3.—*Alibhar Kacheri.*

The canal and its branches were maintained in good order at a cost of Rs. 3,237 including "Work establishment."

The area irrigated was 12,564 acres (kharif 11,813 acres and rabi 721 acres) against last year's area of 19,275 acres (kharif 12,773 acres and rabi 6,502 acres) and 15,855 acres (kharif 13,023 acres and rabi 2,832 acres) the average area irrigated during the past three years.

The gross revenue amounted to Rs. 27,157 against Rs. 42,099 in the last year and Rs. 33,990 the average revenue of the previous three years. Deducting working expenses Rs. 7,164 and share due to old irrigation Rs. 8,239, the net revenue due to improvements was Rs. 11,754 or 49.14 per cent. on the capital outlay to the end of the year against 114.71 per cent. in the last year and 76.81 per cent. the average of the previous three years.

Financial Results.

The sum remitted during the year was Rs. 102 only against Rs. 856 remitted in the last year and Rs. 399 the average remissions of the previous three years.

General Remarks.

The principal crops grown were bajri 8,008 acres and cotton 1,792 acres, and the value of the whole outturn was estimated at Rs. 3,58,437 or Rs. 29 per acre.

30.

#### 4.—Great Marak.

Extensions and Improvements.

A sum of Rs. 85 was spent on "Works" only.

Maintenance and Repairs.

The canal and its branches were maintained in good order at a cost of Rs. 26,065 including "Work establishment."

The area irrigated was 67,059 acres (kharif 61,340 acres and rabi 5,719 acres) against 82,165 acres (kharif 63,555 acres and rabi 18,610 acres) in the last year and 75,587 acres (kharif 65,083 acres and rabi 10,504 acres) the average of the previous three years.

Irrigation.

The gross revenue amounted to Rs. 1,67,299 against Rs. 1,88,429 in the last year and Rs. 1,78,151 the average revenue of the previous three years. Deducting working expenses Rs. 48,834 and share due to old irrigation, the net revenue due to improvements was Rs. 82,433 or 38.21 per cent. on the capital outlay to the end of the year as compared with 45.98 per cent. in the previous year and 42.02 per cent. the average of the previous three years.

Financial Results.

The sum remitted during the year was Rs. 1,151 against Rs. 3,927 remitted last year and Rs. 2,167 the average remissions of the previous three years.

General Remarks.

The principal crops grown were bajri 37,611 acres and cotton 15,795 acres and the value of the whole outturn was estimated at Rs. 16,26,251 or Rs. 24, per acre.

31.

#### 5.—Sarfrax.

Maintenance and Repairs.

The canal and its branches were maintained in good order at a cost of Rs. 14,482 including "Work establishment."

The area irrigated during the year was 25,805 acres (kharif 24,365 acres and rabi 1,440 acres) against 29,363 acres (kharif 27,417 acres and rabi 1,946 acres) in the last year and 31,248 acres (kharif 29,539 acres and rabi 1,709 acres) the average of the previous three years.

Irrigation.

The gross revenue amounted to Rs. 52,011 against Rs. 60,162 in the last year and Rs. 61,986 the average revenue of the previous three years. Deducting working expenses Rs. 25,667 and share due to old irrigation Rs. 10,985, the net revenue due to improvements was Rs. 15,399 or 12.35 per cent. on the capital outlay to the end of the year as compared with 21.67 per cent. in the previous year and 24.90 per cent. the average of the previous three years.

Financial Results.

The sum remitted during the year was Rs. 399 against Rs. *nil* remitted last year and Rs. 999, the average remissions of the previous three years.

General Remarks.

The principal crops grown were bajri 17,987 acres and cotton 3,603 acres, and the value of the whole outturn was estimated at Rs. 3,47,825 or Rs. 13 per acre.

### B.—WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.

32.

#### 1.—*Nasrat Canals District.*

The principal canals under this classification are the Mehrab, the Nau-  
lkahi and the Dambhro.

Extensions and Improvements.

A sum of Rs. 1,471 was spent on "Works" only.

All the canals under this head were maintained in good order at a cost of  
Maintenance and Repairs. Rs. 88,272 including "Work establishment."

The total area irrigated during the year was 85,771 acres (kharif 73,542  
Irrigation. acres and rabi 12,229 acres) against last year's area  
of 98,475 acres (kharif 78,039 acres and rabi 20,436  
acres) and the three years' average area of 95,483 acres (kharif 79,964 acres  
and rabi 15,519 acres).

The total canal revenue amounted to Rs. 2,27,003 and the total revenue  
Financial Results. charges were Rs. 1,26,568 which represents 55.8 per  
cent. on revenue and Rs. 1.5 per acre irrigated  
against last year's figures of 40.6 per cent. and Re. 1.0 per acre. The cor-  
responding figures for the previous three years averaged 35.5 per cent. and  
Re. 0.9 per acre.

The remissions granted during the year amounted to Rs. 2,086 against  
General Remarks. Rs. 26,724 remitted last year and Rs. 9,770 the  
average remissions of the previous three years.

The principal crops grown were—

	Acres.
Jowari ... ..	52,551
Bajri ... ..	12,297
Wheat ... ..	8,836

and the estimated value of the whole outturn was Rs. 13,35,030 or Rs. 16  
per acre.

33.

#### 2.—*Hyderabad Canals District.*

The principal canals are the Ren, Gharo Mahmudo, Kari Shumali and  
Nasir.

A sum of Rs. 8,485 was spent during the year on "Works" only, mainly  
Extensions and Improvements. on constructing a bridge across new cut to Gharo  
Mahmudo and on Clerks' quarters in the compound  
of Public Works Inspection Bungalows at Tando Adam and Uderolal.

All the canals and their branches were maintained in good order at a cost  
Maintenance and Repairs. of Rs. 70,170 including "Work establishment."

The total area irrigated was 151,960 acres (kharif 133,514 acres and rabi  
Irrigation. 18,446 acres) against 166,417 acres (kharif 144,140  
acres and rabi 22,277 acres) in the last year and  
168,129 acres (kharif 150,363 acres and rabi 17,766 acres) the average of the  
previous three years.

The total canal revenue amounted to Rs. 3,12,654 and the revenue charges were Rs. 1,19,872, being 38·3 per cent. on the revenue and Re. 0·8 per acre irrigated against last year's figures of 34·6 per cent. and Re. 0·7 per acre irrigated. The corresponding figures for the previous three years were 32·4 per cent. and Re. 0·7 per acre irrigated.

The year's remissions amounted to Rs. 3,768 against Rs. 4,769 remitted last year and Rs. 2,452 the average remissions of the previous three years.

The principal crops grown were bajri 93,322 acres and cotton 27,076 acres, and the value of the whole outturn was estimated at Rs. 31,57,309 or Rs. 21 per acre.

### 34. 3.—Fuleli Canals District.

There are only a few small canals under this head taking off direct from the Indus.

A sum of Rs. 4,113 was spent during the year on "Works" mainly on Extensions and Improvements. constructing sluices over karias *ex* Khairwah.

The canals were maintained in good order at a cost of Rs. 17,490 inclusive Maintenance and Repairs. of "Work establishment."

The total area irrigated during the year was 26,973 acres (kharif 23,294 acres and rabi 3,679 acres) compared with 30,167 acres (kharif 24,250 acres and rabi 5,917 acres) in the last year and with 27,277 acres (kharif 23,475 acres and rabi 3,802 acres) the average of the previous three years.

The total canal revenue amounted to Rs. 64,862 and the revenue charges were Rs. 27,172, representing 41·9 per cent. on the revenue, and Rs. 1·1 per acre irrigated against last year's figures of 47·0 per cent. on the revenue and Rs. 1·2 per acre irrigated. The corresponding figures for the previous three years averaged 44·1 per cent. and Rs. 1·1 per acre.

A sum of Rs. 476 was remitted during the year against Rs. 3,802 remitted last year and Rs. 3,416 the average remissions of the previous three years.

The principal crops grown were rice 14,608 acres and bajri 7,691 acres and the value of the whole outturn was estimated at Rs. 6,46,142 or Rs. 24 per acre.

### C.—WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.

#### 35. Agricultural Works.

A sum of Rs. 7,750 was spent on "Works" only, of which, Rs. 4,900 were spent on construction of two small bunds and two earthen dams across dhoro in the Nasrat Canals District and Rs. 2,850 on constructing sluices in the Ghallian Bund in the Fuleli Canals District.

All the bunds in the Division were maintained in good order at a cost of Rs. 37,787 inclusive of "Work establishment." Of this sum, Rs. 30,100 were spent on bunds in the Fuleli Canals District, Rs. 5,019 on bunds in the Nasrat Canals District and Rs. 2,668 on the Ren Bund in the Hyderabad Canals District.

As the river was so low, none of the river bunds in this Division had any appreciable depth of water against it. There were no leaks or breaches.

36. The expenditure on and receipts from gardens during the year are compared below with the three years' expenditure and receipts:—

Years.	Expenditure on maintenance.	RECEIPTS.	
		As estimated.	Actual.
1912-13	Rs. 5,437	Rs. 2,250	Rs. 1,792
1913-14	4,513	1,800	2,086
1914-15	5,412	1,800	2,437
1915-16	5,472	1,844	1,782

There is a decrease in receipts from gardens in the Division of Rs. 705 and Rs. 373, respectively, compared with the last year's receipts and the average receipts of the previous three years. Four new gardens at Chakur Lund, Pangrio, Pir-jo-goth and Kario Gawher in the Fuleli Canals District were inaugurated during the year.

37. During the year, about 17,900 new young trees of various kinds other than babul were reared in canal gardens and nurseries. About 8,150 trees of various kinds were also planted along canals and bunds during the year, of which, about 6,350 trees were alive at the end of the year. Besides these, about 1,600 babul trees were also planted along canal banks and river embankments.

38. The Division was in charge of Mr. R. T. Harrison throughout the year. The following officers were in charge of the executive districts.

District.	Executive Engineer.	Months in charge.
Nasrat Canals District ...	Mr. A. A. Musto ...	6½
	„ R. B. MacLachlan ...	5½
Hyderabad Canals District ...	„ D. R. Sawhney ...	12
Fuleli Canals District ...	„ C. O. Lowsley ...	10½
	„ C. F. Simon ...	1½
Eastern Nara District ...	Rao Bahadur V. N. Parulekar ...	9½
	Mr. E. P. Watson ...	2½
Jamrao Canal District ...	„ W. L. C. Trench ...	12

R. T. HARRISON,  
Superintending Engineer, Indus Left Bank Division.

*Below Irrigation Revenue Report for the year 1915-16.*

No. C. E.-142 OF 1917.

PUBLIC WORKS DEPARTMENT,  
Karachi, 31st January 1917.

Forwarded with compliments to the Secretary to Government, Public Works Department, Bombay.

F. WRIGHT,  
Chief Engineer in Sind.

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**TABLE I.**

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TABLE

Area of Cultivation and Consolidated Revenue for 1915-16 and comparison with Irrigation share of

Canals and Executive Districts.	Cultivation.			Consolidated Assessment.			
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	
1	2	3	4	5	6	7	
MAJOR WORKS. PRODUCTIVE WORKS. IRRIGATION WORKS NOT CHARGED AGAINST REVENUE.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	
<i>Canals in operation.</i>							
Begari Canals District	Desert Canal ... ..	72,974	54,703	127,677	1,01,206	1,53,363	2,48,569
	Unharwah ... ..	44,785	31,444	76,229	1,07,302	67,319	1,66,221
	Begari Canal ... ..	144,771	75,149	219,920	4,33,443	2,29,630	6,63,583
	Total	262,530	161,296	423,826	7,21,553	4,09,148	11,91,701
Shikarpur Canals District	Mahiwah ... ..	35,261	15,019	50,280	97,161	50,616	1,47,777
Jamroo Canal District	Jamroo Canal ... ..	138,465	123,689	262,154	4,38,073	4,31,950	8,70,023
Nasrat Canals District	Dad Canal ... ..	73,647	8,104	81,751	2,07,391	27,877	2,35,268
	Nasrat Canal ... ..	76,445	5,150	81,595	2,39,153	15,345	2,54,498
	Total	159,292	13,254	172,546	4,46,544	43,219	4,99,763
Eastern Nara District	Nara Supply Channel ... ..	324	5,084	5,408	1,04	14,203	15,377
	Eastern Nara ... ..	29,644	7,392	37,036	64,017	14,613	78,629
	Mithrao Canal ... ..	99,048	27,590	126,638	3,22,370	84,074	4,07,344
	Thar Canal ... ..	51,454	6,907	58,361	1,79,695	21,698	2,01,563
	Khipro Canal ... ..	3,847	73	3,920	7,01	199	7,170
	Hiral Canal ... ..	11,477	5,330	16,807	37,798	29,278	67,076
	Total	194,804	52,328	247,132	6,48,169	1,66,014	7,66,173
	Total, Major Works	781,353	368,769	1,150,122	23,08,689	11,50,917	34,57,606
<b>MINOR WORKS.</b>							
<b>IRRIGATION AND NAVIGATION.</b>							
<b>WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.</b>							
<i>Canals in operation.</i>							
Ghar Canals District	Ghar Canal ... ..	59,355	15,552	74,907	2,31,006	72,946	3,03,952
	Ghar Canal ... ..	131,450	19,466	150,916	6,10,493	1,24,513	7,34,966
	Total	190,805	35,018	225,823	8,41,499	1,97,459	10,38,911
Karachi Canals District	Suttah Canal ... ..	10,408	275	10,683	22,345	561	22,906
Hyderabad Canals District	Alibhar Kachari ... ..	10,644	454	11,098	29,002	1,470	30,542
	Great Mirak ... ..	55,085	4,449	59,534	1,65,676	11,452	1,77,118
	Sarfaraz ... ..	21,170	928	22,098	63,254	3,508	66,762
	Total	86,897	5,405	92,302	2,47,013	15,400	2,62,413
Fuleli Canals District	Fuleli Canal ... ..	2,87,707	52,407	340,114	9,73,274	1,19,501	10,92,775
	Hassanali Canal ... ..	16,311	261	16,572	60,003	609	60,612
	Total	304,018	52,668	356,686	10,33,277	1,19,510	11,52,787
	Total, Minor Works, Capital and Revenue Accounts	612,317	94,023	706,340	23,14,436	2,42,942	25,57,378
<b>WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.</b>							
<i>Canals in operation.</i>							
Shikarpur Canals District	Canals in Rohri ... ..	26,211	6,513	32,724	97,006	21,559	1,18,564
	Sind Canal ... ..	54,267	23,126	77,393	2,22,094	91,418	3,13,512
	Rajih Canal ... ..	5,234	3,317	8,551	27,067	14,646	41,703
	Chitli Canal ... ..	5,261	3,721	8,982	27,799	17,191	44,970
	Garang Canal ... ..	3,905	2,413	6,318	12,210	15,426	27,636
	Total	98,789	41,990	140,779	3,86,206	1,78,901	5,65,106
Western Nara District	Nara ... ..	171,279	26,350	197,629	7,27,088	1,69,911	8,96,999
	Machhar ... ..	1,734	7,200	8,934	6,502	22,270	27,702
	Arni ... ..	2,272	2,951	5,223	6,679	13,999	20,727
	Prichard ... ..	6,460	816	7,276	25,943	3,614	29,557
	Wahar ... ..	1,071	272	1,343	3,001	1,043	4,046
	Marvi ... ..	2,043	1,474	3,517	9,205	5,416	14,621
	New Feeder, Western Nara ... ..	700	107	807	2,207	264	2,471
	Watu Canal ... ..	7,253	8,811	16,064	26,654	27,371	54,025
	Phitta Canal ... ..	2,501	1,300	3,801	9,107	5,496	14,603
	Canal, north of Kotri ... ..	7,145	2,094	9,239	19,777	7,111	26,888
	Total	204,908	64,145	269,053	9,90,216	2,74,129	11,64,345
Karachi Canals District	Kalri ... ..	13,928	1,249	15,177	26,907	5,973	32,880
	Parbat ... ..	25,041	1,736	26,777	84,724	5,003	89,727
	Indus Canals, Right Bank ... ..	22,454	3,518	25,972	66,144	10,907	77,051
	Puryari ... ..	82,114	6,140	88,254	1,91,244	12,000	2,03,244
	Indus Canals, Left Bank ... ..	29,669	1,154	30,823	91,843	5,500	97,343
	Total	163,206	13,796	177,002	4,80,662	26,783	5,07,385

I.

the average of the previous three years showing Increase or Decrease under heads—Kharif, Rabi and Net Consolidated Assessment.

Remissions.			Net Consolidated assessment.	Irrigation share, 90 per cent.	Average of previous three years.				Results as compared with the average of the previous three years.				
Kharif.	Rabi.	Total.			Cultivation.			Irrigation share of Net Consolidated assessment.	Cultivation.			Irrigation share of Net Consolidated assessment.	
					Kharif.	Rabi.	Total.		Kharif.	Rabi.	Total.		
8	9	10	11	12	13	14	15	16	17	18	19	20	
Rs.	Rs.	Rs.	Rs.	Rs.	Acres.	Acres.	Acres.	Rs.	Acres.	Acres.	Acres.	Rs.	
7,801	4,759	12,290	3,31,338	2,98,204	87,245	40,930	128,175	3,82,793	-14,271	18,773	-498	35,411	
849	1,434	2,235	1,92,936	1,73,643	49,890	21,314	71,304	1,52,456	-5,105	10,330	5,225	1,27,186	
1,468	5,633	6,999	6,46,883	5,81,294	141,527	55,878	197,405	4,48,492	3,244	19,271	22,515	1,37,802	
9,816	11,728	21,544	11,70,167	10,53,140	278,662	118,122	396,784	8,58,741	-16,132	43,374	27,242	1,94,399	
459	120	579	1,47,198	1,32,479	42,985	18,236	61,221	1,61,493	-7,724	3,223	-10,947	-29,015	
7,088	37,829	44,914	8,26,108	7,42,599	171,768	68,072	239,840	7,11,750	-33,302	59,608	25,306	30,849	
183	337	525	2,34,743	2,11,269	80,863	18,025	96,978	2,37,958	-7,108	7,921	-15,027	-26,889	
7,940	1,614	8,554	2,46,941	2,21,947	83,359	9,666	93,025	2,46,354	-6,914	4,516	-11,430	-25,007	
7,228	1,851	9,079	4,80,684	4,32,616	164,812	25,691	190,003	4,84,312	-14,020	-12,437	-26,457	-51,696	
215	...	215	15,162	13,646	963	5,036	5,999	15,086	-639	-2	-641	-1,440	
2,119	107	2,236	68,393	59,754	23,440	13,868	37,328	58,963	5,204	-6,496	-1,292	756	
7,258	475	7,733	3,99,611	3,59,650	109,834	16,356	125,240	3,46,082	-10,826	12,234	1,408	13,568	
6,430	874	5,794	1,95,789	1,76,210	61,338	4,217	55,555	1,61,993	116	2,690	2,806	11,217	
78	...	78	7,094	6,385	2,752	729	3,481	4,997	1,085	-656	439	1,383	
...	463	463	57,607	51,846	15,710	2,832	18,542	53,483	-4,233	2,498	-1,735	-1,637	
15,098	1,419	16,517	7,41,656	6,67,491	204,087	42,058	246,145	6,43,609	-883	10,288	1,985	23,882	
39,687	52,946	92,633	33,64,803	30,28,324	861,814	272,179	1,133,993	28,59,805	-80,461	96,590	16,129	1,66,419	
355	3,293	3,688	2,80,367	2,61,330	62,097	13,283	75,360	2,40,929	-3,742	2,299	-1,453	20,401	
14,508	3,036	17,541	9,27,065	8,34,359	214,039	29,679	243,717	9,75,559	-32,479	9,733	-42,212	-1,41,200	
14,860	6,269	21,129	12,17,432	10,95,669	276,135	42,942	319,077	12,16,468	-38,221	7,444	-43,665	-1,20,799	
62	...	62	22,863	20,577	13,849	676	14,635	24,025	-3,446	-401	-3,847	-3,448	
76	27	103	29,440	26,496	11,780	1,922	13,702	32,544	-1,136	1,437	-2,573	-6,048	
590	561	1,151	1,75,957	1,58,361	69,244	7,690	65,334	1,72,106	-3,178	3,041	-6,217	-13,745	
399	...	399	55,364	49,828	25,980	1,423	27,403	59,682	-4,810	-500	-5,310	-9,254	
1,064	588	1,652	2,80,781	2,34,686	96,004	10,440	106,444	2,83,732	-9,122	4,978	-14,100	-29,047	
5,639	201	5,740	10,76,036	9,68,432	281,293	39,501	320,794	7,96,576	7,414	12,908	20,320	1,61,656	
187	...	187	51,404	46,264	16,974	218	17,192	45,655	-663	163	-500	1,209	
5,726	201	5,927	11,27,440	10,14,696	298,287	39,719	337,986	8,31,631	6,751	13,069	19,820	1,83,065	
21,712	7,068	28,770	26,28,496	13,65,647	684,255	93,777	778,032	1,23,35,876	-42,038	246	-41,792	29,771	
1,743	83	1,828	1,29,326	1,15,943	29,933	12,827	42,755	1,36,865	-3,717	-4,014	-7,731	-20,942	
30	436	466	3,13,046	2,81,741	51,100	15,665	66,765	2,19,619	3,187	7,570	10,737	62,122	
...	69	69	43,337	38,994	5,748	3,495	9,243	33,503	-523	-273	-801	482	
112	78	188	44,982	40,214	5,133	4,768	9,890	40,065	119	-1,437	-1,318	149	
...	190	190	28,555	25,700	2,531	4,213	6,744	25,663	374	-800	-526	37	
1,887	873	2,760	5,58,436	5,02,592	94,439	40,968	135,397	4,60,734	-680	1,041	361	41,859	
15,678	13,653	29,231	6,97,585	7,89,809	204,107	52,083	256,170	8,57,441	-32,848	-13,813	-46,661	-58,632	
294	3,460	3,754	23,978	21,659	3,419	10,261	19,630	34,148	-1,685	-3,356	-10,041	-12,559	
256	899	1,155	17,773	16,895	2,286	5,456	7,732	19,642	-44	-2,125	-2,169	-3,647	
1,071	364	2,335	24,546	22,609	7,859	1,196	9,054	29,239	-1,023	-380	-1,408	-4,692	
...	33	33	4,113	3,693	1,164	1,336	2,500	8,843	-93	-1,514	-1,607	-5,150	
110	...	110	14,511	13,060	2,834	1,718	4,552	12,469	149	-244	-95	594	
...	...	...	3,625	3,263	849	69	918	3,368	59	-38	-21	-123	
177	...	177	47,752	42,977	7,466	11,318	18,774	47,512	-203	2,807	-3,010	-4,535	
54	380	434	13,817	12,435	3,664	3,991	7,655	17,654	-63	2,688	-2,751	-5,219	
3,589	637	3,266	23,762	21,386	8,478	4,325	12,803	21,246	-1,323	-3,229	-3,552	140	
21,039	19,228	40,266	10,64,168	9,57,753	242,185	88,233	340,418	10,51,576	-37,197	-34,118	-71,315	-93,822	
915	144	1,059	88,653	84,798	10,057	3,899	10,916	25,572	-2,129	-2,640	-4,769	6,216	
4,250	202	4,451	60,234	59,011	30,518	4,445	34,963	53,661	-5,477	-2,709	-8,186	-2,050	
1,141	68	1,209	65,207	56,276	26,932	2,081	28,963	85,809	-4,368	7,487	3,119	22,967	
5,703	2,135	7,838	1,07,407	1,77,663	56,725	6,563	63,288	1,40,509	-4,611	-353	-4,964	24,157	
566	450	1,018	93,185	83,567	44,591	2,996	47,587	74,221	-4,901	-1,836	-6,739	9,616	
12,684	3,019	15,603	4,50,766	4,05,703	204,723	19,824	224,547	3,40,773	-21,486	-89	-21,569	64,936	



TABLE

Canals and Executive Districts.		Cultivation.			Consolidated Assessment.		
		Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
		1	2	3	4	5	6
<b>MINOR WORKS—continued.</b>							
<b>IRRIGATION AND NAVIGATION—continued.</b>							
WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT—continued.							
Canals in operation—continued.							
East Coast Canals District	Mehrabpur	10,710	337	11,047	28,033	1,183	29,216
	Naulakhi	41,402	1,543	42,945	1,30,835	10,509	1,41,344
	Umbro	12,754	1,310	14,064	37,743	5,474	43,217
	Other canals	6,553	2,523	9,076	10,250	5,727	15,977
	<b>Total</b>	<b>71,819</b>	<b>5,713</b>	<b>77,532</b>	<b>2,18,861</b>	<b>23,993</b>	<b>2,42,854</b>
Hyderabad Canals District	Gharo Mahrodo	22,326	1,087	23,413	1,32,740	18,282	1,51,022
	Kari Shumali	23,056	1,087	24,143	73,000	4,328	77,328
	Nasir	22,107	2,002	24,109	60,238	5,497	65,735
	Renwar	7,300	602	7,902	15,873	3,074	18,947
	Other canals	602	115	717	2,120	540	2,660
<b>Total</b>	<b>75,391</b>	<b>5,893</b>	<b>81,284</b>	<b>2,43,971</b>	<b>32,721</b>	<b>2,76,692</b>	
Fuleli Canals District	Other canals	20,091	1,204	21,295	67,403	4,190	71,593
<b>Total, Minor Works, Revenue Accounts only</b>		<b>1,39,201</b>	<b>12,000</b>	<b>1,51,201</b>	<b>4,92,235</b>	<b>60,904</b>	<b>5,53,139</b>
<b>AGRICULTURAL WORKS.</b>							
WORKS FOR WHICH SEPARATE CAPITAL AND REVENUE ACCOUNTS ARE KEPT.							
Begari Canals District	Canals from Kashtapur Bund	2,630	1,035	3,665	5,783	3,100	8,883
	Bunds in Rohri	78	80	158	108	143	251
Sikharpur Canals District	Sukkur-Begari Bunds	1,000	2,000	3,000	1,000	2,541	3,541
	Kashtapur Bund	623	120	743	1,450	470	1,920
<b>Total</b>	<b>4,331</b>	<b>3,235</b>	<b>7,566</b>	<b>8,341</b>	<b>6,254</b>	<b>14,595</b>	
Ghar Canals District	Ghar Bunds	222	312	534	1,360	1,097	2,457
Western Nara District	Nara Bunds	1,005	254	1,259	6,004	970	6,974
	Bunds north of Kotri	607	40	647	1,716	110	1,826
<b>Total</b>	<b>2,834</b>	<b>606</b>	<b>3,440</b>	<b>9,340</b>	<b>2,177</b>	<b>11,517</b>	
Karachi Canals District	Bunds, Right Bank	4,604	633	5,237	9,200	1,117	10,317
	Bunds, Left Bank	6,019	800	6,819	10,017	1,200	11,217
<b>Total</b>	<b>10,623</b>	<b>1,433</b>	<b>12,056</b>	<b>19,217</b>	<b>2,317</b>	<b>21,534</b>	
<b>Total Agricultural Works</b>		<b>18,228</b>	<b>5,066</b>	<b>23,294</b>	<b>67,898</b>	<b>37,044</b>	<b>1,04,942</b>
Indus Right Bank Division	Begari Canals District	298,200	103,301	401,501	7,20,200	4,74,200	11,94,400
	Sikharpur Canals District	181,116	61,178	242,294	4,03,000	2,00,000	6,03,000
	Ghar Canals District	24,198	26,010	50,208	10,21,200	2,00,000	12,21,200
	Western Nara District	207,200	84,447	291,647	5,26,013	2,74,270	8,00,283
	Karachi Canals District	204,244	20,000	224,244	4,72,120	80,700	5,52,820
<b>Total</b>	<b>1,015,958</b>	<b>394,936</b>	<b>1,410,894</b>	<b>26,82,733</b>	<b>11,29,170</b>	<b>38,11,903</b>	
Indus Left Bank Division	Jumra Canals District	130,000	120,000	250,000	4,20,000	4,20,000	8,40,000
	Eastern Nara District	104,000	82,200	186,200	3,00,000	1,50,000	4,50,000
	Nasir Canals District	21,000	27,000	48,000	80,000	70,000	1,50,000
	Hyderabad Canals District	20,261	17,015	37,276	84,000	63,000	1,47,000
	Fuleli Canals District	220,700	64,500	285,200	10,21,000	1,23,000	11,44,000
<b>Total</b>	<b>506,961</b>	<b>370,715</b>	<b>877,676</b>	<b>15,65,000</b>	<b>7,26,000</b>	<b>22,91,000</b>	
<b>Total, Grand</b>		<b>1,522,919</b>	<b>865,781</b>	<b>2,388,700</b>	<b>72,57,733</b>	<b>18,55,174</b>	<b>91,12,903</b>

Note.—The figures in this statement are assessments.

I—concluded.

Remission.			Net Consolidated assessment.	Irrigation share, 90 per cent.	Average of previous three years.				Results as compared with the average of the previous three years.			
Kharif.	Rabi.	Total.			Cultivation.			Irrigation share of Net Consolidated assessment.	Cultivation.			Irrigation share of Net Consolidated assessment.
					Kharif.	Rabi.	Total.		Kharif.	Rabi.	Total.	
9	9	10	11	12	13	14	15	16	17	18	19	20
Rs.	Rs.	Rs.	Rs.	Rs.	Acres.	Acres.	Acres.	Rs.	Acres.	Acres.	Acres.	Rs.
488	20	508	28,677	25,809	11,518	1,141	12,659	30,335	-808	-804	-1,612	-4,426
1,503	...	1,503	1,500,853	1,35,768	46,002	5,377	52,039	1,30,719	-5,170	166	-5,004	-3,943
.....	19	.....	43,318	88,894	11,742	1,803	13,545	34,858	1,043	-485	567	4,056
.....	.....	15	27,071	26,174	7,380	3,942	71,322	20,354	-827	-1,420	-2,247	-4,180
2,051	35	2,086	2,50,717	2,25,645	77,302	12,383	89,585	2,34,163	-5,763	-2,542	-8,306	-8,518
1,497	183	1,680	1,68,362	1,49,726	63,018	6,145	69,161	1,64,189	-6,730	712	-6,018	-14,413
174	183	342	77,575	69,817	32,327	1,525	33,852	76,135	-3,641	-28	-3,669	-6,318
1,678	89	1,768	63,687	57,480	28,725	2,089	30,704	71,076	-6,618	733	-5,885	-13,596
.....	.....	.....	23,048	19,941	434	515	939	2,139	6,974	397	7,341	17,711
.....	.....	.....	2,738	2,462	4,172	1,497	5,669	13,506	-3,280	-1,382	-4,662	-11,134
3,349	419	3,768	3,32,588	2,99,326	129,664	11,751	140,415	3,27,076	-13,295	402	-12,893	-27,750
151	325	476	71,205	64,084	21,027	2,184	23,191	61,235	-336	-359	-695	2,849
41,061	23,997	64,958	27,27,898	24,55,108	766,340	185,323	953,663	24,76,556	-78,757	-58,160	-114,417	-20,448
97	72	169	10,714	863	2,434	1,954	4,383	7,957	402	-69	333	1,686
.....	.....	.....	308	277	61	28	89	208	15	22	37	71
.....	665	.....	22,244	20,020	1,555	4,874	6,439	23,264	-55	-891	-936	-3,234
52	.....	52	1,882	1,694	546	993	1,538	4,594	-23	-868	-891	-2,900
52	665	717	24,434	21,991	2,161	5,890	2,051	28,064	-63	-1,727	-1,790	-6,063
.....	.....	.....	2,737	2,464	591	433	1,014	4,189	-359	-121	-480	-1,725
.....	.....	.....	7,643	6,879	2,594	1,030	3,604	11,910	-759	-776	-1,535	-5,032
154	134	288	1,628	1,463	182	140	302	234	395	-92	303	1,229
154	134	288	9,288	8,341	2,726	1,170	3,896	12,144	-364	-668	-1,232	-3,803
.....	.....	.....	10,455	9,409	3,985	459	4,444	4,975	699	-26	673	4,434
.....	962	.....	11,160	10,035	5,082	252	5,334	8,820	937	148	1,085	1,215
.....	962	962	21,605	19,444	9,067	711	9,779	12,795	1,636	122	1,758	5,649
303	1,833	2,136	69,758	61,683	16,969	10,168	27,127	66,139	1,252	-2,663	1,411	-4,256
9,913	11,800	21,713	11,80,871	10,62,763	281,096	120,076	401,172	8,66,699	-15,730	43,305	27,575	1,96,085
2,398	1,858	4,056	7,30,068	6,67,061	139,585	66,094	204,679	6,50,281	-8,467	-3,909	-12,376	6,780
14,880	6,289	21,129	12,20,169	10,98,153	276,716	48,375	320,091	13,20,677	-36,560	-7,565	-44,145	-1,22,524
21,193	19,380	40,553	10,78,438	9,66,094	244,911	99,433	344,344	10,63,720	-37,561	-34,988	-72,547	-97,626
12,946	3,981	16,627	4,95,254	4,45,729	227,839	21,311	248,950	3,78,592	-28,296	-862	-28,658	67,137
61,010	43,068	1,04,078	46,99,798	42,29,820	1,169,947	849,279	1,619,226	41,79,968	-1,21,634	-3,517	-125,151	49,852
7,036	87,828	44,914	8,25,108	7,42,569	171,768	68,072	239,840	7,11,760	-33,302	59,908	26,366	30,819
15,993	1,419	18,517	7,41,656	6,87,401	204,087	42,059	246,145	6,43,509	-9,233	10,383	95	33,833
9,279	1,806	11,165	7,31,401	6,68,261	241,614	37,954	279,568	7,18,475	-19,733	-14,680	-34,743	-60,214
5,413	1,007	6,420	6,93,347	6,34,011	224,698	23,191	248,889	5,90,809	-22,417	-4,576	-26,993	-56,787
5,877	528	6,403	11,98,645	10,78,780	319,294	41,883	361,177	8,92,966	6,416	12,710	19,125	1,85,914
41,753	42,886	84,419	40,90,167	36,81,142	1,161,431	212,159	1,373,589	38,57,509	-78,370	62,080	-16,340	1,33,634
1,02,763	86,734	1,88,497	87,80,955	79,10,062	2,331,378	561,437	3,892,816	77,37,476	-200,004	58,513	-141,491	1,73,486

TABLE II.

Area of Cultivation and Canal Revenue for 1915-1916 and the previous five years.

Year.	CULTIVATION.			Water-share of net consolidated Assessment.	Hakábo.	Miscellaneous.	Total, Canal Revenue.	
	Government.	Jághir.	Total.					
1	2	3	4	5	6	7	8	
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	
Indus Right Bank Division.	1910-1911 ...	1,547,985	168,784	1,716,769	44,62,508	1,89,770	61,208	46,53,540
	1911-1912 ...	1,207,427	118,061	1,325,488	35,08,069	1,15,918	71,848	36,95,835
	1912-1913 ...	1,403,629	136,452	1,540,081	38,53,603	1,17,473	72,311	40,43,327
	1913-1914 ...	1,506,896	151,472	1,658,368	41,21,897	1,34,647	72,942	43,29,486
	1914-1915 ...	1,647,163	180,461	1,827,624	46,06,406	1,28,538	78,512	48,13,456
	Average ...	1,462,620	150,046	1,612,666	41,10,493	1,27,269	75,376	43,13,140
	1915-1916 ...	1,394,075	156,678	1,550,753	43,29,820	1,43,487	58,786	44,87,043
	Increase or decrease as compared with 1914-1915 ...	-253,088	-23,783	-276,871	-3,76,586	19,949	-19,776	-3,76,413
Do. do. with average...	-68,545	6,632	-61,913	1,19,325	21,218	-16,640	1,23,908	
Indus Left Bank Division.	1910-1911 ...	1,294,046	121,080	1,415,126	33,16,494	60,400	69,905	34,46,799
	1911-1912 ...	1,292,142	120,157	1,412,299	33,87,512	58,972	78,228	35,24,712
	1912-1913 ...	1,370,713	128,423	1,499,136	35,58,105	55,352	70,408	36,83,865
	1913-1914 ...	1,362,855	126,051	1,488,906	34,12,105	54,471	98,445	35,65,021
	1914-1915 ...	1,337,201	133,943	1,521,144	37,02,814	51,823	61,230	38,15,867
	Average ...	1,339,391	125,931	1,465,322	34,75,306	56,204	75,643	36,07,158
	1915-1916 ...	1,357,249	124,021	1,481,270	36,81,142	58,779	68,790	38,08,711
	Increase or decrease as compared with 1914-1915 ...	-29,952	-9,922	-39,874	-21,172	6,956	7,569	-6,656
Do. do. with average...	17,858	-1,910	15,948	2,05,836	2,575	-6,853	2,01,558	
Total for Sind ...	1910-1911 ...	2,832,031	289,864	3,121,895	77,78,996	2,00,170	1,51,173	81,30,339
	1911-1912 ...	2,499,569	283,218	2,732,787	68,95,581	1,74,890	1,50,076	72,20,547
	1912-1913 ...	2,774,342	264,875	3,039,217	74,11,708	1,72,825	1,42,719	77,27,252
	1913-1914 ...	2,869,751	277,523	3,147,274	75,34,002	1,89,118	1,71,887	78,94,507
	1914-1915 ...	3,034,364	314,404	3,348,768	83,08,720	1,80,361	1,39,743	85,28,823
	Average ...	2,802,011	275,977	3,077,988	75,85,501	1,83,473	1,51,019	79,20,293
	1915-1916 ...	2,751,324	230,699	3,082,023	79,10,962	2,07,266	1,27,526	82,45,754
	Increase or decrease as compared with 1914-1915 ...	-283,040	-33,705	-316,745	-3,97,758	26,905	-12,216	-3,83,069
Do. do. with average...	-50,687	4,722	-45,965	3,25,161	23,793	-23,493	3,25,461	

Note.—The figures in this statement are assessments, with the exception of Hakábo and Miscellaneous which are actuals.





TABLE IV.

Area of Cultivation, Assessment, Realization and Balances outstanding in respect of lands in Khelát and Jágghir Lands in Sind for 1915-1916.

Canals and Executive Districts.	AREA CULTIVATED DURING THE YEAR.			Un-realized balance at end of the last year.	ASSESSMENT OF THE YEAR.			Remissions.	Net Total for Collection.	Actual Realizations.	Balance outstanding at end of year.	
	Khariif.	Rabi.	Total.		Khariif.	Rabi.	Total.					
1	2	3	4	5	6	7	8	9	10	11	12	
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
<b>MAJOR WORKS.</b>												
<b>PRODUCTIVE PUBLIC WORKS.</b>												
<b>IRRIGATION WORKS NOT CHARGED AGAINST REVENUE.</b>												
<i>Canals in Operation.</i>												
Begári Canals District.	Desert Canal ...	36,127	31,840	57,967	*4,325	45,010	46,770	91,780	1,173	94,932	91,394	3,538
	Khelát Foreign (Begári Canal ...	23,828	4,902	28,730	*3,413	25,595	2,273	27,967	1,351	30,029	26,911	3,118
	Total ...	49,956	36,742	86,697	*7,738	70,605	49,043	1,19,647	2,424	1,24,961	1,18,305	6,656
	Desert Canal ...	2,163	1,824	3,787	193	380	255	585	...	783	434	349
	Unharwah ...	44	23	67	270	184	98	286	...	556	251	305
Begári Canal ...	12,530	4,303	16,833	2,111	3,365	1,078	4,443	...	7,054	4,863	2,191	
Total ...	14,727	5,955	20,682	2,579	4,383	1,431	5,814	...	8,369	5,548	2,845	
Shikárpur Canals District—Mahlwah.	761	485	1,246	881	310	146	466	...	1,437	832	605	
Jámro Canal District—Jámro Canal.	2,234	1,957	5,181	2,517	1,084	1,054	2,138	...	4,655	2,107	2,548	
Sasral Canals District.	Dád Canal ...	4,877	763	5,639	-2,242	1,806	597	2,403	345	-184	3,095	-3,279
	Nasral Canal ...	295	107	402	-22	112	36	148	...	126	-587	713
Total ...	5,172	869	6,041	-2,264	1,918	633	2,551	345	-58	2,508	-2,563	
Eastern Canals District.	Nára Supply Channel ...	845	2,540	3,385	3,889	225	718	943	...	3,832	2,892	940
	Eastern Nára ...	...	...	...	...	...	...	...	...	...	...	...
	Mithrao Canal ...	849	899	1,238	74	475	163	628	...	702	549	153
	Nára Canal ...	2,604	852	2,956	224	1,487	169	1,656	...	1,880	1,701	179
	Khilpro Canal ...	...	...	...	...	...	...	...	...	...	...	...
Hiral Canal ...	...	...	...	...	...	...	...	...	...	...	...	
Total ...	4,268	3,281	7,570	3,187	2,187	1,040	3,227	...	6,414	5,142	1,272	
Total, Major Works ...	78,137	49,289	127,426	14,738	80,487	53,346	1,33,833	2,769	1,45,802	1,34,442	11,360	
<b>MINOR WORKS.</b>												
<b>IRRIGATION AND NAVIGATION.</b>												
<b>WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.</b>												
<i>Canals in Operation.</i>												
Shár Canals District.	Sukkur Canal ...	1,793	801	2,594	1,315	918	474	1,392	...	2,707	1,673	1,034
	Ghar Canal ...	5,400	506	5,906	-395	3,192	181	3,373	...	2,978	4,735	-1,757
Total ...	7,193	1,307	8,500	920	4,110	655	4,765	...	5,685	6,408	-723	
Larschi Canals District—Sattah Canal.	82	14	68	-38	29	5	34	...	-4	28	-27	
Hydrabad Canals District.	Alibhar Kacheri ...	1,199	135	1,334	424	513	51	564	...	988	652	336
	Máruk ...	6,273	660	6,933	906	2,281	149	2,430	...	6,335	3,642	-307
	Sariras ...	3,195	384	3,579	4,629	1,220	163	1,388	...	6,017	1,200	4,809
Total ...	10,668	1,179	11,846	5,953	4,014	368	4,382	...	10,340	5,503	4,837	
Fuleli Canals District.	Fuleli Canal ...	59,213	8,456	66,669	3,504	30,163	4,072	34,235	...	37,739	23,882	3,857
	Hasanali Canal ...	941	53	994	317	471	26	497	...	814	1,041	-227
Total ...	59,154	8,509	67,663	3,821	30,634	4,098	34,732	...	38,553	24,923	3,630	
Total, Minor Works, Capital and Revenue Accounts ...	77,065	11,009	88,074	10,661	38,787	5,126	43,913	...	54,574	45,857	7,717	
<b>WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.</b>												
<i>Canals in Operation.</i>												
Shikárpur Canals District.	Canals in Rohri ...	6,735	612	7,347	*2,114	853	226	1,079	...	3,193	2,045	1,148
	Sind Canal ...	4,643	1,473	6,066	3,001	2,697	738	3,335	...	6,336	2,673	3,663
	Bajib Canal ...	39	83	122	...	23	50	73	...	73	95	-22
	Chitri Canal ...	195	359	554	497	97	169	256	...	753	364	389
	Garang Canal ...	485	485	970	561	259	250	509	...	1,070	517	553
Total ...	12,047	3,012	15,069	6,173	3,329	1,483	5,252	...	11,425	5,714	5,711	
Bhawalpur Lands Foreign—Canals in Rohri.	Nára ...	6,139	3,319	9,472	7,565	3,328	1,301	4,689	...	12,254	8,255	3,999
	New Feeder to Western ...	...	...	...	...	...	...	...	...	...	...	...
Western Nára District.	Wahur ...	...	...	...	...	...	...	...	...	...	...	...
	Marvi ...	...	...	...	...	...	...	...	...	...	...	...
	Pritchard Canal ...	...	...	...	-23	...	...	...	...	-23	...	-23
	Dáin Canals ...	231	9	240	179	95	98	183	...	372	152	220
	Phitta Canal ...	461	75	536	827	310	40	360	...	1,177	782	395
	Manchar ...	...	...	...	-11	...	...	...	...	-11	...	-11
	Aral ...	524	355	909	810	198	237	435	...	1,245	...	1,245
Other Canals North of Kotri ...	955	515	1,470	722	405	183	588	...	1,310	...	1,310	
Virah Bund ...	...	...	...	...	...	...	...	...	...	...	...	
Total ...	8,310	4,317	12,627	10,069	4,336	1,919	6,255	...	16,824	7,189	9,135	

\* Includes Manchar, Aral and new Feeder.

TABLE IV—concluded.

Canals and Executive Districts.	AREA CULTIVATED DURING THE YEAR.			Un-realized balance at the end of last year.	ASSESSMENT OF THE YEAR.			Remissions.	Net Total for Collection.	Actual Realizations.	Balance outstanding at end of year.	
	Kharif.	Rabi.	Total.		Kharif.	Rabi.	Total.					
1	2	3	4	5	6	7	8	9	10	11	12	
<b>MINOR WORKS—concluded.</b>												
<b>IRRIGATION AND NAVIGATION—concluded.</b>												
<b>WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT—concluded.</b>												
<b>Canals in Operation—concluded.</b>												
Karachi Canals District.	Kalri	563	63	625	306	304	31	205	...	501	968	-465
	Baghar	2,344	39	2,383	754	1,075	307	1,382	...	2,036	923	9,112
	Indus Canal Right Bank	638	441	1,079	94	...	...	...	...	94	375	-281
	Pinyari	3,211	36	3,247	800	1,456	10	1,466	...	2,266	1,392	6,740
	Indus Canals Left Bank	227	7	234	278	68	...	63	...	308	433	-115
Total	7,900	698	7,592	2,079	2,678	249	2,176	...	5,205	4,081	1,124	
Nasrat Canals District.	Mehrabwah	129	...	126	49	...	...	...	...	49	49	...
	Naukhahi	1,106	89	1,193	556	447	91	539	...	1,054	419	677
	Dambro	758	48	804	712	218	10	233	...	318	257	676
	Other Canals	16	13	29	-197	...	4	6	...	-193	6	-197
Total	3,008	149	2,158	1,120	600	105	765	...	1,685	678	1,207	
Hyderabad Canals District.	Gharo Mahmud	11,663	2,594	14,547	-2,444	4,017	237	4,001	...	2,400	5,567	-3,107
	Karl Shumali	5,458	208	5,666	2,703	2,143	59	2,301	...	4,064	1,643	2,116
	Nasir	1,034	35	1,069	3,620	339	11	350	...	3,070	305	2,765
	Ronwah	...	...	...	...	...	...	...	...	...	...	...
	Other Canals	...	...	...	41	...	...	...	...	41	...	41
Total	19,145	3,137	21,282	3,980	7,098	267	7,455	...	11,435	7,920	3,515	
Fuleli Canals District.	Other Canals	3,203	78	2,278	-471	1,100	36	1,136	...	1,607	298	1,309
Total, Minor Works, Revenue Accounts only		49,575	11,389	61,168	23,029	19,964	4,092	24,056	...	47,985	25,617	22,368
<b>AGRICULTURAL WORKS.</b>												
<b>WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.</b>												
Begari Canals—Kashmir Bund District.		...	...	...	...	...	...	...	...	...	...	
Shikarpur Canals District.	Bunds in Bohri	...	...	...	...	...	...	...	...	...	...	
	Sukkur Bund	1,568	1,503	2,180	12	68	...	68	...	80	60	
	Kasimpur Bund	...	...	...	...	...	...	...	...	...	...	
Total	1,568	1,503	2,180	12	68	...	68	...	80	...	60	
Ghar Canals District.	Ghar Bunds	11	27	38	49	5	8	12	...	62	63	
Western Nara Canals District.	Nara Bunds	...	...	...	...	...	...	...	...	...	...	
	Bunds North of Kotri	...	...	...	...	...	...	...	...	...	...	
Total	...	...	...	...	...	...	...	...	...	...	...	
Karachi Canals District.	Bunds, Right Bank	527	19	539	191	220	...	230	...	411	268	123
	Bunds, Left Bank	244	36	279	-298	91	15	106	...	-192	...	-192
Total	771	47	818	-107	311	15	326	...	219	268	-69	
Total, Agricultural Works		2,217	1,638	4,036	-46	294	23	407	...	261	250	11
<b>Foreign Lands.</b>												
Begari Canals District.	Begari Canals	49,954	36,743	86,697	7,738	70,005	49,063	1,19,617	2,424	1,24,991	1,16,205	6,606
	Shikarpur Canals do.	157	13	170	37	63	6	67	...	104	87	67
Total	50,122	36,756	86,876	7,775	70,068	49,069	1,19,714	2,424	1,25,095	1,16,292	6,723	
Indus Right Bank Division.	Jaghir Lands.											
	Begari Canals District	14,737	5,065	20,662	+2,579	4,328	1,431	5,614	...	6,393	5,546	2,545
	Shikarpur Canals District	14,309	5,098	19,465	+7,196	4,207	1,679	5,776	...	12,942	6,546	6,206
	Ghar Canals District	7,304	1,354	8,638	639	4,115	703	4,778	...	5,747	6,470	-223
	Western Nara District	8,210	4,317	12,627	10,038	42,76	1,919	6,256	...	16,224	7,189	9,135
Karachi Canals District	7,223	647	8,470	1,034	2,318	268	2,464	...	5,420	4,292	1,228	
Total	52,493	17,242	69,803	22,717	20,259	5,660	26,109	...	48,825	20,149	18,081	
Total	102,582	54,006	156,678	30,492	90,327	54,926	1,45,223	2,424	1,73,991	1,46,467	26,494	
Indus Left Bank Division.	Jamrao Canal District.	2,224	1,027	5,181	2,617	1,084	1,064	2,129	...	4,058	2,107	2,546
	Eastern Nara District	4,298	2,221	7,579	2,187	2,197	1,060	2,277	...	6,414	6,142	1,272
	Nasrat Canals District	7,178	1,018	6,168	+1,144	2,678	728	2,516	245	3,107	3,106	-1,259
	Hyderabad Canals District	29,211	4,316	33,187	+9,928	11,112	725	11,837	...	21,775	12,122	8,652
	Fuleli Canals District	61,257	6,584	69,941	+4,202	21,724	4,124	25,268	...	40,100	22,221	6,979
Total	104,265	19,166	124,021	18,700	48,006	7,691	66,266	245	74,921	64,779	10,142	
TOTAL, SIND	2,07,447	78,252	280,699	40,282	1,30,922	62,587	2,02,209	2,709	2,49,722	2,07,266	41,456	

\* The difference in the figures as compared with the last year is due to adjustments made by the Civil Department.

† The difference between these figures and those reported last year is due to adjustments by the Revenue Department.





TABLE V—continued.

Canals and Executive Districts.	REVENUE.				EXPENDITURE.							Revenue Collection Charges.	Total, columns 6 to 12.	TOTAL EXPENDITURE.				
	Improvements.				Maintenance and Repairs.									Works.	Establishment.		Indirect Charges.	Total.
	Works.	Regular Establishment.	Tools and Plant.	Total.	Clearance Expenditure.			Regular Establishment.	Tools and Plant.	Total.	Public Works Department, including Tools and Plant.				Civil Department Collection Charges.			
					Works.	Works Establishment.	Total.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
<b>MINOR WORKS—contd.</b>																		
<b>IRRIGATION AND NAVIGATION—concluded.</b>																		
<b>WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT—concluded.</b>																		
<b>Canals in Operation—concl.</b>																		
Western Nara District.	Nara New Feeder Western ...	854	146	— 4	996	60,755	23,534	1,09,289	18,670	— 566	1,27,389	48,418	1,75,811	1,10,143	18,246	46,418	...	1,748
	Nara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Marvi ...	...	...	...	...	1,968	278	2,244	383	— 12	2,615	783	3,398	2,244	371	783	...	...
	Wahur ...	10,479	1,790	— 54	12,215	3,543	190	3,735	638	— 19	4,354	222	4,676	14,214	2,955	222	...	...
	Pritohard ...	...	...	...	...	26,000	3,518	80,178	5,155	— 156	35,177	1,475	36,652	30,178	4,999	1,475	...	...
	Dadu Canals ...	...	...	...	...	2,828	1,332	4,158	710	— 22	4,846	2,536	7,382	4,168	6-8	2,580	...	...
	Phitta Canals ...	6,717	1,148	— 35	7,830	7,960	862	8,822	1,507	— 46	10,283	783	11,076	15,539	2,674	793	...	...
	Manchar ...	...	...	...	...	...	...	...	...	...	...	1,332	1,382	...	...	1,332	...	...
	Aral ...	...	...	...	...	...	...	...	...	...	...	1,302	1,302	...	...	1,302	...	...
	Canals north of Kotri.	11,903	2,034	— 61	13,875	5,446	2,011	7,457	1,274	— 39	8,692	1,315	10,007	19,369	3,208	1,315	...	...
Virah Bund ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total ...	29,957	5,118	— 154	34,916	1,29,158	36,725	1,65,883	23,337	— 860	1,89,330	68,422	2,51,752	1,95,693	32,441	59,422	...	2,500	
Karnal Canal District.	Katri ...	72	12	— 1	83	11,791	2,643	14,433	2,367	— 129	16,661	2,166	19,817	14,505	2,239	2,166	...	150
	Baghar ...	9,236	1,509	— 88	10,662	35,374	6,625	41,999	6,860	— 377	48,432	3,066	51,568	61,235	7,909	3,066	...	620
	Indus Canals, Right Bank ...	327	37	— 2	362	20,920	1,882	22,802	3,724	— 205	26,321	3,544	29,865	23,029	3,554	3,544	...	300
	Pinyri ...	4,040	660	— 36	4,664	33,399	13,370	61,769	8,465	— 464	69,760	10,946	70,006	68,909	6,615	10,946	...	750
	Indus Canals, Left Bank ...	...	...	...	...	17,298	4,102	21,397	3,496	— 192	24,700	5,371	30,071	21,397	3,303	5,371	...	300
Total ...	13,575	2,218	— 122	15,671	1,23,779	28,621	1,52,400	24,891	— 1,367	1,76,924	25,003	2,00,927	1,65,675	25,620	25,603	...	2,160	
Nasrat Canals District.	Mehrabah ...	1,291	343	18	1,652	19,870	1,244	20,614	5,455	— 291	26,263	1,543	27,803	21,805	6,107	1,543	...	200
	Naulkhi ...	180	48	8	231	45,763	4,333	50,151	13,336	— 711	64,199	8,106	72,396	60,331	14,068	8,106	...	720
	Dambro ...	...	...	...	...	6,342	8,391	9,738	2,558	— 136	12,453	2,379	14,833	9,733	2,726	2,379	...	140
	Other canals ...	...	...	...	...	6,715	1,169	7,874	2,094	— 112	10,069	1,451	11,531	7,874	2,206	1,451	...	110
Total ...	1,471	391	21	1,883	78,090	10,162	89,272	23,473	— 1,262	1,12,937	13,571	1,26,508	89,743	25,137	13,571	...	1,250	
Hydrabad Canals District.	Ghara Mahmud ...	5,587	2,438	21	8,046	22,343	4,817	27,160	11,861	— 100	39,110	9,638	48,646	32,746	14,410	9,538	...	500
	Kari Blumal ...	1,924	640	7	2,571	7,576	2,820	10,396	4,637	— 38	14,971	4,425	19,396	12,320	5,422	4,425	...	220
	Nasir ...	952	415	3	1,370	26,395	2,372	28,767	12,633	— 106	41,427	3,473	44,900	29,720	13,077	3,473	...	460
	Renwah ...	22	10	...	32	1,800	...	1,800	825	— 7	2,722	1,161	3,883	1,912	842	1,161	...	300
	Other canals ...	...	...	...	...	1,967	...	1,967	854	— 7	2,818	229	3,047	1,957	861	229	...	300
Total ...	8,485	3,708	31	12,219	60,161	10,009	70,170	30,620	— 268	1,01,048	18,824	1,19,872	78,655	34,612	19,624	...	1,320	
Fullei Canals Dist.	Other canals ...	4,113	1,300	62	5,475	15,004	2,486	17,490	5,527	— 262	23,279	3,893	27,172	21,608	7,151	3,893	...	320
	Total, Minor Works, Revenue Accounts only.	88,542	15,679	— 744	1,03,477	5,07,663	1,07,791	6,15,454	1,24,418	— 2,734	7,37,138	1,50,321	8,87,459	7,03,996	1,98,619	1,50,321	...	9,900
<b>AGRICULTURAL WORKS.</b>																		
<b>WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.</b>																		
Beghari Canals District.	Kashmor Bund ...	...	...	...	...	14,070	41,789	55,868	11,907	— 812	66,687	581	69,168	55,868	12,719	581	...	600
	Sukkur-Begari Bund ...	7,413	584	41	8,038	1,19,027	9,039	1,28,066	10,084	— 708	1,38,553	1,226	1,40,078	1,35,479	11,412	1,226	...	1,400
	Kasimpur Bund ...	...	...	...	...	4,848	1,418	6,266	493	— 34	6,703	102	6,805	6,266	527	102	...	600
Shikarpur Canals District.	Bunde Bohri District ...	3,788	299	31	4,116	4,102	2,044	6,146	434	— 33	6,663	16	6,679	9,944	837	16	...	1,200
	Total ...	11,211	883	62	12,166	1,27,977	12,501	1,40,478	11,061	— 770	1,52,309	1,343	1,53,652	1,51,689	13,776	1,343	...	1,650
Ghar Canals District.	Ghar Bund ...	...	...	...	...	4,060	5,233	9,293	1,998	— 139	11,430	162	11,682	9,293	2,137	162	...	1,100
	Total ...	1,11,346	19,628	1,371	1,32,344	14,025	7,308	21,333	3,741	— 269	25,337	412	25,749	1,32,678	24,908	412	...	1,570
Western Nara District.	Nara Bunde ...	5,058	887	62	6,007	5,482	1,020	6,512	1,142	— 60	7,734	68	7,822	11,670	88	...	1,300	
	Bunde north of Kotri.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total ...	1,18,403	20,415	1,433	1,39,251	19,517	8,323	27,845	4,883	— 343	33,071	500	33,571	1,44,348	27,074	500	...	1,710	

TABLE V—concluded.

Canals and Executive Districts.	REVENUE.				EXPENDITURE.							Revenue Collection Charges.	Total, columns 6 to 12.	TOTAL EXPENDITURE.					
	Improvements.				Maintenance and Repairs.									Works.	Establishment.			Total.	
	Works.	Regular Establishment.	Tools and Plant.	Total.	Clearance Expenditure.			Regular Establishment.	Tools and Plant.	Total.	Public Works Department, including Tools and Plant.				Civil Department Collection Charges.	Indirect Charges.			
					Works.	Works Establishment.	Total.												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
<b>AGRICULTURAL WORKS—concluded.</b>																			
<b>WORKS FOR WHICH WHITHBB CAPITAL WORKS REVENUE ACCOUNTS ARE KEPT—concluded.</b>																			
Canals District	Bunds, Right Bank ...	40,060	8,802	604	49,466	68,236	6,188	74,475	16,366	1,105	91,944	582	99,528	1,14,523	26,867	582	...	1,41,972	
	Bunds, Left Bank ...	8,755	1,924	130	10,809	94,068	10,616	1,04,684	23,006	1,554	1,29,244	676	1,29,919	1,13,439	26,614	676	...	1,40,728	
	<b>Total ...</b>	<b>48,805</b>	<b>10,726</b>	<b>734</b>	<b>60,265</b>	<b>1,62,363</b>	<b>16,804</b>	<b>1,79,157</b>	<b>39,372</b>	<b>2,659</b>	<b>2,21,188</b>	<b>1,257</b>	<b>2,22,445</b>	<b>2,27,962</b>	<b>53,481</b>	<b>1,267</b>	...	<b>2,62,700</b>	
Building District	River District Mathematical Instrument Depot ...	32,064	60,709	3,422	96,194	23,105	...	23,105	43,746	2,465	69,316	...	69,316	55,169	1,10,341	...	...	1,65,610	
	... ..	...	1,063	12,639	13,731	...	...	...	...	...	...	...	...	...	13,721	...	...	13,721	
	<b>Total ...</b>	<b>32,064</b>	<b>61,761</b>	<b>16,060</b>	<b>1,09,915</b>	<b>23,105</b>	...	<b>23,105</b>	<b>43,746</b>	<b>2,465</b>	<b>69,316</b>	...	<b>69,316</b>	<b>55,169</b>	<b>1,24,062</b>	...	...	<b>1,79,231</b>	
Narasat Canals District	Bunds in the Nasrat Canals.	4,900	868	60	5,828	1,636	2,671	4,307	763	63	5,123	...	5,123	9,207	1,744	...	...	10,951	
	Canal Chouki at Doulatpur ...	...	...	...	...	531	...	531	94	7	632	...	632	531	101	...	...	632	
	Maintaining Bench Marks and Centre Nick-line of proposed Rohri-Hyderabad Canal ...	...	...	...	...	181	...	181	32	2	215	...	215	181	34	...	...	215	
	<b>Total ...</b>	<b>4,900</b>	<b>868</b>	<b>60</b>	<b>5,828</b>	<b>2,348</b>	<b>2,671</b>	<b>5,019</b>	<b>889</b>	<b>(a)-277</b>	<b>(a)-277</b>	...	<b>(a)-277</b>	<b>9,919</b>	<b>1,879</b>	...	...	<b>11,798</b>	
Canals District	Renwah Bunds ...	...	...	...	...	2,668	...	2,668	574	40	3,282	...	3,282	2,668	614	...	...	6,282	
	Fuleli Canals District	River Bunds ...	2,850	697	42	3,489	25,247	4,853	30,100	6,308	(a) 440	36,848	...	36,848	32,950	7,337	...	...	40,337
	<b>Total ...</b>	<b>2,16,233</b>	<b>95,280</b>	<b>18,381</b>	<b>3,29,894</b>	<b>3,81,354</b>	<b>92,179</b>	<b>4,73,533</b>	<b>1,30,738</b>	<b>7,702</b>	<b>6,01,973</b>	<b>3,633</b>	<b>6,06,806</b>	<b>6,89,766</b>	<b>2,42,101</b>	<b>3,633</b>	...	<b>9,35,700</b>	
Ripat Bank Division	Begari Canals District	6,427	2,097	09	8,623	1,46,577	1,03,803	2,50,442	74,647	4,007	3,29,096	69,926	3,99,022	2,56,969	30,850	69,926	10,234	4,17,879	
	Shukarpur Canals District	46,319	4,239	458	50,100	2,73,894	41,715	3,15,609	27,903	-706	3,43,808	42,281	3,85,089	3,61,928	30,990	42,281	796	4,35,985	
	Ghar Canals District	1,034	473	20	2,477	1,91,409	36,286	2,26,784	53,399	2,287	2,82,970	70,051	3,59,021	2,23,768	56,679	76,051	7,410	3,68,903	
	Western Nara District	1,40,355	25,633	1,879	1,73,167	1,48,976	46,053	1,95,238	39,220	-517	2,26,431	58,923	2,85,353	3,40,083	59,515	58,923	...	4,69,520	
	Karachi Canals District	62,490	12,962	604	76,056	2,96,439	47,270	3,43,708	66,254	1,474	4,11,436	27,669	4,39,105	4,06,198	61,294	27,669	232	5,15,443	
	Karachi Buildings District	32,064	61,761	16,060	1,09,915	23,105	...	23,105	43,746	2,465	69,316	...	69,316	55,169	1,24,062	...	...	1,79,231	
		<b>Total ...</b>	<b>2,95,639</b>	<b>1,07,066</b>	<b>17,604</b>	<b>4,20,338</b>	<b>10,60,187</b>	<b>2,73,189</b>	<b>13,53,376</b>	<b>2,09,671</b>	<b>9,010</b>	<b>16,62,067</b>	<b>2,74,349</b>	<b>19,36,906</b>	<b>16,49,015</b>	<b>4,33,380</b>	<b>2,74,349</b>	<b>118,722</b>	<b>23,75,966</b>
	Jamroo Canal Division	Jamroo Canal District	2,009	1,718	66	3,793	1,09,286	59,405	1,68,631	1,44,285	5,816	3,18,791	28,233	3,47,024	1,70,700	1,61,884	28,233	20,557	3,71,374
		Eastern Nara District	47,947	8,934	502	57,383	85,871	35,659	1,21,630	22,904	1,023	1,46,457	41,136	1,86,643	1,69,477	33,361	41,136	4,407	2,48,433
		Narasat Canals District	13,035	3,066	131	16,226	2,19,699	60,329	2,70,028	72,687	2,199	3,44,913	44,990	3,89,903	2,93,060	78,072	44,990	7,152	4,13,230
Hyderabad Canals District		8,570	3,739	32	12,334	1,00,382	16,240	1,16,622	47,850	871	1,65,349	37,034	2,02,367	1,24,102	52,485	37,034	2,337	2,17,038	
Fuleli Canals District		51,691	16,975	646	69,312	1,82,749	33,486	2,16,235	64,921	2,934	2,84,150	77,603	3,61,653	2,87,028	84,538	77,603	9,533	4,39,499	
	<b>Total ...</b>	<b>1,23,255</b>	<b>33,415</b>	<b>1,277</b>	<b>1,53,047</b>	<b>6,07,987</b>	<b>1,95,119</b>	<b>8,93,106</b>	<b>3,52,647</b>	<b>12,901</b>	<b>12,58,654</b>	<b>2,28,936</b>	<b>14,87,690</b>	<b>10,16,361</b>	<b>4,00,340</b>	<b>2,28,936</b>	<b>44,036</b>	<b>16,89,673</b>	
<b>GRAND TOTAL ...</b>		<b>4,18,804</b>	<b>1,40,510</b>	<b>18,981</b>	<b>5,78,385</b>	<b>17,78,174</b>	<b>4,68,308</b>	<b>22,40,482</b>	<b>6,52,318</b>	<b>21,911</b>	<b>29,20,711</b>	<b>5,03,763</b>	<b>34,24,496</b>	<b>26,66,376</b>	<b>8,33,720</b>	<b>5,03,763</b>	<b>62,768</b>	<b>40,65,539</b>	

(a) Suspense account.



TABLE VI—concluded.

Canals and Executive Districts.	AVERAGE OF THREE PREVIOUS YEARS.					1915-16.					LENGTH IN MILES.				
	Cultivation.	Canal Revenue.	Maintenance and Revenue Collection.	Percentage of Expenditure on Revenue.	Cost of Maintenance per acre.	Cultivation.	Canal Revenue.	Maintenance and Revenue Collection.	Percentage of Expenditure on Revenue.	Cost of Maintenance per acre.	Canals.			Bunds	Total.
											Main canals.	Branches.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>MINOR WORKS—concluded.</b>	Acres.	Rs.	Rs.	Rs.	Rs.	Acres.	Rs.	Rs.	Rs.	Rs.	Miles.	Miles.	Miles.	Miles.	Miles.
<b>IRRIGATION AND NAVIGATION—concluded.</b>															
<b>WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT—concluded.</b>															
<i>Canals in operation—concluded.</i>															
Kashmir ...	26,655	20,680	21,069	91.0	1.1	15,802	36,102	18,817	52.1	1.1	26	66	92	...	93
Begari ...	37,781	64,951	39,866	73.5	1.0	29,160	52,977	51,588	97.3	1.7	93	67	160	...	160
Indus Canals Right Bank ...	23,706	37,946	21,474	57.6	0.8	33,079	59,301	29,365	53.0	0.9	103	8	111	...	111
Indus Canals Left Bank ...	96,864	1,65,012	75,921	46.0	0.7	91,541	1,83,570	70,608	38.4	0.7	103	261	332	...	332
<b>Total</b>	181,749	3,61,743	2,00,743	55.2	0.8	210,664	4,16,798	2,00,927	48.3	0.9	470	463	933	...	933
<b>Total, Minor Works, Revenue Accounts only</b>	1,023,132	25,53,951	9,08,174	35.6	0.9	900,409	35,12,683	8,87,459	35.5	0.9	1,317	1,558	2,873	...	2,873
<b>AGRICULTURAL WORKS.</b>															
<b>WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.</b>															
Kashmir Band ...	4,983	10,670	1,37,340	1,755.6	42.6	4,721	11,830	69,108	584.9	14.6	...	...	...	124	124
Sukkur-Begari ...	7,054	19,294	97,408	504.8	13.8	126	372	1,40,078	37,655.3	1,111.7	...	...	...	67	67
Kasimpur Bund ...	4,061	11,404	4,113	36.0	1.0	3,673	21,678	6,995	31.3	0.7	...	...	...	11	11
Bunds in Rohri ...	80	333	48,994	14,934.1	544.2	642	1,728	6,078	369.9	10.4	...	...	...	40	40
<b>Total</b>	11,235	31,028	1,50,605	486.6	13.3	9,441	23,778	1,53,652	616.2	16.2	...	...	...	117	117
Ghar Canals ...	2,633	8,968	22,457	250.4	8.5	573	2,635	11,582	439.5	2.2	...	...	...	46	46
Nara Canals ...	3,894	12,278	31,327	255.1	8.7	2,069	7,655	25,749	340.8	12.5	...	...	...	91	91
Kotri ...	302	299	6,635	2,246.6	22.1	605	1,522	7,623	513.9	12.9	...	...	...	9	9
<b>Total</b>	3,896	12,676	38,022	303.3	9.7	2,664	9,077	33,571	369.8	12.6	...	...	...	100	100
Right Bank ...	4,664	6,925	75,941	1,096.6	16.2	5,656	10,691	92,526	865.4	16.3	...	...	...	52	52
Left Bank ...	5,541	9,367	1,12,185	1,195.1	20.2	6,698	10,711	1,29,919	1,212.9	19.3	...	...	...	94	94
<b>Total</b>	10,205	16,312	1,63,126	1,163.2	18.4	12,354	21,402	2,22,445	1,039.3	18.0	...	...	...	146	146
River District ...	...	...	37,485	...	...	...	...	69,318	...	...	...	...	...	...	...
M. I. Depot ...	...	238	...	...	...	...	2,056	...	...	...	...	...	...	...	...
<b>Total</b>	...	238	37,485	15,760	...	...	2,056	69,316	1,03.4	...	...	...	...	...	...
Desert Canal District ...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Western Nara District ...	...	94	6,851	9,939.2	...	...	28	5,093	20,329.1	...	...	...	...	(2)15	15
Narasat Canals District ...	...	9	3,200	36,555.5	...	...	17	3,232	19,305.6	...	...	...	...	3	3
Karachi Canals District ...	...	193	55,093	28,659.1	...	...	26	37,097	12,970.9	...	...	...	...	44	44
<b>Total</b>	...	297	64,534	21,829.9	...	...	332	46,072	19,877.1	...	...	...	...	67	67
<b>Total, Agricultural Works</b>	33,383	80,087	6,83,778	860.0	21.3	29,762	71,109	6,05,806	851.9	20.4	...	...	...	800	800
Begari Canals District ...	487,849	9,87,428	6,03,906	61.1	1.2	536,126	11,95,892	3,99,022	33.4	0.7	210	495	705	124	829
Shikarpur Canals District ...	229,167	6,08,877	3,83,873	67.2	1.6	211,957	6,76,641	3,86,089	57.0	1.8	213	360	573	117	690
Ghar Canals District ...	241,410	12,49,686	3,03,341	24.2	0.8	281,464	11,19,846	3,59,021	32.1	1.2	113	323	436	46	423
Western Nara District ...	384,414	10,91,187	3,64,580	33.4	1.0	384,424	9,84,532	2,85,363	29.1	1.0	351	327	678	100	778
Karachi Canals District ...	266,537	4,02,239	4,02,410	100.0	1.5	233,762	4,59,077	4,39,105	95.6	1.8	500	469	969	796	1,115
Karachi Buildings District ...	...	238	37,465	16,760.0	...	...	2,056	69,318	1,03.4	...	...	...	...	...	...
<b>Total</b>	1,873,467	43,09,955	20,94,594	47.6	1.2	1,550,753	44,37,043	19,36,906	43.7	1.2	1,887	1,974	3,361	533	3,594
Jamroo Canal District ...	243,198	7,48,360	3,01,338	40.3	1.2	270,327	7,80,016	3,47,024	44.5	1.3	117	520	637	...	637
Eastern Nara District ...	283,057	6,62,624	1,89,802	27.3	0.7	264,709	6,82,404	1,66,643	27.4	0.7	163	119	281	304	365
Narasat Canals District ...	290,738	7,30,198	3,73,354	61.1	1.3	282,938	6,65,645	3,89,803	59.6	1.5	277	664	931	15	946
Hyderabad Canals District ...	565,921	6,11,627	1,55,970	30.4	0.9	282,368	5,54,364	2,02,367	36.5	1.0	266	651	917	8	623
Fuleli Canals District ...	430,448	9,35,255	3,90,553	41.7	0.9	450,243	11,20,293	3,61,653	32.1	0.8	199	1,028	1,225	44	1,269
<b>Total</b>	1,509,083	36,89,094	14,32,017	53.3	0.9	1,481,270	38,02,711	14,87,590	39.1	1.0	1,021	2,970	3,991	371	4,362
<b>Grand total, Sind</b>	3,181,629	80,38,039	35,26,611	43.6	1.1	3,032,023	82,45,764	34,24,496	41.5	1.1	2,408	4,944	7,352	904	8,256

- (a) Begari Canals District.—Increase of four miles in the Desert Canal is due to new cut to Adiwah. Increase of one mile of Karia Khanwah in Unharwah. Net increase of three miles in the canals from Kashmir Bund included in Kashmir Bund is due to decimal figures being not taken into account last year by the Executive Engineer, Begari Canals, through mistake.
- (b) Ghar Canals District.—Decrease of 27 miles in the Ghar Canal is due to the main canals, viz., Nasrat, Kado and Fordwah, being treated as branch canals as per Chief Engineer in Sind's orders this year. This increase of 27 miles in main canals is included in the mileage of branch canals with additional 3 miles (i.e., in all 30 miles added) of new cut Fordwah sanctioned this year.
- (c) Karachi Canals District.—Increase of one mile in Battah Canal is due to river having left the course this year.
- (d) Hyderabad Canals District.—(1) Decrease of two miles in main canal—Marak—and an increase of one mile in its branches as compared with last year is due to portion of Marak Dhand and of new cut having been eroded away and to old abandoned tail of Shahwah having been taken up. (2) Increase of three miles in main canal—Nasir—is due to inclusion of Nasir old mouth.
- (e) Fuleli Canals District.—(1) Decrease of 22 miles in branches of Fuleli as compared with last year is due to actual chainage made of all the branches this year while preparing Karia Registers and to Nasir Distributaries used as karias now. (2) Decrease of one mile in main canal—Hasanal—is due to erosion in the head portion. (3) Increase of two miles in main canals—Other canals Fuleli—and decrease of eight miles in their branches is due to actual chainage made this year, vide (1) ante.
- (f) Shikarpur Canals District.—Increase of fifteen miles in branch canals of Sind Canal is due to taking one zamindari karia Mirwah by Government.
- (g) Western Nara District.—Decrease of two miles in the Canals of north of Kotri is due to erosion this year.
- (h) Nasrat Canals District.—Increase of two miles in the length of Bunds as compared with last year is due to construction of four short bunds across certain dhas near Laswah.

TABLE VII.

Statement showing Receipts from sale of Occupancy Rights in waste or other lands not belonging to Major and Minor Works, but directly benefited by their construction for the year 1915-16.

Canals and Executive Districts.	Particulars of the lands, the Occupancy Rights of which were sold.				Amounts of Receipts from sale of Occupancy Rights.	Land share $\frac{1}{10}$ .	Irrigation share $\frac{6}{10}$ .	Sums to be credited as Indirect Revenue calculated at 6 per cent. on Irrigation share.	Remarks
	Taluka.	Village.	Area.	Assessment.					
1	2	3	4	5	6	7	8	9	10
<b>MAJOR WORKS.</b>									
<b>PRODUCTIVE WORKS.</b>									
<b>IRRIGATION WORKS NOT CHARGED AGAINST REVENUE.</b>									
<i>Canals in operation.</i>									
Begári Canals District.	Desert Canal ...	622	889	2,274	227	2,047	82		
	Unharwah ...	198	109	657	60	591	24		
	Begári Canal ...	593	1,032	1,485	149	1,336	53		
	Total ...	1,413	2,030	4,416	442	3,974	159		
Shikárpur District.	Canals } Mahiwah ...	614	815	574	57	517	21		
Jámráo Canal District.	Jámráo Canal ...	7,263	16,692	53,845	5,384	48,461	1,939		
Nasráo Canals District.	Dád Canal ...	357	837	1,313	181	1,182	47		
	Nasráo Canal ...	1,082	1,061	4,043	404	3,639	146		
	Total ...	1,439	1,898	5,356	585	4,821	193		
Eastern Nára District.	Nára Supply Channel ...	880	...	889	88	844	14		
	Eastern Nára ...	117	19	100	10	80	4		
	Mitbrao Canal ...	7	860	709	71	698	25		
	Thar Canal ...	...	14	287	29	258	10		
	Khipro Canal ...	...	...	...	...	...	...		
	Hiral Canal ...	337	493	1,671	167	1,504	60		
	Total ...	850	866	3,149	315	2,834	113		
	Total, Major Works ...	11,579	21,821	67,340	6,738	60,607	2,425		
<b>MINOR WORKS.</b>									
<b>IRRIGATION AND NAVIGATION</b>									
<b>WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.</b>									
<i>Canals in operation.</i>									
Ghár Canals District.	Sukkur Canal ...	3	...	15	1	14	1		
	Ghár Canal ...	8	...	2,036	204	1,832	73		
	Total ...	11	...	2,051	205	1,846	74		
Karschi Canals District.	Sattah Canal ...	942	2,084	1,257	126	1,131	46		
Hyderabad District.	Allibhar kacheri ...	...	...	8	1	7	...		
	Márák ...	...	...	2	1	1	...		
	Sarfrás ...	...	...	22	2	20	1		
	Total ...	...	...	32	4	28	1		
Fuleli Canals District.	Fuleli Canal ...	...	...	16,791	1,679	15,112	604		
	Hasanali Canal ...	...	...	3,225	322	2,903	116		
	Total ...	...	...	20,016	2,001	18,015	720		
	Total, Minor Works, Capital and Revenue Accounts ...	953	2,084	23,356	2,336	21,020	641		

Too numerous to mention.

Too numerous to mention.

TABLE VII—continued.

Canals and Executive Districts.	Particulars of the lands, the Occupancy Rights of which were sold.				Amounts of Receipts from sale of Occupancy Rights.	Land share		Irrigation share	Sums to be credited as Indirect Revenue calculated at 4 per cent. on Irrigation share.	Remarks.
	Taluka.	Village.	Area.	Assessment.		1 10.	9 10.			
1	2	3	4	5	6	7	8	9	10	
<b>MINORWORKS—continued.</b>										
<b>IRRIGATION AND NAVIGATION—concluded.</b>										
<b>WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.</b>										
<i>Canals in operation—concluded.</i>										
Shikarpur District.	Canals	Canals in Rohri Sind Canal...	92	65	209	21	188	7		
		Rajib do. ...	32	33	47	5	42	1		
		Chitti do. ...	...	29	135	13	122	5		
		Garang do. ...	23	84	27	8	24	1		
	Total ..		154	211	418	42	376	15		
Western Nára District.		Nára ...	90	4	286	30	266	10		
		Aral ...	...	...	...	...	...	...		
		New Feeder, Western Nára ...	...	...	...	...	...	...		
		Pritchard Canal ...	14	...	39	4	35	2		
		Wahur ...	...	...	...	...	...	...		
		Márví ...	...	...	...	...	...	...		
		Dádu Canals ...	...	...	...	...	...	...		
		Phitta Canals ...	...	...	...	...	...	...		
		Canals north of Kotri ...	98	227	105	10	95	4		
	Total ..		202	231	440	44	396	16		
Karachi Canals District.		Kalri ...	595	1,529	854	85	769	31		
		Bághar ...	2,259	4,304	3,399	340	3,059	122		
		Indus Canals Right Bank ...	1,384	1,853	4,308	431	3,877	155		
		Pinyári ...	1,013	2,267	1,768	177	1,591	64		
		Indus Canals Left Bank ...	1,174	2,441	2,267	227	2,040	81		
	Total ...		6,375	12,394	12,596	1,260	11,336	453		
Nasrat Canals District.		Mehrabwah ...	...	...	...	...	...	...		
		Naulákhí ...	2	2	14	1	13	...		
		Dámbró ...	...	...	...	...	...	...		
		Other canals ...	...	...	...	...	...	...		
	Total ...		2	2	14	1	13	...		
Hyderabad Canals District.		Gháro Mahmúdo ...	...	...	450	45	405	16		
		Kari Shumáli ...	...	...	69	7	62	3		
		Nasir ...	...	...	1	...	1	...		
		Renwah ...	...	...	...	...	...	...		
		Other canals ...	...	...	...	...	...	...		
	Total ...		...	...	520	52	468	19		
Fuleli Canals District.		Other capals ...	...	...	7,129	713	6,416	257		
Total, Minor Works, Revenue Accounts only ...			6,733	12,833	21,117	2,112	19,005	760		

Too numerous to mention.

Too numerous to mention.

TABLE VII--concluded.

Canals and Executive Districts.	Particulars of the lands, the Occupancy Rights of which were sold.				Amounts of Receipts from sale of Occupancy Rights.	Land share $\frac{1}{10}$ .	Irrigation share $\frac{9}{10}$ .	Sums to be credited as Indirect Revenue calculated at 4 per cent. on Irrigation share.	Remarks.
	Taluka.	Village.	Area.	Assessment.					
1	2	3	4	5	6	7	8	9	10
<b>MINOR WORKS--concluded.</b>									
<b>AGRICULTURAL WORKS.</b>									
WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.									
Begari Canals District.	Kashmir Bund	...	38	20	75	7	68	2	
Shikarpur Canals District.	Bunds in Rohri	...	22	5	21	2	19	1	
	Sukkur-Begari Bund	...	...	...	...	...	...	...	
	Kasimpur Bund	...	22		21	2	19	1	
	Total	...							
Ghar Canals District.	Ghar Bunds	...	8		13	1	12	1	
Western Nara District.	Nara Bunds	...	...	...	...	...	...	...	
	Bunds north of Kotri	...	...	...	...	...	...	...	
	Total	...	...	...	...	...	...	...	
Kardahi Canals District.	Bunds, Right Bank	...	34	132	76	8	68	3	
	Bunds, Left Bank	...	7	14	14	1	13	...	
	Total	...	41	146	90	9	81	3	
	Total, Agricultural Works	...	104	171	199	19	180	7	
Indus Right Bank Division.	Begari Canals District.	...	1,451	2,050	4,491	449	4,042	101	
	Shikarpur Canals District	...	790	1,031	1,013	101	912	87	
	Ghar Canals District.	...	14	...	2,004	200	1,804	75	
	Western Nara District	...	202	231	440	44	396	16	
	Kardahi Canals District	...	7,858	14,624	13,948	1,395	12,553	552	
	Total	...	9,315	17,936	21,951	2,195	19,756	791	
Indus Left Bank Division.	Jamrao Canal District.	...	7,268	16,492	53,845	5,384	48,461	1,939	
	Eastern Nara District.	...	850	886	3,149	315	2,834	118	
	Nasrat Canals District	...	1,441	1,400	6,370	530	4,840	193	
	Hyderabad Canals District	...	...	...	552	56	496	20	
	Fuleli Canals District.	...	...	...	27,145	2,714	24,431	977	
	Total	...	9,554	18,978	90,061	9,035	81,026	3,242	
	Grand total, Sind	...	19,369	36,914	1,12,912	11,233	1,00,512	4,033	

Too numerous to mention.

Too numerous to mention.

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**TABLE VII.**

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L (iv) 705-15



TABLE

## Abstract of Crop Return of Government

Canals, Districts and Crops,	1911-1912.			1912-1913.			1913-1914.		
	Lift.	Flow.	Total.	Lift.	Flow.	Total.	Lift.	Flow.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
<i>Kharif.</i>									
Rice...	...	46,762	46,762	...	11,605	11,605	...	39,187	39,187
Jowari ...	22,432	68,375	90,767	22,520	103,617	126,137	25,422	160,002	185,424
Bajri ...	12,346	39,193	51,544	16,134	92,083	108,217	16,774	74,771	91,545
Cotton ...	22	201	223	43	86	129	16	595	611
Other crops .	2,367	41,090	43,457	1,220	44,496	45,716	1,623	50,928	52,550
<b>Total ...</b>	<b>37,217</b>	<b>195,526</b>	<b>232,743</b>	<b>39,917</b>	<b>251,892</b>	<b>291,809</b>	<b>43,834</b>	<b>316,483</b>	<b>362,317</b>
<i>Rabi.</i>									
Wheat ...	40	33,519	33,559	30	44,524	44,554	181	48,082	48,263
Barley ...	...	39	39	1	31	32	1	68	69
Oil-seeds ...	72	19,327	19,399	17	15,826	15,843	10,753	44,969	55,712
Other crops .	7	52,779	52,786	1	47,691	47,692	31	68,619	68,650
<b>Total ...</b>	<b>119</b>	<b>105,664</b>	<b>105,783</b>	<b>49</b>	<b>108,071</b>	<b>108,120</b>	<b>10,966</b>	<b>161,748</b>	<b>172,714</b>
<b>Grand total.</b>	<b>37,336</b>	<b>301,190</b>	<b>338,526</b>	<b>39,966</b>	<b>359,963</b>	<b>399,929</b>	<b>54,800</b>	<b>480,231</b>	<b>535,031</b>
<i>Kharif.</i>									
Rice...	...	40,390	40,390	...	19,491	19,491	3	27,737	27,739
Jowari ...	35,810	37,549	72,859	40,929	64,425	105,354	30,461	61,612	92,123
Bajri ...	4,812	3,709	8,521	6,650	10,644	17,294	8,463	9,820	17,788
Cotton ...	160	446	606	329	668	997	275	765	1,030
Other crops .	1,455	8,291	9,746	1,477	7,090	9,467	1,453	7,622	9,080
<b>Total ...</b>	<b>41,737</b>	<b>90,385</b>	<b>132,123</b>	<b>49,885</b>	<b>103,218</b>	<b>152,603</b>	<b>40,664</b>	<b>107,096</b>	<b>147,760</b>
<i>Rabi.</i>									
Wheat ...	636	28,646	29,282	1,193	50,197	51,390	494	53,145	53,639
Barley ...	...	248	248	6	164	190	5	178	183
Oil-seeds ...	21	2,938	3,009	16	4,169	4,185	4	8,104	8,168
Other crops ..	16	17,542	17,558	13	13,404	13,422	4	19,331	19,338
<b>Total ...</b>	<b>673</b>	<b>49,424</b>	<b>50,097</b>	<b>1,233</b>	<b>67,954</b>	<b>69,187</b>	<b>507</b>	<b>80,821</b>	<b>81,328</b>
<b>Grand total.</b>	<b>42,410</b>	<b>139,809</b>	<b>182,219</b>	<b>50,618</b>	<b>171,172</b>	<b>221,790</b>	<b>41,171</b>	<b>187,917</b>	<b>229,088</b>
<i>Kharif.</i>									
Rice...	...	212,508	212,508	16	207,800	207,816	6	217,843	217,349
Jowari ...	15,725	81,483	47,208	25,849	48,401	74,250	20,561	38,932	64,673
Bajri ...	1,057	3,094	4,151	4,814	3,035	7,849	2,874	2,385	5,259
Cotton ...	46	81	77	104	34	138	24	36	60
Other crops .	2,951	4,946	7,897	2,960	7,163	10,143	2,519	8,731	11,250
<b>Total ...</b>	<b>19,779</b>	<b>252,062</b>	<b>271,841</b>	<b>33,743</b>	<b>266,453</b>	<b>300,196</b>	<b>26,004</b>	<b>262,467</b>	<b>293,491</b>
<i>Rabi.</i>									
Wheat ...	1,385	39,174	40,559	1,807	44,109	45,916	1,945	45,444	47,389
Barley ...	5	139	144	21	74	95	6	49	55
Oil-seeds ...	769	29,322	30,091	190	21,965	22,175	500	39,781	40,261
Other crops .	399	78,357	78,756	199	79,645	80,044	298	88,354	88,650
<b>Total ...</b>	<b>2,548</b>	<b>146,992</b>	<b>149,540</b>	<b>2,217</b>	<b>140,013</b>	<b>148,230</b>	<b>2,747</b>	<b>173,628</b>	<b>176,375</b>
<b>Grand total.</b>	<b>22,327</b>	<b>399,054</b>	<b>421,381</b>	<b>35,960</b>	<b>412,466</b>	<b>448,426</b>	<b>28,751</b>	<b>436,115</b>	<b>469,866</b>
<i>Kharif.</i>									
Rice...	...	160,671	160,671	...	170,258	170,258	...	175,298	175,298
Jowari ...	23,797	20,476	49,273	36,442	37,507	73,949	37,591	20,652	64,223
Bajri ...	10,905	2,114	13,079	7,100	3,593	10,693	5,629	1,611	7,240
Cotton ...	1,204	110	1,314	453	115	568	341	33	374
Other crops .	1,377	3,887	5,244	1,036	8,775	4,811	1,270	8,523	4,725
<b>Total ...</b>	<b>42,343</b>	<b>167,233</b>	<b>229,581</b>	<b>45,031</b>	<b>224,158</b>	<b>269,189</b>	<b>44,831</b>	<b>207,094</b>	<b>261,925</b>

VIII.

Foreign and Jāghir Lands for five years.

1914-1915.			1915-1916.			Percentage of Lift and flow.			Percentage of Kharif and Rabi.	Canals, Districts and Crops.
Lift.	Flow.	Total.	Lift.	Flow.	Total.	Lift.	Flow.	Total.		
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
...	59,208	59,208	...	79,614	79,614	...	100.	100	...	<i>Kharif.</i>
30,307	111,553	141,860	29,183	84,637	113,820	26	74	100	...	Rice ...
19,633	108,067	127,700	21,482	103,510	124,992	17	83	100	...	Jowari ...
14	473	487	1	58	59	2	98	100	...	Bajri ...
1,919	46,800	48,719	1,024	10,539	11,563	9	91	100	...	Cotton ...
									...	Other crops ...
51,873	326,101	377,974	51,690	278,358	330,048	16	84	100	55	Total.
										<i>Rabi.</i>
176	83,661	83,637	1,074	81,172	82,246	1	99	100	...	Wheat ...
1	127	128	2	87	89	2	98	100	...	Barley ...
3,643	61,950	65,598	5,870	55,815	61,665	9	91	100	...	Oil-seeds ...
1	83,606	83,607	274	120,798	121,072	...	100	100	...	Other crops ...
3,828	229,344	233,170	7,200	257,872	265,072	3	97	100	45	Total.
55,699	555,445	611,144	58,890	536,230	595,120	10	90	100	100	Grand total.
										<i>Kharif.</i>
...	43,653	43,653	30	53,651	53,681	...	100	100	...	Rice ...
24,918	63,329	93,247	81,313	36,332	68,245	46	54	100	...	Jowari ...
7,035	10,748	17,783	8,986	6,916	15,902	57	43	100	...	Bajri ...
227	604	831	121	147	263	45	55	100	...	Cotton ...
887	8,804	9,691	891	6,694	7,585	12	88	100	...	Other crops ...
33,067	132,138	165,205	41,341	104,340	145,681	28	72	100	60	Total.
										<i>Rabi.</i>
1,124	73,633	74,807	604	52,255	52,859	1	99	100	...	Wheat ...
3	251	254	1	163	164	1	99	100	...	Barley ...
99	12,687	12,786	5	6,902	6,907	...	100	100	...	Oil-seeds ...
37	38,091	38,128	10	38,512	38,522	...	100	100	...	Other crops ...
1,263	124,712	125,975	620	97,832	98,452	1	99	100	40	Total.
34,330	256,850	291,180	41,961	102,172	244,133	17	83	100	100	Grand total.
										<i>Kharif.</i>
...	217,195	217,195	3	198,358	198,361	...	100	100	...	Rice ...
20,511	38,793	59,304	12,036	28,785	40,801	29	71	100	...	Jowari ...
3,160	1,751	4,911	802	849	1,651	49	51	100	...	Bajri ...
14	65	79	6	10	16	37	63	100	...	Cotton ...
2,185	8,939	11,174	1,312	5,199	6,511	20	80	100	...	Other crops ...
25,870	266,793	292,663	14,159	233,181	247,340	6	94	100	61	Total.
										<i>Rabi.</i>
2,238	54,976	57,214	887	49,103	49,990	2	98	100	...	Wheat ...
17	114	131	9	61	70	13	87	100	...	Barley ...
2,817	51,161	53,978	261	25,429	25,690	1	99	100	...	Oil-seeds ...
376	101,479	101,855	369	81,804	82,273	...	100	100	...	Other crops ...
5,443	207,730	213,173	1,526	156,497	158,023	1	99	100	39	Total.
31,318	474,523	505,841	15,685	389,678	405,363	4	96	100	100	Grand total.
										<i>Kharif.</i>
...	189,652	169,652	...	153,583	153,583	...	100	100	...	Rice ...
32,783	34,780	67,563	32,782	17,788	50,570	65	35	100	...	Jowari ...
2,973	2,138	5,111	5,535	1,907	7,442	74	26	100	...	Bajri ...
203	76	281	91	4	95	96	4	100	...	Cotton ...
882	3,081	3,963	1,276	2,694	3,970	32	68	100	...	Other crops ...
36,843	209,727	246,570	39,684	175,976	215,660	18	82	100	59	Total.

Begari Canals.

Shikarpur Canals.

Western Nara.

TABLE

Canals, Districts and Crops.	1911-1912.			1912-1913.			1913-1914.			
	Lift.	Flow.	Total.	Lift.	Flow.	Total.	Lift.	Flow.	Total.	
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Western Nara— (concl'd.)	<i>Rabi.</i>									
	Wheat ...	5,375	39,413	44,787	8,629	41,988	50,617	12,149	37,276	49,425
	Barley ...	397	2,111	2,508	494	1,529	2,023	905	1,914	2,819
	Oil-seeds ...	1,007	46,779	47,786	1,557	46,661	48,218	1,582	45,173	50,054
	Other crops ..	855	73,125	73,480	571	72,296	72,867	557	62,366	62,913
Total ...	7,134	161,427	168,561	11,271	162,474	173,745	15,493	149,718	165,211	
Grand total.	49,477	348,665	398,142	56,802	386,632	442,934	60,324	356,813	417,136	
Karachi Canals.	<i>Kharij.</i>									
	Rice ...	233	213,851	214,084	297	226,202	226,499	126	224,449	224,575
	Jowari ...	313	440	753	625	106	731	926	322	1,248
	Bajri ...	7,225	2,598	9,823	8,494	719	9,213	8,262	8,019	11,281
	Cotton ...	28	...	28	3	...	3	6	...	6
Other crops ..	2,315	1,579	3,894	3,048	1,694	4,742	1,950	1,419	3,369	
Total ...	10,114	218,468	228,582	12,467	228,721	241,188	11,270	229,209	240,479	
Indus Right Bank Division.	<i>Rabi.</i>									
	Wheat ...	...	82	82	...	107	107	...	279	279
	Barley ...	10	3,098	3,108	4	5,683	5,692	...	9,801	9,801
	Oil-seeds ...	...	5,544	5,544	...	10,073	10,073	...	17,859	17,859
	Other crops ..	78	19,109	19,187	150	19,767	19,917	501	22,325	22,826
Total ...	88	27,833	27,921	154	35,635	35,789	501	50,264	50,765	
Grand total.	10,202	246,301	256,503	12,621	264,356	276,977	11,771	279,473	291,244	
Eastern Nara...	<i>Kharij.</i>									
	Rice ...	233	674,182	674,415	313	644,351	644,664	134	677,009	677,143
	Jowari ...	102,627	158,223	260,850	128,365	254,056	380,421	114,981	282,610	397,691
	Bajri ...	38,405	50,713	87,118	43,192	109,994	153,188	42,007	91,106	133,118
	Cotton ...	1,460	788	2,248	932	903	1,835	662	1,419	2,081
Other crops ..	10,465	59,773	70,238	9,741	65,138	74,679	8,519	72,225	81,044	
Total ...	151,190	943,679	1,094,869	180,543	1,074,442	1,254,985	166,608	1,124,809	1,290,972	
Eastern Nara...	<i>Rabi.</i>									
	Wheat ...	7,436	140,838	148,269	11,659	180,925	192,584	14,769	184,226	198,995
	Barley ...	412	5,635	6,047	526	7,506	8,032	917	12,030	12,947
	Oil-seeds ...	1,859	103,960	105,819	1,800	98,713	100,513	18,189	158,985	172,074
	Other crops ..	855	240,912	241,767	939	233,003	233,912	1,389	260,988	262,377
Total ...	10,562	491,340	501,908	14,924	520,147	535,071	30,214	616,179	646,893	
Grand total.	161,752	1,435,019	1,596,771	195,467	1,694,589	1,790,056	196,817	1,740,548	1,937,365	
Eastern Nara...	<i>Kharij.</i>									
	Rice ...	230	129,368	129,646	598	125,740	126,336	1,167	121,287	122,454
	Jowari ...	1,143	247	1,390	2,279	784	3,063	2,340	986	3,316
	Bajri ...	19,120	11,006	24,126	26,734	18,768	45,502	25,074	11,482	36,556
	Cotton ...	10,874	22,559	33,433	15,276	20,139	35,415	22,609	29,592	52,161
Other crops ..	1,070	991	2,061	1,268	906	2,174	1,373	686	2,058	
Total ...	26,487	164,169	190,656	46,153	166,337	212,430	52,663	164,283	216,945	
Eastern Nara...	<i>Rabi.</i>									
	Wheat ...	3,362	34,069	37,431	1,817	25,068	26,885	2,525	21,902	24,427
	Barley ...	56	333	389	84	202	286	19	202	221
	Oil-seeds ...	764	7,394	8,158	909	7,990	8,849	733	11,237	11,970
	Other crops ..	547	9,001	9,548	426	8,031	8,467	218	6,313	6,531
Total ...	4,729	50,797	55,526	2,986	41,291	44,277	3,495	39,654	43,149	
Grand total.	21,216	214,906	246,182	49,139	207,628	256,707	66,158	203,936	260,094	

VIII—continued.

1914-1915.			1915-1916.			Percentage of Lift and Flow.			Percentage of Kharif and Rabi.	Canals, Districts and Crops.
Lift.	Flow.	Total.	Lift.	Flow.	Total.	Lift.	Flow.	Total.		
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
29,565	50,321	78,888	9,971	36,808	46,779	21	79	100	...	<i>Rabi.</i>
932	3,760	4,712	676	2,425	3,101	23	78	100	...	Wheat... ..
4,672	106,164	110,836	827	29,779	30,606	3	97	100	...	Barley... ..
1,438	75,808	77,246	406	68,650	69,056	1	99	100	...	Oil-seeds ... ..
										Other crops ... ..
35,807	236,073	271,680	11,880	137,662	149,542	8	92	100	41	Total
72,450	445,800	518,250	51,564	313,638	365,202	14	86	100	100	Grand total.
										<i>Kharif.</i>
14	209,802	209,816	164	202,670	202,834	...	100	100	...	Rice ... ..
763	119	891	787	151	588	83	17	100	...	Jowari... ..
5,919	887	6,806	3,037	482	3,519	86	14	100	...	Bajri ... ..
4	...	4	1	...	1	100	...	100	...	Cotton... ..
2,030	1,253	3,283	2,163	2,761	4,924	44	56	100	...	Other crops ... ..
8,729	212,061	220,790	6,102	206,064	212,166	3	97	100	84	Total
										<i>Rabi.</i>
...	284	284	...	140	140	...	100	100	...	Wheat... ..
...	11,060	11,060	10	7,919	7,929	...	100	100	...	Barley... ..
...	11,775	11,775	...	8,850	8,850	...	100	100	...	Oil-seeds ... ..
243	17,845	18,088	433	22,053	22,486	2	98	100	...	Other crops ... ..
243	40,964	41,207	443	38,962	39,405	1	99	100	16	Total
8,972	253,025	261,997	6,645	245,026	251,571	3	97	100	100	Grand total.
										<i>Kharif.</i>
14	699,510	699,524	197	687,976	688,073	...	100	100	...	Rice ... ..
109,281	253,574	362,855	106,051	163,273	274,324	39	61	100	...	Jowari ... ..
38,720	123,591	162,311	39,842	113,664	153,506	26	74	100	...	Bajri ... ..
464	1,218	1,682	220	219	439	50	50	100	...	Cotton... ..
7,903	63,927	76,830	6,666	27,887	34,553	19	81	100	...	Other crops ... ..
156,382	1,146,820	1,303,202	152,976	997,919	1,150,895	13	87	100	62	Total ... ..
										<i>Rabi.</i>
32,103	262,925	295,028	12,536	219,478	232,014	5	95	100	...	Wheat... ..
953	15,332	16,285	698	10,655	11,353	6	94	100	...	Barley... ..
11,236	243,737	254,973	6,943	126,775	133,718	5	95	100	...	Oil-seeds ... ..
2,095	316,829	318,924	1,492	331,917	333,409	...	100	100	...	Other crops ... ..
46,387	838,823	885,210	21,669	688,825	710,494	3	97	100	38	Total
202,769	1,985,643	2,188,412	174,645	1,686,744	1,861,389	9	91	100	100	Grand total.
										<i>Kharif.</i>
751	112,325	113,076	3,374	136,849	140,223	2	98	100	...	Rice ... ..
499	831	1,330	1,258	740	1,998	63	37	100	...	Jowari... ..
20,131	12,640	32,771	25,848	13,775	39,623	65	35	100	...	Bajri ... ..
19,304	28,517	47,821	7,205	7,406	14,611	49	51	100	...	Cotton... ..
1,393	770	2,163	1,344	1,303	2,647	51	49	100	...	Other crops ... ..
42,063	155,083	197,166	39,029	160,073	199,102	20	80	100	76	Total
										<i>Rabi.</i>
2,353	40,041	42,394	7,129	41,581	48,710	15	85	100	...	Wheat... ..
30	484	514	54	541	595	9	91	100	...	Barley... ..
1,078	10,747	11,825	1,092	4,321	5,913	18	82	100	...	Oil-seeds ... ..
415	8,726	9,171	378	6,379	6,757	6	94	100	...	Other crops ... ..
3,906	59,963	63,874	8,653	53,322	61,975	14	86	100	24	Total
45,984	215,051	261,040	47,682	213,395	261,077	18	82	100	100	Grand total.

TABLE

Canals, Districts and Crops.	1911-1912.			1912-1913.			1913-1914.		
	Lift.	Flow.	Total.	Lift.	Flow.	Total.	Lift.	Flow.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
<i>Kharij.</i>									
Rice ...	8	15,213	15,216	2	14,523	14,530	15	13,725	13,740
Jowari ...	49,114	32,914	82,028	62,878	33,667	101,543	70,798	40,481	111,279
Bajri ...	47,791	13,407	61,198	58,938	26,395	85,333	53,008	19,004	72,012
Cotton ...	25,981	41,601	67,582	11,803	27,055	38,858	15,399	25,642	41,041
Other crops ...	6,098	10,930	17,023	4,114	8,550	12,664	6,274	9,579	15,553
Total ...	128,987	114,065	243,052	137,783	115,195	252,978	145,494	108,431	253,925
<i>Nasrat Canals</i>									
<i>Rabi.</i>									
Wheat ...	644	12,118	12,762	1,215	15,954	17,169	403	17,962	18,425
Barley ...	38	873	911	88	995	1,083	12	945	957
Oil-seeds ...	43	12,809	12,852	51	19,120	19,171	11	24,560	24,571
Other crops ...	43	3,743	3,785	61	3,970	4,031	...	4,030	4,030
Total ...	767	29,543	30,310	1,415	40,039	41,454	426	47,497	47,983
Grand total.	129,754	143,608	273,362	139,198	155,234	294,432	145,920	155,928	301,908
<i>Hyderabad Canals</i>									
<i>Kharij.</i>									
Rice ...	...	6,691	6,691	3	6,425	6,428	6	4,842	4,848
Jowari ...	6,600	528	7,128	8,427	984	9,411	8,154	1,092	9,246
Bajri ...	123,696	11,598	135,294	154,136	17,518	171,654	141,058	14,831	155,889
Cotton ...	30,861	3,996	34,857	64,882	3,383	78,265	71,510	9,043	80,552
Other crops ...	6,159	792	6,951	6,066	506	6,572	7,733	490	8,223
Total ...	217,316	28,575	245,891	238,514	33,816	272,330	228,511	30,237	258,748
<i>Rabi.</i>									
Wheat ...	530	3,297	3,827	1,132	5,929	7,061	557	5,610	6,367
Barley ...	5	8	13	3	13	16	4	4	8
Oil-seeds ...	184	2,612	2,796	229	6,121	6,350	355	6,605	6,960
Other crops ...	332	3,159	3,491	473	9,020	9,493	230	10,582	10,812
Total ...	1,051	14,056	15,107	1,837	21,083	22,920	1,176	25,001	26,177
Grand total.	318,367	42,631	260,998	238,351	54,899	297,250	230,087	55,238	284,925
<i>Fuleli Canals</i>									
<i>Kharij.</i>									
Rice ...	40	250,400	250,440	101	275,272	275,373	176	263,902	264,078
Jowari ...	2,387	1,158	3,545	2,845	839	3,684	3,673	733	4,406
Bajri ...	57,938	10,057	67,995	78,055	6,851	84,906	77,306	6,223	83,529
Cotton ...	22,037	6,499	28,536	16,656	736	17,391	22,256	1,773	24,029
Other crops ...	5,223	1,895	7,118	7,303	1,314	8,617	8,707	1,764	10,471
Total ...	88,225	269,009	357,234	104,959	235,212	390,171	112,208	274,445	388,653
<i>Rabi.</i>									
Wheat ...	553	9,979	10,532	1,034	8,191	10,125	311	7,338	8,149
Barley ...	146	2,054	2,200	69	2,172	2,241	33	718	751
Oil-seeds ...	851	27,084	27,935	199	15,330	15,529	645	16,625	17,270
Other crops ...	778	20,239	21,015	445	16,256	16,701	4,867	18,291	17,853
Total ...	1,328	69,356	71,182	2,647	41,999	44,606	5,556	38,472	44,023
Grand total.	90,051	338,365	428,416	107,606	327,211	434,777	117,764	312,917	432,676

## VIII—continued.

1914-1915.			1915-1916.			Percentage of Lift and Flow.			Percentage of Kharif and Rabi.	Canals, Districts and Crops.
Lift.	Flow.	Total.	Lift.	Flow.	Total.	Lift.	Flow.	Total.		
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
95	14,203	14,298	14	16,406	16,420	...	100	100	...	<i>Kharif.</i>
64,938	49,942	113,878	71,298	56,712	128,010	56	44	100	...	Rice ...
87,589	12,653	50,222	36,717	19,297	56,014	66	34	100	...	Jowari ...
17,364	27,266	44,630	5,467	7,930	13,397	41	59	100	...	Bajri ...
7,364	11,728	19,092	4,572	10,593	15,165	30	70	100	...	Cotton ...
										Other crops ...
127,928	114,792	242,120	118,068	110,938	239,006	52	48	100	89	Total.
										<i>Rabi.</i>
2,594	24,401	26,935	605	14,349	14,953	4	96	100	...	Wheat ...
184	2,177	2,361	27	1,185	1,212	2	38	100	...	Barley ...
518	23,729	24,247	28	9,081	9,059	...	100	100	...	Oil-seeds ...
773	4,925	5,697	38	3,700	3,738	1	99	100	...	Other crops ...
4,058	55,232	59,290	698	28,264	28,962	2	98	100	11	Total.
131,886	170,024	301,410	118,766	139,202	257,968	46	54	100	100	Grand total.
										<i>Kharif.</i>
11	5,016	5,027	49	7,467	7,516	1	99	100	...	Rice ...
7,109	973	8,082	10,418	1,211	11,629	90	10	100	...	Jowari ...
128,158	14,861	143,019	144,430	12,448	156,928	92	8	100	...	Bajri ...
73,237	10,251	83,488	48,494	4,772	48,266	90	10	100	...	Cotton ...
7,722	547	8,269	6,232	491	6,723	93	7	100	...	Other crops ...
216,297	31,648	247,885	204,673	26,389	231,062	89	11	100	90	Total.
										<i>Rabi.</i>
815	11,212	12,027	1,189	6,216	7,405	16	84	100	...	Wheat ...
...	19	19	10	4	14	71	29	100	...	Barley ...
380	23,239	22,569	156	3,531	3,687	4	96	100	...	Oil-seeds ...
296	14,424	14,720	434	14,786	15,220	3	97	100	...	Other crops ...
1,441	47,894	49,335	1,789	24,537	26,326	7	93	100	10	Total.
217,679	79,542	297,220	206,462	50,926	257,388	80	20	100	100	Grand total.
										<i>Kharif.</i>
48	246,945	246,993	212	287,224	287,486	...	100	100	...	Rice ...
3,478	1,851	5,329	3,395	2,096	5,491	62	38	100	...	Jowari ...
71,678	9,670	81,348	63,356	11,031	74,387	85	15	100	...	Bajri ...
13,573	3,016	22,589	9,505	2,443	11,948	80	20	100	...	Cotton ...
8,950	2,403	10,453	6,017	1,788	7,805	77	23	100	...	Other crops ...
102,827	263,885	366,712	82,485	304,582	387,067	21	79	100	84	Total.
										<i>Rabi.</i>
1,593	11,327	12,920	6,083	18,496	24,579	25	75	100	...	Wheat ...
104	2,167	2,271	88	2,899	2,987	3	97	100	...	Barley ...
416	42,723	43,139	303	24,705	25,008	...	100	100	...	Oil-seeds ...
2,611	19,119	21,730	1,773	20,474	22,247	8	92	100	...	Other crops ...
4,724	75,336	80,060	8,247	66,574	74,821	11	89	100	16	Total.
107,551	339,221	446,772	90,732	371,156	461,888	20	80	100	100	Grand total.

Nasrat Canals.

Hyderabad Canals.

Fuleli Canals.

TABLE

Canals, Districts and Crops.	1911-1913.			1912-1913.			1913-1914.		
	Lift.	Flow.	Total.	Lift.	Flow.	Total.	Lift.	Flow.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
<b>Kharif.</b>									
Rice ...	3	2,881	2,884	...	177	177	...	...	...
Jowari ...	1,296	2,668	3,964	1,307	4,963	6,329	1,045	2,924	3,969
Bajri ...	13,881	17,879	31,760	19,037	29,439	48,476	19,348	25,294	44,642
Cotton ...	32,040	79,409	111,049	28,910	84,828	113,738	32,807	91,850	124,657
Other crops.	1,087	4,552	5,639	884	3,506	4,390	1,108	3,551	4,659
<b>Total ...</b>	<b>43,307</b>	<b>106,969</b>	<b>155,296</b>	<b>50,198</b>	<b>123,912</b>	<b>178,110</b>	<b>54,308</b>	<b>123,619</b>	<b>177,927</b>
<b>Jamrao Canal.</b>									
<b>Rabi.</b>									
Wheat ...	9,763	44,449	54,212	11,024	49,114	60,138	7,008	42,167	49,175
Barley ...	435	1,511	1,946	838	856	1,194	138	720	858
Oil-seeds ...	616	3,064	3,680	714	3,434	4,148	408	2,564	2,972
Other crops.	2,312	13,437	15,749	1,287	9,411	10,698	926	7,759	8,685
<b>Total ...</b>	<b>13,126</b>	<b>62,461</b>	<b>75,587</b>	<b>13,363</b>	<b>62,815</b>	<b>76,178</b>	<b>8,480</b>	<b>53,210</b>	<b>61,690</b>
<b>Grand total.</b>	<b>61,433</b>	<b>169,450</b>	<b>230,883</b>	<b>63,561</b>	<b>185,727</b>	<b>249,288</b>	<b>62,788</b>	<b>176,829</b>	<b>239,617</b>
<b>Kharif.</b>									
Rice ...	326	404,551	404,877	702	432,142	422,844	1,364	403,756	405,120
Jowari ...	60,540	37,515	98,055	77,794	46,236	124,030	86,050	46,216	132,266
Bajri ...	256,426	63,947	320,373	336,950	98,971	435,921	315,884	76,834	392,718
Cotton ...	171,798	157,664	329,457	187,526	141,141	278,667	164,641	158,199	322,840
Other crops.	20,237	19,130	39,367	19,635	14,982	34,617	25,245	16,069	41,314
<b>Total ...</b>	<b>509,322</b>	<b>662,807</b>	<b>11,92,129</b>	<b>572,607</b>	<b>723,472</b>	<b>1,296,079</b>	<b>593,164</b>	<b>701,074</b>	<b>1,294,258</b>
<b>Indus Left Bank Division.</b>									
<b>Rabi.</b>									
Wheat ...	14,852	103,912	118,764	16,923	104,256	121,178	10,864	95,079	106,543
Barley ...	680	4,779	5,459	532	4,238	4,770	206	2,589	2,795
Oil-seeds ...	1,958	62,963	64,921	2,102	62,045	64,147	2,132	63,591	65,723
Other crops.	4,009	54,559	58,568	3,692	46,688	49,380	5,941	41,975	47,916
<b>Total ...</b>	<b>21,499</b>	<b>226,218</b>	<b>247,712</b>	<b>22,248</b>	<b>207,227</b>	<b>229,475</b>	<b>19,133</b>	<b>208,334</b>	<b>228,027</b>
<b>Grand total.</b>	<b>530,821</b>	<b>909,020</b>	<b>1,439,841</b>	<b>594,855</b>	<b>930,699</b>	<b>1,525,554</b>	<b>612,377</b>	<b>909,408</b>	<b>1,517,285</b>
<b>Kharif.</b>									
Rice ...	559	1,078,733	1,079,292	1,015	1,066,493	1,067,508	1,498	1,080,765	1,082,263
Jowari ...	163,167	195,738	358,905	204,159	300,292	504,451	201,031	323,826	523,857
Bajri ...	292,831	114,630	407,491	330,143	208,965	539,107	357,891	167,940	525,831
Cotton ...	173,258	158,452	331,705	138,453	142,044	280,502	165,303	159,613	324,921
Other crops.	30,702	78,903	109,605	29,376	80,120	109,466	34,064	88,294	122,358
<b>Total ...</b>	<b>660,512</b>	<b>1,626,466</b>	<b>2,236,998</b>	<b>763,150</b>	<b>1,797,914</b>	<b>2,551,064</b>	<b>759,787</b>	<b>1,825,443</b>	<b>2,585,230</b>
<b>Total for Sind.</b>									
<b>Rabi.</b>									
Wheat ...	22,832	244,745	267,033	23,581	255,181	313,762	25,033	279,905	305,538
Barley ...	1,092	10,414	11,506	1,058	11,744	12,903	1,123	14,619	15,742
Oil-seeds ...	3,817	166,923	170,740	3,902	150,758	154,660	15,321	222,526	237,847
Other crops.	4,864	235,471	300,335	3,631	279,691	283,322	7,330	303,983	310,293
<b>Total ...</b>	<b>32,061</b>	<b>717,553</b>	<b>749,614</b>	<b>37,172</b>	<b>727,374</b>	<b>764,546</b>	<b>49,407</b>	<b>620,013</b>	<b>669,420</b>
<b>Grand total.</b>	<b>692,573</b>	<b>2,314,039</b>	<b>3,036,612</b>	<b>790,322</b>	<b>2,525,298</b>	<b>3,315,610</b>	<b>809,194</b>	<b>2,645,456</b>	<b>3,454,650</b>

## VIII—concluded.

1914-1915.			1915-1916.			Percentage of Lift and Flow.			Percentage of Kharif and Rabi.	Canals, Districts and Crops.
Lift.	Flow.	Total.	Lift.	Flow.	Total.	Lift.	Flow.	Total.		
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
...	...	...	...	4	4	...	100	100	...	<i>Kharif.</i>
1,496	5,601	7,097	1,136	5,181	6,317	18	82	100	...	Rice ...
14,942	17,447	32,389	20,018	41,251	61,269	33	67	100	...	Jowári ...
38,406	91,815	125,221	16,715	49,893	66,108	25	75	100	...	Bájrí ...
1,165	3,218	4,373	1,142	6,350	7,492	15	85	100	...	Cotton ...
									...	Other crops ...
50,999	119,081	169,080	39,011	102,679	141,690	23	72	100	51	Total.
										<i>Rabi.</i> Jámráo Canal.
11,033	57,833	68,866	23,076	95,016	118,092	20	80	100	...	Wheat ...
180	457	637	374	1,503	1,877	20	80	100	...	Barley ...
337	2,618	2,955	473	2,791	3,264	14	86	100	...	Oil-seeds ...
2,533	15,487	18,020	1,471	11,741	13,212	11	89	100	...	Other crops ...
14,083	76,395	90,478	25,394	111,051	136,445	19	81	100	49	Total.
65,082	194,476	259,558	64,405	213,730	278,135	23	77	100	100	Grand total.
										<i>Kharif.</i>
905	378,489	379,394	3,649	447,950	451,599	1	99	100	...	Rice ...
77,518	58,198	135,716	87,505	65,940	153,445	57	43	100	...	Jowári ...
272,478	67,271	339,749	290,419	97,802	388,221	75	25	100	...	Bájrí ...
162,884	160,865	323,749	82,366	72,444	154,830	53	47	100	...	Cotton ...
25,689	18,666	44,355	19,307	20,525	39,832	48	52	100	...	Other crops ...
539,474	683,489	1,222,963	483,266	704,661	1,187,927	41	59	100	78	Total.
										<i>Rabi.</i> Indus Left Bank Division.
18,378	144,814	163,192	38,083	175,657	213,739	18	82	100	...	Wheat ...
498	5,274	5,772	553	6,132	6,685	8	92	100	...	Barley ...
2,679	102,056	104,735	2,052	44,879	46,931	4	96	100	...	Oil-seeds ...
6,657	62,681	69,338	4,094	57,080	61,174	7	93	100	...	Other crops ...
23,212	314,825	343,037	44,781	283,743	328,529	14	86	100	22	Total.
567,686	993,314	1,566,000	528,047	988,409	1,516,456	35	65	100	100	Grand total.
										<i>Kharif.</i>
919	1,077,999	1,078,918	8,846	1,155,826	1,139,672	...	100	100	...	Rice ...
186,799	311,772	498,571	193,566	234,213	427,769	45	55	100	...	Jowári ...
311,198	190,862	502,060	330,261	211,466	541,727	61	39	100	...	Bájrí ...
163,348	162,083	325,431	82,606	72,663	155,269	53	47	100	...	Cotton ...
33,592	87,593	121,185	25,973	48,412	74,385	35	65	100	...	Other crops ...
695,856	1,830,309	2,526,165	636,242	1,702,580	2,338,822	27	73	100	69	Total.
										<i>Rabi.</i> Total for Sind.
50,481	407,739	458,220	50,618	395,135	445,753	11	89	100	...	Wheat ...
1,451	20,606	22,057	1,251	16,787	18,038	7	93	100	...	Barley ...
13,915	345,793	359,708	8,995	171,654	180,649	5	95	100	...	Oil-seeds ...
8,752	379,510	388,262	5,586	388,997	394,583	1	99	100	...	Other crops ...
74,599	1,153,648	1,228,247	66,450	972,573	1,039,023	6	94	100	31	Total.
770,455	2,983,957	3,754,412	702,692	2,676,153	3,377,845	21	79	100	100	Grand total.



TABLE IX.

Rainfall in the Province of Sind for the year 1915-16.

Collectorates and Districts.		April 1916.	May.	June.	July.	August.	September.	October.	November.	December.	January 1916.	February.	March.	Total 1915-16.	Total 1914-15.	
		In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	In. ct.	
<b>Indus Right Bank Division.</b>																
UPPER SIND FRONTIERS.	Begari Canals District.	Kashmor	0 8	...	...	...	...	1 05	...	...	0 4	...	0 8	1 85	10 78	
		Kandhot	0 2	...	...	...	...	6 50	...	...	0 4	0 3	...	4 63	4 17	
		Jacobabad	0 26	...	...	0 8	...	...	0 63	...	...	...	...	0 64	1 00	6 16
		Thul	0 17	...	...	...	...	...	1 07	...	...	...	...	0 20	3 36	5 00
		Shahdadkot	0 24	...	...	0 31	...	...	1 10	...	...	0 5	0 2	...	1 72	7 09
Average		...	...	...	...	...	...	...	...	...	...	...	...	2 81	6 83	
		Mean average of 10 years ...												5	51	
BUKHAR COLLECTORATE.	Shikarpur Canals District.	Ubaro	0 3	...	...	...	...	0 73	...	...	0 2	0 1	0 18	0 94	8 54	
		Mirpur Mathelo	...	...	...	0 17	...	0 10	...	...	...	...	...	...	0 14	7 51
		Ghotki	...	...	...	...	...	...	0 45	...	...	...	...	...	0 14	6 64
		Bohri	...	...	...	...	...	...	0 23	...	...	...	...	...	0 29	3 38
		Sukkur	...	...	...	...	...	...	0 40	...	...	...	...	...	0 45	8 57
Average		...	...	...	...	...	...	0 19	...	...	...	...	...	1 43	4 33	
		Mean average of 10 years ...												8	10	
LARKANA COLLECTORATE.	Ghar Canals District.	Larkana	0 19	...	...	0 10	...	...	0 19	...	...	0 7	0 1	0 66	4 64	
		Nasirabad (Warrah)	0 15	...	...	...	...	...	1 23	...	...	0 25	...	0 3	1 04	5 03
		Bakrani	...	...	...	0 13	...	...	...	...	...	0 8	0 2	...	1 14	5 76
		Kambar	...	...	...	...	...	...	0 60	...	...	...	...	...	0 79	3 94
		Ratodero	...	...	...	...	...	...	0 11	0 45	...	...	0 2	0 1	...	...
Average		...	...	...	...	...	...	...	...	...	...	...	...	0 63	4 5	
		Mean average of 10 years ...												3	4	
WESTERN NARA COLLECTORATE.	Western Nara District.	Labdaria (Dokri)	0 55	...	...	0 14	...	...	0 70	...	...	0 20	0 6	1 64	3 71	
		Mohar	1 33	...	...	0 12	...	...	...	...	...	0 20	...	...	1 75	6 61
		Dadu	0 51	...	...	...	...	0 10	...	...	...	0 33	...	...	0 97	7 87
		Schwan	0 46	...	...	0 25	...	0 50	...	...	...	0 31	...	...	1 55	7 84
		Johi	0 66	...	...	0 3	...	0 11	...	...	...	0 37	...	...	1 6	15 97
Average		...	...	...	...	...	...	...	...	...	...	...	...	1 15	6 72	
		Mean average of 10 years ...												5	55	
KARACHI COLLECTORATE.	Karachi Canals District.	Karsahi	1 33	...	...	0 8	0 13	...	0 20	...	...	0 1	...	1 74	7 60	
		Mirpur Sakro	0 3	...	...	0 23	0 4	0 29	0 39	...	...	0 10	...	...	1 59	4 90
		Ghorabari	0 53	...	...	1 23	0 4	...	...	...	...	...	...	...	3 53	6 74
		Keti Bandar	0 64	...	...	0 20	0 1	1 0	1 63	...	...	0 31	...	...	3 48	7 3
		Shahbandar (Ladion)	0 45	...	...	0 75	0 7	1 50	0 67	...	...	0 1	...	...	3 45	7 02
Average		...	...	...	...	...	...	...	...	...	...	...	...	2 25	6 14	
		Mean average of 10 years ...												3	16	
Average for Indus Right Bank Division		...	...	...	...	...	...	...	...	...	...	...	...	1 43	5 68	
<b>Indus Left Bank Division.</b>																
THAR AND PARKAR COLLECTORATE.	Jamrao Canal District.	Mirpurkhas	0 6	...	...	1 53	...	0 23	...	...	...	...	...	0 29	4 59	
		Jamshed (Digri)	0 3	0 16	...	...	...	...	0 4	0 50	...	...	...	...	0 65	4 40
		Average	...	...	...	...	...	...	...	...	...	...	...	...	1 52	4 61
		Mean average of 10 years ...												8	7	
THAR AND PARKAR COLLECTORATE.	Eastern Nara District.	Diplo	0 21	...	...	0 65	...	1 20	1 71	...	...	0 4	...	4 11	12 69	
		Mithi	0 16	...	...	1 7	...	...	0 26	0 26	...	...	...	...	3 14	9 77
		Nagar Parkar	0 5	...	...	1 24	...	...	0 6	1 70	...	...	...	...	3 9	5 91
		Chachro	...	...	...	0 53	...	...	0 61	3 21	...	...	...	...	3 24	7 07
		Umartot	...	...	...	0 26	...	...	1 33	0 53	...	...	...	...	3 25	6 11
Average		...	0 6	0 8	...	0 75	...	0 23	0 14	...	...	...	...	0 61	4 31	
		Mean average of 10 years ...												1	4	
NARVAL COLLECTORATE.	Narval Canals District.	Nawabshah	0 16	...	0 17	0 70	...	0 28	...	...	...	0 7	...	1 48	8 91	
		Kandiaro	0 20	...	...	0 20	...	0 65	...	...	...	0 6	...	...	1 21	5 43
		Nausahro	0 25	...	...	0 23	...	...	0 7	...	...	0 20	...	...	0 64	3 18
		Tharshah	0 23	...	...	0 3	...	...	0 5	...	...	0 19	...	...	0 59	3 90
		Moro	0 48	...	...	0 35	...	...	0 14	...	...	0 26	...	...	1 25	15 16
Average		...	...	...	...	...	...	...	...	...	...	...	...	1 7	5 51	
		Mean average of 10 years ...												1	55	
HYDRABAD COLLECTORATE.	Hyderabad Canals District.	Binjoro	...	...	...	0 50	...	...	0 50	...	...	...	...	1 0	8 59	
		Rakrand	0 23	...	...	0 43	...	...	0 31	...	...	0 18	...	...	1 8	3 51
		Shahdadpur	0 2	...	...	0 63	...	...	0 40	0 10	...	...	...	...	1 14	3 45
		Tando Adam	0 7	...	...	...	...	...	0 30	...	...	0 6	...	...	0 33	1 74
		Hala	...	...	...	0 10	...	...	1 25	...	...	0 10	...	...	1 55	5 87
Average		...	...	...	...	...	...	...	0 9	0 20	...	...	...	0 45	3 29	
		Mean average of 10 years ...												0	25	
HYDRABAD COLLECTORATE.	Fulchi Canals District.	Hyderabad	0 4	...	0 3	0 27	...	0 44	...	...	...	...	...	0 27	3 15	
		Dero Mohabb	0 15	...	...	0 51	...	...	0 3	0 18	...	...	...	...	0 67	4 11
		Tando Bago	0 9	...	...	1 20	0 4	...	1 7	6 30	...	...	...	...	3 73	6 28
		Badin	0 5	...	...	0 94	...	...	1 7	...	...	...	...	...	3 8	6 65
		Tando Mahomed Khano (Guni)	...	...	...	2 23	...	...	0 3	0 73	...	...	...	...	3 23	6 5
Average		...	...	...	...	...	...	...	...	...	...	...	...	3 17	6 06	
		Mean average of 10 years ...												20	24	
Average for Indus Left Bank Division		...	...	...	...	...	...	...	...	...	...	...	...	3 26	6 19	
		Mean average of 10 years for Indus Left Bank Division ...												7	24	

Memorandum showing the amounts of loss to canals on account of difference between the assessments of water-rates on Jágíir lands and assessment at the ordinary rates in force for Government lands.

	To end of 1914-15.	During 1915-16.	To end of 1915-16.	Remarks.
<b>MAJOR WORKS.</b>				
<i>Productive Works.</i>				
Desert Canal ... ..	16,94,218	90,834	17,85,052	
Unfiarwáh ... ..	16,224	1,064	17,288	
Begári Canal ... ..	19,57,518	69,953	20,27,471	
Mahiwáh ... ..	77,463	3,312	80,775	
Eastern Nára Works ... ..	5,38,144	23,385	5,61,529	
Jámráo Canal ... ..	1,64,353	14,900	1,79,253	
Dád Canal ... ..	2,89,000	11,374	3,00,374	
Nasrat Canal ... ..	22,028	1,329	23,357	
Total ... ..	47,58,948	2,16,151	49,75,099	
<b>MINOR WORKS AND NAVIGATION.</b>				
<i>Works for which Capital and Revenue Accounts are kept.</i>				
Sukkur Canal ... ..	2,23,814	8,708	2,32,522	
Ghár Canal ... ..	11,54,374	23,761	11,78,135	
Sattah Canal ... ..	2,901	97	2,998	
Alibhar Kacheri Canal ... ..	1,05,662	3,469	1,09,131	
Márah Great Canal ... ..	6,03,324	17,902	6,21,226	
Sarfrazwáh ... ..	3,28,532	9,107	3,37,639	
Fuleli Canal' ... ..	50,88,632	1,97,022	52,85,654	
Hassanali Canal ... ..	16,751	2,902	19,653	
Total ... ..	75,23,990	2,62,968	77,86,958	
<i>Works for which only Revenue Accounts are kept.</i>				
Shikárpur Canals District ... ..	...	51,932	...	
Western Nára District ... ..	...	42,609	...	
Karáchi Canals District ... ..	...	13,385	...	
Nasrat Canals District ... ..	...	7,516	...	
Hyderabad Canals District ... ..	...	52,110	...	
Fuleli Canals District ... ..	...	6,725	...	
Total ... ..	...	1,74,277	...	
<i>Works for which neither Capital nor Revenue Accounts are kept.</i>				
Shikárpur Canals District ... ..	12,439	...	...	
Ghár Canals District ... ..	138	...	...	
Karáchi Canals District ... ..	1,448	...	...	
Total ... ..	14,025	...	...	

H. S. KATRAK,  
Chief Superintendent.

Statement showing actual Receipts during 1915-16 on account of Irrigation share of Land Revenue from canals in Sind.

MAJOR WORKS.				Gross Irrigation Share of Land Revenue.	Deduct 3/10ths of Cash Refunds of Land Revenue in the Civil Department.	Net Irrigation share of Land Revenue.
<i>Productive Works.</i>				Rs.	Rs.	Rs.
Desert Canal	...	...	...	2,99,216	...	2,99,216
Unharwáh	...	...	...	1,74,182	...	1,74,182
Begári Canal	...	...	...	5,82,078	...	5,82,078
Mahiwáh	...	...	...	1,31,903	...	1,31,903
Eastern Nára Works—						
Mithrao Canal	...	...	...	3,60,419	...	3,60,419
Thar Canal	...	...	...	1,76,210	...	1,76,210
Nára do.	...	...	...	59,652	...	59,652
Khipra Canal	...	...	...	6,172	...	6,172
Hiral Canal	...	...	...	60,277	...	60,277
Hiran do.	...	...	...	...	...	...
Nára Supply Channel	...	...	...	13,534	...	13,534
				6,76,264	...	6,76,264
Jámrao Canal	...	...	...	9,13,398	...	9,13,398
Dád Canal	...	...	...	2,21,853	...	2,21,853
Nasrat Canal	...	...	...	2,34,783	...	2,34,783
				32,33,677	...	32,33,677
Total, Major Works				32,33,677	...	32,33,677
<b>MINOR WORKS AND NAVIGATION.</b>						
<i>Works for which Capital and Revenue Accounts are kept.</i>						
Sukkur Canal	...	...	...	2,62,040	...	2,62,040
Ghár Canal	...	...	...	8,42,765	...	8,42,765
Sattah Canal	...	...	...	20,577	...	20,577
Alibhar Kacheri Canal	...	...	...	25,468	...	25,468
Márák Great Canal	...	...	...	1,59,608	...	1,59,608
Sarfrazwáh	...	...	...	48,928	...	48,928
Fuleli Canal	...	...	...	9,80,029	...	9,80,029
Hassanali Canal	...	...	...	46,408	...	46,408
				23,85,823	...	23,85,823
<i>Works for which only Revenue Accounts are kept.</i>						
Shikárpur Canals District	...	...	...	5,03,320	...	5,03,320
Western Nára District	...	...	...	9,67,867	...	9,67,867
Karáchi Canals District	...	...	...	4,11,227	...	4,11,227
Nasrat Canals District	...	...	...	2,25,289	...	2,25,289
Hyderabad Canals District	...	...	...	3,08,109	...	3,08,109
Fuleli Canals District	...	...	...	64,582	...	64,582
				24,78,394	...	24,78,394
<i>Works for which neither Capital nor Revenue Accounts are kept.</i>						
Begári Canals District—						
Kashmor Bund	...	...	...	9,670	...	9,670
Shikárpur Canals District—						
Sukkur-Begári Bund	...	...	...	20,130	...	20,130
Kasimpur Bund	...	...	...	1,694	...	1,694
Bunds in Rohri District	...	...	...	277	...	277
Ghár Canals District—						
Ghár Bunds	...	...	...	2,472	...	2,472
Western Nára District—						
Nára Bunds	...	...	...	8,341	...	8,341
Karáchi Canals District—						
Bunds Right and Left Banks	...	...	...	20,656	...	20,656
				63,240	...	63,240
				49,27,457	...	49,27,457
Total, Minor Works				49,27,457	...	49,27,457
<b>GRAND TOTAL</b>				<b>81,61,134</b>	...	<b>81,61,134</b>

## Statement of Highest Readings on Bukkur and Kotri Gauges from 1880 to 1915.

Year.	Bukkur.		Kotri.		Remarks.
	Date.	Highest reading.	Date.	Highest reading.	
		Feet.		Feet.	
1880	8th July	14.9	14th August	17.1	
1881	20th June	14.4	28th "	17.2	
1882	7th August	17.6	17th "	20.5	
1883	17th July	15.9	26th July	18.5	
1884	19th August	15.8	27th August	19.2	
1885	20th "	15.4	4th September.	20.3	
1886	22nd July	16.3	19th August	20.3	
1887	18th August	16.6	2nd "	19.7	
1888	29th "	14.4	3rd September.	17.9	
1889	19th July	16.6	24th July	19.8	
1890	24th August	16.0	31st August	20.6	
1891	15th "	14.8	20th "	20.6	
1892	18th "	16.8	27th "	21.3	
1893	30th July	15.8	3rd "	21.0	
1894	7th August	16.4	14th "	22.6	
1895	24th "	15.3	26th "	18.3	
1896	7th "	15.8	19th "	19.4	
1897	28th "	17.9	19th "	22.0	
1898	18th July	13.3	21st July	18.5	
1899	27th "	13.4	29th "	18.6	
1900	16th August	14.5	24th August	19.3	
1901	15th "	16.4	19th "	19.5	
1902	1st "	13.5	4th "	15.9	
1903	22nd "	17.1	27th "	19.7	
1904	6th "	15.8	22nd "	18.7	
1905	20th July	16.7	25th July	19.1	
1906	22nd August	16.6	29th August	20.9	
1907	20th "	13.7	27th "	19.4	
1908	12th "	16.1	16th September.	22.9	
1909	28th "	14.4	30th August	20.8	
1910	4th September	14.5	8th September	22.3	
1911	20th June	14.0	28th June	20.7	
1912	10th August	15.5	17th August	21.7	
1913	15th "	15.0	20th "	20.9	
1914	3rd "	17.4	11th "	23.8	
1915	26th "	12.7	31st "	19.6	

R. T. HARRISON,  
Superintending Engineer, Indus Left Bank Division.

GOVERNMENT OF BOMBAY.

PUBLIC WORKS DEPARTMENT.

Resolution No. W. I.—8020.

Bombay Castle, 16th August 1917.

Letter from the Superintending Engineer, Indus Right Bank Division, No. D-575, dated the 28th December 1916.

Submits the Revenue report for his Division for 1915-16 and makes remarks.

Letter from the Superintending Engineer, Indus Left Bank Division, No. 316 dated the 25th January 1917.

Submits the Revenue report for his Division for 1915-16 and makes remarks.

Memorandum from the Chief Engineer in Sind, No. C. E.—142, dated the 31st January 1917.

Forwards the above Revenue reports for the Indus Right and Left Banks Divisions.

Memorandum from the Commissioner in Sind, No. 1615, dated the 11th June 1917, as under:—

" *Irrigation Revenue Report of the Province of Sind for 1915-16.*— Submitted to Government together with a comparative statement\* showing the area irrigated and the assessment thereon for the 3 years ending 1915-16 and the average of the 3 years ending 1914-15.

" 2 The inundation compared with that of the previous year was very unfavourable being in fact one of the lowest on record, and the rainfall was also very scanty. At Bukkur the fair irrigating level of 13 feet was never reached during the whole year, while this level was maintained for 45 days in the previous year and for 40 days on an average during the 10 years ending 1914-15. The highest reading on this gauge was 12.7 feet which was recorded on the 26th August and lasted for only 5 days. At Kotri the fair irrigating level of 17 feet was first registered on the 20th May but the river soon began to fall and with fluctuations fell to 14.9 feet on the 3rd July 1915. Subsequently, however, there was a steady rise until the level of 19.6 feet was reached on 31st August. On this gauge 17 feet and over were recorded for 66 days as against 100 in the previous year and 76 days the average of the decennium ending 1914-15. As a natural result of these exceptionally bad conditions the cultivated area from canals fell from 33½ to 30½ lakhs and the assessment thereon from 94½ to 90 lakhs. As compared with the average figures of the past 3 years, the cultivated area shows a decrease of 4.6 per cent; but the assessment an increase of 2.23 per cent. This increase is mostly due to the introduction of the revised and enhanced rates in Mehar, Kandiaro, Naushahro, and Moro talukas in the year 1915-16.

" 3. The increase and decrease in the figures of cultivation for the two divisions as compared with 1914-15 and the average of three years ending 1914-15 are given in the subjoined statement:—

Division.	As compared with 1914-15.		As compared with the average of 3 years ending 1914-15.	
	Kharif.	Rabi.	Kharif.	Rabi.
Right Bank ... ..	—152,000	—1,24,000	—1,32,000	+ 7,500
Left Bank ... ..	—35,000	—4,500	—83,000	+ 62,000

" 4. The decrease in the area under cultivation as compared with the average of the previous triennium chiefly occurred on the following canals:—

Name of canal.	Decrease in acres.
Mahi Wah ... ..	11,000
Dad Wah ... ..	1,000
Nasrat Wah ... ..	11,000
Ghar Wah ... ..	42,000
Great Marak ... ..	6,000
Western Nara ... ..	40,000
Mauchar ... ..	10,000
Baghar ... ..	8,000

\* Printed as an accompaniment.

On the other hand, an appreciable net increase in cultivation over the average of the past triennium is noticeable on the Begari (22,000), Jamrao (25,000) Fuleli (20,000) and Sind canals (11,000).

" 5. During the year remission of land revenue amounted to Rs. 1,91,000 as against Rs. 5,33,000 in the previous year and 5,81,000 the average of the preceding 3 years. The amount (which includes Rs. 1,553 written off and 797 remitted on account of cancellation of grants) is very low in comparison with the figures of the last year or the previous triennium and a large portion of it, *i. e.*, Rs. 1,49,000 is due to damage to crops from deficiency of water. Other important causes for remissions were damage to crops by insects (Rs. 7,000) and by adverse winds (Rs. 10,000).

" 6. The outstanding balance at the end of the year amounted to Rs. 1,40,000 only (Rs. 63,000 in the Right Bank Division and Rs. 77,000 in the Left Bank Division) as against Rs. 4,77,000 in the preceding year and Rs. 3,42,000 the average of the last triennium. The subject has been discussed in detail in the Land Revenue Administration Report, Part I.

" 7. The more important items of expenditure on new works are the following :—

Name of Canal.	Nature of work.	Amount.
		Rs.
Canals in the Shikarpur Canal Divisions.	Raising and strengthening the left bank of the Rajib canal, taking over a zamindari karia and Mirwah <i>ex</i> tail of Sind canal and remodelling it.	31,000
Canals in the Western Nara district.	Construction of the Public Works Department Inspection Bungalow at Pano Akil, etc.	30,000
Canals in the Karachi Canals district.	Improvement to the Dhamrao canal and the construction of Head Regulators over the Phitta and the Chario Wahur canals, etc.	13,600
Eastern Nara system	Construction of outhouses to the first class Inspection Bungalow at Mirpur Sakro and providing drainage channels for deh Karampur and Aror, etc.	48,000
Fuleli Canals	Extension of the inner right and left bank inspection paths, along the Nara below Makhi Regulator, construction of a bund across Nara near Alishah village and Mithrao extension to tail in Nara and a Public Works Department Inspection Bungalow Class II at 8th mile Hiral Canal.	43,700
Hyderabad canals district	Construction of Inspection Bungalows with outhouses at Raji Khanani and Tando Kaiser and a Regulator to the head of Imamwah Janobi and a distributary <i>ex</i> Shahdiwah Large from taki 110 left.	8,500
	Construction of a bridge across new cut to Ghoro Mahmudo and Clerks' quarters in the compound of Public Works Department Inspection Bungalows at Tando Adam and Uderolal.	

In addition to these a sum of Rs. 2,08,000 was spent during the year on the construction of a sluice in the Choi loop near mile 28 of the Sukkur Begari Bund, on raising to full bund section the right bank of Colonel Fife's channel along its length between the front Sukkur Begari Bund and Adurtakio, on improvements to the Garkino Wah, and on other works in the Right Bank Division.

" 8. The subjoined statement shows the amount spent on maintenance and repairs in the year under report as compared with those spent in the previous year and the average figures of the last 3 years :—

Division.	1915-16.	1914-15.	Average of the 3 years ending 1914-15.
	Rs.	Rs.	Rs.
Right Bank	19,37,000	20,32,000	21,27,000
Left Bank	14,87,000	13,65,000	14,32,000

Out of this the actual cost of works of clearance and repairs was as follows :—

Division.	1915-16.	1914-15.	Average of the 3 years ending 1914-15.
Right Bank' ... ..	Rs. 10,80,000	Rs. 11,79,000	Rs. 12,66,000
Left Bank ... ..	6,98,000	6,78,000	7,16,000

"9. The following table shows the area cultivated with the principal crops as compared with the figures of the previous year and the average of the last 3 years in lakhs of acres.

	1915-16.	1914-15.	Average of the 3 years ending 1914-15.
Rice ... ..	11.4	10.79	10.76
Jowari ... ..	4.28	4.99	5.11
Bajri ... ..	5.42	5.02	5.39
Cotton ... ..	1.55	3.25	3.1
Wheat ... ..	4.46	4.58	3.6
Barley ... ..	0.18	0.22	0.17
Oil seeds ... ..	1.81	3.6	2.51

The above figures show that the area under crops other than rice and bajri was less than in the previous year. The large decrease in the cotton area (170,000 acres) is due to the disorganisation of the market on the out-break of the war in the preceding year."

RESOLUTION.—The report has been reviewed by the Commissioner in Sind and the general results are summarised in the statement\* which accompanied his memorandum No. 1615, dated the 11th June 1917.

2. The inundation of 1915 is characterised as one of the lowest on record with very scanty rainfall. A peculiar feature of the year was an unusually high river at the commencement of the season giving promise of a very favourable inundation which, however, was not realized.

The area irrigated during the year under review and in each of the past five years is shown in the following table :—

Year.	Area irrigated.
	Acres.
1910-11 ... ..	3,121,895
1911-12 ... ..	2,732,787
1912-13 ... ..	3,039,217
1913-14 ... ..	3,147,274
1914-15 ... ..	3,348,768
1915-16 ... ..	3,032,023

In consequence of the low inundation the irrigated area decreased by over 3 lakhs of acres when compared with last year's figures, and is less by nearly 46,000 acres than the average of the past quinquennium. The gross revenue realized, however, increased by Rs. 65,000 nearly, over that for the previous year, partly due to the recovery of outstandings of former years and partly to enhanced and revised rates being introduced in certain talukas.

3. The financial results of the year, based on actual receipts and expenditure for all irrigation works in Sind may be thus summarised:—

	Gross revenue.	Working expenses.	Net revenue.
	Rs.	Rs.	Rs.
Major Works-Productive ...	35,34,446	13,17,602	22,16,844
Minor Works and Navigation —Works for which both Capital and Revenue Accounts are kept.	24,90,307	8,21,401	16,68,906
Works for which only Revenue Accounts are kept... ..	25,84,723	9,90,936	15,93,787
Agricultural Works ... ..	74,509	9,33,970	—8,59,461
<b>Grand Total</b> ...	<b>86,83,985</b>	<b>40,63,909</b>	<b>46,20,076</b>

The following table shows these financial results and those of the previous five years:—

Year.	Gross revenue.	Working expenses.	Net revenue.
	Rs.	Rs.	Rs.
1910-11 ...	82,84,130	42,59,535	40,24,595
1911-12 ...	74,19,419	40,32,299	33,87,120
1912-13 ...	79,80,904	43,29,549	36,51,355
1913-14 ...	80,98,144	45,96,140	35,02,004
1914-15 ...	86,18,763	40,93,551	45,25,212
1915-16 ...	86,83,985	40,63,909	46,20,076

The net revenue increased by nearly a lakh of rupees over the previous year's figures and by over eight lakhs, when compared with the average of the previous five years, which is a very satisfactory result considering the unfavourable character of the inundations.

4. The capital invested in works for which capital accounts are kept, up to the year under review was as follows:—

Major Works ... ..	2,75,56,117
Minor Works ... ..	48,39,397
<b>Total</b> ... ..	<b>3,23,95,514</b>

The net receipts on capital works alone amounted to Rs. 32,95,890, or 10.17 per cent., of the above capital expenditure.

The percentages of the previous three years were as follows:—

1912-13 ... ..	7.51
1913-14 ... ..	8.51
1914-15 ... ..	9.93

The Major Works show a return of 7.29 per cent., against 6.13 per cent., of the last year, whilst Minor Works show 26.61 per cent., against 31.31 per cent.

5. The figures in column 4 of Statement E at pages 7 and 27 of the report need slight modification. The information contained in the statements is shown in the consolidated statement which follows:—

Total area irrigated by all classes of works.	Total working expenses and maintenance for canals.	Rate of working expenses per acre of area irrigated (col. 2 + col. 1).	Expenditure on agricultural works (excluding the cost of surveys for special projects).	Rate of expenditure on agricultural works per acre of area irrigated (col. 4 + col. 1).	Total working expenses per acre of area irrigated including expenditure on agricultural works. (col. 3 + col. 5).
1.	2.	3.	4.	5.	6.
Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
3,032,023 ...	31,29,939	1.03	9,33,970	0.31	1.34



The whole cost per acre of irrigation in Sind must include the expenditure on river embankments, as these have to be maintained in order to protect the area of cultivation from floods. Thus, the gross working expenses amounted to Rs. 40,63,909 (Rs. 31,29,939 for canals and Rs. 9,33,970 for embankments) in the year against Rs. 40,93,551 (Rs. 31,20,509 for canals and Rs. 9,73,042 for embankments) in the previous year, and the rate per acre was Rs. 1'34 which is slightly in excess of last year's figure (Rs. 1'22).

6. The average net consolidated assessment per acre on Government land in the Right Bank Division shows an advance from 3'09 to 3'37 rupees. In the Left Bank Division the amount was 3'01 against 2'97 rupees of last year.

7. The estimated value of crops grown is Rs. 8,00,22,590 (£5,334,839) as compared with Rs. 7,85,93,430 (£5,239,562) the past quinquennial average.

8. The officers in Sind are thanked for their efficient administration of the canals during the year.

9. Copies of the report and of this review should be sent to the Government of India and the Secretary of State for India.

W. N. CARTLAND,  
Under Secretary to Government.

G. R. No. W. I.—8020, P. W. D., dated 16th August 1917.

To

The Revenue Department, Secretariat. } With copies of the Irrigation Re-  
The Political Department, Secretariat. } venue Report, Sind, for 1915-16.  
The Commissioner in Sind.

The Director of Agriculture. }  
The Settlement Commissioner and } With copies of the Irrigation Revenue  
Director of Land Records. } Report, Sind, for 1915-16.

The Chief Engineer in Sind.

The Superintending Engineer, Indus Left Bank Division.

The Superintending Engineer, Indus Right Bank Division.

The Superintending Engineer, N. D.

The Superintending Engineer, Deccan  
Irrigation Division.

} With copies of the Irrigation  
Revenue Report, Sind, for  
1915-16.

The Superintending Engineer, C. D.

The Superintending Engineer, S. D.

The Accountant General, Bombay.

All Executive Engineers in Sind.

The Government of India.

The Secretary, Revenue and Statistics Departments, India  
Office.

(By letter).

The Secretary, Public Works Department, India Office.

The Registrar and Superintendent of Records, India Office.

Class A.

Exd. R. D. K.

No. \_\_\_\_\_ of 1917.

Copy forwarded for information and guidance to

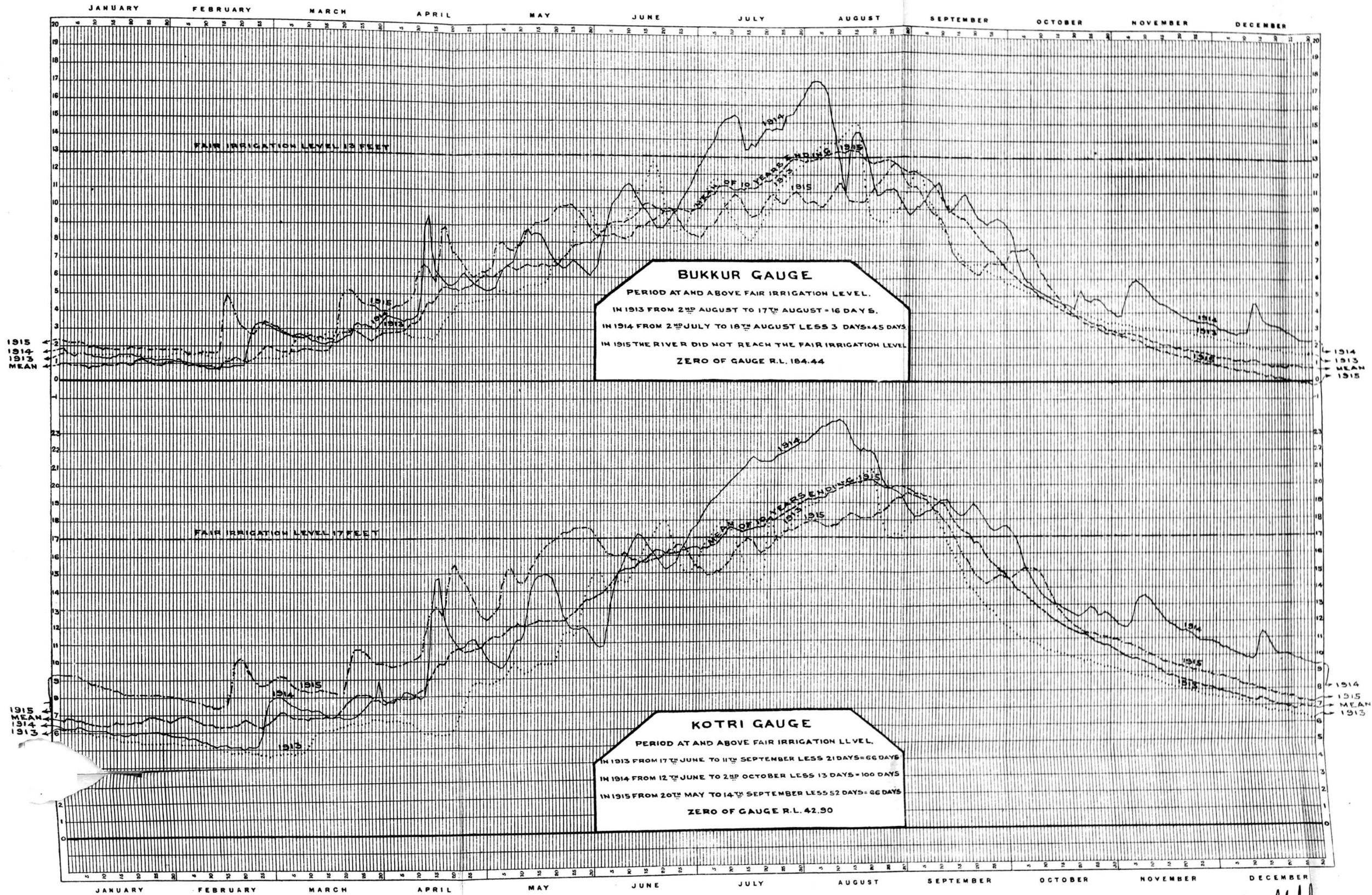
(Accompaniment to Government Resolution No. W. I.—8020, dated the 16th August 1917).

Statement showing cultivated area and assessment of Government, Japhir and Foreign lands for the years 1913-14, 1914-15 and 1915-16 together with the average of three years ending 1914-15.

Year.	Government lands.									Japhir lands.								
	Indus Right Bank Division.			Indus Left Bank Division.			Total.			Indus Right Bank Division.			Indus Left Bank Division.			Total.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
							Area.											
1913-14 ...	1,178,714	333,182	1,506,896	1,184,254	178,601	1,362,855	2,357,668	511,783	2,869,751	60,681	21,055	82,036	110,200	15,752	126,051	171,289	36,807	208,087
1914-15 ...	1,183,796	463,367	1,647,163	1,118,125	269,076	1,387,201	2,301,921	732,443	3,034,364	65,240	34,018	99,258	105,153	28,790	133,943	170,393	62,808	233,201
1915-16 ...	1,048,313	345,762	1,394,075	1,483,061	274,168	1,757,229	2,131,374	619,950	2,751,324	52,460	17,342	69,802	104,875	19,156	124,021	157,325	36,408	193,823
Average of three years ending 1914-15.	1,169,949	349,284	1,519,229	1,161,431	212,158	1,373,589	2,331,380	561,438	2,892,818	64,178	23,165	87,343	110,007	19,466	129,473	174,185	42,631	216,816
							Assessment.											
1913-14 ...	35,31,471	10,48,400	45,79,880	32,80,250	5,10,977	37,91,227	68,11,721	15,59,386	83,71,107	20,799	6,868	27,667	48,127	5,143	53,270	68,926	12,011	80,937
1914-15 ...	35,91,977	15,24,250	51,18,227	33,30,507	7,83,084	41,13,681	69,24,574	23,07,334	92,31,908	19,291	11,973	31,214	47,215	8,867	56,082	66,505	20,790	87,296
1915-16 ...	35,05,070	11,94,728	46,99,798	33,00,190	7,89,967	40,90,157	68,05,260	19,84,695	87,89,955	20,259	5,850	26,109	48,357	7,684	56,041	68,616	13,534	84,150
Average of three years ending 1914-15.	35,11,197	11,44,765	46,59,962	33,29,062	6,13,724	39,52,786	68,50,259	17,62,439	86,12,748	20,448	7,906	28,354	48,642	6,098	54,740	69,090	14,004	83,094
Year.	Foreign lands.						Grand Total.											
	Indus Right Bank Division.			Indus Left Bank Division.			Indus Right Bank Division.			Indus Left Bank Division.			Total.					
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.			
							Area.											
1913-14 ...	56,276	13,160	69,436	...	...	...	1,200,071	367,397	1,658,368	1,294,513	194,353	1,488,906	2,585,524	561,750	3,147,274			
1914-15 ...	54,116	27,087	81,203	...	...	...	1,303,152	524,472	1,827,624	1,221,278	277,866	1,521,144	2,526,130	822,338	3,348,768			
1915-16 ...	50,122	36,754	86,876	...	...	...	1,159,895	399,858	1,559,753	1,187,926	203,344	1,481,270	2,138,821	693,202	3,032,023			
Average of three years ending 1914-15.	48,909	19,876	68,785	...	...	...	1,283,036	392,321	1,675,357	1,271,438	231,624	1,503,062	2,554,474	623,946	3,178,419			
							Assessment.											
1913-14 ...	60,339	27,207	87,546	...	...	...	76,12,609	10,82,484	46,95,093	33,28,377	5,56,120	38,44,197	69,40,986	15,98,604	85,39,560			
1914-15 ...	77,647	45,082	1,22,729	...	...	...	36,90,915	15,81,255	52,72,170	33,77,812	7,91,951	41,69,763	70,68,727	23,73,206	94,41,933			
1915-16 ...	69,067	48,223	1,17,290	...	...	...	35,94,396	12,48,801	48,43,197	33,48,547	7,97,651	41,46,198	69,42,943	20,46,452	89,89,395			
Average of three years ending 1914-15.	62,285	35,410	97,695	...	...	...	35,93,930	11,92,081	47,86,011	33,87,704	6,19,822	40,07,526	69,81,634	18,11,993	87,93,537			

S. H. COVERNTON,  
Assistant Commissioner in Sind.

# HYDROGRAPH OF THE RIVER INDUS AT BUKKUR AND KOTRI



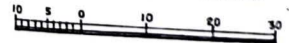
*A. K. K. K.*  
 CHIEF ENGINEER  
 INDUS RIVER COMMISSION

# INDEX MAP

OF  
SIND

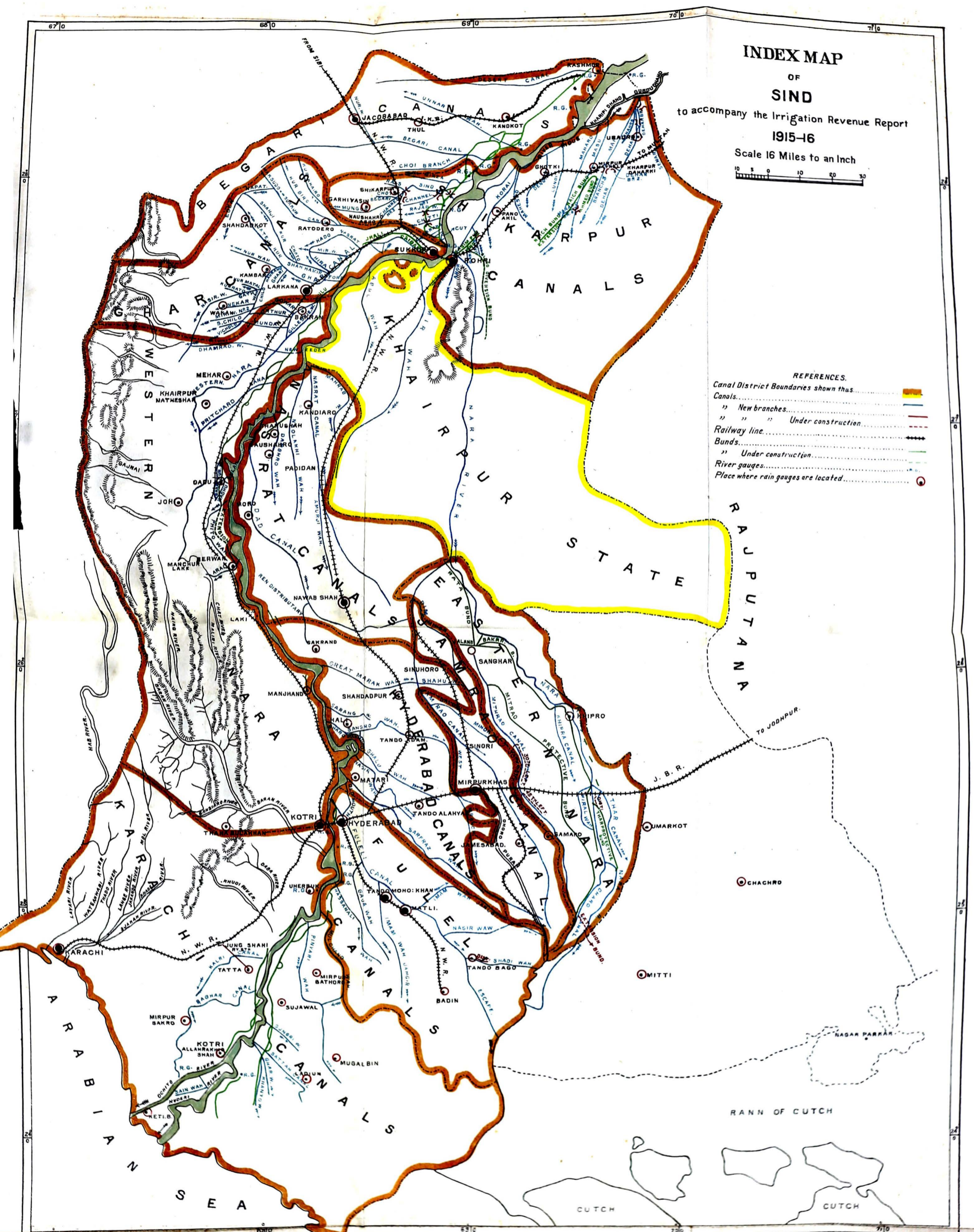
to accompany the Irrigation Revenue Report  
1915-16

Scale 16 Miles to an Inch



### REFERENCES.

- Canal District Boundaries shown thus.....
- Canals.....
- " New branches.....
- " " Under construction.....
- Railway line.....
- Bunds.....
- " Under construction.....
- River gauges.....
- Place where rain gauges are located.....



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CUTCH

CUTCH

*R. S. Howard*  
SUPERINTENDING ENGINEER,  
INDUS LEFT BANK DIVISION  
16-8-16.