Srrigation Revenue Report of the

Bombay Presidency

$$
1895-96
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## IRRIGATIOH REVENUE REPORT

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## BOMBAY PRESIDENCY,

EXCLUDING SIND,
1890-96.

PARTSI\&II.

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# IRRIGATION REVENUE REPORT, BOMBAY PRESIDENCY (EXCLUDING SIND), <br> 1895-96. 

PART I.
COMPRISING WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.

## general reichris.

Works in operation.
The following list includes all the works in opera. tion, 36 in number:-

| Collectorate. | Number. | Names of Works. | Storage Works completed or proposed, |
| :---: | :---: | :---: | :---: |
|  |  | Major Works. Protective Works. |  |
| Poona ... | 1 | Nira Canal ... ... ... | Storage lake at Bhatghar practically completed. |
| Sholápur ... | 2 | Mhasvad Tank <br> Productive Works. | Completed, except a part of the waste weir which was demolished in order to enable repairs to the dam to be carried out. This work is still to be completed. |
| Ahmedabad | 5 | Háthmati Canal | Storage works under consideration. |
| Klándesh | 6 | Lower Pánjhra River Works. Pálkhed Canal. | Storage Tank at Makti complete. <br> (Wághad Tank completed with the |
| Násik | 7 | $\left\{\begin{array} { l }  { \text { Kádva } } \\ { \text { River } } \\ { \text { Works } } \end{array} \left\{\begin{array}{l} \text { Ojhai Támbat } \\ \text { Canal. } \\ \text { Wadáli Canal... } \end{array}\right.\right.$ | exception of the waste weir Water consequently is no stored to full designed height |
| Ahmednagar | 8 | Pravara River Works-Lákh Canal. | Máládevi Tank proposed for this work, but sanction withdrawn pending enquiry into modified proposals for the dam, and alternative proposals for a tank at Samrad, revised survey of which is completed and plans, \&y., have been prepared. |
| Poona | 9 | Mutha Canals | Lake Fife at Khadakvásla complete. |
| Sholápůr ... | 10 | Ekrúk Tank ... ... | Complete. |
| Sátára ... | 11 | Krishna Canal <br> Minor Works and Navigation. | Site for a storage reservoir is under consideration. |
| Almmedabad | 12 | Khári Cut | The Bokh project under consideration. |
|  | 13 | $\begin{array}{lll} \text { Hartála Tank } & \text {... } & \text {... } \\ \text { Mhasva do. } & \text {... } & \text {.. } \end{array}$ | Complete. Do. |
| Khándesh | 15 | Jámda Canals ... | Reservoir at Chankápursanctioned and commenced, but work snspened. Question of resumption of work under consideration. |
| Násik | 16 | Parsul Tank ... | Complete. |
| Ahmednager | 17 18 | Pravara River Work-Ojhar Canal. <br> Bhatodi Tank | Vide remarks against (8) Lákh Canal. <br> Complete. |

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| Collectorate, | Number. | Names of Works, | Storage Works completed or proposed. |
| :---: | :---: | :---: | :---: |
| - |  | Minor Torks and Nayiga-TION-continued. |  |
|  | 19 | Mátoba Tank ... ... | Complete. |
| Poona ... | 20 | Kásurdi do. ... ... | Do. |
|  | 21 | Shirsuphal Tank ... ... | Do. |
|  | 22 | Bhádalvádi do. ... ... | Do. |
| Sholápur | 23 | Koregaon do. ... ... | Do. |
|  | 24 | Ashti do. ... ... | Do. |
|  | 25 | Revári Canal... ... ... | Storage Tank at Soukeh proposed. |
|  | 26 | Upper Mán River Works ... | Pingli Tank complete. |
| Sátúra... | 27 | Yerla River Irrigation Works. | Nehr T'ank complete. |
|  | 28 | Chikhli Canal ... ... | No Storage works yet propased but subject being considered. |
|  | 29. | Maini Tank ... '... ... | Complete. . |
| Bijápur | 30 | Muchkundi Tank ... ... | Do. |
|  | 31 | Nilgund do. ... ... | Do. |
| Belgaum ... | 32 | Gadikeri do. ... ... | Do. |
|  | 33 | Dámbal do. ... ... <br> Medleri do. $\ldots$. .. | Do. |
| Dhárwár | 35 | Madag do. $\quad .$. | Do. |
|  | 36 | Asundi do. ... ... | Do. |
|  | 37 | Mávinkop do. ... ... | Do. |
|  |  | Provincial. |  |
| Belgaum ... | 39 | Gokák Canal, 1st Section ... | Storage works at Dhupdal completed. Further raising of the weir lately sanctioned. |

Nos, 3 and 4, or Chankipur and Maladevi Tanks, are not iucluded, as the worke were not in operation; he former has been suspended and the latter has not yet been approved. No. 38 -Gokak Canal, Ind Section, is in abeyance.
2. The total capital outlay during and up to the end of the year was as follows:-

| Main Heads. | To end of 1894.95. | During 3805-96. | To end of 1893-0. |
| :---: | :---: | :---: | :---: |
|  | Rs. | Rs. | Is. |
| 4 A.-Direct Charges. |  |  |  |
| I.-Works ... ... ... ... | 1,98,27,081 | 74,207 | 1,99,01,288 |
| II.-Establishment .. ... | 45,01,191 | -14,564 | 45,15,755 |
| III.-Tools and Plant ... | 4,90,4,43 | --4,983 | 4,94,460 |
| IV.-Suspense . ... ... ... | ...... | ...... | ...... |
| Profit and Loss ... ... | ...... |  | ...... |
| Total 1 | 2,48,27,715 | 83,783 | 2,49,11,503 |
| Deduct-Receipts on Capital Account. | 35,225 | 156 | 35,381 |
| Net Total, A.-Direct Charges ... | 2,47,92,490 | 83,632 | 2,48,76,122 |
| B.-Indirect Clarges. |  |  |  |
| Capitalization... ... | 5,24,208 | 58,060 | 5,82,263 |
| Loss by Exchange | 8008815 | $\underline{2041}$ | 8,09,850 |
| Total, B.-Indirect Charges | 13,25,029 | 60,101 | 13,85,124 |
| Grand Total A and B | 2,61,17,513 | 1,43,783 | 2,64,61,246 |

3. The following abstract shors the details of the above:-


The number of works in operation is 36 , the same as in the previous year. The Chankápur and Máládevi Tanks and the Gokák Canal, 2nd Section, are still n abeyance. Government have ordered further investigations in regard to the Jhankipur 'Tank, and the requisite survey has been made. A report on the result of this survey is awaited.

The revision of the Samrad Tank project, which is an alternative to the Masladevi Tank project and is designed to afford storage for the development of the Lálh and Ojhar canals, is receiving attention.

In view of the unsatisfactory financial result of the Lákh Canal the Government of India have raised the question whether it is adrisable to continue its maintenance, and have invited the opinion of this Government. The matter awaits receipt of reports from local officers.

The greater portion of the capital expenditure during the year was on the Nira Canal, a Protective work, and on the Mutha Canals, a Productive work, the outlay on which is being incurred from the ordinary revenues and charged to the head "Dinor Works and Navigation."

The work done on the Nira Canal was chiefly in connection with the Bhatghar Reservoir. All works in progress at the end of last year were completed. The new works of importance were an additional training wall for the north waste weir channel and two small walls at the south weir channel. All the gates on the south weir, 33 in number, were erected and in working order before the monsoon

On the Mutba Canals the greater portion of the expenditure was on the alterations and improvements to the Poona Water-supply Works. Five new settling tanks have been built with a capacity of 5 days' supply, and arrangements have been made for passing water into the filters and for the efficient cleaning of the tanks when required.

A brief report on the new works carried out for the improvement of the Poona-Water-supply has been published.

Interest Account.
4. The Interest Account to end of the year stands as follows:-

5. The gross revenue realised from all sources during the year, after Rercnae. deducting refund of revenue (Rs. 802 ), was Rs. $5,98,539$, of which Rs. $5,84,384$ were dipect, and Rs. 14,455 indirect, receipts. The net revenue actually realised was Rs, $3,04,552$.

The gross revenue shows an increase of Rs. 35,357 , and the net revenue an increase of Rs. 91,996 .

Area under command and irrigable area.
6. The gross area under command was 886,086 acres and the irrigable area at present is 316,224 acres.
7. The financial results of the year by main heads were as follows :-

|  | Areas Irrigated. | Rrvbrua Reahimba |  |  | Worting Expenides. | Net Revenue. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| . |  | Direat Receipts, | $\begin{aligned} & \text { Share of } \\ & \text { "Land Re- } \\ & \text { venue. } \end{aligned}$ | Total, |  |  |
| Class I.-Works for which Capital and Revenue dccounts are kept. | Acres, | R8, | - Rs. | Rs. | Rs. | Rs. |
| Major Works $\cdots$ - ${ }^{\text {S Protective Works }}$ (Productive Works | $\begin{aligned} & 26,034 \\ & 23,055 \end{aligned}$ | $\begin{aligned} & 1,02,678 \\ & 3,68,498 \end{aligned}$ | $77 * 7$ | $\begin{aligned} & 3,02.678 \\ & 3,76,069 \end{aligned}$ | $\begin{array}{r} 66,800 \\ 1,98,675 \end{array}$ | $\begin{array}{r} 35,578 \\ 2,37,194 \end{array}$ |
| 'Total ... | 49,989 | 4,71,176 | 7,571 | 4,78,747 | 2,05,675 | 2,73,073 |
| Minor Works Provincial Minor Works | $\begin{array}{r} 91,676 \\ 4,464 \end{array}$ | $\begin{aligned} & 90,188 \\ & 23,020 \end{aligned}$ | 6,884 .. | $\begin{aligned} & 97,072 \\ & 29,020 \end{aligned}$ | 82,4311 6,589 | $\begin{aligned} & 15,043 \\ & 16,433 \end{aligned}$ |
| Total Class I ... | 76,129 | 5,84,384 | ${ }^{1} 14,455$ | 5,98,839 | 2,94,287 | 3,04,553 |

The area shown as irrigated includes 1,206 acres on which a consolidated land and water assessment is levied. This is derived from old works on.which expenditure on improvements only has been incurred.
8. The figures showing areas irrigated, revenue assessed and realized, and working expenses, as compared with former years, are $\begin{array}{ll}\text { Areas irrigated: } & \begin{array}{l}\text { working expen } \\ \text { as follows :- }\end{array}\end{array}$


There was a decrease of 9,314 acres in the total area irrigated as compared with the previous year, distributed over the several classes of works as follows:-

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Protective Works | **' | ..' | ..' | Acras $-5,662$ |
| Productive , | - | ... | ... | -5,056 |
| Minor | . | ... | . 0 | +1,303 |
| Do. . Provincial | ... | ... | ..' | +101 |
|  |  |  | - $\cdot$ | 2,314 |

Under Protective Works the Nira Canal shows a decrease of 4,917 acres and the Mhasvad Tank a decrease of 745 acres. Under Productive Works, the Mutha Canals account for a decrease of 1,944 acres, and the Krishna Canal a decrease of 1,467 acres, and the balance is the net result of increases and decreases under the remaining works. Many Minor Works show an increase, the most noticeable being that on the Khari Cut.

Distribution of area,
9. The total area irrigated was distributed as follows :-

|  | Kharil.. | Rabi. | Total. |
| :---: | :---: | :---: | :---: |
|  | Acres, | Acres. | Acres. |
| 1834-95 | 41,314 | 42,923 | 84,237 |
| 1895-96 | 39,365 | 35,558 | 74,923 |

Both the kharif and rabi areas show a decrease. The differences in areas as compared with those of the previous year have been explained in the review of the Annual Statement of Irrigatiou and Rainfall.
10. The area irrigated was in excess of the

Difference between nrea applied for and area irrigated. area applied for, the figures being 74,923 and 67,311 acres respectively.

The area irrigated includes 1,762 acres of the permanent garden irrigation under the Lower Pánjhra River Works. Eliminating these figures the area irrigated is reduced to 73,161 acres. The excess in the measured area over that applied for was chiefly on the Nira Canal, the difference was largely due to the cultivators having entered the minimum area they could be charged for, while in most cases they irrigated much more.

Distribution of rainfall.
11. The following table contrasts the distribution of rainfall in each month for the last five years:-

| Kharif. | I, -Worki having an untailing Supply. |  |  |  |  | IT.-Works dependent on Local Rainfall. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1801-82. | 1802-93. | 1803-24. | 1894-95. | 1895-96. | 1891-02. | 1892-93. | 1893-94. | 1894-95. | 1895-88. |
|  | Inches. | Inohea. | Iuches. | Inches, | Inches. | Inchen. | Inches. | Inchea, | Inches. | Inches. |
| June ... ... | $2 \cdot 57$ | 6.83 | 9.85 | 3.27 | $5 \cdot 24$ | 2.58 | 8.04 | 6.92 | $2 \cdot 45$ | $2 \cdot 31$ |
| July ... ... ... | 711 | $6 \times 36$ | $2 \cdot 05$ | $9 \cdot 30$ | $5 \cdot 36$ | $3 \cdot 86$ | $3 \cdot 91$ | 3.01 | 6.85 | $4 \cdot 18$ |
| August ... | 3.03 | $6 \cdot 51$ | $4 \cdot 58$ | 1.98 | 3.09 | $8 \cdot 15$ | 6.56 | $3 \cdot 36$ | $3 \cdot 09$ | $2 \cdot 30$ |
| Scptember ... | $2 \cdot 93$ | $9 \cdot 13$ | $2 \cdot 43$ | 6.30 | $8 \cdot 73$ | 2.78 | $7 \cdot 87$ | 4.04 | 6.65 | $11 \cdot 60$ |
| Total | 15.64 | 27.83 | 18.91 | 20.85 | $22 \cdot 42$ | 12.39 | 26.38 | 17.33 | 1904 | 20.30 |
| Rabi. |  |  |  |  |  |  |  |  |  | , |
| October ... | 3.25 | $5 \cdot 14$ | $2 \cdot 24$ | 4.77 | 3.65 | $3 \cdot 81$ | 8.77 | 413 | 3.04 | 3.50 |
| November ... ... | $0 \because 6$ | 0.34 | 116 | $0 \cdot 11$ | 0.49 | $0 \cdot 13$ | 0.63 | 0.06 | ". | 0-50 |
| December ... ... | ... | 0.02 | ... | ... | ... | ... | ... | ... | $0 \cdot 01$ | -. |
| Jaluary ... | $\cdots$ | ... | $\cdots$ | $\cdots$ | ... | ... | ... | $\cdots$ | $\cdots$ | ... |
| Total | 351 | $5 \cdot 50$ | $3 \cdot 40$ | 4.91 | 414 | 4.04 | $9 \cdot 40$ | $5 \cdot 09$ | $3 \cdot 05$ | 439 |
| Tutal Kharif and Rabs | $19 \cdot 15$ | 33•33 | 22.31 | 25.76 | 26.56 | 16.43 | 33.78 | 22.42 | 22.09 | 24.78 |

The rainfall in the year under report compared with that of the previous year varied from the nornal in the case of almost all works.

The average in the two seasons, taking all the works together, was 24.54 inches as compared with $23 \cdot 13$ inches in 1894-95.

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The remissions and refunds together amount to Rs. 1,3t6.
The total amount, Rs. 81,016, unrealized at the close of the year, shows a large increase ; this total is made up of the following :-

|  |  | Rs. |  |
| :---: | :---: | :---: | :---: |
| Mntha Canals ... | . $\cdot$ | ... | 44,863 |
| Kbári Cut | .. | ... | 11,9100 |
| Krishna Canal ... | .. | ... | 10,320 |
| Nira Camal | ... | ... | 2,851 |
| Jámila Canals ... | ... | $\ldots$ | 1,830 |
| Kidva River Works | ... | ... | 1,555 |
| Mhasvad Tank | ... | ... | 1,514 |
| Bhátodi Tank | ... | ... | 1,205 |
| Other Works | ... | ... | 4,811 |
|  |  | ... | 81,016 |

The outstanding balance on the Mntha Canals, which is the heariest, includes Rs. 9,941 on account of bills for water rates for March 1806, prepared at the end of the month. Omitting this item the balance represents tho unrealized amount on account of irrigation, the greater portion of which has since been recovered, leaving only Rs. 5,761 unrealized at the end of June 1896. The heary balance is ascribed to the large sum to be collected during 1805.96.

On the Khári Cut out of the balance of Rs. 11,950 , Rs. 7,327 were recorered after the close of the year, and the Revenue Department have issued the decessary orders for the prompt recovery of the remainder. Owing to the peculiar circumstances of cultivation under the Ehári Cut the lixecutive Engineer is unable to submit his demand statements within the date fixed in the Canal rules and this accounts, in a great measure, for the heavy outstandings.

No explanation has been furnished of the outstandings on the Krishna Canal.

In the case of the balance on the Nira Canal, the Revenue authorities explain that the dates of payment of instalments of land revenue and irrigation assessments being almost the same, the people find it hard to pay the amounts due in time. The same reason is assigned for the balances on the Mhasrad Tank and some otber works. The Lalances in some cases have since been recovered and in others the Revenue authorities are taking steps for recovery.

As regards the balance on the Jimda Canals, all has been realized in 1896-97.

The balance on the Bhatodi Tank is attributed to the poverty of the people from whom the amounts are due. Most of the complaints of the rayats, alluded to in the last year's report, have, it is stated, been disposed of in 1895-96.

Of the balance on the Kadva River Works, Rs. 1,355 are on the Pallkhed Canal. The amount could not be realized before the end of the year as the crops of the people from whom the amounts were due had not been harvested. Out of the total balance of Rs. 1,355, Rs. 1,132 have since been recovered.
13. The total working expenses for the year amounted to Rs. $2,94,287$ against Rs. $3,50,925$ in the previous year, showing a
Working expenses, decreaso of Rs. 56,639 distributed as follows:-


[^0] Minor Works.

The working expenses of the Nira' Canal include a sum of Rs. 1,952 for special repairs consisting of strengthening the banks by puddled earth, in places where they were found to be unsafe or leaky owing to the nature of the soil of which they were originally made. The total charges amounted to Rs. 50,978 as compared with Rs. 53,589 in the previous year. With 96 miles of main canal in operation this gives a rate of Rs. 531.02 per mile and it includes the maintenance of 132 miles of distributaries. The cost of maintenance per acre irrigated was Rs. $2 \cdot 17$ against Rs. $1 \cdot 89$ in the previous year, the rather high rate being due to decrease in the irrigated area.

The working expenses of the Mhasvad Tank include a sum of Rs. 2,273 for the reconstruction of 2 feet of the waste weir.

The expenditure on account of working expenses of the Mutha Canals amounted to Rs. 77,589 against Rs. 79,703 in the previous year, including all charges. Out of the total, Rs. 36,103 are debitable to maintenance of watersupply and the balance, Rs. 41,486 , to maintenance of irrigation. As compared with the previous year there is an excess on the working charges of the Yoona Water-supply due to employment of a mechanic at Rs. 180 per mensem and repairs to fire plugs.

There is an excess in working expenses of the Ekruk Tank principally due to the inclusion of Rs. 3,041, being the cost of a new iron bridge provided to the outlet tower of the perennial canal. The excess on the Kásurdi Tank was due to special repairs to the dam.

The increase under Provincial Minor Works (Gokák Cana!, Ist Section and Storage Works) is due to the debit of a share of Canal and Sub-Divisional Office Establishment to Revenue management and to the heavier collection charges (Rs. 313) on account of the water-power realizations which amounted to Rs. 10,816 as compared with Rs. 4,920 in the previous year.

The percentage of working expenses on gross assessed revenue was 46 against $59 \cdot 10$ in the previous year, and the rate per acre was Rs. $3 \cdot 93$ against Rs. $4 \cdot 17$ in the previous year.

[^1]

The establishment charges, dirided between ' Direction and Accounts' and ' Executive,' compare as follorss with those for the prerious year :-


| Detail of working. W | 15. The following table gives the details of the working expenses of some of the principial works :- |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Names of Trorks. | Average incidence of Wieter-rate per Acre. | Cost of Miaberbmeht. |  | Wobking Experspa Totalin pheftrale Worle Departmert. |  |
|  |  | Total Oost. | Per Acre. | Per wile of Main Canal | Per Acre Irrigated. |
| Canals. | Re. | R. | Re. | Ro, | Is. |
| Nira Canal | 3.70 | 1,820 | $\begin{array}{llll}0 & 1 & 3\end{array}$ | 451 | $1 \cdot 85$ |
| Háthmati Canal ... ... | $2 \cdot 65$ | 141 | $0 \quad 08$ | 2ris | $1 \cdot 68$ |
| Kádva River Works $\quad .$. | 3.87 | 235 | 016 | 350 | 333 |
| Pravara River Workg-Lákb Canal | $3 \cdot 35$ | 40 | 0111 | 413 | 28.45 |
| Mutha Canals ... | 21.83 | 1,432 | $0 \quad 210$ | 743 | $8 \cdot 02$ |
| Krishna Canal ... | 12.00 | 593 | 0211 | 258 | $3 \cdot 17$ |
| Jámda Canals ... ... | 5.58 | 53 | 013 | 231 | 6.12 |
| $\underset{\text { Canal }}{\text { Prarara }}$ Rirer Works-0jhar | 3.26 | 150 | 0178 | - 637 | 6.6 S |
| Gokák Canal, 1st Section | $2 \cdot 47$ | 610 | 022 | 315 | $1 \cdot 15$ |
| Cpper 3án River Works | $4 \cdot 08$ | 298 | 0211 | 295 | $2 \cdot 87$ |
| Resari Canal ... | $4 \cdot 64$ | 238 | $0 \begin{array}{lll}0 & 3 & 1\end{array}$ | C21 | 2.54 |
| Chikhli do. | $4 \cdot 39$ | 13 | 0005 | 125 | 2.16 |
| Khári Cut | $4 \cdot 75$ | 184 | 010 | 331 | $1 \cdot 6$ |
| Tanks. |  |  |  |  |  |
| Mhasrad Tank | 3.61 | 850 | $\begin{array}{llll}0 & 310\end{array}$ | 233 | 414 |
| Ekrúk do. ... ... | 4.74 | 570 | 0306 | 591 | 5.45 |
| Phatodi do. ... | 3.73 | 10 | 012 | 1,734 | S\%0 |


| Names of Worke |  | Averageincidence of Water-rate per Acre. | Cost of Mbatrabaryt. $\%$ |  | Wonerse Exprsaes Tothle ty the Prdeno Woeks Depabturat. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | ${ }_{\text {Tostal }}^{\text {Tost. }}$ | Per Acre. | Pur mile of Main Canal. | Per Acre Irrigated |
| Tanks-continued. |  | Rs. | Rs. | Rs. | Rs. | Re. |
| Matoba Tank | ... | 7.68 | 63 | $\begin{array}{llll}0 & 0 & 10\end{array}$ | 140 | $2 \cdot 04$ |
| Shirsuphal do. ... | $\cdots$ | $2 \cdot 87$ | 15 | 0 0 0 4 | 200 | $3 \cdot 48$ |
| Bhádalvádi do. ... | , | $2 \cdot 7$ | 41 | $\begin{array}{llll}0 & 0 & 9\end{array}$ | 180 | $2 \cdot 10$ |
| Maini do. ... | $\cdots$ | $3 \cdot 94$ | 140 | 0110 | 306 | $2 \cdot 37$ |
| Madng do. ... | ... | $2 \cdot 44$ | ... | ...... | 160 | 1.54 |

The cost of measurement per acre was in many cases the same as in the previous year. The rate on the Bhatodi Tank, remarked on last year, shows some improvement. The cost of measurement on the Mhasvad and Ekruk tanks was rather high in the year under report owing to decrease in the irrigated area while the measuring establishment remained as usual.

The cost of measurement under the Krisbna and Gokák canals and Maini Tank is much less than last year. On the Madag Jank no special measuring establishment was employed owing to the land under command having been subdivided into pôt numbers, suitable for irrigation.

The conditions on the various works differ so much that it is scarcely possible to compare the figures themselves.

15 a. The orders contained in Government Resolution No. 172 A. I. -454 dated 15th September 1379, required that special sanction of Government should be obtained to excesses over prescribed percentages of establishment charges to revenue expenditure. The rules which now govern the debit of establishment charges, however, made these orders unnecessary, and they were accordingly cancelled in Government Resolution No. 213 A. I.-1289, dated 14th August 1895. But it was thought necessary to carefully watch the establishment expenditure on revenue management, and it was directed that the Annual Revenue Reports should furnish iuformation showing for each work-
(a). The cost of establishment debited to revenue management.
(b). The percentage this bears to the assessed revenue from the irrigation.
(c). Incidence of cost per acre irrigated.

The information furnished in compliance with these orders is shown in the following table :-


|  |  |  |  | 1683.64. | 150485. | 1595.64. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | nis. | Rs. | Is. |
| Works... ... |  |  |  | 12.641 | 27.53 | 7,:75 |
| Repair ${ }^{\text {a }}$ - |  | ... |  | 1,91,987 | 1, 20.490 | 1,14: |
| Establishment Tools and Plant | ... | ... | ... | 1,1,50 | 1,48,35 | 1,24,1 ${ }^{\text {c }}$ |
|  | ... | ... | ... | 3,45: | 9, 0100 | 0,209 |
| Total in the Public Works Department |  |  |  | 2,49,506 | 3,07,117 | 0,53.5.9 |
| Collection charges ... <br> Indirect chargres ... |  | $\cdots$ | ... | -3, 01 | 23,13: | -3, $2 \times 5$ |
|  |  | ... | ... | 14, 41 | 20,7:0 | 16,413 |
| Total |  |  |  | 2,87,415 | 3,51,990 | 2,94,25: |

The establishment charese, divided between 'Direction and Accounts ' and 'Esecutive,' compare as follons with those for the previous year :-

15. The folloring talle gires the details of the Detail of working. working expenses of some of the principal works :-



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(c). Iocidence of cost per acre irrigated.

The information furnished in compliance with these orders is shown in the following table:-

|  |  |  |  |  |  |  |  | Incilence citent fef Acte infiguld |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | R.s. |  | Rs. |
| 1. | Nira Canal | ... |  | .. |  | ${ }_{9} 9,634$ | 2 $2 \cdot 10$ | $0 \cdot 41$ |
| ${ }_{3}^{2 .}$ | Mhasral Tauk | ... | $\ldots$ | ... | ... | 2,977 | :30.93 | 0.84 |
| 4. | Lower Patrihta | Rirer |  | $\ldots$ | $\cdots$ | 514 | 5.63 | 0.15 |
| 5. | Kadva Rirer Wr | ris |  | ... | $\ldots$ | 1,077 | 11.17 | 0.43 |
| 6. | Prasara River W | orbs | Ca | ... | ... | 105 | 9\%3 | 0.31 |
|  | Mutha Canals |  |  |  | ... | 7,252 | 4:03 | 0.83 |
| 8. | Ekrak Tark | $\ldots$ | ... | ... | . | 2,509 | 20.40 | $0 \cdot 96$ |
| 9. | Kri,bna Canal | ... | ... |  | . | 1,455 | 3.58 | 0.45 |
|  | Chari Cat |  |  |  | ... | 562 | 8.9 | $2 \cdot 18$ |
|  | Marals Tank | ... | ... |  | ... | 166 | 100.73 | $2 \cdot 37$ |
|  | 3hara do. | ... | ... | ...' | $\ldots$ | 245 | 1665 | 4.54 |
|  |  | ... | $\cdots$ | $\ldots$ | .. | 2,23, | 27.15 | 1.15 |
| 15. | Pravara Liver | \%ork | $\because$ |  | $\cdots$ | 290 | \% 7.09 | 0.25 |
| 15. | Bhatolit Tank |  |  | $\ldots$ | $\ldots$ | 172 | 5.26 | 0.20 |
| 17. | Mitola do. | ... | ... | $\ldots$ | ... | 835 | $4 \cdot 40$ | 0.36 |
|  | Katrril d . |  |  |  | ... | 200 | 2500.00 | $68 \cdot 67$ |
|  | Shirsuptal Tank | $\ldots$ |  |  |  | 274 | 13.23 | 0.38 |
|  | bladaradi da. | ... | ... | ... | .. | 278 | 12.13 | 0.33 |



The percentages of revenue establishment on assessed revenue from irrigation water-rates were very high on the Hartála, Mhasra and the Kísurdi tanks.

The Executive Engineer for Irrigation, Khándesh, reports that the irrigated area and revenue assessed under the first two works have decreased during the year under report, and endeavour was made to reduce the revenue establishment charge. On the Kásurdi Tank there was no direct irrigation because the dam was washed away. On the Jámda Canals there was increase in irrigation and assessment and also a slight increase in the charge of establishment for revenue management.

The cost of establishment debited to revenue management of the Mhasrad Tank was less than in 1894-95, but the percentage of revenue establishment on assessed revenue was a little higher on account of decrease in the area irrigated during 1895-96.

The cause which led to a higher percentage on the Ekruk Tank was a decrease in the irrigated area.

The Koregaon Tank had to be placed in charge of a Sub-Engineer, and the share of his pay and travelling allowance debited to the revenue management of the work being higher than that of the Sub-Overseer who had charge of the tank in the previous year, the percentage was high.

The increase in cost in the case of the Rewiri and Chikhli canals and the Maini Tank was due to the reappointment of a third measurer during the year. The experiment made during the previous year of reducing the measuring staff did not prove satisfactory, the preparation of assessment papers leiug delayed. The increase in the case of the Dímbal Tank was due to the subordinate in charge having to visit the work on more occasions than in the previous year for the disposal of the question of perennial irrigation within a quarter mile of the village site.

The high cost on the Gokák Canal was due to the debit of a share of pay fe gauge kárkún and pátkaris, \&c., to revenue management.

Enquiries made in the Southern Division as to the possibility of dimjnishing the charges in general have shown that reduction is not feasible except in the case of the Gokák Canal, on which, when the sub-division of land is completed, the revenue staff can, to a certain extent, be decreased.
16. The indirect receipt, as shown in Statements $I-C, I V-C$ and II-E,

Indirect Receipts. $\quad$ were Rs, 14,455 . If Rs. 3,263 plus $\mathrm{Hs}, 41,323$ on account of supply to the Poona City $=$ Rs. 41,591 ,
being the difference between the value of water issued from the Mutha Canals at normal rates and the value of water supplied at special reduced rates or gratuitously, be taken credit for in the revenue returns of the work as a book credit and be added to the above amount, the earnings of the year will be Rs. $6,76,802$. The Poona Municipality have not yet accepted the terms offered to them with the sanction of the Government of India, in the matter of increased supply of water.
17. The net assessed revenue of the year, after deducting working expenses, Net assessed Revenue. - including indirect and all other charges, and neglecting preceding paragraph, was Rs. $3,37,924$ as compared with Rs. $2,42,811$ in 1894-95.

The details of the assessment were as follows :-

|  | Ditrct Retbnut, |  |  | Indirect Revenue. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Water Rates, | Other Receipts. | Total, |  |  |
| Major Works. | , Rs. | Rs. | Rs. | Rs. | Rs. |
| Protective Works | 99,356 | 4,142 | 1,03,498 |  | 1,03,498 |
| Prodactive Works | 2,59,045 | 1,39,529 | 3,98,574 | 7,571 | 4,06,145 |
| Total | 3,58,401 | 1,43,671 | 5,02,072 | 7,571 | 5,09,643 |
| Minor Works ... ... | - 83,168 | 10,566 | 93,734p | 6,884 | 1,00,618 |
| Provincial Minor Works | 10,907 | 11,043 | 21,950 | ... | 21,950 |
| Grand Total | 4,52,476 | 1,65,280 | 6,17,756 | 14,455 | 6,32,211 |

18. The water rates in force during the year are shown in Statement I-F., Water rates. in the remarks column of which the orders sanctioning revision of rates in certain cases are quoted. For the Gokák Canal it has been ordered that the perennial rate shall be raised from Rs. 14 to Rs. 18 in five years; the rate for the year under report was Rs. 16.
19. The average water rates per acre of land actually irrigated were :-

|  |  |  | 1894-95. | 1895.96. |
| :---: | :---: | :---: | :---: | :---: |
| Protective Works | ... | .. | 3.21 | $3 \cdot 69$ |
| Productive Works | ... | ... | $8 \cdot 17$ | $11 \cdot 20$ |
| Minor Works... | ... | -.' | $4 \cdot 35$ | 4.07 |
| Provincial Minor Works | ... | ... | $2 \cdot 73$ | $2 \cdot 47$ |
| Average of all taken toge | ther | ..' | $5 \cdot 10$ | 6.04 |

20. The water rate assessments and other receipts compare with those of the previous year as under :-


The above comparison shows an increase under all heads except Miscellaneous revenue.

The increase under water rates is wholly under Productive Public Works and principally on the Mutha Canals, and due chiefly to the higher rates introduced for perennial crops. There was also increased reveuue from the Poona Water-supply to the extent of $\mathrm{R}_{\mathrm{s}} .12,459$, whirh accounts for the increase under Water-supply to towns. The total revenue from the Mutha Canals was Rs. $2,98,470$, or Rs. 50,515 in excess of the total of the previous year. This is the highest annual revenue obtained since the work came into operation.

Out of the increase of Rs. 1,892 under Plantations Rs. 1,602 was on the Jámda Canals due to a large sale of full grown bábul trees:

Under Water-power the increase is solely on the Gokák Canal.
Under Miscellaneous the decrease of Rs. 6,037 is the result of small differences on many rorks.
21. The principal crop acreages irrigated during

Crop acreages.
1894-95 and $1895-96$ were as follows:-


The figures for all the above crops show a decrease with the exception of bajjri and maize, which show a slight increase.

Of the total decrease under sugarcane, jowári and gram, the Nira and the Mutha Canals are responsible for the following:-

|  |  |  | Sugarcane. <br> Acres. | Jowári. <br> Acres. | Gram. <br> Acres. |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Nira Canal | $\ldots$ | $\ldots$ | 1,241 | 1,063 | 768 |
| Mutha Canals | $\ldots$ | $\ldots$ | 911 | 1,451 | 421 |

the works in the Southern Division showing an increase of 1,383 acres under jowári.

The falling off in the cultivation of sugarcane is reported to be due to abnormally low market rate of gûr during the past two years, as explained in paragraph 3 of the Mutha Canals report, and that in jowári and gram to favourable ruinfall.

The decrease in ground-nut was due to the fact that excessive rainfall rendered irrigation unnecessary.

The total estimated value of crops irrigated is shown as Rs. $49,03,224$ against Rs. $56,57,235$ in the previous year, and Rs. $88,59,742$ for the year 1893-94.

## 22. In Statement I-E the duty of water on each work, as well as the bases

 Daty of water. on which the duties were calculated, \&.c., are shown The results vary very much on different works; but, as observed in previous years, this is to be expected, as the conditions also vary considerably, and in most of the canals it is nccessary to maintain a much larger discharge than is necessary for the area under irrigation, owing to the bulte of the land irrigated being usually situated at the tail of the canal, at a distance from the head-works.Details of the duty obtained on each canal are given in the body of the report and are generally estimated from the daily discharge observations and the known area of the miscellaneous crops under irrigation during the period.

Special experiments to determine the duty of water per acre for certain crops were carried out during the year with the following results:-

> Cft.

| Poona District, Nira Canal | Khapla wheat $=$ <br> Ground-nut $=$ |  |  | $\begin{aligned} & 43,461 \\ & 75,268 \end{aligned}$ | ac |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Násil District-Sugarcane | ... |  |  | 185,495 |  |
| Do. |  |  |  | 422,155 |  |
| Do. |  |  |  | 187,168 |  |
| Khondia (Ris) |  |  |  | 63,720 | , |

The details of experiments for the Násik and Sholápur Districts have been reported separately.

## PARTII.

## WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT, AND AGRICULTURAL WORES.

23. The following shows a comparison of the figures for the year under report with those for 1894-95:-


The area irrigated shows a decrease of 102 acres. The revenue receipts show an increase of Rs. 1,305 and the expenditure a decrease of Rs. 42,028, the result being an increase under net revenue of Rs. 43,333.

24 , The following gives details of expenditure :-


The decrease except under Extensions and Improvements and Maintenance and Repairs are satisfactory.

в 1239-d
I.-A.

Statement of Canals in the Bombay Presidency, excluding Sind.


Statement of Reservoir Projects in tho


## A.

Bombay Presidency, excluding Sinch.


[^2]xriii
I.-

Capital Account of Irrigation Works in Deccun and


B.

Gujaruit for anal to enl of 1895-96.


Statement showing the Financial Results of Irrigation W'crlis ist

|  |  |  |  |  |  |  |  | Seal | izatiows | nder A | $n{ }_{\text {neals }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - Name of Work. ${ }^{\text {a }}$ | Rataius (Actoal Riceiptis). |  |  |  |  |  |  |  |  |  |  |
|  | Irrigation, |  | Narigawion. | Plautastious. | Waterwower. | Hiscella nevils. | Total. | $\begin{aligned} & \text { Reftunds } \\ & \text { Revernue. } \end{aligned}$ | $\begin{gathered} \text { Gmss } \\ \text { Revenue } \\ \text { Revs } \\ \text { Refunds. } \end{gathered}$ | Devenue |  |
|  | Share of Revenue atcau | Total. |  |  |  |  |  |  |  | Diroction. |  |
| . 1 1 2 | 8 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 18 |
| IMPERIAL. Rs. <br> Major Wobks.  | Rs. | Rs, | If. | Rs, | R6. | Rs, | $\mathrm{r}_{6 .}$. | ns, | Rs. | R6. | Rs, |
| Protective Works. |  |  |  |  |  |  |  |  |  |  |  |
| 1. Nira Canal ... $\ldots$ .. 85,368 <br> 2. Mhasvad Tank $\ldots$. $\ldots$ 13,168 | $\cdots$ | $\begin{aligned} & 85,368 \\ & 13,168 \end{aligned}$ | ... | $\cdots$ | $\ldots$ | 2,516 | $\begin{aligned} & 86,884 \\ & 15,794 \end{aligned}$ | $\cdots$ | $\begin{aligned} & 86,884 \\ & 15,794 \end{aligned}$ | $\begin{array}{r} 1,409 \\ 487 \end{array}$ | $\begin{array}{r} 17,791 \\ 2,651 \\ 2,651 \end{array}$ |
| Tota | - | 98,536 | ... | 1 | ... | 4,141 | 1,02,678 | .. | 1,02,678 | 1,896 | 20,442 |
| 5. Háthmati Canal ... ... 10,291 | 6,788 | 10,291 | $\cdots$ | $\begin{aligned} & 314 \\ & 301 \end{aligned}$ | $\begin{aligned} & \text {... } \\ & \cdots \end{aligned}$ |  | 17,59018,409 | $\cdots$ |  |  |  |
| 6. Lower Pianjbra River Works 10,776 |  |  |  |  |  | 984 |  |  | 11,520 | 60 208 208 | $\begin{array}{r}383 \\ 283 \\ \hline, 094\end{array}$ |
| 7. Kadva River Works $\quad$... 9,087 | 594 | 18,81 9,681 1,81 | $\cdots$ | 22 |  | 147 | 9,850 | ... | 9,850 | 295 | 2,541 |
| 8. Pravara River Works- ' $\quad$ Likh Canal $\ldots$,..034 | 147 | 147 , 1,181 | ... |  |  |  |  |  | 2,819 |  |  |
| 9. Mutha Canals ... ... $1,57,044$ | 42 | 1,57,086 | $\ldots$ | $\begin{array}{r}173 \\ 9 \\ \hline\end{array}$ | 6,000 | 1,14,4600 | 2,819 $2,77,088$ | $\cdots$ | 2,78,447 | 2,065 | -6,082 |
| 10. Ekruk Tank... ... ... 13,023 | , | 13,023 | ... | 282 | … <br>  | $\left\lvert\, \begin{array}{r} 13,116 \\ 1,290 \end{array}\right.$ | $\begin{array}{r} 26,421 \\ 30,603 \end{array}$ | $\cdots$ | $\begin{aligned} & 26,421 \\ & \mathbf{3 0 , 6 0 3} \end{aligned}$ |  | $\begin{aligned} & 3,260 \\ & 1,1: 1,9 \end{aligned}$ |
| 11. Etishna Canal ... ... 29,313 | ... | 29,313 | ... |  |  |  |  |  |  | 151 |  |
| Total ... 2,30,498 | 7,571 | 2,38,069 | ... | 1,094 | 6,000 | 1,31,647 | 3,76,710 | 641 | 3,76,049 | 3,445 | 37,244 |
| Total, M4.jor Works ... 3,29,034 | 7,571 | 3,36,605 | ... | 1,095 | 6,000 | 1,35,688 | 4,79,388 | 641 | 4,78,747 | 5,341 | 67,656 |
| Minor Wores and Nayigation. |  | , |  |  |  |  |  |  |  |  |  |
| 12. Khări Cut ... ... ... 13,005 | ... | 11,06s | $\cdots$ | 550 | ... | 4:3 | 11,386 | $\ldots$ | 11,386 | 62 | 437 <br> 207 <br> 17 |
| 13. Hartala Tank ... ... 186 | ... | 186 |  |  |  |  | 1,159 |  | 1,159 | 8 |  |
| 15. Mhasta do. . ... ... 380 | ... | 380 | $\ldots$ | 1 | ... | 326 | 11707 | ... | 707 | 31 | 428 |
|  | ... | $\begin{aligned} & 7,270 \\ & 1,725 \end{aligned}$ | $\ldots$ | 3,920 | $\cdots$ | 25 | 11,625 | … | 11,6251,160 | 285 | 3, $\begin{array}{r}\text {, } \\ 4\end{array}$ |
| 16. Parsul Tauk 17. Pravara River Works_ |  |  | ... | ... | ... |  | 1,150 |  |  | 27 |  |
| $\begin{array}{llll}\text { 17. Pravara River Works- } \\ \text { Ojhar Canal } & \text {... } & \text {... } & \text { 4,89t }\end{array}$ | $\begin{array}{r} 76 \\ 1,351 \end{array}$ | $\begin{aligned} & 4,970 \\ & 5,651 \end{aligned}$ | $\cdots$ | 26 | ... | $\begin{aligned} & 469 \\ & 609 \end{aligned}$ | $\begin{aligned} & 5,465 \\ & 6,160 \end{aligned}$ | $\begin{array}{r} 12 \\ 140 \end{array}$ | $\begin{aligned} & 5,4 \times 3 \\ & 6,014 \end{aligned}$ |  | $8,150$ |
| 18. Bhatodi Tank ... ... 4,300 |  |  |  |  | ... |  |  |  |  | 175 | 5,475 |
| 19. Matoba do. ... ... 9,100 | $\cdots$ | 9,100 | $\cdots$ | $\cdots$ | ... | 116 | 9,21646 |  | 9,216 | 79326 | 18741037 |
| 20. Kasurdi do. ... ... $\quad$. | ... |  |  |  |  |  |  | $\cdots$ | 46 |  |  |
| 21. Shirmuphal do. ... ... 336 | ... | $\cdots$ | ... | $\cdots$ | $\cdots$ | 173 | ${ }_{5}^{509}$ | $\cdots$ | 1,696 | 88 | 815 |
| 22. Bhadalvadi do. ... ... 3,689 | ... | 1,689 | ... | ... | ... |  | 1,696 | ., |  | 59 | 635 |
| 23. Koregnon do. ... ... 9444 |  | 944 | $\cdots$ |  | ... | 40 | 934 4.317 | $\ldots$ | 484 | $\underline{95}$ | 429 |
|  | ... | 3,753 | $\ldots$ | 28 | $\ldots$ | ${ }_{114}^{536}$ | $\xrightarrow[5]{4,317}$ | ... | 4,317 | 112 | ${ }_{4}^{496}$ |
| 27. Yerla Biver Irrigation | $\cdots$ | 6,324 | ... | $\ldots$ | .." |  |  | ... |  | 0 | 498 |
| Works ... | ... | 11,165 | $\cdots$ | $\cdots$ | $\cdots$ | 1,382 | 12,547 | ... | 12,547 | 90 | 767 |
| 29. Chikhli Canal ... ... 2,309 | $\ldots$ | 2,309 | ... | $\cdots$ | ... | 44 | 2.353 | ... | 2,363 | 14 | 123 |
| 29. Maini Tauk... ... ... 6,311 | ... | 6,311 | ... |  | ... | 85 | 6,396 | $\ldots$ | 0,396 | 64 | 767 |
| 30. Machkuadi Tauk ..... $.17^{4}$ | ... | 74 | ... | 77 | ... | 376 | 527 | ... | 627 | ... | ... |
| 31. Nipund do. ... ... ... |  |  | ... | $\cdots$ | ... | ... |  | $\cdots$ |  | $\ldots$ | $\cdots$ |
| 39. Gadikeri do. ... ... ... | 1,987 | 3,987 | ... |  | ... |  | 1,987 | ... | 1,967 |  |  |
| 33. Duímbal do. ... | 981 | 1,357 | ... | 79 | ... | 323 | 1,769 | $\cdots$ | 1,759 | 12 | 00.5 |
|  | $\ldots{ }^{\text {... }}$ | 570 | $\cdots$ |  | $\cdots$ | 85 | 5147 | ... | $\begin{array}{r}670 \\ \\ \hline 147\end{array}$ | 12 | 460 711 |
|  | 632 | 2,047 1,235 |  | 15 | ... | 8 | 1,235 | $\cdots$ | 1,2:35 | 11 | 451 |
| 37. Alarinkop do. ... ... ... | 1,847 | 1,857 | $\cdots$ | ... | ... | 6 | 1,963 | ... | 1,603 |  | ... |
| Total, Minor Works and   <br> Navigation ... 79,723 | 6,884 | 86,607 | ... | 4,749 | ... | 6,874 | 97,230 | 168 | 97,072 | 1,669 | 27,156 |
| Sinor Works and Natigation. |  |  |  |  |  |  |  |  |  |  |  |
| 33. Cok4i Cana, First Section and Storage Works ... 11,950 | ... | 11,080 | ... | 72 | 10,816 | 155 | 23,023 | 3 | 23,000 | ss | 1,5,94 |
| Grayd Total $\ldots . .4,20,737$ | 14,455 | 4,35,192 | ... | 6,916 | 16,516 | 1,41,717 | 5,00,641 | 802 | 5,98,539 | 7,035 | 66,460 |

Sicies.-(1) The irrigation share of hand revenue ansemmente relatea to the Bevenue year 1990.0 us .


## C.

Deccan and Gujarút for the year ending 31st March 1896.
Revenue and Working Eirpenves.

| Wornima Expruaka, |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{gathered} \text { Net } \\ \text { Revenue. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Management. |  |  | Maintenance and Repairs. |  |  |  |  |  |  |  |  |  | Indirect Charges. | $\begin{gathered} \text { Grand } \\ \text { Total } \\ \text { Working } \\ \text { Expenges. } \end{gathered}$ |  |
| lishment. |  | Total Rovenue ment. | Establiohment. |  |  |  |  |  |  |  |  | Total |  |  |  |
| $\begin{aligned} & \text { Navica- } \\ & \text { toom } \end{aligned}$ | ${ }_{\text {cinel }}^{\text {Civil }}$ |  | Diroctlon. | Executive. | $\begin{aligned} & \text { Medi- } \\ & \text { cal. } \end{aligned}$ | Total. |  |  |  |  |  |  |  |  |  |
| 14 | 15 | 18 | 17 | 18 | 19 | 20 | 21 | ${ }^{23}$ | 23 | 34 | 25 | 26 | 27 | 28 | 29 |
| Fs. | Rg. | Rs, | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Bs. | Rs. | Rs. | Rs. |
|  | 4,269 | 23,469 | 341 | 4,324 | 267 | 4,932 | 6 | 17,879 | $\ldots$ | 538 | 776 | 24,131 | 3,378 | 50,978 | 35,906 |
| .... | 4,266 | 3,804 | 344 | 1,871 | 20 | 2,215 | 2,273 | 6,425 | ... | 88 | 268 | 11,269 | 749 |  |  |
| ... | 4,935 | 27,273 | 685 | 6,195 | 267 | 7,147 | 2,279 | 24,304 | ... | 626 | 1,014 | 35,400 | 4,127 | 66,800 | 35,878 |
|  | $\begin{array}{r}511 \\ 1,530 \\ \hline 150\end{array}$ |  |  |  |  | 889 |  | 3,257 | 111 | 67 | 298 | 4,622 | 186 | 5,762 | 5,75S |
| $\ldots$ |  | 3,832 | 65 | 663 | ... | 728 | 115 | 2,537 | $\cdots$ | 100 | 262 | 3,742 | 424 | 7,998 | 10,411 |
|  | 457 | 3,293 | 114 | 976 | ... | 1,090 | ... | 4,072 | ... | 149 | 287 | 5,598 | 550 | 9,441 | 409 |
|  | 68 | 6,363 | 21 | 601 |  | 622 |  | 2,423 | $\ldots$ | 94 | 67 | 3,206 | 968 | 10,637 | -7,718 |
| ... | 7.834 | 32,574 | 584 | 6,448 | $\ldots$ | 7,032 | 420 | 28,633 | $\cdots$ | 4,325 | 157 | 40,567 | 4,448 | 77,589 | 1,98,808 |
|  | - 652 | 3,37 | 384 | 3,874 | $\cdots$ | 2,258 | 3,041 | 5,085 |  | 97 | 908 | 11,389 | 697 | 15,461 | 10,960 |
| .... | 1,506 | 2,856 | 189 | 1,511 | ... | 1,700 | 916 | 5,504 | 152 | 68 | 464 | 8,801 | 427 | 12,087 | 18,516 |
| $\cdots$ | 12,558 | 53,247 | 1,475 | 12,844 | $\cdots$ | 14,319 | 4,492 | 51,511 | 233 | 4,900 | 2,443 | 77,9:8 | 7,700 | 1,38,875 | 2,37,194 |
| ... | 17,493 | 80,520 | 2,160 | 19,039 | 267 | 21,466 | 6,771 | 75, ${ }^{\text {S15 }}$ | 263 | 5,526 | 3,487 | 1,13,328 | 11,827 | 2,05,675 | 2,73,072 |
|  |  |  |  |  |  |  |  |  |  | 44 | 33 | 4,065 | 382 | 5,299 | 6,087 |
| $\cdots$ | 50 30 | 1,245 | 1 | 22 | ... | 23 | ${ }^{-12}$ | 70 | ... |  | 1 | 116 | 33 | 394 | 765 |
| $\cdots$ | 19 | 473 | 7 | 94 | $\ldots$ | 101 | ... | 201 | $\ldots$ | 50 | 203 | 550 | 93 | 1,121 | ${ }^{-414}$ |
| $\cdots$ | 363 | 4,519 | 64 | 866 | $\ldots$ | 930 | $\cdots$ | 3,721 | $\ldots$ | 200 |  | 4,851 | 719 | 10,082 | 1,543 |
| ... | 56 | 523 | 5 | 81 | ... | 86 | .. | 301 | ... | 50 | 43 | 480 | 77 | 1,080 | 8 |
|  | 253 | 8,677 | 26 | 773 | $\cdots$ | 799 |  | 3,306 |  | 255 | 90 | 4,250 | 1,291 | 14,218 | $-8,765$ |
|  | 344 | 5,594 | 17 | 494 | ... | 511 | $\ldots$ | 1,938 | $\ldots$ |  | 105 | 9,554 | 807 | 8,955 3,014 | -2,941 |
| ... | 455 | 1,409 | 23 | 249 | $\cdots$ | 272 | ... | 1,088 | ... | 75 | $\cdots$ | 1,435 2374 | 171 229 | 3,014 3,766 | 6,02 -3.720 |
| $\ldots$ |  | 1,163 | 50 | 420 | $\cdots$ | 470 | ... | 1,879 | ... | 25 | - | ${ }_{1,605}^{2,374}$ | 269 169 | 2,692 | -2.183 |
|  | 17 | 918 | 29 | 277 | ... | 306 | $\ldots$ | 1,924 | $\cdots$ | 75 50 | $\cdots$ | 1,605 1,061 | 129 | 1,968 | -272 |
| ... | 84 | 778 <br> 294 | 17 | 186 82 | $\cdots$ | $\begin{array}{r}203 \\ 91 \\ \hline 1\end{array}$ | $\cdots$ | ${ }_{360}^{81}$ | $\cdots$ | 50 18 | $\cdots$ | ${ }^{1} \mathbf{4 7 4}$ | 47 | 815 | 169 |
| $\cdots$ | 47 148 | 294 | 309 | +81 | $\cdots$ | 590 | $\cdots$ | 2,124 | $\ldots$ | 418 | $\because 336$ | 2,994 | les | 3,918 | 393 |
| $\cdots$ | 244 | 516 | 74 | 478 | $\cdots$ | 662 | 752 | 1.380 | :- | 72 | 77 | 2,833 | 115 | :3,464 | ,, 551 |
| ... | 315 | 880 | 95 | 713 | ... | 808 | 136 | 2,945 | ... | 79 | 153 | 4,121 | 192 | :5,193 | 1,217 |
| $\cdots$ | 558 | 1,415 | 98 | 840 | $\ldots$ | 938 | ... | 3,391 | $\cdots$ | 62 | 361 | 4,752 | 251 | 6,418 | 6,129 |
|  | 115 | 252 | 13 | 121 | ... | 134 | ... | 499 | $\cdots$ | 5 | 39 | 677 | 38 | ${ }^{967}$ | 1,386 3,076 |
| $\ldots$ | 316 | 1,127 | 26 | 371 | $\ldots$ | 397 | ... | 1,399 | $\cdots$ | 37 | 191 | 2,024 | 169 | 3,320 | - ${ }^{3,076}$ |
| $\cdots$ | 4 | 4 | 10 | 42 | ... | 52 | 17 | 209 | $\cdots$ | 3 | $\cdots$ | 281 26 | 7 | 292 | 236 -27 |
| $\ldots$ | $\cdots$ | $\cdots$ | 1 |  | ... | 5 | $\cdots$ | 21 | $\cdots$ | ... | $\ldots$ | 26 | 1 | 199 | 1,788 |
| $\cdots$ | 139 | 399 6.9 | $\cdots$ | 66 | $\ldots$ | 68 | $\cdots 77$ | -705 | $\cdots$ | $\cdots$ | $\cdots$ | 340 | 108 | 1,098 | 661 |
| $\ldots$ | 28 | ${ }^{6.96}$ | 2 | 68 | $\cdots$ | 70 | ... | 279 | $\cdots$ | $\cdots$ |  | 349 | 75 | 920 1860 | -350 |
| $\cdots$ | 302 | 837 |  | 136 | $\ldots$ | 140 | ... | 426 | ... | ... | 135 | 701 | 122 74 | 1,1860 | ${ }_{271}^{487}$ |
|  | 93 | 6.75 | 2 | 65 | ... | 17 | ... | 268 | $\ldots$ | $\ldots$ | $\ldots$ | 335 | ${ }^{. .}{ }^{4}$ | 186 | 1,677 |
| $\cdots$ | 186 | 156 | ... | ... | ... | $\cdots$ | ... | ... | ... | ... | ... |  |  |  |  |
| -•• | 4,662 | 33,517 | 782 | 7,630 | $\cdots$ | 8,412 | 1,004 | 31,029 | $\cdots$ | 1,144 | 1,667 | 43,256 | 5,257 | 82,030 | 15,042 |
| $\ldots$ | 1,140 | 2,802 | 35 | 631 | $\ldots$ | 666 | ... | 2294 | ... | 299 | 172 | 3,431 | 329 | 6.582 | 16,433 |
| ... | 23,205 | 1,16,8:9 | 2,977 | 27,300 | 267 | 30,544 | 7,7\% | 1,09,138 | 263 ? | 6,969 | 15,3:2 | 1,60,015 | 17,413 | 2,94,257 | 3,01,552 |

with the orders coutained in Guvernment of India Nie. 95 A.I, dated 19țh Auguat 1se4.

## A. L. WRIGHT,

For Examiner, Public Works Accoants:

$$
\begin{gathered}
\text { xxii } \\
\text { II.-C. }
\end{gathered}
$$

Statement showing tho Financial Results of the Irrigution Works in Deccan atul Gujarát for the year 1895-96 lased on actual receipts.
Principal Results of operations for the yur ended s1st Narech 1596 .

A. L. WRIGIIT,

For Examiner, Pullic Works Accounts.

## xsiii

III.-C.

Demends and Realizations during the year 1595-96 in Deccan and Gujarat.

| Irrigation Wurks. |  | Damand optay mas. |  |  |  | Totalincludinghalance atcommene-ment ofyear. | $\left\lvert\, \begin{aligned} & \text { Deduct } \\ & \text { missions } \\ & \text { Res } \\ & \text { not in. } \\ & \text { cluding } \\ & \text { Rash } \\ & \text { Retunde. } \end{aligned}\right.$ | Net Total. | DeduceAmount at close of year. | Actual tions of the year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\underset{18,4-95}{\text { Rani }_{1}}$ | Kharif, | Miscellam Receipts $\qquad$ | Total. |  |  |  |  |  |
| 1 | 2 | ग | 4 | 5 | 6 | 7 | 8 | $\theta$ | 10 | 11 |
| IMPERIAL. | Rs, | Rs. | Rs. | Rs. | Rs. | R . | Rs. | Rs. | Rs. | Rs. |
| Major Works. |  |  |  |  |  |  |  |  |  |  |
| Protective Works. |  |  |  |  |  |  |  |  |  |  |
| 1. Nira Canal ... ... | 25 | 36,306 | 51,888 | 1,516 | 89,710 | 89,735 | $\ldots$ | 89,735 | 2,851 | 86,884 |
| 2. Mhasvad Tank -.. | 508 | 7,567 | 6,637 | 2,626 | 16,830 | 17,338 | ... | 17,338 | 3,544 | 15,794 |
| Total | 533 | 43,873 | 58,525 | 4,142 | 1,06,540 | 1,07,073 | ... | 1,07,073 | 4,395 | 1,02,678 |
| 5. Hathmati Canal ... | 1,113 | 4,900 | 5,046 | 1,299 | 11,245 | 12,358 |  | 12,358 | 838 |  |
| 6, Lower Painjhra River Works. |  | (b) 3,491 | 7,342 | 845 | 11,678 | (a) 11,678 | $\ldots$ | 11,678 | 57 | 11,621 |
| 7. Kidva River Works ... | 1,454 | 5,235 | 3,960 | 163. | 9,358 | (a) 10,812 | ... | 10,812 | 1,556 | 9,256 |
| Likh Canal ... ... | 23 | 344 | 675 | 1,639 | 2,658 | (a) 2,681 | 2 | 2,679 | 7 | 2,672 |
| 9. Mutha Canals... ... ... | 22,359 | 6,092 | 1,72,694 | 1,20,787 | 2,99,573 | (a) 3,21,932 | 17 | 3,21,915 | 44,869 | 277,046 |
| 10. Ekruk Tank ... | 853 | 3,551 | 9,585 | 13,285 | 26,421 | - 27,274 | ... | 27,274 | ¢53 | 26,421 |
| 11. Krishna Canal | 660 | 7,420 | 31,402 | 1,511 | 40,333 | 40,993 | ... | 40,993 | 10,390 | 30,603 |
| Total | 26,463 | 31,033 | 2,30,704 | 1,39,529 | 4,01,266 | 4:27,728 | 19 | 4,27,709 | 58,570 | 3,69,139 |
| Total Major Works | 26,995 | 74,906 | 2,89,229 | 1,43,671 | 5,07,806 | 5,34,801 | 19 | 5,34,782 | 62,965 | 4,71,817 |
| Minor Works and Napigation |  |  |  |  |  |  |  |  |  |  |
| 12. Khári Cat ... | 8,051 | 172 | 14,802 | 321 | 15,205 | 23,346 |  | 23,346 | 11,960 | 11,386 |
| 13. Hartala Tank... | ... | 142 | 44 | 973 | 1,159 | 1,159 | $\cdots$ | 1,159 |  | 1,159 |
| 15. Mhasva do. ... ... |  | 222 | 158 | 327 | 707 | 707 |  | 707 |  | 707 |
| 15. Jimda Canals... ... | 1,191 | 1,331 | 6,602 | 4,355 | 12,288 | 13,479 | 24 | 13,455 | $\mathbf{1}_{2} 830$ | 11,625 |
| 11. Parsul Tank ...̈... | -14 | 987 | ${ }^{6} 36$ | 25 | 1,338 | 1,324 | 179 | 1,145 | $\stackrel{1}{1}-5$ | 1,150 |
| Ojbar Canal | 573 | 2,061 | 2,496 | 682 | 5,139 | (a) 5,712 | 14. | 5,698 | 309 | 5,389 |
| 18. Bhatodi Tank ... | 2,339 | 2,890 | 727 | 361 | 3,983 | (a) 6,322 | 308 | 6,014 | 1,205 | 4,809 |
| 39. Mátoba do. | $\ldots$ | 1,329 | 7,839 | 116 | 9,284 | (a) $\begin{array}{r}9,284 \\ \hline 8.2\end{array}$ |  | 9,284 | ${ }^{1,28}$ | 9,216 |
| 20. Kásurdi do. ... | .. | ,.. |  | 46 | - 46 | ${ }^{2} 46$ | $\cdots$ | - 46 | 6 | ${ }^{9} 46$ |
| 21. Slirsuphal do. ... | ... | ... | 336 | 173 | 509 | 509 | $\cdots$ | 509 | $\ldots$ | 509 |
| 23. Bhadalvadi do. ... | ... | 612 | 1,077 | 7 | 1,606 | 1,696 | ... | 1,696 | $\cdots$ | 1,696 |
| 24. Ashti do, ${ }^{\text {di }}$... | 946 | 1,892 | 2,086 | 568 | $\begin{array}{r}1984 \\ 4,546 \\ \hline\end{array}$ | 5,092 | $\cdots$ | 1984 5 5092 |  | 984 4.317 |
| 25. Reviri Canal ... ... |  | 3,523 | 1,600 | 114 | 5,237 | 5,237 | $\cdots$ | 5,092 5,237 | 775 221 | 4,317 5,016 |
| 26. Upper Min River Works ... | 366 | 2,411 | 4,072 | 86 | 6,569 | 6,935 | $\ldots$ | 6,237 | 525 | 5,016 6,410 |
| 27. Yerla River Irrigation Works. | 35 | 7,028 | 4,160 | 1,382 | 12,570 | 12,605 | $\ldots$ | 12,605 | 58 | 12,547 |
| 28. Chikhti Canal... ${ }^{\text {and }}$... $\quad$.. |  | 915 | 1,463 | 44 | 2,422 | 2,422 | $\ldots$ | 2,422 | 69 | 2,353 |
| 29. Maini T'ank ... | S4 | 3,331 | 3,496 | 85 | 6,912 | 6,996 | $\ldots$ | 6,996 | 600 | 6,396 |
| 31. Nilgund ${ }^{\text {30, }}$ do. $\quad \cdots \quad \cdots$ | $\cdots$ | 6 | 68 | 453 | 527 | 527 | $\ldots$ | 527 | $\cdots$ | 527 |
| 32. Gadikeri do. $\quad$... $\quad \cdots$ | '." | $\cdots$ | $\cdots$ | $\cdots$ | .." | ... | $\ldots$ | ... | ... | $\cdots$ |
| 33. Dámbal do. ... | 76 | 261 | 70 | 402 | 733 | (a) ${ }^{\text {a }} 809$ | $\cdots$ | 809 | 31 | 778 |
| 34. Meclleri do. ... |  | 116 | 454 | 402 | 570 | (a) $\begin{array}{r} \\ 570 \\ \\ \hline\end{array}$ | ... | 870 | 31 | 670 |
| 3. Maday do. ... | 175 | ¢63 | 1,277 | 100 | 2,342 | 2,517 | $\ldots$ | 2,517 | 370 | 2,347 |
| 36. Asundi do. ... | ... | 303 | 335 |  | 638 | (a) 638 | ... | 638 | 35 | 603 |
| 3. Mávinkop do. ... | ... | ... | ... | 6 | 6 | (a) 6 | $\ldots$ | 6 | ... | 6 |
| Total, Minor Works and Na- <br> vigation $. . . \quad . .$. | 13,422 | 31,179 | 53,755 | 10,566 | 25,500 | 1,08,922 | 625 | 1,08,397 | 18,051 | 90,346 |
| Mlyor Wores and Natigation. <br> 30. Gokik Canal, lst Section, and Storage Works |  |  |  |  |  |  |  |  |  |  |
|  | ... | 3,407 | 8,573 | 11,043 | 23,023 | 23,023 | ... | 23,023 | ... | 23,023 |
| Grind Total | 40,417 | 1,09,492 | 3,51,557 | 1,6̄5,280 | 6,26,329 | 6,66,746 | 544 | 6,66,202 | 81,016 | 5,85,186 |

[^3](b) Inclusive of Rs, $2,2 i 4$ on sceount of rabi of $1395-96$ shown in Canal Retum No. IX.
A. L. WRIGHT,

For Examiner, Pablic Works Accounts.

## xxiy

IV.-C.

Statement showing the Financial Results of Irrigation Works in Deccan and Cujarat for the year ended 1595-9C, based on the Assessment of the year.

Principal Results and Operations for the year ended s1st Mirch 1990.

(a) Excluding remiswiona ahown in Canal Return No. V tor khatif and rabl acamuna of jest-rno
(b) Irrigation share oll land revenue assessment.
A. I. WRIGHT,

For Eraminer of I'ullic Works Accounts:

STATEMENT I-E.


## E.

Presidency, excluding Sind, during the year 1895-96.


Shatement sioouing Incidence of Working Expenses and Assessed Water Rerenue

| No. | Namt of Work. |  | Watrirnats anamssp. |  |  |  |  |  | $\begin{gathered} \text { Working } \\ \text { Hxpulses, } \\ \text { Direte end } \\ \text { ladirecth } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Occupler's. | Owner's. | $\xrightarrow[\substack{\text { Total } \\ \text { Direact, }}]{ }$ | Indireot. | $\begin{aligned} & \text { Total } \\ & \text { Direot and } \\ & \text { Indirecti. } \end{aligned}$ |  |  |
| 1 | Major Woris. <br> Protective Works. <br> Nira Canal Mhasvad Tank | $\begin{aligned} & 213 \\ & 35 \cdot 84 \end{aligned}$ | Rs. |  | $\mathrm{n}_{8}$ 。 | R\%. | R. | R , | ks. |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  | 86,786 | ... | 86,786 | $\cdots$ | 86,786 | 88,302 | 50,979 |
|  |  |  | 12,570 | ... | 12,670 | . | 12,570 | 16, 156 | $\cdot 15,{ }^{\wedge} \cdot 2$ |
|  |  | ... | 99,356 | ... | 99,356 | ... | 99,356 | 1,03,498 | 66,500 |
|  |  |  |  |  |  |  |  |  |  |
| 7 | Háthmati Canal ... | 68 | 9,120 | ... | 9,120 |  | 9,120 | 10,419 | 8,762 |
|  | Lower Páujra River Works ... | 15.37 | 10,763 | ... | 10,763 | 6,788 | 17,561 | 18,390 | 7,998 |
|  | Waghad Tank, | $\stackrel{\square}{21} \cdot 55$ |  | $\cdots$ | 6,398 | $\cdots{ }^{-9}$ | $\dddot{6,992}$ | 33 7,108 | 1,312 5,739 |
|  | Kadva Eiver $\left\{\begin{array}{l}\text { Palkhed Canal } \\ \text { Ojhar Tambi }\end{array}\right.$ | 21.65 | 6,398 | ... | 6,398 | 594 |  | 7,108 |  |
| 7 | Work … Canal ... | 4.23 | 2,185 | -.. | 2,185 | ... | 2,185 | 2,194 | 1,118 |
|  | (Wadali Canal... | 7.00 | 1,062 | ... | 1,062 | -•• | 1,062 | 1,067 | 1,272 |
| 10 | $\begin{array}{clll}\text { Pravara } & \text { River } & \text { Works-Lakb } \\ \text { Canal } & \ldots & \ldots & \ldots \\ \ldots\end{array}$ | 21.54 | 1,120 | $\ldots$ | 3,120 | 147 | 1,267 | 2,906 | 10,537 |
|  | Mutha Canals ... | J51-47 | 1,77,641 | ... | 1,77,641 | 42 | 1,77,683 | 2,98,470 | 77,589 |
|  | Erkük Tank ... ... | $30 \cdot 85$ | 12,291 | ... | 12,291 | $\cdots$ | 12,291 | 25,576 | 15,461 |
|  | Krishna Canal ... | 44.74 | 38,465 | ... | 38,465 | ... | 38,465 | 39,956 | ]2,087 |
| 11 | Total | ... | 2,59,045 | ... | 2,69,045 | 7,571 | 2,66,616 | 4,06,145 | 1,38,875 |
|  | Total, Major Works | ** | 3,58,401 | ... | 3,58,401 | 7,57] | 3,65,972 | 8,09,642 | 2,05,678 |
|  | Minor Works ayd Napt. gation. |  |  |  |  |  |  |  |  |
| 12 | Khari Cut... ... ... ... | 9.71 | 14,854 | ... | 14,854 | ... | 14,864 | 15,175 | 5,299 |
| 13 | Hartala Tank ... ... ... | $0 \cdot 69$ | 154 | ... | 154 | ... | 154 | 1,127 | 394 |
| 14 | Mhasra Tank ... ... ... | 0.68 | 230 | $\cdots$ | 230 | ... | 230 | 557 | 1,121 |
| 15 | Jamda Canala ... ... ... | 33.22 | 8,212 | ... | 8,212 | ... | 8,212 | 12,567 | 10,082 |
| 16 | Parsul Tank $\quad \cdots \quad . .$. | 0.94 | 902 | ** | 902 | .." | 902 | 927 | 1,080 |
| 17 |  | 31.57 | 6,189 | ... | 6,189 | 76 | 6,265 | 6,847 | 14,218 |
| 18 | Bhatodi Tank ... ... | $4 \cdot 96$ | 3,271 | ... | 3,271 | 1,351 | 4,622 | 4,283 | 8,955 |
| 19 | Mátola do.... ... ... | $9 \cdot 20$ | 8,971 | ... | 8,971 | $\ldots$ | 8,97] | 9,057 | 3,014 |
| 20 | Kásurdi ... ... ... ... |  |  | ... |  | ... | 8 | L4 | 3,766 |
| 21 | Slirsuphal do.... ... ... | $3 \cdot 67$ | 2,064 | .... | 2,064 | ... | 2,064 | 2,2:3 | 2.642 |
| 22 | Bhádalvadi do.... ... ... | 6.11 | 2,293 | .. | 2,292 | ... | 2,292 | 2,294 | 1,968 |
| 23 | Koregaon di. ... ... | $1 \cdot 85$ | 850 | ... | 850 | .". | 850 | 890 | 815 |
| 24 | Ashti do.... ... .. | $9 \cdot 31$ | 3,977 | $\cdots$ | 3,977 | ... | 3,977 | 4,545 | 3,918 |
| 25 | Revari Canal ... ... ... | 6.08 | 5,617 | "* | 5,617 | ... | 5,617 | 5,931 | 3,464 |
| 26 | Upper Man River Works ... | $8 \cdot 25$ | 6,664 | ... | 6,064 | $\cdots$ | 6,664 | 6,750 | 6,193 |
| 27 | Yerla River Irrigation Worha ... | 7.78 | 9,067 | ... | 9,067 | $\because$ | 9,067 | 10,449 | 6,418 |
| 28 |  | 3.67 4.30 | 1,657 | ... | 1,657 4,725 | .." | 1,657 4,725 | 1,701 4,810 | 3,9670 |
| 30 | machkundi do. ... $\quad$... ${ }^{\text {and }}$.. | Not known | 4,72 | $\cdots$ | ${ }_{82}$ | ... | ${ }_{82}$ | 835 | 292 |
| 31 | Nilgund do, ...... | ... | $\cdots$ | ... | ... |  |  |  | 27 |
| 32 | Gadikeri do. ... ... ... |  |  |  |  | 1,947 | 1.987 | 1,987 | 1:9 |
| 33 | Dambaly do. ... ... ... | 1.18 | 150 | ... | 150 | 881 | 1,131 | 1,533 | 1,098 |
| 34 | Medleri ... ... ... | 127 | 522 | ... | 522 | ... | 622 | 522 | 920 |
| 35 | Madag ... ... ... | 4.07 | 2,273 | ... | 2,273 |  | 2,273 | 2.373 | 1,660 |
| 36 | Asundi ... ... ... | $1 \cdot 14$ | 437 | ... | 437 | 632 | 3,069 | 3,069 | 964 |
| 37 |  | ... | ... | ... | ... | 1,857 | 1,867 | 1,863 | 180 |
|  |  | ... | 83,168 | ... | 83,168 | 6,884 | 90,052 | 3,00,618 | 82,030 |
|  |  |  |  |  |  |  |  |  |  |
| 39 | Gokak Canal, 1st Section, and Etorage Works .. | $20 \cdot 02$ | 10,007 | ... | 10,907 | ..' | 10,907 | 21,950 | 0,582 |
|  | Gmand Total ... | ... | 4,52,476 | '." | 4,62,470 | 24,165 | 4,66,931 | 6,32,211 | 2,94,257 |

E.
on Canals in the Bombay Presidency excluding Sind, during the year 1890̈-96.

|  | Workima Exprabra. |  |  | Occuptrit Rata. |  | Total Watra-Rath, Diract and indirctip. |  | Himark, |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Por cent. or Grows Revenut. | Por Aere irrigated. | Por Cuhis <br> Foot per Second of Discharge Head. | Pet Acre Irrigated | Per Cublo Foot per scond of Discharge Head. | Per Acre | Per Cubfo Foat per Second of Discharke at Canal Head. |  |
| Acres, | Re. | Rs. | Rs, | R\%。 | Rs. | Res. | Rs. |  |
| 23,453 | 68 | $2 \cdot 17$ | 239 | $3 \cdot 70$ | 407 | $3 \cdot 70$ | 407 |  |
| 3,481 | 104 | 4.54 | 441 | $3 \cdot 61$ | 350 | 361 | 350 |  |
| 26,93! | 65 | $2 \cdot 48$ | ..... | $3 \cdot 69$ | ..... | $3 \cdot 69$ | ...... |  |
| 3,439 | 55.30 | 1.68 | 8474 | $2 \cdot 65$ | $134 \cdot 12$ | $2 \cdot 65$ | $134 \cdot 12$ |  |
| 2,863 | 43 | $2 \cdot 79$ | 520 | 3.76 | 700 | $6 \cdot 13$ | 1142 . |  |
| -1,622 | 3976 81 | $\cdots 3.54$ | $\stackrel{\square 106}{ }$ | $\cdots 3.94$ | $\cdots$ | $\cdots \cdot{ }_{4} \cdot 31$ | $\cdots 324$ |  |
| 528 | 51 | $2 \cdot 12$ | 264 | 4.14 | 517 | $4 \cdot 14$ | 517 |  |
| 339 | 119 | $3 \cdot 75$ | 182 | $3 \cdot 13$ | 1.52 | $9 \cdot 13$ | 152 |  |
| 334 | 363 | 31.55 | 489 | $3 \cdot 35$ | 52 | 3.79 | 59 |  |
| 8,138 | 26 | 9.53 | 512 | 21.83 | 1173 | 21.83 | 1173 |  |
| 2,589 | 60 | 5.97 | 501 | 4.74 | 438 | 4.74 | 438 |  |
| 3,204 | 30 | $3 \cdot 77$ | 270 | 12.00 | 860 | 12.00 | 860 |  |
| 23,055 | $3 \pm$ | 6.02 | .....0 | 11.2 | ...... | 11.5 | ...... |  |
| 49,989 | 40 | 411 | ...... | $7 \cdot 17$ | ..... | 7.32 | ...... |  |
| 3,126 | $34 \cdot 92$ | $1 \cdot 69$ | 545/73 | 4.75 | 1529.76 | $4 \cdot 75$ | 152976 |  |
| 70 | 35 | $5 \cdot 63$ | 571 | $2 \times 20$ | 223 | $2 \cdot 20$ | 223 |  |
| ${ }_{1}^{54}$ | 201 80 | 20.76 6.85 | 1648 303 | 4 | 338 | $4 \cdot 26$ | 338 |  |
| 1,472 | 80 117 | 6.85 4.29 | 303 1149 | $5 \cdot 58$ $3 \cdot 68$ | 247 960 | 5.58 <br> 3.58 | 247 960 |  |
| 1,896 | 208 | 7.50 | 450 | $3 \cdot 26$ | 196 | $3 \cdot 30$ | 198 |  |
| , 877 | 180 | 10.21 | 1842 | 3773 | 673 | $5 \times 27$ | 951 |  |
| 3,168 | 833 | ${ }^{2} 2 \cdot 38$ | 328 | 7.68 | 975 | $7 \cdot 68$ | 975 |  |
| 3 720 | 6974 120 | 1255.33 3.74 | 734 | 2.66 <br> $2 \cdot 87$ <br> 2. | ...... 56 | $\begin{array}{r}2 \cdot 66 \\ 2.87 \\ \hline 2.6\end{array}$ | -....6 |  |
| 836 | 85 | $2 \cdot 35$ | 322 | 2.74 | 562 375 | 2.74 | 562 375 |  |
| 313 | 91 | $2 \cdot 37$ | 440 | $2 \cdot 47$ | 459 | $2 \cdot 47$ | 459 |  |
| 1,323 | 86 | $2 \cdot 96$ 2.93 | 421 | - 3.00 | 427 | 3.00 | 427 |  |
| 1,224 | 60 | $2 \cdot 83$ 3 | 570 | 4.64 | 935 | 4.64 | -935 |  |
| 1,635 2,607 | 77 61 | $3 \cdot 18$ <br> $2 \cdot 46$ | 1598 825 | 4.03 <br> 3.48 | 2050 1366 | 4.08 3.48 | 2050 1166 |  |
| , 377 | 57 | $2 \cdot 56$ | 263 | 4.39 | 4501, | $3 \cdot 48$ <br> 4.39 | 1166 |  |
| 1,198 | 69 | 2.77 | 772 . | 3.94 | 1099 | $3 \cdot 94$ | 1099 |  |
| 20 | . 55 | 15 | Not known. | $4 \cdot 10$ | Not known. | 4:10 | Not known. |  |
| $\because 337$ | 30002 | ${ }^{\cdots} 59$ | ...... | $\cdots$ | ...... | $\cdots$ | ...... | * Area òn which consolidat |
| $\begin{array}{r}49 \\ \\ \hline 144\end{array}$ | $\} 7034$ | $\left\{\begin{array}{l}22.41 \\ +5.68\end{array}\right.$ | ) 931 | $\cdots 3 \cdot 65$ | $\cdots{ }^{\cdots} \cdot{ }^{3}$ | ${ }^{-1} 6$ | ***** <br> 983 | - ed axeegsment is levied. |
| $\begin{array}{r}144 \\ 145 \\ \hline\end{array}$ |  | [ $\begin{array}{r}+6.68 \\ 6.34\end{array}$ | 724 |  |  |  |  | $\ddagger \quad$ Do. 327 acres. |
| ${ }^{933}$ | 69.95 | - 1.78 | 408 | $2 \cdot 44$ | 458 | 364 2.4 | 558 |  |
| $\left\{\begin{array}{l}142 \\ \# 185\end{array}\right.$ | \} $90 \cdot 17$ | $\left\{\begin{array}{r}1679 \\ +2.95\end{array}\right.$ | 845 | 3.08 | 383 | $3 \cdot 27$ | 938 |  |
| . ${ }^{540}$ | 9.99 | 0.34 | .... | ... | ...... | $3 \cdot 44$ | ..... |  |
| $\begin{array}{r} 20,470 \\ \cdot \\ \cdot \\ \hline \end{array}$ | 81 | 4.01 | ..... | $4^{\prime} 07$ | $\ldots$ | - $4 \cdot 40$ | ..... |  |
| 4,464 | 29.84 | $1 \cdot 48$ | 328.92 | $2 \cdot 47$ | 551 | $2 \times 47$ | 651 |  |
| $\begin{aligned} & 74,223 \\ & \hline 1,206 \end{aligned}$ | 46 | 3.93 | ..... | 6.04 | ..... | $6 \cdot 23$ | ..... |  |

в 1230-h

III-E.
Slatement of Quantity and Value of Crops irrigated in the Bombay Presidency, excluding Sind, during the year 1895-96,

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \& \multicolumn{2}{|l|}{\[
\text { Nira }{ }_{(1)}^{\text {Canal. }}
\]} \& \multicolumn{2}{|l|}{Marayad Tank.} \& \multicolumn{2}{|l|}{\(\underset{\text { Hatimiti Canal. }}{\text { (B) }}\)} \& \multicolumn{2}{|l|}{\(\qquad\)} \& \multicolumn{2}{|l|}{Pulkhed Canul.} \& \multicolumn{2}{|l|}{\[
\begin{gathered}
\text { Ojhar Támbat } \\
\text { Canal. }
\end{gathered}
\]} \& \multicolumn{2}{|l|}{Wadali Canal.} \& \multicolumn{2}{|l|}{} \& \multicolumn{2}{|l|}{\[
\mathrm{Mutha}^{(9)} \mathrm{Canals},
\]} \\
\hline \& \[
\begin{gathered}
\text { Area } \\
\text { irri- } \\
\text { gated, }
\end{gathered}
\] \& Fintimatod
Valuẹ. \& \[
\begin{gathered}
\text { Area } \\
\text { irri: } \\
\text { gated. }
\end{gathered}
\] \& \[
\begin{gathered}
\text { Estimated } \\
\text { Value. }
\end{gathered}
\] \& Area irrigated. \& \[
\begin{gathered}
\text { Extimated } \\
\text { Value. }
\end{gathered}
\] \& Area
irri-
gated. gated. \& \begin{tabular}{l}
\(\underset{\substack{\text { Estimat } \\ \text { ed }}}{ }\) \\
Value.
\end{tabular} \& \[
\begin{aligned}
\& \text { Arsai } \\
\& \text { irri- } \\
\& \text { gated. }
\end{aligned}
\] \& \[
\begin{gathered}
\text { Esti- } \\
\text { mated } \\
\text { Value. }
\end{gathered}
\] \& Arca irrigated. \& Estimated Value. \& \[
\left|\begin{array}{c}
\text { Area } \\
\text { irri- } \\
\text { gated. }
\end{array}\right|
\] \& \[
\begin{gathered}
\text { Esti, } \\
\text { mated } \\
\text { valuo. }
\end{gathered}
\] \& \[
\left.\begin{array}{|c|}
\text { Area } \\
\text { irri. } \\
\text { gated. }
\end{array} \right\rvert\,
\] \& \[
\begin{aligned}
\& \text { Esti- } \\
\& \text { mated } \\
\& \text { Valuc. }
\end{aligned}
\] \& \[
\begin{aligned}
\& \text { Area } \\
\& \text { grai- } \\
\& \text { gated. }
\end{aligned}
\] \& \[
\begin{gathered}
\text { Entimated } \\
\text { Value. }
\end{gathered}
\] \\
\hline \& Acres. \& R8. \& Acres. \& Rs, \& Acres. \& Re. \& Acres. \& \(\mathrm{n}_{\mathrm{s}}\), \& Acres. \& \(\mathrm{R}_{\mathrm{B}}\). \& Acres, \& Rs. \& Acres. \& Rs. \& Acres. \& Rs. \& Acria, \& Rs. \\
\hline \(\underset{\text { Orcharda }}{\text { Ond }}\) and \(\left\{\begin{array}{l}\text { Vegotubles... } \\ \text { Fruit and other trees }\end{array} \quad . .\right.\). \& 138 \& \[
\begin{array}{r}
5,995 \\
14,420
\end{array}
\] \& \[
\begin{aligned}
\& \mathbf{6 0} \\
\& 76
\end{aligned}
\] \& 1,320
4,940 \& \({ }^{*} 5\) \& \({ }^{-\cdots} 400\) \& 34
486 \& \[
\begin{array}{r}
66,647
\end{array}
\] \& 20
29 \& \[
\begin{array}{r}
700 \\
\mathbf{1 , 5 9 5}
\end{array}
\] \& 14
4
4 \& \[
\begin{aligned}
\& 490 \\
\& 220
\end{aligned}
\] \& 1 \& 35
65 \& 18 \& - 1,785 \& 167
708 \& \[
\begin{array}{r}
6,3 R B \\
1,40,123
\end{array}
\] \\
\hline Eugarcaue ... ... .. ... .. \& 3,0ss \& 7,14,720 \& 308 \& 46,200 \& 84 \& 16,800 \& 216 \& 20,466 \& 255 \& 19,125 \& 65 \& 4,875 \& 12 \& 900 \& 40 \& 7,360 \& 4,368 \& 15,57,855 \\
\hline \(\left(\begin{array}{llll}\text { Wheat } \\ \text { Rarley } \& \ldots . \& \ldots \& \cdots \\ \text { ar }\end{array}\right.\) \& 2,429
20

20 \& 47,305 \& $\begin{array}{r}538 \\ 27 \\ \hline 17\end{array}$ \& 16,140

270 \& 480
87 \& $\begin{array}{r}14,400 \\ 2,175 \\ \hline\end{array}$ \& $\begin{array}{r}789 \\ 1 \\ \hline\end{array}$ \& 11,041
20

0 \& 462 \& 13,500 \& | 97 |
| :--- |
| .. | \& 2,910

$\cdots$ \& 192
$\cdots$ \& 3,960
$\cdots$ \& $\stackrel{31}{. .}$ \& 1,085
$\ldots .$. \& $\begin{array}{r}268 \\ 23 \\ \hline\end{array}$ \& 13,753 <br>
\hline  \& 181
110 \& - 2,975 \& 111 \& 2,220
1,110 \& 1,387 \& 69,100

2,850 \& | 31 |
| :--- |
| 87 | \& 611

1,050 \& '33 \& 990 \& … \& $\cdots{ }^{\cdots}{ }_{10}$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& 975 \& 74.478 <br>
\hline  \& 10,061 \& 2,43,695 \& 1,490 \& 1,110
22,350 \& \& 2,850 \& 87
4 \& \& ${ }^{*} 2$ \& ${ }^{\prime \prime} 16$ \& $\ldots$ \& $\ldots{ }^{10}$ \& $\cdots$ \& $\ldots$ \& ${ }_{63}^{2}$ \& 40
1,260 \& ${ }_{83}^{22}$ \& J,993 <br>
\hline China, Ragi, Rela, Wara... \& 27 \& , 435 \& -31 \& ${ }^{340}$ \& 91 \& 2,730 \& 1 \& 4 \& 2 \& \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\ldots$ \& 59 \& 1,357 \& 24 \& ${ }_{602}$ <br>
\hline  \& 4,477
13 \& -96,87a \& ${ }^{.} .33$ \& 330 \& ${ }^{*}{ }_{6}$ \& $\cdots{ }_{150}$ \& $\stackrel{5}{2}$ \& ${ }_{518}^{9}$ \& $\cdots$ \& ... \& $\cdots$ \& \& $\cdots$ \& ${ }^{\cdot \cdots}{ }_{20}$ \& ${ }^{20}$ \& 340 \& 3,835 28 \& 20,460
824 <br>
\hline  \& 712
13 \& 12.620
215 \& ${ }^{336}$ \& 1,360
40 \& 1,006
$\cdots$ \& 20,120
$\ldots$ \& $\ldots{ }^{23}$ \& 353 \& 116 \& 2,320
$\cdots$ \& 41
.1. \& 820 \& 15 \& 300 \& ${ }^{\text {al }}$ \& ${ }^{936}$ \& \& <br>
\hline  \& $1{ }^{13}$ \& ${ }^{215}$ \& ${ }^{-8}$ \& \& $\cdots$ \& $\cdots$ \& $\stackrel{342}{ }$ \& $\stackrel{9}{2,89}$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& \& .. \& $\cdots$ \& \& $\cdots$ \& ${ }_{4}^{2}$ \& ${ }^{17} 9$ <br>
\hline  \& 1,448
1 \& 85,460
5 \& ${ }^{374}$ \& 18,700 \& $\ldots$ \& $\cdots$ \& 6065
$\cdots$ \& 15,807
$\cdots$ \&  \& 30,195
80 \& 790 \& $\begin{array}{r}10,780 \\ 20 \\ \\ \\ \hline\end{array}$ \& 19\% \& $7,0.35$
$\cdots$ \& ${ }^{\prime \cdots} 2$ \& "100 \& 27
143
14 \& 1,544 <br>
\hline  \& 24
2 \& C.450 \& $\ldots$ \& 7.59
$\cdots$ \& $\ldots$ \& $\cdots$ \& - 1 \& ${ }_{5}^{65}$ \& .. ${ }^{4}$ \& .$^{60}$ \& $\cdots$ \& ...00 \& $\ldots{ }^{7}$ \& 105 \& $\ldots$ \& 1.00 \& 94
230 \&  <br>
\hline Fibna ......$\left\{\begin{array}{l}\text { Cothon } \\ \text { Tag (Hongi }\end{array}\right.$ \& ${ }^{\prime \prime} 2$ \& '" 50 \& $\ldots$ \& ... \& $\ldots$ \& $\ldots$ \& ${ }_{2}^{62}$ \& 1,030 \& "* 4 \& ${ }^{-1} 60$ \& $\cdots$ \& ${ }^{7} 75$ \& 2 \& 30 \& 2 \& 810
60 \& $\cdots$ \& $\ldots$ <br>
\hline Dyer ... .. ... .. ... \& $\cdots$ \& ... \& $\cdots$ \& $\cdots$ \& ... \& $\cdots$ \& ... \& $\cdots$ \& ... \& ... \& ... \& $\cdots$ \& $\cdots$ \& ..* \& $\cdots$ \& $\cdots$ \& $\cdots$ \& ... <br>
\hline  \& 14 \& 550 \& 1 \& 50 \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\cdots$ \& $\ldots$ \& $\ldots{ }^{2}$ \& 170 \& 2 \& $\theta 0$ <br>
\hline \& \& \& \& \& \& $\cdots$ \& $\cdots$ \& \& $\cdots$ \& ... \& $\cdots$ \& \& $\cdots$ \& $\cdots$ \& \& ... \& ... \& ... <br>
\hline Oilsceits $\quad . .\left\{\begin{array}{l}\text { Muntaril, Senama } \\ \text { Linked, Costorvil }\end{array}\right.$ \& ${ }_{1}^{9}$ \& 85
10 \& 1 \& 20 \& 10 \& 480 \& 84
8 \& 520
44 \& $\ldots$ \& $\ldots$ \& $\ldots$ \& ... \& $\ldots$ \& $\ldots$ \& $\ldots$ \& $\ldots$ \& .$^{17}$ \& 256 <br>

\hline $$
\text { Conliments } \ldots\left\{\begin{array}{l}
\text { Chilly and Onioms } \\
\text { Gnrlic, Turbacric and Methi }
\end{array}\right\}
$$ \& $18 \%$ \& 8,305 \& 10

1 \& $$
\underset{10}{\mathbf{6 4 0}}
$$ \& $155^{5}$ \& \[

$$
\begin{array}{|}
2.50 \\
8,630
\end{array}
$$

\] \& \[

$$
\begin{aligned}
& 29 \\
& 39
\end{aligned}
$$

\] \& \[

$$
\begin{aligned}
& 843 \\
& 500
\end{aligned}
$$
\] \& 33

307 \& $$
\begin{aligned}
& 1,485 \\
& 4,280
\end{aligned}
$$ \& \[

$$
\begin{aligned}
& 71 \\
& 47
\end{aligned}
$$

\] \& \[

$$
\begin{aligned}
& 3,195 \\
& 1,040
\end{aligned}
$$

\] \& 30 \& 1,210 \& 19 \& \[

$$
\begin{aligned}
& 1,142 \\
& 60
\end{aligned}
$$
\] \& 104

8 \& $$
\begin{array}{r}
4,222 \\
25: 2
\end{array}
$$ <br>

\hline Miscerlaneous ... ... ... ... \& 100 \& 970 \& $\cdots$ \& ... \& 22 \& $\cdots$ \& -* \& $\cdots$ \& $\cdots$ \& ... \& ... \& ... \& ... \& ... \& $\cdots$ \& $\ldots$ \& 21 \& $\cdots$ <br>
\hline Land inauticiently trrighted ... \& . \& ... \& $\ldots$ \& ... \& ... \& ... \& ... \& ... \& ... \& ... \& \& $\ldots$ \& $\ldots$ \& ... \& 8 \& ... \& $\ldots$ \& ... <br>
\hline Tutal \& 23,153 \& 11,829\% \& 3,41 \& 1,23,870 \& 3,4:19 \& 1,94065 \& 2,862 \& 80,946 \& 1,622 \& 74,763 \& 628 \& 24,54\% \& $3: 19$ \& 14,140 \& 334 \& 16,442 \& K,13\% \& 17,96,073 <br>
\hline  \& ... \& ... \& $\cdots$ \& ... \& $\cdot$ \& ... \& $\cdots$ \& ... \& ... \& \& $\cdots$ \& ... \& $\ldots$ \& ... \& ... \& . \& ... \& ... <br>
\hline
\end{tabular}

III-E-continued.

|  | $\begin{gathered} (10) \\ \text { Errón Tank. } \end{gathered}$ |  | $\text { Kibran Canal. }_{\text {(11) }}$ |  |  |  | Hartala Tany. |  | $\begin{gathered} (14) \\ \text { MuAst Tank. } \end{gathered}$ |  | $\underset{\text { JKMDACAKALS. }}{(95)}$ |  |  |  | Pravaka RiverWorks-OJhabCANAL |  | Buatodi fark. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Area } \\ & \text { irri- } \\ & \text { gated. } \end{aligned}$ | $\begin{gathered} \text { Estimated } \\ \text { Value. } \end{gathered}$ | $\begin{gathered} \text { Area } \\ \text { irri. } \\ \text { gated. } . \end{gathered}$ | $\begin{gathered} \text { Estimated } \\ \text { Value. } \end{gathered}$ | Area irtigated. | $\begin{gathered} \text { Esti. } \\ \text { mated } \\ \text { Valne. } \end{gathered}$ | $\begin{gathered} \text { Area } \\ \text { irri- } \\ \text { gated. } \end{gathered}$ | $\begin{gathered} \text { Esti- } \\ \text { Hatied } \\ \text { Value } \end{gathered}$ | $\begin{gathered} \text { Area } \\ \text { irri- } \\ \text { gated. } \end{gathered}$ | $\begin{array}{\|c} \text { Esti- } \\ \text { mated } \\ \text { value. } \end{array}$ | Area irrigated. | $\begin{aligned} & \text { Esti- } \\ & \text { mated } \\ & \text { Value. } \end{aligned}$ | Arces gated gated. | Estimated Value. | $\begin{gathered} \text { Area } \\ \begin{array}{c} \text { Arri- } \\ \text { gnteal. } \end{array} \end{gathered}$ | $\begin{aligned} & \text { Esti- } \\ & \text { mated } \\ & \text { Value. } \end{aligned}$ | $\begin{gathered} \text { Area } \\ \text { irrio } \\ \text { gatel, } \end{gathered}$ | $\begin{gathered} \text { Esti- } \\ \text { Mathe } \\ \text { Mallut. } \end{gathered}$ |
|  | Acres. | Rs. | Acres. | Rs. | Acres. | Rs, | Acres. | Rs. | Acres. | Rs. | Acres. | ns. | Scres. | R. | Acres. | h. | Acres. | n. |
|  | -19 | 380 | 40 10 | 800 200 | 10 | ${ }^{\text {... }}$ | ${ }^{\prime \prime} 1$ | $\cdots 35$ | $\cdots 13$ | 3,225 | $\begin{aligned} & \mathbf{4 6} \\ & 74 \end{aligned}$ | $\begin{array}{r}448 \\ \mathbf{3 , 9 0 1} \\ \hline\end{array}$ | 14 | 275 | ${ }_{6} 93$ |  | 1 | 80 1,200 |
| Sugarcane ... ... ... ... | 497 | 1,49,100 | 1,419 | 4,26,000 | 5 | 1,000 | 2 | 100 | 3 | 300 | 301 | 25,461 | 12 | 610 | 151 | 24,160 | 13 | 3,276 |
| Wheat ... .. ... | 240 | 6,000 | 128 | 3,080 |  |  | 50 | 752 | 30 | 415 | 594 | 5,953 | 66 | 6s9 | 491 | 17,'65 | 123 | 4,305 |
| $\left\lvert\, \begin{array}{llll}\text { Barley } \\ \text { Rice... } & \text {... } & \text {... } & . . \\ \text { a }\end{array}\right.$ | - $\begin{array}{r}2 \\ 335\end{array}$ | $\begin{array}{r}\text { 8, } \\ 10 \\ \hline 050\end{array}$ | $\cdots$ | $\dddot{2,760}$ | 2,807 | 100 78,210 | ${ }^{\cdot \cdot \cdot} 1$ | $\cdots$ | $\ldots$ | $\ldots$ | ${ }^{-} 53$ | 497 |  | ${ }^{*} 1$ |  | $\stackrel{\square}{240}$ | $\cdots$ | 4, |
|  | - $\begin{gathered}385 \\ 4\end{gathered}$ |  | 13 | ${ }_{314}^{2,4}$ | 2,007 |  | ... |  | ... | $\ldots$ | 13 | 120 | 4 | 55 | 4 | 240 40 |  |  |
|  |  | 11,800 | 118 | 8,692 | 92 | 1,380 | $\cdots$ | $\cdots$ | ... | ... | 56 | 513 | $\cdots$ | $\ldots$ | 3:9 | 7,780 | 431 | 12,930 |
| $\left\lvert\, \begin{aligned} & \text { Chino, Riti, Rala, Wara... } \\ & \text { Biji } \\ & \text {. }\end{aligned}\right.$ | - 10 | 150 | $\ldots$ | $\cdots$ | $\cdots$ | ... | $\begin{aligned} & \frac{1}{2} \\ & 1 \end{aligned}$ | 35 8 8 | ... | $\ldots$ | $\cdots$ | $\ldots$ | ${ }^{\cdot \cdot}{ }_{29}$ | $\overbrace{375}$ | $\underline{738}$ | $\underline{4066}$ | 1 | 25 |
|  | .... | $\ldots$ | ${ }^{*}{ }_{15}$ | ${ }^{-\cdots}{ }_{506}$ | $\ldots$ | $\cdots$ | $\ldots{ }^{1}$ | 8 | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | 29 | 375 | 238 | -4,046 | ${ }^{*}{ }_{3}$ | 60 |
| ( Gram, Udid, Mug... | 65 | 975 | 2 | 60 | ... | ... | 3 | 55 | 6 | 45 | 59 | 56.4 | 43 | 355 | 412 | 9,988 | 153 | 3,672 |
| Pulses ... $\quad . . \begin{aligned} & \text { 1.7'ur } \ldots \text { Peas... } \\ & \text { P }\end{aligned}$ | . ${ }^{6}$ | 120 | ... 27 | ${ }^{\text {... }} 530$ | $\cdots$ | ... | ... | $\cdots$ | $\cdots$ | $\cdots$ |  | $\cdots{ }_{94}$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |  |
|  | 374 | 177,220 | 1,246 | 24,920 | $\ldots$ | … |  | ${ }^{*} 30$ | $\ldots$ | $\cdots$ | ${ }_{8} 8$ | 24 | ${ }^{*} 1$ | ${ }^{\prime} 38$ | $\cdots$ | ${ }_{450}$ | $\cdots 63$ | \%,040 |
| Miscellineous ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | $\ldots$ | ... | ... | ... |
| Foidur Crops... $\left\{\begin{array}{l}\text { Fodder } \\ \text { Luerne, de. } \\ \text { de }\end{array}\right.$ | ${ }^{93}$ | 1,960 | 45 | 1,128 | .... | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ |  | 655 | 71 | 3,080 <br> . | ${ }^{*} 2$ | 300 |
|  |  |  |  | $\cdots$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | ... | $\ldots$ | $\ldots{ }^{1}$ | 8 | $\cdots$ | ... | 7 | 165 | ... | .... | 120 | 85 698 | ... | $\cdots$ | $\ldots$ | $\cdots$ | $\cdots$ | $\ldots$ |
| Dyes ... ... ... ... | ... | ... | ... |  | $\cdots$ |  | $\cdots$ |  |  | ... | ... | $\cdots$ | $\cdots$ | ... | $\cdots$ | ... |  | -. |
| Druga and Nar- ¢ Tobnceo ... |  | ... | 10 | 400 | $\cdots$ |  |  |  |  |  | 1 | 10 |  |  | 4 | 852 | 9 | noo |
| cutiob. ... \ Blatrs ... .. | $\ldots$ |  | ... | ... | $\ldots$ | ... | $\ldots$ | ... | ... | ... | $\ldots$. | ... | ... | ... | 13 | 1,300 | 27 | 1,977 |
| Oil-seeds ... \{ Muntard, Yesaun ... | 4 | 80 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\ldots$ | $\ldots$ | $\cdots$ | ... | 35 | 508 | ... | $\ldots$ | ${ }^{*}{ }_{8}$ | -24 |
| ... Linseed, Castur-oil | ... | $\because$ | ... | ... | ... | ... | ... | $\cdots$ | ... | ... | ... |  | ... | ... | ... | ... | 8 | 224 |
| $\text { Condineuts } \quad . .\left\{\begin{array}{l} \text { Chilly and Onious } \\ \text { Caric, Tur Meric and Methï. } \end{array}\right.$ | 87 53 | 3,045 $\mathbf{3} 1,590$ | 36 30 | 748 | ... | ... | 1 | 32 | 2 | 150 | 93 20 | $\begin{array}{r}2,271 \\ \hline 77\end{array}$ | ${ }^{2}$ | 19 174 | 26 6 | 1,000 | 5 | 308 ... |
| Miscellaneous |  |  | $\cdots$ |  | 11 |  |  |  |  |  | 10 | $\ldots$ | 11 | 135 |  | ... | 32 | 8,102 |
| Land insuficiently irrigated ... ... | ... | ... | ... | ... | 306 | 1,584 | ... | ... | ... | ... | ... | . | ... | ... | 6 | ... |  | ..* |
| Totul ... | 2,589 | 2,02,590 | 3,204 | 4,66,058 | 3,126 | 82,574 | 70 | 3,218 | 64 | 2,135 | 1,472 | 40,760 | 252 | 3,799 | 1,896 | 73,483 | 877 | 41,589 |
| Area on which consolituted assessmeat is levied ... |  | ... | ... | $\ldots$ | ... | ... | $\ldots$ | ... | ... | ... | ..' | ... | ... | ... | ... | ... | ... | ..- |

III-E-continued.


|  | 5ateu. | varue. |  | value. | ea. | value. | gatea. | vabue. | ${ }^{\text {atea. }}$ | value. | gama. | value. | gatect | vasue. | gated | value. |  |  |  | -...uc. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | $\mathrm{R}_{\mathrm{s}}$. | Acres, | Re. | Acres, | Rs. | Acrea. | Is. | Acres. | Rs. | Acres. | Rs. | Acres. | Rs. | Acres. | Re. | Acres. | $\mathrm{E}_{8 .}$ | Acres. | Ra. |
| $\begin{gathered} \text { Gardons and } \\ \text { Orcharda. } \end{gathered}\left\{\begin{array}{lll} \text { Vegetables } & \ldots & \ldots \\ \text { Fruit and other trees } & \ldots . . \end{array}\right.$ | 11 24 | 2,500 | 4 | $\begin{aligned} & 129 \\ & 450 \end{aligned}$ | $\cdots$ | $\ldots$ | 18 | 450 220 | 18 | $\begin{array}{r} 810 \\ 4,843 \end{array}$ | 70 1 | $\begin{aligned} & 5,045 \\ & \mathbf{9 3} \end{aligned}$ | 69 2 | $\begin{array}{\|} 5,195 \\ 250 \end{array}$ | $\cdots$ | $\ldots$ | 57 38 | $\begin{array}{r} 912 \\ 2,850 \end{array}$ | $\begin{array}{r} 776 \\ 1,860 \end{array}$ | $\begin{array}{r} 31,781 \\ 2,40,527 \end{array}$ |
| Sugarcane ... ... | 63 | 8,480 | ... | ... | $\cdots$ | ... | 3 | 172 | $\cdots$ | ... | 43 | 4,350 | 1 | 75 | ... | ... | 125 | 11,250 | 13,897 | 32,70,187 |
| $\left[\begin{array}{llll}\text { Wheat... } & \ldots . & \ldots & \ldots \\ \text { Barley... } & \ldots . & \ldots & . . \\ \hline\end{array}\right.$ | $\begin{array}{r}89 \\ 4 \\ \hline\end{array}$ | 3,280 | $\ldots$ | $\cdots$ |  | $\cdots$ | $\ldots$ | ... |  | … |  |  | . |  | $\cdots$ | $\cdots$ | ${ }_{6} 7$ | 305 670 | 8,315 | $1,99,704$ $\mathbf{6 , 0 4 0}$ |
| Rico $\begin{aligned} & \text { Ric } \\ & \text { Maize }\end{aligned}$ | 10 | 285 |  | $\dddot{60}$ | $\ldots$ | $\ldots$ | ... | … | ${ }^{6} 6$ | 1,890 | 254 | 7.620 | $\cdots$ | ii2 | ... | $\ldots$ | 96 | 1,440 | 6,050 | 1,99,939 |
|  | 131 | 120 4,192 | $\cdots$ | $\cdots$ | ... | … | ${ }^{\cdots} 3$ | ${ }^{-7} 45$ | $\cdots$ | $\cdots$ | $\cdots$ | $\stackrel{125}{ }$ | 3 | 75 | $\ldots$ | $\ldots$ | 1,320 $\mathbf{3}, 276$ | 21,120 14,036 | 1,353 18,581 | 31,305 $\mathbf{3 , 6 0 , 8 7 3}$ |
| Chino, Ragi, Rala, Wara .... | 5 | ${ }^{4,102}$ | ... | ... | $\cdots$ | $\cdots$ | $\ldots$ | ... | 1 | 19 | 8 | 124 |  | 15 | $\ldots$ | $\cdots$ | ${ }^{1} 287$ | 2,870 | 18,632 | 9,165 |
|  | 48 | 480 | $\ldots$ | … | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\cdots$ | ... | 1 | 15 | ... | ... | $\ldots$ | $\ldots$ | 11 | 110 | 0,869 | 74,951 |
|  |  |  | -.. | $\cdots$ | $\ldots$ | ... | $\cdots$ | ... | ... | ... |  | 15 | ... | ... | ... | ... | -. | $\cdots$ | 292 | 6,933 |
|  | 244 3 | 4,870 50 | $\ldots$ | ... ${ }^{7}$ | ... | $\ldots$ | $\ldots$ | $\ldots$ | … | $\cdots$ | $\cdots$ | ... | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | 146 | 1,898 .. | 3,720 56 | 69,616 1,147 |
| Pulses $\quad . .\left\{\begin{array}{l}\text { Peas } \\ \text { I. }\end{array}\right.$ |  |  | ... | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | … | $\cdots$ | $\ldots$ | $\cdots$ | $\ldots$ | $\ldots$ | $\cdots$ |  |  | 389 | 3,625 |
| $\left\{\begin{array}{l}\text { Ground-nut } \ldots \text {... } \\ \text { Niscellaneous... }\end{array}\right.$ | 409 | 0,980 | $\cdots$ | ... | $\cdots$ | $\cdots$ | $\ldots$ | $\cdots$ | $\cdots$ | $\ldots$ | $\cdots$ | $\ldots$ | $\cdots$ | $\cdots$ | $\ldots$ | $\ldots$ | 110 | 1,760 | 7,874 187 | $2,52,466$ 1,973 |
|  | $\ldots{ }^{57}$ | 1,675 $\ldots$ | $\cdots$ | $\cdots$ | $\ldots$ | $\cdots$ | $\ldots$ | $\ldots$ | $\cdots$ | ... | $\cdots$ | $\ldots$ | $\cdots$ | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\ldots$ | 865 296 | 25,147 35,47 |
| Fibres ( Cotton ... ... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 703 | 122 |  |
|  | ... | $\ldots$ | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\ldots$ | 14 | 290 | $\cdots$ | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\ldots$ | 49 | 735 | 200 | 2,009 |
| Dyos ... ... ... ... | ... | ... | ... | $\cdots$ | $\cdots$ | $\cdots$ | ... | $\cdots$ | ... | $\cdots$ | ... | ... | ... | $\cdots$ | ... | ... | ... | ... | $\cdots$ | -... |
|  | 2 | 150 | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\ldots$ | $\cdots$ | $\ldots$ | $\cdots$ | ... | ... | $\stackrel{.}{ } \cdot$ | 57 40 | $\begin{aligned} & 3.109 \\ & \mathbf{2}, 677 \end{aligned}$ |
|  |  |  | . |  | $\because$ | $\ldots$ | $\cdots$ | . | ... | .. | $\cdots$ | ... | $\ldots$ | $\ldots$ |  |  |  |  |  |  |
|  | $\ldots$ | $\ldots$ | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | ... | ... | $\cdots$ | $\cdots$ | ... | $\ldots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | ${ }^{6}$ | 60 | 105 33 | $\begin{array}{r}1,479 \\ \hline 743\end{array}$ |
| Condiments, $\left\{\begin{array}{l}\text { Chilly and Oniong }\end{array}\right.$ |  | 200 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Condments.0. $\{$ Gurlic, Turuvric and Methi . | 8 | 160 | ... | ... | $\cdots$ | $\ldots$ | 15 | 823 | 3 | 120 | 536 | 16,065 | 43 | 1,280 | ... | ... | ${ }_{6}$ |  | 1,186 | 35,815 |
| Miscellaneous ... | 2 | $\cdots$ | ... | ... | ... | ... | $\ldots$ | ... | ... | ... | ... | ... | ... | ... | ... | .. | 218 | 2,180 | 439 | 11,477 |
| Land insufficiently irrigated ... | ... | ... | $\ldots$ | ... | ... | $\cdots$ | $\cdots$ | ... | 1 | ... | 2 | ... | ... | ... | $\ldots$ | ... | ... | ... | 413 | 1,584 |
| Total | 1,198 | 36,732 | 20 | 662 | ... | ... | 49 | ${ }^{1,440}$ | 145 | 8,092 | 933 | 34,280 | 142 | 7,562 | $\ldots$ | ... | 6,464 | 74,925 | 74,923 | 40,69,324 |
| $\begin{array}{c}\text { Area on which consolidated } \\ \text { luvied } \\ \text { nsessmont } \\ \text {... }\end{array} \quad$ is | .. | $\cdots$ | ** | ... | 337 | ... | 144 | ... | ... | ... | ..' | ... | 185 | ... | 540 | ... | ... | ... | 1.206 | ....." |

* Orope sulfervel mach : therofere estimated value culvelated according to the quality producod.
IV.-

Cumparative Statement of Irrigation and Rainfall for the gears 1531-55

E.
and 1995-96 in the Bombay Presidency, excluding Sind.

| Culturabise arena ot frriquation by wirks ${ }^{\text {andecilien in }}$ chan | arma drrioatmitis Acrra. |  |  |  |  |  | Rasisatz. |  | 'Rimaris. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1894.05. |  |  | 1806-96. |  |  | 1904.85. | 1895.86. |  |
|  | Elartif | Rabl. | Total. | Kharit, | Rabi, | Total. |  |  |  |
| 8 | 0 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 37 |
| $\Delta$ cres. | Acres, | Acres. | Acrea. | Acres, | Acres. | Acres. | Inchea. | Inches, |  |
| 8,000 | 1,797 | 2,409 | 4,199 | 1,495 | 1,944 | 3,439 | 50.95 | $22 \cdot 76$ |  |
| 2,846 | 2,053 | 35 | 2,088 | 3,109 | 17 | 3,126 | 51.33 | 31.82 |  |
| 10,846 | 3,850 | 2,437 | 6,287 | 4,604 | 1,961 | 6,505 |  |  |  |
| 56,6.40 | 12,349 | 16,021 | 23,370 | 9,953 | 13,500 | 23,453 | 17.75 | *23'83 | - 23 "8 in the Comparativa 8 statement of Irrigation and |
| 16,800 | 7,662 | 2,520 | 10,082 | 7,462 | 676 | 8,138 | 32.22 | 32.14 | 8tatement of Irrigation and Hainfall issued nnder |
| 2,600 | 828 | 592 | 1,420 | 840 | 328 | 1,168 | 15.28 | $17 \cdot 57$ | G. E. No. 101 W. 1. -1230 , |
| 478 | $17{ }^{1}$ | ... | 177 | - ${ }^{\text {c }} 131$ | \% ${ }^{3}$ | ${ }_{7} 3$ | $13 \cdot 14$ | 22.21 |  |
| $\begin{aligned} & 2,500 \\ & 2,400 \end{aligned}$ | 177 | $\cdots{ }^{-\cdots 3}$ | 177 299 | ${ }_{313}^{131}$ | $\begin{array}{r}589 \\ -623 \\ \hline\end{array}$ | 720 836 | $\underset{1423}{16.24}$ | 16.62 17.75 | ${ }^{\text {cosrect feriteses are :- }}$ |
| 81,418 | 20,923 | 10,426 | 40,349 | 18,699 | 15,619 | 34,318 |  |  | Rabi $4=20$ |
| 12,627 | 1,602 | 1,098 | 2,790 | 1,593 | 3,269 | 2,862 | 18.47 | 27.82 |  |
| 415 | 12 | 71 | 83 | 15. | 55 | 70 | 34.71 | 18.61 |  |
| 1,700 | 21 | 106 | 127 | 18 | 36 | 54 | 28.07 | 31.01 |  |
| 5,000 | 539 | 609 | 1,148 | 743 | 729 | 1,472 | $24 \cdot 37$ | $24 \cdot 11$ | . |
| 19,742 | 2,264 | 1,884 | 4,148 | 2,369 | 2,089 | 4,458 |  |  |  |
| -9,837 | -.688 | 71,163 | 7,851 | 421 | 17,201 | -1,622 |  |  |  |
| 2,367 | 222 | 367 | 689 | 116 | 412 | 1,528 |  |  |  |
| 2,433 | 72 | 255 | 327 | 58 | 281 | 339 | 30.28 | 27.77 |  |
| 1,000 | 116 | 247 | 363 | 108 | 144 | 252 | $25 \cdot 37$ | 18.93 |  |
| 15,637 | 1,098 | 2,032 | 3,130 | 703 | 2,038 | 2,741 |  |  |  |
| 11,280 | 138 | 172 | 310 | 132 | 202 | 334 | 25.64 | 17.38 |  |
| 14,763 | 593 | 951 | 1,544 | 577 | 1,319 | 1,896 | $24 \cdot 29$ | $2+57$ |  |
| 12,12t | 617 | 1,181 | 1,698 | 86 | 791 | 877 | 24:25 | 24.65 |  |
| 33,167 | 1,243 | 2,304 | 3,552 | 795 | 2,312 | 3,10: |  |  |  |
| 45,813 | 1,207 | 3,019 | 4,226 | 1,233 | 2,248 | 3,481 | 15\%1 | 27.78 |  |
| 14,352 | 1,830 | 1,462 | 3,292 | 1,671 | 918 | 2,589 | $20 \cdot 18$ | 31.09 |  |
| known. | 85 | 306 | 391 | 51 | 292 | 343 | $23 \cdot 10$ | 43.95 | . |
| 14,476 | 645 | 814 | 1,469 | 486 | 837 | 1,323 | $21 \% 0$ | $29 \cdot 55$ |  |
| 74,6+1 | 3,767 | 5,601 | 9,369 | 3,441 | 4,295 | 7,736 |  |  |  |
| 26,453 | 2,689 | 1,982 | 4,671 | 1,719 | 1,455 | 3,204 | 25.45 | $23 \cdot 41$ |  |
| 3.624 | 842 | 1,193 | 1,641 | 141 | 1,083 | 1,224 | $31 \cdot 6$ | $31 \cdot 90$ |  |
| 7,623 | 614 | 680 | 1,29t | 723. | 912 | 1,635 | 20.18 | $23 \cdot 28$ |  |
| 10,680 | 117 | 2,239 | 2,386 | 773 | 1,534 | 2,607 | $29 \cdot 40$ | 88.60 |  |
| 1,478 | 117 | 258 1,008 | 1,250 | 322. | 55 493 | 377 | 20.02 | 22.36 |  |
| 4,625 | 272 | 1,008 | 1,250 | 705 | 493 | 1,198 | $14 \cdot 43$ | 29.56 |  |
| 51,483 | 4,211 | 7,366 | 11,577 | 4,383 | 5,862 | 10,245 |  |  |  |
| 3,417 | 16 | 3 |  | 15 | 6 | 20 | 17.87 | 12.58 |  |
| $\cdots$ | ... | . |  | .* | ... | ... | ... | $\cdots$ |  |
| 3,117 | 16 | . 3 | 19 | 15. | 5 | 20 |  |  |  |
| 337 | +337 | ... | $\dagger 337$ | +337 | $\cdots$ | †337 | $28 \cdot 63$ | $23 \cdot 67$ | + Arezon which opasolitated assossment is levied. |
| 6,170 | 3,038 | 1,325 | 4,363 | 3,550 | 914 | 4,464 | 13.90 | 24.92 |  |
| 6,507 | +337 3,038 | 1,325 | $\begin{array}{r} +337 \\ 4,363 \end{array}$ | $\begin{aligned} & +337 \\ & 3,550 \end{aligned}$ | 914 | +337 $4,46-6$ |  |  |  |
| 4,505 | ( $\begin{array}{r}98 \\ \text { +143 }\end{array}$ | 74 | $\left\{\begin{array}{r}172 \\ +143 \\ \hline 137\end{array}\right.$ | $\begin{array}{r}10 \\ \hline\end{array}$ | ? 39 | $\left\{\begin{array}{r}49 \\ +144\end{array}\right.$ | \} 12.98 | 14.58 |  |
| 1,052 | 100 | 37 |  | 124 | 21 | - 145 | 9 929 | 18\%0 |  |
| 2,188 | 589 | $\begin{array}{r}335 \\ 99 \\ \hline 1\end{array}$ | $\begin{aligned} & 921 \\ & 2! \end{aligned}$ | 576 | - 357 | 933 | 19.74 | 21.50 |  |
| 1,800 | 132 | 99 +185 | 2:1 +185 | ) 96 | $\left\{\begin{array}{r} 46 \\ +185 \end{array}\right.$ | 142 +185 | \} 13.49 | 16.57 |  |
| 9,065 | +143 899 | $\begin{array}{r}+185 \\ 5+5 \\ \hline\end{array}$ | $\begin{aligned} & +329 \\ & 1,441 \end{aligned}$ | $+1+4$ 806 | ${ }_{+}^{+1853}$ | $\begin{array}{r} +329 \\ 1,269 \end{array}$ |  |  | . |
| 617 | +492 | ... | +492 | +510 | ... | +510 | No gauge. | No gange. | - |
| 315,030 $\ldots$ | 41,314 +972 | $42,9,123$ $\dagger 185$ | 8,937 $+1,105$ | 39,365 + + | $\begin{array}{r} 3 .,-58 \\ +\quad .85 \\ +\quad .85 \end{array}$ | $\begin{aligned} & 7,4,923 \\ & +1,206 \end{aligned}$ | $23 \cdot 13$ | 24.51 |  |

## STATEMENT F.

Statement showing the Operation of Irrigation Forks in the Deccan and Gujardt for the year 1595-96.


## xxyii <br> I-F.

Slatement'showing Water-rates per Acre in force during 1995-96 on Irrigation Works in the Bombay Presidency, excluding Sind.


[^4](3) Leakage or percolation rates are the same as ordinary rates.

в 1239-j

## STATEMENT G.

Stutement shouing Areas and Water-rate Assessments dxring 1595-Sti according to the systess of classification adopted in fxing the Scale of Water-ratis.


Statement showing Operations of the year 1505.00.

| No. | Nance of Works. | $\begin{aligned} & \text { Amount of } \\ & \text { Fsimnate, } \\ & \text { Firetand and } \\ & \text { ludirect. } \end{aligned}$ | Capital oftiay, Dingct and Inlikget. |  |  |  |  |  | $\xrightarrow{\text { Raine }}$ fal. |  | Abia. |  |  | Realizas.tives |  | (eevertue. | Exyarse |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | During | To end of $1546=00$. | Canal, | Distribaturies. | Gros. | $\left\lvert\, \begin{gathered} \text { Irrigable } \\ \text { at presevt. } \end{gathered}\right.$ |  |  | Appied | 1rrısated. |  |  |  |  |  |
|  | Major Worke. | ns. | Rs. | Rg, | aillos. | Miles. | Acres. | res. |  |  | Acres. | Acres. | Re. | Rs. | fis. | Re. |  |
| 1 |  | $\begin{aligned} & * 89,40,3,37 \\ & \hline=7,81,406 \end{aligned}$ |  | $\begin{aligned} & 50,51,480 \\ & 20 ; 72,508 \end{aligned}$ | ${ }_{00-25}^{08}$ | $\begin{gathered} 312 \cdot 46 \\ 34 \cdot 00 \\ 34 \end{gathered}$ | $\begin{gathered} 274,447 \\ 1: 9,045 \\ \hline 10 \end{gathered}$ | $\begin{aligned} & 56,6,16 \\ & 45,813 \end{aligned}$ | ${ }_{27}^{23 \cdot 83}$ | - $\begin{array}{r}2.15 \\ 35 \cdot 4\end{array}$ | $\begin{gathered} 17,438 \\ 8,178 \end{gathered}$ | $\left.\begin{gathered} 2,453 \\ 8,4 \times 1 \end{gathered} \right\rvert\,$ | 88,302 |  | 50,078 | 35,908 | ${ }^{\text {Incladee }}$ Intarest |
|  | Total | 1,17,33,803 | 82,124 | 77,23,880 | $166 \cdot 23$ | 166 | 3,402 | 102,458 | ... | .. | 20,618 | 20,984 | 1,03,498 | 1,02,678 | 06,800 |  |  |
|  | Productice Works. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }_{6}^{5}$ |  |  | ${ }_{\text {2, }}^{2,065}$ | 5,17,878 | 21 | ${ }_{40}^{80}$ | ${ }^{41,747}$ | 8, 812000 | ${ }_{2}^{22}$ | ${ }^{68}$ | 2,693 | 9,439 | 10,419 | 11,620 | 8,769 |  |  |
|  | Lower Pallita livor wwithä̈ Tanik |  | ${ }^{2,005}$ | ${ }^{4,61,4690}$ |  |  |  | 12,027 | $27 \cdot 82$ | 25:37 | ${ }^{954}$ |  | 18,809 | ${ }^{18,489}$ |  |  |  |
| 7 |  |  | $4{ }^{7}$ |  | ${ }^{\text {ii }}$ | $\cdots$ | - 28,882 | O, | 2092 | 212.55 | 7, 71.518 | ${ }_{\text {17, }}^{71822}$ |  | 7,118 | ${ }^{1,739}$ | -1,279 | Dibiyat |
|  | Pravara Bier Works-Lakh Cunal | - | ${ }_{831}^{440}$ |  | 4.80 | …… | $\stackrel{8}{8,456}$ | ${ }_{2}^{2,538}$ | \} 27.77 |  | 3709 | ${ }_{8}^{589}$ | - | $\xrightarrow{1,1,118}$ | 1,272 | ${ }^{1888}$ | $2 \%$ |
| ${ }_{9}^{8}$ | $\stackrel{\text { Pravara }}{\text { civor }}$ Works-Lakh Caual | *9, | -11,639 | ( | ${ }_{88}^{23}$ | $8_{67}{ }^{9.97}$ | ${ }_{9+1,4187}^{24,418}$ | 11,2880 16,800 | 17:98 | 21.54 | - 535 | - ${ }^{8,138}$ |  | - ${ }_{\text {2,819 }}$ | 170,687 | -7,718 |  |
| 12 |  |  | ¢, |  | ${ }_{68}^{88}{ }_{68}$ | , |  |  |  | 151.48 <br> 30.85 $44 \cdot 7$ |  |  |  |  |  | come |  |
|  | Totul | 1,74,62,920 | 35,131 | 1,08,71,463 | 287.09 | $185 \cdot$ | 207,713 | 104, 440 | ... | ... | 21.531 | 23,055 | 4,06,145 | 70,069 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3, 0,00 | 1,38,576 | 2,87,194 |  |
|  | rotal, Major | 2,01,80, 23 | 1,17,255 | 1,8i, 35,410 | 43124 | ${ }^{832} 10$ | 671,205 | 200,602 |  | ... | 42,147 | 40,080 | 5,00,643 | 4,78,747 | 2,05,675 | 2,73,078 |  |
|  |  | 1,78,480 |  | 1,81,818 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\stackrel{1}{1}$ |  | 1,75,010 | $\cdots$ | comer | $\cdots$ | ${ }_{7}^{5 \cdot 50}$ |  | 3,415 |  | 9.789 | ${ }^{2,008}$ |  |  | [11,880 | 6,909 | 0,087 |  |
| 15 |  |  | $\cdots$ |  | ${ }^{99}$ | 76 | - 48.887 | ${ }_{6}^{1,700}$ | cill |  |  | - | 12,657 | $\begin{array}{r}707 \\ \hline 11,625\end{array}$ | (1,21 | ${ }^{-1,543}$ |  |
| 1317 |  |  | -2, ${ }_{20}$ |  | 19 | ${ }_{21}{ }^{\text {P/75 }}$ |  | +1,000 |  |  | (1,4, 2 | 1, 2582 | ${ }_{\text {c, }}$ | $c111055159$ | cill |  |  |
| ¢ |  |  | $\ldots$ | 边 | 4,50 | ${ }^{5} 5$ |  | cole | - | - | 2,436 | 1,877 | (6,8, |  | 14,218 8,956 8 | $-8,765$ $-2,941$ |  |
| 管 |  |  | $\cdots$ | 2,01,422 | ....... | ${ }_{1}^{17} 175$ | ${ }^{10,7008}$ | 2,000 |  | $0 \div 20$ | 1,650 | 1,1488 | 0,087 | 0,210 | $\xrightarrow[\substack{3,014 \\ 8,74{ }^{\text {a }}}]{ }$ | - |  |
| ${ }_{23}^{20}$ |  |  | ${ }_{8}^{885}$ |  | $\cdots$ | $\stackrel{1290}{8.75}$ | $\xrightarrow[\substack{4,500 \\ 8,000}]{ }$ | 2, 2, 200 | citice | ¢. 97 | ${ }^{888}$ | ${ }_{830}^{720}$ | ${ }_{\substack{2,237 \\ 2,290}}$ | ${ }^{509}$ | 9, | - |  |
| $2 \cdot$ | $\underset{\text { Koregula }}{\text { Kin }}$ | - | .$^{8}$ | - | 8785 | ${ }^{-1.975}$ | Not known. |  |  | -1.86 | ${ }^{936}$ | ${ }_{\text {cki }}^{838}$ | 2,239 | ${ }^{1,684}$ | 1,0188 |  |  |
| 26 20 20 | $\cdots$ | 8, | 382 | ${ }_{\text {8 }}^{881.198}$ | $\xrightarrow{27} 10$ | 2 | cile |  | ¢ | -8.91 | ${ }_{\substack{1,933 \\ 1,489}}$ | , $1,3,234$ | ¢ | $\underset{\substack{4,317 \\ 6,018}}{\text { c, }}$ | ¢, | \% 8189 |  |
| ${ }^{27}$ | Upar Main Rlvar Works |  |  | 4,30,441 | 17.50 | \%-\%0 | 8,418 | ${ }_{7,628}$ | -3.23 | - | 1,567 | ${ }_{1}^{1,8,36}$ | ¢,758 | ${ }^{6,418}$ |  | 1,6,27 |  |
| $\stackrel{28}{28}$ |  | 7, 777.708 | 8,160 | ${ }^{6,904,412}$ | 28.80 | 4:00 | 11,23, | 10,680 | 28.60 | 778 | 2,886 | 2,607 | 10,40 | 12,647 | ${ }_{6,418}$ | ${ }_{8}^{1,129}$ |  |
|  |  | 3, 30,701 | ${ }_{624}$ |  | - 6.50 | $7 \cdot 58$ | ${ }_{4,870}^{1,871}$ | 1,478 | ${ }_{2}^{22}{ }_{2}$ | 8.87 | ${ }^{6075}$ | 1,973 | 1,701 | 8,353 | ${ }^{\text {pif }} 7$ | 1,306 |  |
|  | Muclikundl do. ... ... ... ... |  |  |  | $5 \cdot 50$ | - $2 \cdot 25$ | 6,670 |  | 12.59 | Not |  |  |  |  |  |  |  |
| ${ }_{82}^{81}$ |  | $8,028$ | ...... | ${ }_{8,2,027}^{8,279}$ | ... |  | ..... |  |  | ... | ... |  |  | ${ }^{6} 27$ | ${ }^{27}$ | ${ }_{-37}^{235}$ | ${ }^{\text {conoolindatod }}$ |
|  | Damhni do. |  |  |  |  | Channel. |  |  |  | ... | ... |  | 1,887 | 1,087 |  | 1,788 | asperm. |
| ${ }_{85}^{84}$ |  |  | $\ldots$ |  | .....: | - | ${ }^{4,595}$ | 4,526 | 14.98 | 1.18 <br> 1.27 <br> 18 | ${ }_{181}^{18}$ | ${ }_{195}^{114}$ | ${ }_{\text {1, }}^{1,538}$ | 1,750 | 1,008 | ${ }_{806}^{661}$ |  |
|  | Manday do. ... $\quad .$. |  | ...... | 1,67,698 | 9 |  | 2,851 | ${ }_{2,188}^{1,18}$ | 21.50. | 4.07 | ${ }_{917}^{1317}$ | 9is | 2,378 | 17 | 1,000 | 607 |  |
| 887 |  | 88,816 81,817 | ...... | $\begin{aligned} & 74,195 \\ & 30 ; 847 \end{aligned}$ | ...... | $\begin{gathered} 4 \cdot 88 \\ \begin{array}{c} \text { Irrigator's } \\ \text { Channel. } \end{array} \end{gathered}$ | 1,880 | 1, 1 , 617 |  | $1 \cdot 1.4$ |  | $\left\{\begin{array}{ll} 143 \\ 1+185 \\ 1560 \end{array}\right\}$ | 1,8689 | 1,235 | P01 180 | 1,671 |  |
|  | Proviscraz. Total | 03,96, 179 | 8,710 | 01,50,560 | $203 \cdot 35$ | 202:86 | 100,213 | 102,422 | ". | ". | 21,184 | $\begin{gathered} 20,470 \\ 1,201 \end{gathered}$ | 1,00,018 | 87,072 | 82,080 | 16,043 |  |
| 80 | Cosak Canal ... ... ... ... ... | ${ }^{13,77,878}$ | 16,707 | 12,11,583 | 10. | 7780 | 18,668 | 7,200 | $24 \cdot 92$ | $20 \cdot 12$ | 4,000 | 4,404 | 21,000 | 23,020 | 6,593 | J0,438 |  |
|  | Gramd Totas | 3,00,01,071 | 1,42,691 | 2,50,60,641 | 3-69 | $662 \cdot 51$ | ${ }^{\text {8S }}$, 886 | 810,224 | 24.8.4 | ... | ${ }^{07,311}$ |  | 0,32,211 | 6,08,839 | 2,04,247 | 8,01,652 |  |

## PARTI.

## MAJOR WORKS.

## PROTECTIVE IRRIGATION WORKS.

## (1). - NIRA CANAL:

On the 31st March 1895 the calturable area commanded by the distributaries in operation was 183,862 acres, the same as in the previous year, no fresh area having been brought under commaud.
2. The total area irrigated during the year was 23,453 acres.

The following table gives a comparison of the figures of the previous five years with those of the present year:-

|  | Years. |  | Kharif. | Rabi. | Total. | Water.rate Assessment. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Acres. | Acres. | Acres. | Rs. |
| 1890-91... | ** | *-. | 8,920 | 7,993 | 16,913 | 36,226 |
| 1891-92... | ... | $\cdots$ | 9,595 | 19,268 | 28,863 | 66,390 |
| 1892-93... | ... | ... | 11,104 | 7,142 | 18,246 | 60,036 |
| 1893-94... | - 0 | ... | 13,556 | 10,947 | 24,503 | 83,703 |
| 1894-95... | ... | ... | 12,349 | 16,021 | 28,370 | 90,864 |
| 1895-96... | ... | ... | 9,953 | 13,500 | 23,453 | 86,786 |

3. The total area irrigated was 4,917 acres less than in 1894-95. The kbarif season showed a decrease of 2,396 acres again, chiefly due to a reduction in the area of sugarcane. The rabi season showed a decrease of 2,521 acres, due to there being rain at more favourable times than last year. The explanation given in paragraph 3 of the report on the Mutha Canals regarding the reduction in area of sugarcane applies also to the Nira Canal.
4. The excess of the measured area over that applied for, as shown in the Area applied for. following table, was 6,015 acres. The difference is due to the fact that the cultivators are in the habit of entering in their applications only the minimum area that can be charged for, and irrigating much more. Measures are being taken to check this:-

5. The rainfall during the rabi season was scanty but fell at favourable Rainfall. times. The kharif rain was good. The comparison with the previous two years is as follows :-
в 1239-1

| Yeara |  |  | Ins.' cts. | Rabi. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Ins. cts. | Ins, cts. |
| 1893-94 | - 0 | - | 1020 | 563 | 1583 |
| 1894-95 | ... | ... | 1362 | 413 | $17 \quad 75$ |
| 1895-96 | ... | ... | 1963 | 420 | 2383 |

The following table shows the total rainfall of the kharif and rabi seasons at different stations along the canal :-

| Stations. |  |  | 1895-96. |  |  |  | Averages. |  | Revaris, |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Kharif. | Rabi. | Total |  |  |  |  |
|  |  |  | Ins. cts. | Ins, cts. |  | cts. | Ins. |  |  |
| Pimpra |  | ... | 1509 | $5^{*} 73$ |  |  |  |  | Average of 11 years. |
| Wadgaon | ... | ... | 1703 | 493 |  | 96 |  | 94 | Do. |
| Pandhara | ... | ... | 1890 | 414 |  | 04 |  | 01 | Do. |
| Bárámati | ... | ... | 1871 | 400 | 22 | 71 | 22 | 86 | Do. |
| Sansar | ... | ... | $16 \quad 24$ | 504 |  | 28 |  | 70 | Do. |
| Haturna | ... | ... | 1978 | 328 |  | 06 |  | 59 | Average of 9 years. |
| Nimbgaon | ... | ... | 1982 | $2 \quad 28$ |  | 10 |  | 09 | Do. |
| Bávda | ... | ... | 3145 | 425 | 35 | 70 | 24 | 30 | Average of 4 jears. |
|  |  | ... | $157 \quad 02$ | 3365 |  | 67 | 187 |  |  |
|  | Ave | ... | $19 \quad 63$ | 420 |  | 83 | 23 |  |  |
| Virwadi bungalow |  |  | $13 \quad 00$ | 463 |  | 63 | 21 |  | Average of 11 years. |
| Indápur |  | ... | $22 \quad 57$ | 5.87 | 28 | 44 | 25 |  | Do. |

6. The first flood in the Nira river did not occur until the 8th August Replenishment. and water was not drawn off from the Bhátghar reservoir until the 19th November 1895. Water was successfully stored to $4 \frac{1}{2}$ feet above weir crest, giving a storage of $4 ; 600$ millions of cubic feet of water, which proved largely in excess of requirements.
7. The monthly average discharge at the head of the canal is given below. Discharge. The first column shows the average struck on the number of days the canal was actually open, while the second column gives the mean average discharge for the month ascertained by. dividing the total quantity of water by the number of days in the month :-

| Months. |  | A verage actual discharge taken on number of days. | Mean discharge taken on full number of day - in month. |
| :---: | :---: | :---: | :---: |
| April | ... | 154 | 129 |
| May ... | $\cdots$ | 196 | 152 |
| June... | ... | 141 | 117 |
| July... | $\ldots$ | 270 | 270 |
| August | ... | 279 | 279 |
| September | ... | 197 | 118 |
| October | ... | 214 | 159 |
| November | ... | . 261 | 174 |
| December | ... | 278 | 278 |
| January | ... | 239 | 239 |
| Febraary | ... | 181 | 131 |
| March |  | 157 | 127 |
|  |  | 2,567 | 2,173 |
| Mon | 1 | 214 | 181 |

8. The working expenses, including direct and

The following table shows the comparisou between the working expenses of 1894-95 and 1895-96:-

| Namen of Works. | Main. tenance Repairs. | Establismment. |  | $\begin{gathered} \text { Tools } \\ \text { ond } \\ \text { Plant. } \end{gathered}$ | RefondaofRavenue. | Leave and Pension Allowances. | Share of Collection Charges. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Erecative. | Direction. |  |  |  |  |  |
| 1894-95. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs | Rs. | Rs. |
| Nira Canal ... | 24,240 | 17,067 | 4,633 | 608 | 37 | 3,038 | - 4,002 | 53,625 |
| 1895-96. |  |  |  |  |  |  |  |  |
| Nira Canal | 18,661 | 22,382 | 1,750 | 538 | - $\times$ | 3,378 | 4,269 | 60,978 |

The decrease in expenditure is due chiefly to the pay of Inspectors and Pátkaris being charged to "Establishment" instead of to "Works." as formerly. With 96 miles of main canal in operation, this gives a rate of Rs. 531.02 per mile, and it includes the maintenance of 132 miles of distributaries. The cost of maintenance per acre irrigated was more than last year owing to the area under rrigation being less this year, the rate being Rs, $2 \cdot 17$ against Rs. $1 \cdot 89$ in the revious year. The working expenses included a sum of Rs. 1,952 for special repairs, which consisted of strengthening the banks by puddled earth cores in places where they were found to be unsafe or leaky, due to the nature of the soil of which they were originally made.
9. The gross revenue from all sources amouted to Ks. 88,302 , made up of

## Gross revenue.

 Rs. 86,786 for water-rates assessed on the total irrigated area of 23,453 acres and Rs. 1,516 from other sources. The rate of assessment thus works out at Rs. 370 per acre against Rs. $3 \cdot 20$ of the previous year. Deducting Rs. 50,978 for working expenses and Rs. 169 for remissions sanctioned during the year, from the gross revenue, Rs. 88,302 , the net revenue was Rs. 37,155 , or Rs. 1,933 less than that of the previous year.10. The expenditure on plantations was: Rs. 1,334 , iacluding Rus. 558 for Plantations. plantations at head-works shown in the monthly accounts as expenditure under the head Miscellaneous. An expenditure of Ris. 255 was also incurred against Capital Account on demarcating and on planting bábul trees along the canal. The receipts from plantations. amounted to Rs. 403. The trees were not counted during the year.
11. The cost of measuring the irrigated area was Rs, 1,820 , giving a rate

Cost of measurement. of 1 anna and 3 pies per acre against 1 anna iu the previous year.
12. The figures in Statement I-E showing the duty of water during the

Duty of water. kharif and rabi seasons show merely the average of all sorts of crops actually irrigated per cubic foot of discharge at the head of canal for the two seasons, but give no guide to the actual quantity of water required for any given acreage of a certain class of crops. The duty of water for the whole discharge of the canal for special periods has not been taken this year owing to misunderstanding on the part of the Bárámati and Nimbgaon sub-divisional officers.
13. During the Fear special experiments to ascertain the quantity of water consumed by wheat and ground-nut crops were carefully carried out. The water gauging for these was carried on, under the personal supervision of the sub-divisional officer, by means of a triangular notch at the field in question, the supply being kept regular by means of the head regulator of the distributary from which the water was drawn.

The results of each experiment are tabulated below:-

| Ares ander oommand. | $\begin{gathered} \text { Number } \\ \text { of } \\ \text { watering. } \end{gathered}$ | Total quantity given. | A verage of waturing. | $\begin{gathered} \text { Period } \\ \text { inrigation. } \end{gathered}$ | Duty per cubic foot at field. | Outtura. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A. g. |  | Cubic feet. | Cubic feet. | Dajs. | Acres. | Lbs. |
| 133 Khapla wheat... | 7 | 63,055 92.580 | 9,008 23145 | 83 134 | 129 | 2,652 |

14. The duty on the distributaries, water being gauged at the head of the distributary, is shown in the following table. The results however, in the absence of special establishment to record the discharges, must be considered only approximate:-

15. The total area under command was 183,862 acres, and of this $5 \cdot 41$ per cent. was irrigated during the kharif season and 7.34 per cent. during the rabi season.
16. The most noticeable feature of the year was the continued decrease in

General remarks. sugarcane plantation, the cause being as explained in para 3. of the report on the Mutha Canals. The eight and four months crops area is a good deal less than in the previous year owing to opportune rainfall. During the year the depth of water admitted into the canal was 6.25 feet, and under this depth the banks stood well, except in those parts of the leaky and high banks of the Kara and the Nimbori, which had not yet been strengthened and made water-tight by puddle hearting. This work was however practically completed during the year.

Several portions of roads available for the transport of produce which had been damaged by canal leakage were put in repair and by degrees others will be taken in hand.

## (2).-MHASVAD TANK.

The rainfall for the year under report was $27 \cdot 78$ inches (kharif 22.73 and Rainfall over area irrigated. rabi $5 \cdot 05$ inches) against $15 \cdot 71$ inches of the previous jear (kharif 11.29 and rabi $4 \cdot 42$ inches), and was seasonable.
2. The lowest water level in the tank was R. L. $1,920 \cdot 85$ prior to replenishment, with a depth of water over the sill of canal sluice of $5 \cdot 15$ feet. The tank commenced to fill from
15 th September 1895 the cut in the waste weir began to Replenishment. 28th of May 1895. On 15th September 1895 the cut in the waste weir began to overflow, and continued to do so till 15 th November 1895.
3. The area irrigated during the year was 3,481 acres (kharif 1,233 and

## Ares ifrigated.

 rabi 2,248 ) ugainst 4,226 acres of the previous year was 1,195 acres and 1,983 acres of kharif and rabi respectively, the excess of area applied for over area actually irrigated being due to the cultivators being ignorant of the areas of their fields.4. The assessment on account of water-rates amounted to Rs. 12,570 agaitst Rs. 13,869 of the previous year. The gross
Gros a-sessed revenue. revenue from all sources was Rs. 15,196 against Rs. 10,134 of the last year. The decrease is due to less area irrigated under "Rabi" daring the year.
5. The figures of the previous years since the

Comparison with previons years.
opening of the canals are given in the following state-ment:-

| Miars. |  |  | Kharif. | Rabi. | Total. | Water-rate Assessment. | $\begin{aligned} & \text { Gross } \\ & \text { Revenne from } \\ & \text { all sources. } \end{aligned}$ | Working Expenses. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Acres. | Acres. | Acres. | Rs. | Rs. | Rs. |
| 1885-87 |  | $\ldots$ | 617 | 727 | 1,344 | 1,030 | 1.825 | 11,812 |
| 1887-88 |  |  | 1,117 | 2,14. | 3,561 | 5,837 | 6,883 | 15,618 |
| 1535-89 |  | ..' | 2,965 | 3,139 | 6.104 | 12,733 | 12,875 | 13,269 |
| 1883-90 | ... | .. | 4,074 | 2,718 | 6,792 | 14,969 | 16,327 | 12,285 |
| 1890.91 |  | ... | 4,081 | 3,025 | 7,106 | 13,541 | 14,241 | 12,729 |
| 1891-22 | ... | .. | 3,514 | 4,760 | 8.304 | 25,457 | 26,101 | 12,633 |
| 189 - 83 |  | ... | 3,561 | 1,4:6 | 4,997 | 19,997 | 20,613 | 15,121 |
| 1593.94 |  | ... | 3,947 | 1,376 | 5,283 | 21,492 | 22,490 | 22,060 |
| 1594.95 |  |  | 1,207 | 3,019 | 4,226 | 13,869 | 16,134 | 28,460 |
| 1595-9b | ... | .. | 1,233 | 2,248 | 3,481 | 12,570 | 15,196 | 15,822 |

There was an increase of 26 acres in kharif and a decrease of 771 acres in rabi as compared with the previous year. The decrease was due to favourable rainfall during the rabi season. The incidence of water-rate per acre irrigated was Rs. 3.61 against Rs. 3.28 of the previous year.
6. The rainfall over 480 square miles of catchment area of the tank was gauged at five stations. The average rainfall from 1st June to 31st October 1895 was 23.99 inches, which gave 26,752 million cubic feet of water on the catchment area of the tank. The run-off is calculated to bave been 0.088 of the rainfall from 1st June to 31 st October 1895, and 0.144 of the rainfall from 1st June to 15 th September 1895, on which date the cut in the waste weir began to overflow. The supply in the tank at R. L. $1,934 \cdot 20$ (level of cut in the waste weir), or 18.50 feet above the sill of the canal sluice, was sufficient to meet the requirements of irrigation during the jear. As there was not sufficient water in the tank at the commencement of the rains, water applications for dry and wet kharif crops were not admitted till the end of July 1895 . The waste weir is being rebuilt the remaining 2 feet during the current year (1896-97), and it is hoped that the water-supply thus increased will lead to improvement in revenue.
7. The working expenses, including indirect clarges, amounted to

Working expenses. Rs. 15,822 . The expenditure on maintenance and repairs amounted to Rs. 6,693, inclusive of certain special repairs. The charges on account of raising the waste weir 2 feet higl were tis. 2,273, which are also included in the working expenses. The total length of canals, including branch canals and distributaries, is 94 miles, which gives a charge for maintenance and repairs at Rs. 71 per mile against Rs. 62.6 S of the previous year. The increase is due to the special repairs referred to above, which cost Rs. 1,100.

- 8. The area irrigated was measured at a cost of

Measuring charges. Rs. 840 , which gives a rate of annas 3 and pies 10 per acre irrigated.

Duty of water.
9. No special experiments were made during the year on this tank to ascertain the duty of water.
10. No new plantation was made during the year. It is proposed in future to diride the tank contour into 30 blocks, and when they are rell grown with bábul and other trees,
B 1339-2
to sell one block annually for clearance. The cleared block will be ploughed up and sown with bábul seed broadcast, immediately after clearance; the same system will be adopted for canal plantations, as far as practicable.

The number of trees above and below 5 feet in height on the tank and canals at the end of March 1896 were as under:-


Eraporation and absorption.
11. The following figures show the storage and . the loss of water by evaporation and absorption:-

| Millions of <br> Cubic feet |
| :---: |
| 613.85 |
| $1,865.97$ |
| $2,481 \cdot 82$ |

Deduet-

| Deduct- |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Balance in tank on 31st March 1896 Quantity of water discharged through canals, and leakage |  |  | $993 \cdot 26$ |  |
|  |  |  |  |  |
| (measured) ... ... | ... | ... | 1,239.68 |  |
| Loss due to evaporation and absorption |  | ** | ... | 548.85 |

## PRODUCTIVE PUBLIC WORKS. <br> (5).- HA THMATI CANAL.

The rainfall ras 21.80 inches in the kharif and 0.96 inches in the rabi
Rainfall. season, against 50.74 and 0.21 inches respectively during the previous year, the arerage of the last
five years being as follows:-

|  |  |  |  | Ins, cto. |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Kharif | .. | $\ldots$ | $\ldots$ | $\ldots$ | 37 | 77 |
| Rabi | ... | $\ldots$. | $\ldots$ | $\ldots$ | 0 | $C 3$ |

2. The areas irrigated aro compared with those

Area irrigated. of $1894-95$ in the table below:-

|  |  | Kharis. | Ralis | Total. |
| :---: | :---: | :---: | :---: | :---: |
| 1894-05 | -* | $\begin{array}{r} \text { Acres. } \\ \text {... } 1,797 \end{array}$ | Acres. $2,402$ | Acres <br> 4,190 |
| 1895-96 |  | ... 1,405 | 1,944 | 3,439 |

Assessments.
3. The assessments were as follows :-

|  |  |  | Kharif. | Rabi. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Rs. | Rs. | Rs. |
| 189.4 .95 | $\ldots$ | $\ldots$ | 5,637 | 4,900 | 10,537 |
| $1505-96$ | $\ldots$ | $\ldots$ | 5,046 | 4,074 | 9,120 |

4. The decrease in the areas irrigated and in the assessments both for the kharif and rabi crops was due to insufficient supply in the canal consequent on scanty rainfall. It is to be noted that the unfavourable monsoon did not increase the area of kharif irrigation. As pointed out at pare 8 of the Revenue Report for the year 1893-9t, the area irrigated seems now to depend on the discharge available in the canal, and not on the scantiness of the rainfall during the monsoon. Assuggested in the report for the year mentioned, this is a healthy sign showing that the cultivators now look steadily to the canal for the production of kharif crops.

Remissions.
5. Of the total of Rs. 153 shown in the accounts 6. The amount of outstanding balance at the close of the year for the kharif season was Rs. 837-12-0; out of this the following recoveries have been made:-
Oatstanding bàlance, following recoveries have been made :-
Rs. a. p.

| April 1896 | ... | . $\cdot$ |  | .** | 567 | 8 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1896 | ... | ... |  | ... | 210 | 10 | 0 |
| July 1896 | ... | ... | 1 | ... | 48 | 6 | 0 |
|  |  |  | Total |  | 826 | 8 | 0 |

Area applied for.
7. The areas applied for and irrigated were as under :-

|  |  |  | Kharif. | Rabi. | Total. |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Acres. | Acres. | Acres. |
| Applied for | ... | $\ldots$ | 1,308 | 1,284 | 2,592 |
| Irrigated | $\ldots$ | $\ldots$ | 1,495 | 1,944 | 3,439 |

The difference is due to the inability of cultivators to state exactly what areas they will irrigate, and also to the fact that lands within 200 yards of the canal, which benefit by percolation, are assessed, no applications for water being, from the nature of the case, necessary for them.
8. The miscellaneous revenue realized during Miscellaneons Revenue. the year amounted to Rs. 1,299 against Rs. 1,196 in the previous year.
9. The areas irrigated were measured by the ordinary establishment

Measurement of crops. employed on the canal (charged to Revenue Establishment) at a total cost of Rs. 141 or 8 pies per acre irrigated, against 6 pies per acre during the previous year as shown below :-

10. The percentage of revenue establishment on assessed revenue and the incidence of cost per acre irrigated are a little higher than those of the previous year, and are due to the decrease in the areas irrigated and revenue assessed.

[^5]11. The arerage mater-rate per acre irrigated

13. The rate per acre irrigated was his. $1 \cdot 68$ for the year under report against $1 \cdot 45$ in the presious year-an increase of $0 \cdot 23$. The arerage amount spent on silt clearance from the commencement, including the year under report, was Ris. 575 , or Rs. $11 \cdot 27$ per mile on the total length of 51 miles of the canal and distributaries.
14. No reliable data can be given regarding the duty of trater. The canal has been gauged for a series of years and the result
Doty of mater. shows that about 50 per cent. of the rater is lost hy absorption and evaporation in the first ten miles, whero there is practically no irrigation; thus the arerage discharge gauged at the head during the kharif season was 85.50 cubic feet per second; out of this only about 43 cubic fect per second reached the first distributary ; on this discharge the duty works out to 35 acres per cubic foot of discharge against 58 acres in the prerious year. In the rabi season, the average discharge at the head for the year was about 72 cubio feet per second, the area irrigated being 1,944 acres; allowing the same percentage for loss by absorption, the result is 54 acres per cubic foot as against 77 acres for the previous year.
15. The following table compares sugarcane cultivation for the past three years : -
Aces,

| $1833-94$ | $\ldots$ | $\ldots$ | $\ldots$ | 17 |
| :---: | :---: | :---: | :---: | :---: |
| $1894-95$ | $\ldots$ | $\ldots$ | $\ldots$ | 39 |
| $1895-96$ | $\ldots$ | $\ldots$ | .. | 84 |

The increased area of sugarcane cultivation is a very favourable feature.

> (6).-LOWER PANJRA RIVER WORKS.

These works have been in operation for 24 years.
Gross and irrigable area.
2. The gross area under command is 13,117 aeres, of which the area itigable at present is 12,627 acres.
3. The source of supply of water is principally the Pinjhra river. If tho

Source of supply. natural supply of the river falls short of requirements, it is supplemented from the Mukti Tank storage, During the year under report the river supply was found deficient
for 46 days in the hot scason,
for 6 days in the monsoon, and
for 14 days in the rabi scason;

## Total $\overline{60}$ days.

4. The arailable storage in the tank at the commencement of the rear was $237 \cdot j \mathrm{j}$ million cubic feet, which, after beine drawn upon for 46 days to the extent of a daily diselarie rarsing from 2.53 to $7 \cdot 50$ cubic fect per second, fell to $135 \cdot 1 \mathrm{C}$ million cubic
fcet before the tank had its first replenishment on 19th June. It filled on 21st September 1895 At the close of the year the storage in the tank was 252.96 million cubic feet.
5. The arca irrigated during the year amounted to 2,862 acres. Of this, Area irrigated. . assessment for cland and bágay yat, with a consolidated classed for land only, separate water rates being charged. Of the káyam bágáyat, 2 acres were lying fallow at Nimkhedi.
6. In the following table the year's irrigation is given by seasons:-

|  | Kharif. | Rabi. | Total. |
| :---: | :---: | :---: | :---: |
| Mámul bágáatat land ... | Acres. | Acres, | Acres. |
|  | 1,059 | 703 | 1,762 |
| Dry crop land | 534 | 566 | 1,100 |
| Total | 1,593 | 1,269 | 2,862 |

The area of mámul bágáyat is fixed under the settlement, but the remainder of the area under irrigation fluctuates according to the nature of the rainfall and the inclination and means of the irrigators. During the year under report there was an increase of 72 acres in the latter class of irrigation, due to extended cultivation of sugarcane, wheat, and ground-nut.
7. In connection with the mámul bágáyat of the Mudhi and Mandal villages the anomaly resulting from the operations of the revision survey, referred to in paragraph 7 of the last year's report, still remains unsettled.

Rainfall.
8. The rainfall during the year was gauged at two stations in the tank catchment, and is recorded as under :-

the total being 51 per cent. in excess of the quantity gauged at the dam site in the previous year.

[^6]9. The following is the classification of the areas irrigated outside the bágáyat limits during the year according to the rates levied :-

|  |  |  | Kharif. |  | Rabi. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1895. | 1894. | 1895. | 1894. | 1895. | 189.4. |
| 1 Perennial <br> 2 Eight months <br> 3 Four do. <br> 4 Monsoon <br> 5 Hot weather |  | $\cdots$ | 216 | 201 | 2 | 10 | 218 | 211 |
|  | ... | ... | 296 | 234 |  | 3 | 296 | 237 |
|  |  | . $\cdot$ |  | 1 | 564 | 552 | 564 | 553 |
|  |  | . | 13 | 17 | 504 | 5 | 13 | . 17 |
|  | $\ldots$ | ... | 9 | 10 | ... | ... | 9 | 10 |
|  |  |  | 534 | 463 | 566 | 565 | 1,100 | 1,028 |


as compared with Rs. 17,759 of the previous year. The increase of Rs. 637 was due to more irrigation of "dry crop" land especially in the kharif season.
11. The average rates per acre were :-

|  |  |  |  |  | Rs. a. | p. |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Old irrigation... | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 7 | 6 | 5 |
| New irrigation | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 4 | 1 | 8 |

Remission,
12. There were no remissions during the year.
13. The realizations amounted to :-

|  |  |  |  |  | Rs. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Water-rates on old irrigation | $\ldots$ | -.0 | ... | 6,248 |
|  | Irrigation share on land revenue | . | ... | ... | 6,788 |
|  | Water-rates on new irrigation | ... | ... | ... | 4,527 |
|  |  |  | Total water-rates | ... | 17,563 |
| $\because$ | Revenue from other sources... | ... | ... | ... | 845 |
|  |  |  | Total | ... | 18,408 |

14. The unrealized balance of assessed water-rates is Rs. 58 only, in addition to the rabi assessment of Rs. 1,147, which was sent for realization after the close of the year under report. Measures are being taken to effect the recovery of the sum of Rs. 58 remaining unrealized.
15. The following table contains a comparison
 of the areas for which applications for water were received and the areas actually assessed :-

|  |  |  | Kharit. | Rabi. | Total. |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |

The difference is due mostly to the "jirayat" portions (i.e. portions classed as "dry crop") of the "káyam bágáyat" (i.e. land classed as permanent garden land) in Mudhi and Mandal, which are watered without applications. The cause of this has been explained in previous reports.
16. The cost of measurement of crops irrigated in dry crop land during the year was Rs. $36-1$ 1-1 against Rs. 41-12-8 of the previous year, and the rate per acre 6 pics against 8 pies.
17. The working expenses of the year amounted to Rs. 7,098 against Rs. 8,569 last year. These being deducted from the gross assessed revenue, the year's net earnings amount to Rs. 10,398 .
18. No special observations of the duty of water were taken during the year.
10. The following figures represent the calcution. lated loss by evaporation and absorption from the Mukti tank, after making deduction for leakage gauged below the dam :-

- Gharif Season-

April, May and Juae, 70 days... ... ... $2 \cdot 18$ feet.
Rabi Season-
November-December 1895 and January 1820, 92 days... 1.245 ,
Ilot Weather-

20. The number of trees on this work at the close of the year was 4,041 ; 70 trees such as bamboo, nimb, moho, mangoes, \&c., were sold by auction, and 15 plants of sorts were destroyed by white ants and by the excessive heat in the hot season,

The expenditure on plantations during the year was Rs. 262 , which raise the total expenditure on this head up to the end of the year to Rs. 7,301 .

## (7).-KADVA RIVER SYSTEM.

The Wághad tank has been in operation for the last eleven years. As the waste weir has not been constructed as yet, the full supply level of the water in the tank is from 15 to 18 feet short of the designed full supply level. At the Tank. close of the monsoon, however, a temporary dam is annually thrown across the waste weir channel and 4 feet additional storage was thus obtained last year.

The erosion of the waste weir channel and the consequent necessity for building a waste weir wall and providing some protection works to the channel have led to a review of the general position of the Kadva river system. The plans and estimates for dealing with the Waghad tank, though completed, have been held back until a revised estimate for the tank and canals is ready. It is necessary to enlarge the carrying capacities of the canals, and to complete the proposals for distribution. Owing to an accident to the canal subordinate the survey has been unavoidably delayed.
2. From April 1st to June 1st, 1895, a period of 61 days, the tank was continuously drawn upon to feed the canals. The expenditure of water from the tank outlet was 78.15 millions cubic feet. The rivers brought in 4.93 millions cubic feet. Thus during this period 83.08 millions cubic feet were used in watering 354 acres applied for. The duty calculated on these data is 22 acres per cubic foot per second.
3. During this period the total reduction of quantity in the tank mas $93 \cdot 15$ millions cubic feet, whereas the total discharge from the outlet was $78 \cdot 15$ millions cubic feet, which shows a difference of 15 millions cubic feet, i.e. $1 \cdot 25$ feet on the mean area of the period ( $11 \cdot 908$ millions square feet), or 1.60 feet over the mean tank area ( $9 \cdot 529$ millions square feet). From this the conclusion may be drawn that aboul 5 feet on the mean area of the tank represents the annual loss from evaporation.
4. Of the 83.08 millions cubic feet referred to in paragraph 2 above, $82 \cdot 42$ millions cubic feet passed into the canal, showing that whatever loss from evaporation occurred was practically compensated for by springs in the river.
o. In the Pálkhed Canal itself experiments made in April 1896 show that 52 per cent. was lost by evaporation and percolation. Deducting this loss ( $42: 86$ millions cubic feet) and the tail discharge into the Ojhar Támbat and Wadáli canals ( 18.69 millions cubic feet) from 82.42 millions cubic feet, we have 20.87 millions cubic feet irrigating 301 acres (obtained from statement of crops for the kbarif season) actually on the canal. The duty thus arrived at is 76 acres per cubic foot per second.
6. At the head of the Wadali Canal the quantity of water derived from the Parashari river and from springs between the Palkhed and Wadali weirs was $28 \cdot 13$ millions cubic feet

Deducting 42 per cent. (from actual experiment), or 11.81 millions cubic feet, for loss by eraporation and percolation, the remainder 16.32 millions cubic feet
was used up in irrigating 59 acres (of which 39 acres mas the Thal irrication) Hence the duty is 19 acres per cubic foot per second. This result is bad as compared with that of the Pálkhed Canal. It is howerer to be observed that the water is all derived from percolation and from the Parashari river, and that there is no irrigation further dorn.
7. The duty for the Ojhar Támbat Canal is morted out as follows:-

Millions e. ft.
Toial quanity at the head ... ... . ... 19.85

$$
\begin{aligned}
& \begin{array}{l}
\text { Deduct- } \\
\text { For loss by absorption and exaporation (from experi- }
\end{array} \\
& \text { ment) at } 37 \text { per cent. - ... ... ... } i 34 \\
& 12.51
\end{aligned}
$$

Thus the net quantity 12.51 millions cubic feet irrigating 76 acres gives a duty of 32 acres. The lor duty is due to much scattered irrigation and longer field̆ chanuels.
8. The tail flow of the Pálkhed Canal was all utilized, and practically no water was allowed to run to raste. This consideration and the high duty on the Palkhed Canal show that the water was economically used and well managed

The balance of water left in the tank on the Sth June 1895, when its level was at its lowest, i.e. R. L. $100 \cdot 2 \overline{3}$, was $85 \cdot 99$ millions cubic feet, or sufficient for irrigating 1,225 acres of hot weather crops on the Palkhed Canal.
9. Tbere was no replenishment to the tank during the hot weather season. On the 18th July, after $11 \cdot 40$ inches of rain had fallen at Tághad from the beginning of the monsoon, the tank began to orerflow and water continued to run until the 4th of Octnber 1895, when the temporary bank cut off the waste weir outflow. The water begins to flow in the waste weir channel at R.L. 110, at which level the storage is 19764 millions cubic feet. The temporary dam brought the water level to R. L. 113:70, giring a storage at the begining of the new season of 257.52 millions cubic feet.
10. By the 1st February 1896 the natural eupply of the rivers had fallen so low that it was necessary to supplement it from the tank, the discharge from which raried from 4 to 19 cubic feet per second.
11. The duty for the rabi season is worked out for the Paikhed Canal as follows:-

12. Out of the $228 \cdot 26$ millions cubic feet, ouly 229.37 millions cubic feet passed into the canal, showing a difference of 5.69 millions cubic fect which probably represents storage behind the Palkhed weir.
13. From 222.37 millions cubic feet deducting (from experiment) 45 per cent., or 100.07 millions, for loss bs eraporation, and $32 \cdot 61$ millions cubic fect as the tail discharge let into the Ojhar Támbat and Wadali canals, the net quantity of rater utilized was 80.69 millions cubic feet, irrigating 1,555 acres, of which 277 acres were under perennial crops. The duty for the rabi season (including the watering of hot weather crops) works out, therefore, to 205 acres per cubic foot per second, but there is reason to beliere that this duty is too high to be reliable.

Taking the perennial duty at 76 acres as arrived at for the lot weather, the duty for the rabi crops alone works out to 325 acres.
14. On the Ojhar Támbat Canal the yuantity supplied ras


Out of this supply only 51.03 millions cubic feet passed into the canal irrigating 497 acres, the duty at canal head being thus 115 acres per cubic foot per second.

From 51.03 millions cubic feet deducting. 25 per cent., or 12.76 millions cubic feet for loss by evaporation and absorption, the quantity used was 38.27 millions cubic feet irrigating 497 acres. The duty for the season thus arrived at is 154 per cubic foot per second.
15. On the Wadali Canal the duty is worked out as follows :-


Thus 50.44 millions cubic feet irrigating 610 acres (of which 282 acres was the Thal irrigation) give a duty for the season of 143 acres per cubic foot per second.
16. The rainfall in the catchment area of the tank was $46 \cdot 36$ inches against the average 52.39 inches. Orer the irrigated area the total of $28 \cdot 84$ inches is in excess of the average ( $25^{\cdot} \cdot 3$ ) for the last 22 years. The distribution according to seasons is :-

| Locality of Cange. |  | Kharif. |  | Rábi. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Ins. cts. |  | Ins. cts. |  | Ins, cts. |  |
| Pálkhed | ... |  |  | 4 |  | 29 |  |
| Niphad | -•• | 26 |  | 1 | 25 |  |  |

The monsoon season was characterised by timely and favourable rainfall at the beginning and insufficient rainfall at the end. At Pallkhed there was no rainfall after the 25th October.
17. The following table shows areas applied for Irrigation. and areas actually irrigated as compared with those of the previous year :-

|  | Year. |  | Area applied for in Acres, |  |  | Area actually irrigated in Acres. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Kharif. | Rabi. | Total. | Kharif. | Rabi. | Total. |
|  |  |  | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. |
| 1894-95 | -• | $\cdots$ | 1,095 | 1,452 | 2,547 | 982 | 1,785 | 2,767 |
| 1895-96 |  | . | 856 | 1,444 | 2,300 | 595 | 1,894 | 2,483 |

The excess of areas actually irrigated as compared with areas applied for is due to the approximate character of the areas as entered in the applications. The decrease in kharif area for 1895-96 is due to the sufficiency of fodder and to favourable rainfall at the beginning of the monsoon.

[^7]18. The following table shows by seasons the areas and assessments of irrigated land exclusive of permanent bágáyat:-

1895-96.

| Canals. |  | Areas, |  |  | Assessment. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Kharif. | Rabi. | Total. | Eharif. | Rabi. | Total. |
| Pálkhed Canal ... Wadáli Canal ... Ojhar Támbat Canal |  | Acres. | Acres. | Acres. | Rs. | Rs. | Rs. |
|  |  | 421 | 1,201 | 1,629 | 2,921 | 3,477 | 6,598 |
|  | $\ldots$ | 58 | 281 | 339 | 291 | 771 | 1,063 |
|  | "' | 116 | 412 | 598 | 749 | 1,436 | 2,185 |
|  | Total | 595 | 1,894 | 2,489 | 3,961 | 5,684 | 9,645 |

This compares as follows with the areas and assessments in the presious year:-

1894-95.


The comparison shows that the kharif area was much less than that of the previous year. The decrease is in hot weather crops, which were not raised for the reasons given in paragraph 17 above. The increase in rabi area is due to the raising of ground-nut crop mostly in the rabi season. The total area irrigated shows a decrease of 10 per cent. as compared with the average of the preceding five years. The total assessment is, in consequence of the falling off in kharif, less than that of the previous year.

Aress of crops.
19. The following table shows areas of principal crops for the year under review compared with the average of the previous five years:-

| Namo of Crop. | For the year 1895.90. | Averago of the five proceding yeara. | Increase. | Decrease. |
| :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Acres. | Acres. | Acres. |
| Wheat ... | 691 | 904 |  | 213 |
| Ground-nut... | 882 | 810 | 72 | ... |
| Gram ... | 172 | 170 | 2 | ... |
| Sugarcane ... | 332 | 274 | 58 | ... |

20. The most noticeable feature is that owing to the timely and sufficient rainfall there was considerable decrease in the area of irrigated wheat. There was however no diminution of the wheat area cultirated. The cultivation of ground-nuts increased owing to the rise in market price.
21. The total assessment and the amount realized

Agecssments and realizations during the year were as under:-

|  |  |  | Rs. |
| :---: | :---: | :---: | :---: |
| Assessment dnring the year | $\ldots$ | $\ldots$ | $\ldots$ |
| Unrealized rabi assessment for $1894-95$ | $\ldots, 808$ |  |  |
| Unrealized balance from previons years | $\ldots$ | $\ldots$ | 5,235 |
| Do. do. on Miscellaneous receipts | $\ldots$ | 1,449 |  |
|  |  | Total | $\ldots$ |

The above figures include direct receipts as noted below, Rs. 594 being for enhancement of land assessment:-

22. The following exhibits a comparison of

Working Expenses. working expenses, \&c., under each head between the years 1895-96 and 1894-95:-


Norss :-(1). The excess in Maintenance and Repair charges of the Palkhed Canal in 1395-96 were due to special clearance of silt accumulated in the canal owing to exceptionally heavy floods.
(2). Balance of establishment chargea is debited to this in proportion to outlay. Heavier expenditure being incurred in 1890-96 on other service heads, less balance was left to be charged to this, and hence decrease,
(3). The excess in other heads being trivial requires no explanation.
23. The usual works of maintenance and repairs were carried out during the year. The Wadali Canal has been provided with mile and furlong stones.
The total maintenance charges on the three canals and the Wághad tank during the jear amounted to Rs. 9,441 and are divided as follows :-

## Rs.

| I.-Maintenance and Repairs | ... | ... | - 0 | 4,359 |
| :---: | :---: | :---: | :---: | :---: |
| II.-Establishment | ... | - | ... | 3,926 |
| III.-Tools and Plant | ... | . | ... | 149 |
| IV.-Share of Collection Charges | ... | ... | ... | 457 |
| V.-Indirect Charges | ... | ... | ... | 550 |
| VI.-Refund of Revenue | ... | $\cdots$ | - 0 | **** |
|  |  |  | .. | 9,441 |

24. The crops were measured at a cost of

Cost of measuring crops. 24. The crops were measured at a cost of 6 pies per acre.
25. The following table shows the cost of establishment debited to revenue management, the percentage it bears to the assessed revenue from irrigation, and the incidence
Revenue management. of cost per acre irrigated as required per Government Resolution No. 213 A.I. -1289, dated 14th August 1895 :-

| Name of Work. | $\begin{gathered} \text { Establishment } \\ \text { debited to } \\ \text { Revenue manage- } \\ \text { ment. } \end{gathered}$ | Percentage of Revenue Establishment on assessed Revenue | Incidence of Cost per Acre irrigated. |
| :---: | :---: | :---: | :---: |
| Kadva River Works. | Rs. |  |  |
| Pálkhed Canal | 656 | 10.25 | -40 |
| Ojhar Támbat Canal | 235 | 10.75 | -44 |
| Wadáli Canal . | 186 | $17 \cdot 51$ | $\cdot 55$ |
|  | 1,077 | 11-17 | -43 |

26. The Palkhed Canal was closed seven times and the Wadali Canal four Canal closures. times for periods aggregating 38 and 20 days respectively. The Ojbar'Tambat Canal was not formally closed, but it ran dry four times for a period nggregating 22 days when the Pálkhed Canal water was shut off.
27. The duty of water in the canals has been worked out in the remarks Duty of water. above relating to the storage tank. When calculated according to the ordinary method it varies from 20 to 47 for the kharif season and from 82 to 111 for the rabi season.
28. The following table shows results of special observations taken for ascertaining the quantity of water required for maturing different crops :-


The results are :-

| Canalis, | Afraqar logs ix Cubtc Febt par Second per Mile. |  |  | Pricestagz or Hzad DisciamarCost. |  |  | Rramies. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Eharif. | Rabi. | Mot Weather. | Kharif | Rabi. | $\xrightarrow[\text { Weather. }]{\substack{\text { Hot }}}$ |  |
| Pálkhed | -35 | $\cdot 47$ | $\cdot 59$ | 34 | 45 | 52 |  |
| Wadáli .... | -28 | $\cdot 45$ | . 58 | 23 | 34 | 42 |  |
| Ojhar Támbat | $\cdot 55$ | -69 | $\cdot 11$ | 20 | 25 | 37 |  |

30. The total number of trees standing on the

Plantation. canals at the close of the year was 12,319. Of these the principal were as under:-

| Names of Treeq |  |  | Number of Trees. |
| :---: | :---: | :---: | :---: |
| Babul | $\cdots$ | $\cdots$ | 9,607 |
| Mango | $\cdots$ | ... | 1,026 |
| Nimb | ... | ... | 478 |
| Moho | ... | ... | 641 |

The:expenditure during the year was Rs. 287 from the Revenue Account.

## (8).-PRAVARA RIVER WORKS-LA'KH CANAL.

The area irrigated during the year was 334 acres, of which 132 were Area irrigated. under kharif and 202 acres under rabi crops. .The total shows an increase of 24 acres on the area of the last year. The area of kharif was 6 acres less and the area of rabi 30 acres greater than in the previous year. The decrease in the kharif season is small and needs no explanation. The increase in rabi season is due to growth of irrigation under the Nevása distributary at the tail of the canal, as is shown by the following figures of cultivation:-


The area applied for but not irrigated is 37.57 per cent. of the total area applied for. Of the deficiericy, 81 acres was on account of less cultivation on fields irrigated during the rabi, 94 acres on account of kharif lands which took on water as rainfall was sufficient, and 26 acres on account of garden crops for which water was applied for but which were not sown.

Water-rate nesessments.
3. The water-rate assessments amounted to Rs. 1,120 against Rs. 1,065 in the previous year. The details were :-

| Kharif ... <br> Rati |  |  |  | Rs. |
| :---: | :---: | :---: | :---: | :---: |
|  | ... | $\cdots$ | ... | … ${ }^{445}$ |
|  |  |  | Total ...1,120 |  |

The increase is due to greater attention in keeping the canal flowing to the tail distributaries, which has resulted in a steady increase of irrigation in Nevása village as noted in para. 1 abose.
4. The area irrigated per mile of main canal was

Area irrigated per mile of maiz canal and of main canal and branches. kharif 5.74 and rabi 8.78 acres, and of main canal and branches together was kharif 4.08 acres and rabi 624 acres.
5. The following table compares the area irriComparison of ares irri- gated and the revenue derived during the past three
gated and revenue. years with the figures for the year under report : -

| Year. |  |  | Area irrigated, | Rovenue from Water-rates, | Rainfall from 1st April 1395 to 31st March 18yti. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Acres. | Rs. | In . |  |
| 1892-93 | ... | ... | 158 | 532 | 32 |  |
| 1893-94 | ... | ... | 343 | 1,078 | 27 | 17 |
| 1894-95 | ... | ... | 310 | 1,065 | 26 | 71 |
| 1895-96 | ... | ... | 334 | 1,120 | 17 | 46 |

The South-West monsoon rainfall was deficient in August and October and the rabi rainfall below the average.
6. The incidence of water rate per acre was Rs. $3 \cdot 35$ against $3 \cdot 44$ in the Water-rate per acre. previons year. The decrease is due to the lesser area of 8 months crops.

Capital Account.
7. There was no expenditure from Capital Account, which is closed.

Working expenses.
8. The working expenses amounted to Rs. 10,5S7 as detailed below, as compared with Rus. 13,319 in the previous year:-


The rate of working expenses per mile of main canal open was Rs. 458 and per acre irrigated Rs. 31.55 . The expenditure on repairs to head-works was reduced from Rs. 222 to Rs. 194, due to less cost of raising a temporary bund. On repairs to main canal and branches there was an excess over expenditure of 1894-95 of Rs. 212. Of this excess Rs. 120 was for replacing iron pipes of outlets which had become worn out through rust, Rs. 80 was for restoring the road surface over bridges which had been much injured by heavy rains and traffic, Pos. 66 was on plantations against which no charge bad been made in the preceding year, and Rs. 35 on buildings. A large saving was anticipated on earth-work, but heavy rains caused many breaches in the canal banks, and therefore the expenditure could not be kept below Rs. 1,386 for looth clearance and bank repairs. The section of the canal is now being maintained of sufficient depth and width to sppply the tail branches of the canal, and this of neeessity causes some additional expense beyond what was previously incurred. The saving on earth-work ras Rs. 102. The total expenditure for maintenauce and repairs exceeded that of the previous year by Rs. 348.
9. The duty per cubic foot per second of water admitted into the canal was

Daty of water. acres in the kharif and $11 \cdot 16$ acres in the rabi season. The cause of small duty is explained in last year's report.
10. The total cost of measuring 334 acres during the year was Rs. 39-11-2,

Cost of measarement. or one anna and 11 pies per acre against one anna and 8 pies per acre on the previous year. The high rate is due to the fields irrigated being small and scattered along the canal at a distance from each other.
11. The rainfall gauged at Malunja was 16.37 inches in the kharif and Rainfall. 1.01 inches in the rabi season; total 17.38 inches; or 4.30 inches less than the average of the last five years.
12. The supply of water in the river was more than sufficient to meet the

River supply. requirements of the irrigators during the kharif and rabi seasons. In December 1895 a temporary earthen bund 2 feet high was constructed on the weir to increase the backwater during the hot weather of 1896-97. An increased supply during the hot weather is a desideratum, but can only be looked for after construction of a storage reservoir, for which a scheme is under consideration.
13. The canal was closed six times (for 24 days altogether) for silt and Canal closure. weed clearance. It was also closed for 13 days more owing to heary rains during the monsoon.

Plantation,
14. At the end of the year the number of trees on this canal was 20,107 . The number of principal kinds were:-

| Bábol | .-. | ... |  | 13,261 | Molington |  | -.. |  | 32 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nimhárá | ... | ... |  | 49 | Divi-divi | ... | ... |  | 18 |
| Nimb | ... | ... | ... | 1,444 | Moho | ... | ... |  | 3 |
| Bore | ... | ... | $\cdots$ | 580 | Jámbul | ... | ... | ... | 869 |
| Sandal | ... | ... |  | 87 | Siras | ... | ... | ..- | 31 |
| Bakan | ... | - | . | 55 | Mango | ... | ... |  | 649 |
| Tamarind | ... | ... |  | 14 | Bamboo | ... | ... |  | 175 |
| Ləmon | ** | ... |  | 5 | Orange |  | - | ... | 19 |

The total number in the previous year was 22,932 . There is a decrease of 2,837 bábul trees on the number of the last year. They were sold by public auction for the sum of Rs. 1,100. It was necessary to cut this large number of bábul trees, as their shade was injuring a considerable extent of land bordering on the Toka and Nevása distributaries.

## (9).-MUTHA CANALS.

On the lst April 1895, the water at Lake Fife was $21 \cdot 28$ feet above the sill of canal sluices, and the minimum level was rearhed on the 17 th June, when the depth was 10.97 The water began to rise on the 18 th June and the lake filled to overflowing the 22 nd of that month.

The highest flood of the year occurred on the 18th July 1895, when the water rose to R. L. $247 \cdot 22$ or $3 \cdot 15$ feet above finished crest level. The flood of July 1891 rose to R. L. $249 \cdot 17$ and that of 21st July 1894, the highest recorded up to date, rose to R. L. $249 \cdot 52$ or $5 \cdot 45$ feet above finished crest level.

The standards and planks were fixed on the weir by the end of September, and on the 6 th November the water stood at 4 feet above the finished crest of the weir.

The draw-off from the storage commenced from the 9 th November, i.e. 15 days later than the previous year. On the 31st March 1896 the level of the water was 21.47 feet above the sill of the sluices, i.e. 0.07 higher than on the same date in 1895.
2. During the rear under reriew the asseisments

Asjescrent of revenue. amounted to $\mathrm{Rs}, 2,95,471$ as noted below:-

Amonet.
Rs

| Water-rates ... | $\ldots$ | ... | *. | ... | $\underset{1, \%, 642}{\mathrm{Rs}^{2}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sales of water | ... | ... | ... |  | 1,2,214 |
| Water-surfly of tumbs | $\cdots$ | ... | . | ... | 1,07,219 |
| Plantations ... | ... | - | ... | ... | 2 |
| Water-power | ... | ... | ... | ... | 6,000 |
| Ruceipts from cither cana | produce | ... | ... | ... | 1,000 |
| Rents of tnildingr | ... | ... | ... | ... | 117 |
| Miscellaneous... | ... | ... | ... |  | 4,235 |

Irrigation share on account of enchanoed revenue from per-
colation Irom the Ilutha Canuls in the village of Warza,
Stivene and Kondwe Dhawda, táluka Haveli, as per Canal


This is. Rs 50,517 in excess of the total for the previous year and is the highest annual revenue ottained since the work has been in operation. The increase is due chiefly to the bigher rates introduced for perennial crops and also to an increase in the revenue from the Poona water-suppls.
3. The area irrigated during the year was 8,133 acres, of which 7,462 were kharif and 676 rabi crops. The total shows a decrease of 1,944 on the area irrigated in the previous jear.
The principal decrease is in "jowári", of which only 83 acres were irrigated, as compared with 1,534 acres in the previous year. This is due to the favourable rabi rainfall and also to the fact that water for rabi crops was not arailable beyond the 39th mile of the canal, as the storage at Lake Fife was reserved for perennial and 8 months crops. If water had been allowed in the canal to the tail, probably. 300 or 400 acres of jorári would hare been irrigated, as some of the crops required one watering towards the end of the rabi season. There was a serious decrease, riz. 911 acres, in the area of sugar-cane, 5,277 acres being irrigated in 1891-95 and 4,366 acres this sear. This is chiefly due to the abnormally low market rate of "gul" during the past two sears; the rate fellat a time when the cultirators had to procure money for the next cane-sowing operations, and it ras those who had to raise money on the security of their standing crops who failed to get the necessary adrances, It is the farmers with no capital who suffer most in these circumstances, as they are entirely in the hands of the soulírs. The price of sugar fell to only Rs. 8 per palla, a fair rate being from Rs. 15 to R3. 15. The fall of Re. 1 per palla means a loss to the cultivator of about Rs. 40 per acre, and therefore a probable loss of about Ris. 200 per acre was sufficient to make many cultivators gire up a certain area, until they saw there was some chance of the price rising. It was unfortunate that this influence shonld hare been at rork just rhen the enhanced rates were introduced. That the increase, however, to Rs. 40 per acre for sugarcane has not checked the area under cultiration is proved by the fact that a certain area near the village of Mundra, where the rate is Mas. 50 per acre , has increasel. There is little doubt that as soon as the price of sugar goes up the maximum area of cane that can be irrigated will be applied for. The area this gear was 4,3C6 acres and the storage at Lake Fife could serve about 5,490 acres. There will almars be some fluctuation in the area, but the minimum should not be less than 4,500 acres.

The area of rice bas increased from 254 to 375 acres. Seed was obtained through the Agricultural Department and issued to those who required it. The results were in every way most satisfactory, and the only thing to be regretted is that the area was not much larger. All the cultivators who gres the beit bind of rice admit the crop to hare been good and the value of the putturn very eatisfactory. Apparently the reason for the slow development of this class of irrigation is mant of capital.

There was an increase of $46^{\circ} 5$ acres in the area of biini, which is the principal monsoon drycrop, and the irrigation of which varies with the character of the rainfall,
4. The revenue derived from the Poona water-supply amounted to

Water-supply of Towns. Rs. $1,07,219$ as compared with Rs. 94,760 in the previous year, or an increase of Rs. 12,459. About one-third of this is due to an increased supply to private houses, more than a third to the Poona Municipality, and the balance to an increased consumption by the G. I. P. Railway Company and by Government in the Civil and Public Works Departments. The new settling tanks, filter beds and pumping machinery are complete and in good working order. The quantity of water supplied by the new works during the year amounted to $297,810,000$ gallons, or 816,000 gallons a day. The quantity supplied from the old Sholápur Bazár filter is estimated approximately at 300,000 gallons a day. The average daily supply throughout the year amounted to $1,116,000$ gallons a day.
5. The working expenses of the year, including Rs. 641 for refunds of

Working expenses. revenue, amounted to Rs. 78,230 as compared with Rs. 82,187 in the previous year. The following table gives an analysis of the charges:-

| Names of Works. | Mainte- nance and Repairs. | Establishment. | Tools and Plant, | $\begin{gathered} \text { Refunds } \\ \text { of } \\ \text { ofenue. } \end{gathered}$ | Leave and Pension Allowances. | Share of Collection Charges. | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1895-96. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Re. |
| Mutha Canals ... | 13,140 | D ${ }^{1,187}$ | 1,946 | 641 | 2,835 | 7,834 | 42,127 |
| Poonawater-supply | 16,070 | D. 1,452 <br> C. 14,589 | . 2,379 | $\cdots$ | 1,613 | $\cdots$ | 36,103 |
| Total | 29,210 | 31,772 | 4,325 | 641 | 4,448 | 7,834 | 78,230 |
| 1894-95. |  |  |  |  |  |  |  |
| Mutha Canals ... | 19,930 | D. 4,136 | 3,759 | 2,478 | 2,975 | 6,330 | 52,422 |
| Poona water-supply | 13,806 | $\begin{aligned} & \text { D. } 2,172 \\ & \text { C. } 10,071 . \end{aligned}$ | 2,604 | ..' | 1,112 | ... | 29,765 |
| Total | 33,786 | 29,193 | 6,363 | 2,478 | 4,087 | 6,330 | 82,187 |

On the Mutha Canals the cost as shown above, excluding refunds of revenue, represents a rate for maintenance, administration, \&c., of Rs. $471 \cdot 43$ per mile (the total mileage in operation being 88 miles) and Rs. $5 \cdot 10$ per acre irrigated (the total acreage being 8,138). The expenditure under maintenance and repairs amounted to Rs. 13,140 as compared with Rs. 19,930 in the previous year. The chief reason for the decrease is that the pay of Canal Inspector and Pátkaris is now charged to "Establishment" instead of to "Works" as formerly. The increase in the amount charged as construction establishment is due to the decrease in capital outlay during the year. The excess on the Poona water-supply is due to the employment of a mechanic at Rs. 180 per mensem, and to repairs to fire plugs.
6. Deducting the total net working expenses, Rs. 77,589 plus Rs. 1,099 , the amount of remissions and refunds sanctioned during the year, from the total earnings of Rs. 2,98,471, the net profits from the work amount to Rs. 2,19,783, or Rs. $3 \cdot 34$ per cent. on Rs. $65,88,127$, the total entire capital outlay to the end of the year, against Rs. 2.53 per cent. in the previous year.
7. The areas irrigated were ascertained by actual measurements, the

Cost of measaremente. greater part of which were taken by measurers specially entertained for the purpose and assisted occasionally by the Canal Inspectors. From 9 to 12 per cent. of the aroa was checked by the subordinate in charge. The cost of measurements amounted to Rs. 1,432, or at the rate of 2 annas and 10 pies per acte against 2 annas and 2 pies in the

B 1239-6
previous jear. The increase in the rate is due to the area under irrigation being less than in the previous year.
8. The rainfall of the year along the canal varied considerably. The Rainfall. maximum was 3431 inches at Hadapsar and the minimum $17^{\circ} 57$ inches at Kedgaon as under :-

|  |  |  |  | Eharif. | Rabi. | Total. |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: |
| Hadapsar | $\ldots$ | $\ldots$ | $\ldots$ | 2785 | 646 | 3431 |
| Kedgaon | $\ldots$ | $\ldots$ | $\ldots$ | 1470 | 287 | 1757 |

Both the kharif and rabi rainfall was favourable.
9. A statement is appended giving the particulars of the water issued

Items capable of assessment for whiclr the project does not obtain credit. Year at Rs. 3,263 less than the normal rates.

Area actually irrigated compared with area applied comp
for.

The decrease in kharif is due partly to the cultivators being unable to plant as much sugarcane as they applied for and partly to favourable raitfall causing a reduction in the area of monsoon crops; that in rabi is partly due to favourable rainfall during the season and partly to the supply being confined to the first 39 miles of the canal.

## Remissions.

11. Remissions amounting to Rs. 17 were granted during the year on account of erroneous assessments.
12. Pefunds amounting to Rs. 1,082 were sanctioned during the sear, of Refonds. which Rs. 22 were for short supply of water, Rs. 650 on account of rebate given to the Indian Paper Mills Company for 39 days, for 19 dass the supply having been insufficient to gield C0 horse-power and for 20 days the canal having been closed, and IRs. 410 on account of the use for irrigation of the surplus water from the Nána Pbadnavis' conduit together with the leakage from the Mutha Canal in the village of Wadgaon Budruk, Taluka Haveli. The amount actually paid as shown in tho statement in paragraph 5 was Rs. 641, the balance not baving been paid by the Civil Department before the close of the jear.
13. Gaugings to ascertain evaporation and lakage were taken for broken periods in the mouths of April, May, June 1895, and
January, February and March 1890, or a total number
Loss by eraporation and abororption. of 104 days. During this period the loss amounted to
$1,177,555,361$ cubic feet, or rather less than one-third of the total capacity of the lake above outlet level.
14. The following statement shows the duty of water on the tro canals for those months during which correct figures regarding the discharge and area under irrigation were available:-


Sugarcane sowing was continued later than usual, and as there were signs of a reduction in the area, a more liberal supply than usual was maintained in the canal in order to encourage the cultivators to extend the area. This accounts for the reduction in the duty of water as compared with the previous year.

## Poona Water-supply.

Statement showing water supplies given gratuitously or at reduced rates during 189\%̈-96.

| To whom supplied. | Quantity supplied. | Amount paid. | Value at 6 annas per 1,000 gallons. | Difference between 4 and 3. | Remarks, |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 |
|  |  | Rs, at pa | Rs, a. p. | Rs. a. p. |  |
| The Civil Surgeon, Sassoon Hospital. | $1,032,750$ 553,850 | $\begin{array}{rrr}193 & 9 & 10 \\ 103 & 13 & 4\end{array}$ | $\begin{array}{rrr}387 & 3 & 8 \\ 207 & 10 & 8\end{array}$ | $\begin{array}{llrr}193 & 9 & 10 \\ 103 & 13 & 4\end{array}$ |  |
| Superintendent, Byramji Jijibloy Medical School | 55,850 523,409 | $\begin{array}{rrrr}103 & 13 & 4 \\ 98 & 2 & 0\end{array}$ | $\begin{array}{llll}207 & 10 & 8 \\ 196 & 4 & 0\end{array}$ | $\begin{array}{rrrr}103 & 13 & 4 \\ 98 & 2 & 0\end{array}$ |  |
| Superintendent, Lanatic Asylum ... | 1,013,651 | 19006 | 38010 | $190 \quad 6$ |  |
| Secretary, Cantonment Com- |  |  |  |  | . |
| (New Modikhána) .... | 1,205,001 | 225148 | 451134 | 225148 |  |
| (Beef Market) ... ... | 1,285,995 | 24120 | 48240 | 24120 |  |
| (Malcolm Tank) ... ... | 1,341,995 | 251100 | 503 4 0 | 251100 |  |
| (Mutton Market) ... | 1,276,995 | 23970 | 478140 | $\begin{array}{lll}239 & 7 & 0\end{array}$ |  |
| (Asurkhána) - | 1,430,000 | 26820 | 53640 | 26820 |  |
| (Butler Moholla) | 1,421,000 | 26670 | 532140 | 266 |  |
| Convent School.. ... ... | 463,230 | 86135 | 1731010 | $\begin{array}{llll}86 & 13 & 5\end{array}$ |  |
| Jamsetji Fountain ... | 1,146,960 | 1859 | 43019 | 411120 |  |
| Houds in Booty Street ... ... | 1,830,000 | ... | 68640 | 68640 |  |
|  |  |  |  | 3,263 19 |  |

(10).-EKRUK TANK.

The rainfall for the year under report was 31.09 inches (kharif 27.81 and Rainfall. rabi 3.28 ) against 20.18 inches of the previous year (kharif 19.25 and rabi 0.93 ), and was seasonable.
2. The lowest water level in the tank was R. L. $1,509.057$ prior to the Replesishment. commencement of replenishment, and the depth of water over sill of main or perennial canal sluice was 25 feet. On 7th September 1895 there was a heavy rainfall, 9.55 inches, and the tank water level rose to R. L. $1,524 \cdot 107$, or 3 feet over the crest of the waste wreir, which overflowed from that date to 24 th October, and again in November from lst to 12th, both days inclusive.
3. The area irrigated during the year was 2,559 acres, of which 1,671 trere Area irigated. kharif and 918 rabi, against 3,292 acres of the previous year (kharif 1,830 and rabi 1,462). The area applied for was 2,192 acres (kharif 1,472 and rabi 720), or 397 acres less than that actually irrigated. The difference is due to the cultivators being ignorant of the areas of their fields.
4. The assessment of water-rates amounted to Rs, 12,291 as compared Assessed revenue. with Rs. 13,463 of the previous year, and the gross revenue from all sources was Rs. 25,576 against Rs. 29,551 of the previous year. The decrease is due to less area irrigated during the year and to a smaller number of trees sold. The details of revenue, other than from water-rates, are as under :-

5. The following table compares the figures of

Comparison with previons years. area, assessements and working expenses with those of the previous eight years:-

| Years. |  |  |  | Eharit. | Rabi. | Total | Water-rate Assessment | Grose Revenae | Working Expenges. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Acres. | Acres, | Acres. | Rs. | Rs. | Rs. |
| 1887-88 | $\ldots$ | -* | . $\cdot$ | 1,357 | 757 | 2,114 | 6,651 | 13,784 | 15,95.3 |
| 1888-89 | ... | ... | ... | 1,620 | 1,356 | 2,976 | 7,652 | 15,209 | 14,666 |
| 1889-90 | ... | ... | ... | 1,335 | 1,199 | 2,534 | 9,441 | 18,532 | 13,231 |
| 1890-91 | ... | ... | ... | 1,835 | 763 | 2,598 | 10,188 | 23,516 | 13,824 |
| 1891-92 | ... | ... | ... | 1,935 | 1,202 | 3,137 | 13,125 | 27,470 | 13,770 |
| 1892-93 | ... | ... | ... | 2,425 | 613 | 3,038 | 14,760 | 23830 | 27,043 |
| 1893-94 | ... | $\therefore$ | ... | 2,247 | 642 | 2,889 | 14,364 | 24357 | 26,411 |
| 1894-95 |  |  | ... | 1,830 | ],462 | 3,292 | 13,463 | 29,551 | 12,050 |
| 1895-96 | ... | ... | ... | 1,671 | 918 | 2,589 | 12,291 | 25,576 | 15,461 |

The falling off in kharif and rabi irrigation was due to the favourable rainfall of the year. The incidence of water-rate was Rs. 4.74 per acre irrigated against Rs. 4009 of the previous year.

| Area irrgated and waterrate assessment, \&o, on each canal. | water |  | area <br> sessm | irri | ated ereon | by wer | ch c as fol | nal a ors : |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Cmand. |  | Aram lemagrub. |  |  |  |  |  | R. R or wirnkin TaFIOS dixal lines. |  |
|  |  | Sherlt. |  | нabt. |  | Towal. |  |  | $\begin{aligned} & \text { Acight } \\ & \text { of water } \\ & \text { over billy } \\ & \text { is loet. } \end{aligned}$ |
|  |  | Astre. | $\underset{\substack{\text { Anean } \\ \text { weent }}}{ }$ | Acreses | Anesm- | Acres. | Aneorat |  |  |
| Left Bank Low Level Canal $\ldots$ <br> Left Bank High Level Canal $\ldots$ <br> Light Bank High Lerel Canal $\ldots$ | $\begin{gathered} 29.04 \\ 343 \\ 5 \cdot 37 \end{gathered}$ | $\begin{array}{r} 1,391 \\ 179 \\ 101 \end{array}$ | $\mathrm{F}_{4}$ <br> 8,015 <br> 1,207 <br> 363 | $\begin{array}{r} 818 \\ 83 \\ 117 \end{array}$ | $\begin{gathered} \mathrm{Bm} \\ 1,920 \\ 4: 5 \\ 311 \end{gathered}$ | 2,100262219 | 8.4. <br> 9,935 <br> 1,652 <br> 6.4 |  | $\begin{aligned} & 23 \cdot 150 \\ & 1 \cdot 350 \\ & 1 \cdot 410 \end{aligned}$ |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  | 1,671 | 9,655 | 918 | 2,706 | 2,589 | 12,291 | ... | $\ldots$ |

7. Working expenses, including indirect charges, amounted to Rs. 15,401. The item "Maintenance and Repairs" amounted to Rs. 5,903, or Rs. 125 per mile of canal against Rs. 126 of the last year, the length of the canals being 48 miles. I'he working expenses include the cost (Rs. 3,041) of a new iron bridge provided to the outlet tower of the perennial canal. Establishment charges, direct and indirect, amounted to IRs. 5,678.

- 8. The area irrigated was measured at a cost of Rs. 570, which gives•a Measuring charges. charge of annas 3 and pies 6 per acre measured.

9. The rainfall over 159 square miles of catchment area was gauged at one place only, and amounted to $35^{\circ} 36$ inches from 1st June to 31st October 1895. The run-off into the tank was 13,061 million cubic feet, which amounted to 48 per cent. of the total rainfall over the catchment area of the taik, assuming the fall at $35 \cdot 36$ inches throughout that area. The run-off from 1st June to 7th September 1895, on which date the waste weir began to overflow, is calculated to be 0.36 on the same basis, "which is probably erroneous.
10. Bábul trees grow plentifully on the tank margin and on the canals,

Plantations. and form a good source of revenue, as there is always demand for firewood at Sholápur. The system mentioned in the Mhasvad Tank report regarding new plantation and sale of existing trees applies to this tank as well. No trees were sold during the year. The numbers of existing trees on 31st March 1896 on the tank contour and canals were as shown below:-

| Names of Trees. | Number above 5 feet in - height. | Number under 5 feet in height. |
| :---: | :---: | :---: |
| Bábul ... | 50,836 | 73,291 |
| Nimb ... | 1,146 | 79 |
| Madgo... | 649 | 162 |
| Jámbul ... | 100 | 7 |
| Tamarind ... | 186 | 124 |
| Shiras ... | 137 | 20 |
| Bori ... ... | 37 | ... |
| Sandal... . .. | 90. | 34 |
| Bamboo ... | 194 | 5 |
| Guava... | 25 | ... |
| Moho ... | 5 | 2 |
| Nímboni . ... | 88 | 7 |
| Shindi... ... | 50 | 300 |
| Miscellaneous... | 471 | 63 |
|  | 54,014 | 74,094 |
| Total | 1,28,108 |  |

The fruit trees do not yield any considerable revenue as yet. The amount realized from this source was Rs. 241 against Rs. 81 of the previous year.
11. The following figures show storage of water :

Evaporation and absorption. and loss by evaporation and absorption during the year:-

12. Experiments to determine, with accuracy, the duty of water mere made Daty of water. on the Left Bank High Level Canal during the rabi season. The observations were made trice, first from 9th to 18th February 1896 and again from 22nd to 31st idem. The result of the first observation was a duty of 6.15 acres per cubic foot per second, and that of the second was a duty of 5 acres per cubic foot per second. These results are very unsatisfactory, the reasons being,-1st, that the canal runs through muram and porous soil and a great deal of water is therefore lost in transit, and 2nd, that most of the water was utilized for sugarcane while it was being sown in highly manured fields which absorbed large quantities of water in the initial waterings. It is proposed to make the next observations on one of the Ashti Tank canals during 1896-97.
(I1).-KRISHNA CANAL.
The construction estimate of this canal was closed on 31st March 1892vide Government Resolution No. 75 W.-I. - 777, dated 14th May 1892, and the completion report was approved of in Government Resolution No. 12 W.-I.-
Expenditure on original
workg. 119, dated 22nd January 1894. The following original works executed during the jear under report were charged to the Revenue Account :-

Rs.


The total Capital outlay, direct and indirect, to end of the year was Rs. $8,64,892$.
Rainfall.
2. The rainfall, as gauged at Retre Budruk (16th mile of the canal), is shown in the follow: ing table:-- .

| Year. | Kharif, | Pabi. | Total. |
| :---: | :---: | :---: | :---: |
|  | Inches. | Inches. | Inches. |
| 1895-96 | 22.21 | 6.20 | 2841 |
| 1894-95 $\quad \cdots \quad \ldots$ | 20.82 | $4 \cdot 63$ | $25 \cdot 45$ |
| Average, 1891-1894 | 18.33 | 6.25 | 24.58 |

and exhibits an increase of $1 \cdot 39$ inches for the kharif and 1.57 in the rabi over last year. There is an increase of $2 \cdot 96$ over the total of the last year.
3. The hot weather flow of the river in 1895 (April and May) was less River sapply. than the average. After that the supply was ample until the hot weather of 1896.
4. The area irrigated, the assessment, working expenses and average waterrate as compared with the average of the previous four years were as follows:-

| Year, |  |  |  |  | Eharit. |  | . Rabi. |  | Total |  | A verage Waterrate. | Working <br> Expeuses. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Acres. | Ra. | Acres. | Res. | Acres. | Ms, |  | Ins. |
| 1895.96 | … | \% |  | $\cdots$ | 1.719 | 31,402 | 1,485 | 7,063 | 3,204 | 38,465 | 12 | 12,087 |
| Average, Increase | 1891.2 | to |  | $\cdots$ | . 2,627 | 33.376 | 2,018 | 7,199 | 4,645 | 40,5;5 | 8.70 8.30 | 13,519 |
| Decrease | ... | ... | $\cdots$ | $\cdots$ | $\because 908$ | 7,974 | $\because 63$ | $\cdots$ | 1,441 | $\dddot{2,110}$ | -..0 | $\because 1,432$ |

5. As compared with the average of the previous four years, the area Ares irrigated, irrigated shows a decrease of 908 acres in the kharif season and of 533 acres in the rabi season. This decrease is due chiefly to the area of ground-nut crop irrigated being less than the previous year's, as that crop was injured by excessive rain in September and October of last year:

The area irrigated was 12 per cent. of the irrigable area and the measured area was nearly equal to that applied for.
6. There is a decrease in kharif assessment this year as compared with Assesment. the last two years. This was due to good and timely rainfall and the partial failure of the ground-nut crop. The following table will show that the sugarcane cultivation on this canal is on the whole steadily increasing, although this year there is a slight falling off compared with the two previous years. There were no remissions during the year :-

| Year. |  | Area of Sugarcane. | Year. |  | Area of Sugarcane. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Acres |  |  |  |  | Acres. |
| 1885-86 | ... | 852 | 1891-92... | ... | 1,219 |
| 1886-87 | ... | 907 | 1892-93... | ... | 1,319 |
| 1887-88 | ... | 1,089 | 1893-94... | ... | 1,449 |
| 1858-89 |  | 1,144 | 1894-95... | . | 1,566 |
| 1883-90 |  | 1,023 | 1895-96... | $\ldots$ | 1,413 |
| 1830.91 |  | 1,036 |  |  |  |

7. The average water-rate per acre was Ris. 12 as compared with Rs. 9.50 Average water-rate. of the previous year. The increase was due to the increase in water-rates sanctioned in Government Resolution No. 179 of 29th January 1895.
8. The realizations of the year amounted to Rs. 30,823 against Rs. 56,050 ,

Realizations. in the previous year, and the Rs. 10,169.
9. The miscellaneous revenue from all other

Miscellaneous revenue. sources amounted to Rs. 1,511 against Rs. 4,664 of the pretious year.
10. The working expenses, including direct and

Working expenses. indirect charges, compare as under for the last fiva years:-

| Particulars, | 1891-92. | 1892.93. | 1893.94. | 1894-95. | 1895-96. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rs. | Rs. | Rs. | Rs. | Rs. |
| Works... ... ... ... | 6,164 | 7,954 | 6,898 | 7,064 | 7,036 |
| Establishment . | 2,683 | 3,530 | 3,571 | 3,086 | 3,050 |
| Tools and Plant ... | 103 | 99 | 91 | 100 | 68 |
| Refund of Revenue ... |  |  | 1 |  |  |
| Collection ... ... ... | 1,775 | 3,629 | 1,943 | 3,584 | 1,506 |
| Leave and Pension Allowances. | 376 | 494 | 500 | 432 | 427 |
| Total | 11,101 | 15,706 | 13,004 | 14,266 | 12,087 |

The actual outlay on works and establishment was about the same as in the previous year.
11. The cost of working per mile of canal and per acre irrigated is as under for the past five years:-

|  | Year. |  | Per milo <br> of Canal. | Per Acre <br> irrigated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | . | Rs. | Rs. |
| $1891-92$ | $\ldots$ | $\ldots$ | $\ldots$ | 182 | $2 \cdot 07$ |
| $1892-93$ | $\ldots$ | $\ldots$ | $\ldots$ | 255 | $4 \cdot 14$ |
| $1893-94$ | $\ldots$ | $\ldots$ | $\ldots$ | 211 | 2.75 |
| $1894-95$ | $\ldots$ | $\ldots$ | $\ldots$ | 223 | 3.05 |
| $1895-96$ | $\ldots$ | $\ldots$ | $\ldots$ | 189 | 3.77. |

The higher figures for the year per acre irrimated are due to the decrease in the area irrigated. A better comparison would be between the workirs expenses and the total revenue :-

|  | Years. | Grosa Revenue. | Torking Fireases. | Ter cent. | Surlas <br> Evenue. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Re. | Fis. |  | Rs. |
| 1831-92 |  | 40,970 | 11,101 | 271 | 27, \%) |
| 1592-93... | . | 40,057 | 15,716 | 392 | -4,351 |
| 1893-94..: |  | 43,281 | 13,004 | 300 | 30,97 |
| 1591-93... |  | 49,041 | 14,256 | 291 | 34.95 |
| 1895-9b... | . | 30,9,6 | 12,057 | 802 | 25,553 |

The percentage of working expenses to gross revenue for the year under report shorrs a slight increase. This increase was due to the decrease in revenue -vide paragraph 4 above. The actual working expenses were the lorrest of the series with the exception of 1891-92.

The capital sum at charge at end of the rear was Rs, $8,64,8.9$. The net revenue of the year amounted to Rs. 27,859 , giring a return of 3.22 per cent. on the total Capital outlay, direct and indirect.
12. The cost of crop measurement alone was Rs. 593, equal to Re. 0-2-11 Cost of measurement. per acre against Rs. 767, or Re. 0-2-7 per acre for the previous year.
13. The arerage duty of water obtainel was for

Duts of Water. kharif 40 acres per cubic foot per second and for rabi 23 acres.
14. The number of trees of all classes on the canal at the beginning of Plantations. the year was 22,692 , and in addition 379 new saplings were planted. The number of trees cut and sold during the year was 1,359 ; the balance at the close of the jear was thus 21,712 . The net revenue from plantations was Rs. 1,229.

The principal varieties of trees on the canal are babbul 17, 261, mango 732, nim 534, bamboos 413, and jámbul 190.
15. The canal has been heavily silted up and therefore it does not carry General remarks. the estimated discharge. During. the rear under report the last five miles were cleared of silt at a cost of Rs. $1 ; 534$; the result was satisfactory as there were no complaints from cultivators. In 1696-97 three miles ( 28 to 30 ) of the canal will be ceeared of silt.

## MINOR WORKS AND NAVIGATION.

## (12).-KHA'RI CUT.

The rainfall $\pi$ as 28.71 inches in the kharif and $3 \cdot 11$ inches in the rabi
Rainfall. season, against 49.94 and 1.39 inches respectively during the previous year, the arerage of the last fire years being as follows:-


Area irrigated.
2. The areas irrigated as compared with thos3 of the previous year are as below:-

|  |  | Kharif. | Pebin. | Tual |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Acres. | Acres. | Acres. |
| 1534-95 | ... | ... 2,053 | 35 | 2,083 |
| 1895-96 | ... | ... 3,103 | 17 | 3,126 |

3. Though the rainfall was not favourable, the tank was, with great care and economy, kept sufficiently full during the season; nevertheless but for the scasonable rain in the latter part of October 1895, the crops rould have sufferd to a very large extent. The revenue during the year was Rs. 14,854, or Rs. 2,593 more than during the previous year, and is the highest on record.
4. The assessments, excluding remissions and free

Assessments. grants (the former being Rs. 2,437 and the latter is. 2,218), were as under:-

|  |  |  | Kharif. | Rahi. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Rs. | Rs. | Ks. |
| $1834-95$ | $\ldots$ | $\ldots$ | 12,083 | . 172 | 12,261 |
| $1895-96$ | $\ldots$ | $\ldots$ | 14,802 | 52 | 14,854 |

Kharif cultivation is increasing every year; and as it proved difficult, vide paragraph 3 above, to keep the tank full, it is desirable to increase the supply in the Khári Cut Canal to the utmost extent practicable.
5. The amount of outstanding balances at the close of the year for the kharif season was Rs. 11,960-6-6; out of this the
Outstanding balances. following recoveries have since been made:-

6. The working expenses of the year amounted to Rs. 5,299 against Working expenses. Ks. 6,107 in the previous year. The incidence per acre was $1 \cdot 69$ against 2.92 of the last year.
7. The area under irrigation was measured by establishment specially employed for the purpose at a total cost of Rs. 184, or nearly one anna per acre irrigated, against $1 \frac{1}{4}$ annas
evious year. The cost of establishment debited to Measurement of crops. per acre during the previous year. The cost of establishment debited to revenue management was as under:-

8. The average water-rate during the year was

Arerage water-rate.
Rs. 4.75 per acre as compared with Rs. 5.87 during the previous year.
9. The supply drawn from the Khári river during the kharif season at the

Duty of water. head of the Khári Cut was at the rate of 18.56 cubic feet per second, and the area irrigated was 3,109 acres plus the area assessed on the Chándola Tank, viz. 242 acres, making a total of 3,351 acres; these figures give a duty of $180^{\circ} 55$ acres per cubic foot of discharge at head.
10. The discharge at headworks during the rabi season was 4.82 cubic feet per second and the area irrigated was 17 acres, giving a duty of 3.53 acres per cubic foot. With so small a discharge the proportionate loss by ef ration, \&c., is necessarily excessive.

$$
\text { в } 1230-8
$$

11. A good beginning seems to have been made towards developing hot weather crop irrgation, the area of this crop during the year under report being 92 acres against 3 acres in 1894-95, while there was none in precious years.
12. The rear under report has been a most favourable one from a revenue point of view, the realization having been the highest on record; and there is reason to believe that the improvement will prove permanent.

## (13). -HARTA'LA TANK.

This tank bas been in operation for 23 years. It commands a gross area of 584 acres in the village of IIartála, of which the net irrigable area is 415 acres. The full storage of the
irrirable area, but the actual irrigation is very fitful as
Gross and irrigable area. tank would suffice for the irrigable area, but the actual irrigation is very fitful as the work is situated in the cottou-growing district.
2. The depth of water in the tank had fallen to 7.90 feet on 20 th June 1895, after which the first replemshment nas received. The greatest depth of water reached was $8^{\circ} 50$ feet on the 22 ad Seplember, this being $5 \cdot 20$ feet short of full supply. At the close of the year there was only 4.08 feet depth of water.
3. The raiufall of the year amounted to $18 \cdot 61$ inches against $34 \cdot 71$ inches

Rainfall. of the previous year and 25.59 inches the average of the past 22 years.
4. The area irrigated during the year amounted

| Kharif <br> Rabi | ... | ... | ... | Acres |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | ... | 15 |
|  | ... | ... | . | ... | 55 |
|  |  |  |  | ... | 70 |

which is 16.86 per cent. only of the irrigable area commanded by the tank, as compared with 20 per cent. in the previous year. The falling off is in the rabi area owing to large cultivation of cotton.
5. The kbarif areas consisted of $\mathbf{3}$ acres of fruit gardens, 10 acres of monsoon dry crops, 1 acre of chillies and 1 acre of ground-nut. The rabi crops were 33 acres of wheat and gram and 2 acres rajgira. The total value of these crops is estimated at Rs. 1,218.
6. The gross revenue from this tank during the year amounted to

Gross revenue.
Rs. 1,127, or nearly double the amount of the previous
year. Of this, water-rates amounted only to lis. 15t and the revenue from other sources to Rs. 973. The increase is due to the sale of full grown bábul trees.
7. The incidence of water-rate per acre during the year was Rs, 2-3.2 against Rs. 2-8-1 of the previous year. Tho decrease is due to the falling off in rabi irrigation.
8. The realization of reveuue during the year amounted to :-

|  |  |  |  |  | Ms. |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Water-rates | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 185 |  |
| Miscellaneous | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 973 |  |
|  |  |  |  |  |  |  |
|  |  |  | Total | $\ldots$ | $\overline{1,15 s}$ |  |

With the exception of the year's rabi assessments, lis. J11, which whe sent for realization after the close of the jear, there is no outstanding of revenue.

Working expeuses.
9. The working expenses during the year amount-

| In the Pullic Works Department | $\ldots$ | ... | Rs, |
| :---: | :---: | :---: | :---: |
| In the Civil Department ... | ... | ... | 30 |
|  | Total |  | 394 |

ngainst Rs, 1,030 in the previons year, in which some extensive repairs were carried out. This shows that the tank has to its credit during the year

$$
\begin{array}{cccccc} 
& & & . & & \text { Rs. } \\
\text { By assessments } & \ldots & \ldots & \ldots & . . . & 733 \\
\text { \#realizations } & \ldots & \ldots & \ldots & \ldots & 765
\end{array}
$$

after paying the working expenses.
10. The cost of measurement of the area irrigated was Rs. 1-4-8 against Rs. 2-5-4 of the previous year, which gives a rate of Cost of measurement of crops. $\quad \begin{aligned} & \text { Rs. } \\ & 3\end{aligned}$
11. The actual area irrigated compares as shown below with the area a!plied for:-

| - |  |  |  | Kharif. Acres. | Rabi. Acres. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Applied for ... | . $\cdot$ | $\cdots$ | - | 22 | 64 |
| Actually irrigatel | - $\cdot$ | ... | -' | 15 | 55 |
|  |  | Difference | ... | 7 | $\overline{9}$ |
|  |  |  |  | - | - |

Daty of water. - 12. The duty of water is shown in Statement I-E attached to this report. . There were no special observations.

Loss by evaporation and 13. The loss by evaporation and absorption was absorption. as follows:-

Kharif Season.

(14).-MHASVA TANK.

This tank las been in operation for 19 years. The gross area under its Gross and irrigable area. command is 4,647 acres, of which the irrigable area is 1,700 acres. But owing to its situation in the cottongrowing part of the district the actual irrigation is very fitful.
2. The full supply depth of water in the tank is 22 feet. At the commencement of the year the depth of water was $18 \cdot 61$ feet, which fell to $15 \cdot 42$ feet on 9 th June 1895, after which the tank received its first replenishment, and by 20 th July 1895 it filled
to overflowing. The depth of water at the close of the jear was 18.25. The supply was thus sufficient to meet the requirements of irrigation.
3. The rainfall of the year gauged at the tank amounted to 31.01 inches

Rainfall. against 28.07 inches of the previous jear and 99.00 inches, the average of the past 18 years. The monsoon or kharif rainfall was heavier than in the previous year, which made the monsoon crops independent of the tank water, and the heary fall in September of $10 \cdot 30$ inches followed by a good fall in October also belped the rabicropsto grow independently of canal water. Late sowings in inferior land required watering from the tank.

Ares irrigated.
4. The area irrigated during the year was as under:-

|  |  |  |  |  | Acres. |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Kharif | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 18 |  |
| Rabi | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 35 |  |
|  |  |  |  |  | Total | $\ldots$ |

against 127 acres of the previous year. This falling off in irrigation is explained by the nature of the year's rainfall described in the foregoing paragraph. The value of the crops grown during the year is estimated at Rs. 2,135.

Gross revenue. 5. The gross assessed revenue of the year
Gross revenue.
was:-

| Water-rates | ... | ... |  | 230 |
| :---: | :---: | :---: | :---: | :---: |
| Miscellaneous | ... | ... | ... | 327 |
|  |  | Total | ... | 557 |

against Rs. 1,036 of the previous year. The diminution is due to less irrigation in the year and to no babbul wood having been sold.
6. The incidence of water-rate assessment per acre was Rs. 4-4-1 against Rs. 3.1-8 of the previous year. The increase in rate with less irrigation during the year is due to the proportion of the perennial crops to the low-rated crops being greater than in the previous jear.
7. The revenue realized was-


With the exception of the rabi assessments of the year, Rs. 72, which reere sent for realization after the cluse of the jear, there is no outstanding of revenue.
8. The working expenses amounted to:-

|  |  |  |  | Rs. |  |
| :--- | :--- | :--- | :--- | :--- | ---: |
| In the Pablic Works Department | $\ldots$ |  | $\ldots$ | $1,10 \pm$ |  |
| In the Civil Department | $\ldots$ | $\ldots$ |  | $\ldots$ | 19 |
|  |  |  | Total | $\ldots$ | 1,111 |

against R. 1,223 of the previous year.
9. The cost of measurements of the area irrigated was Rs. 4-6-0, which gives a rate of anna 1 and pies 3 per acre against
Cost of measurement. $\quad 1$ anna 1 pie in the previous jear.
10. The area applied for was 53 acres or 1 acre less than that actually irrigated.
11. The scale of water-rates during the year under report was the same as in the previous year and the following table shows the classification of crops and the revenue assessed under that scale :-

| No. | Crops. | Area irrigated. | Rate per scre. | Аввasgment. |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1 \\ & 2 \\ & 3 \end{aligned}$ | Perennial ... Eight months Four months | Acres. | Rs. | Rs. |
|  |  | 16 | 10 | 149 |
|  |  | 2 | 4 | 9 |
|  |  | 36 | 2 | 72 |
|  |  | 54 | - | 230 |

- There were also 3 acres of lift irrigation assessed at half the sanctioned rate.

Loss by evaporation and absorption.
12. The loss by evaporation and absorption was as under:-

Kharif Season.


> (15).-JAMDA CANALS.

These canals have been in operation for 29 years. The gross area under Gross and irrigable area. command is 46,288 acres, of which the area irrigable by the works as completed is 5,000 acres only.
2. The source of supply to these canals is the Girna River. - Its discharge River supply. during the year under report was less than in the previous jear, but was sufficient for all requirements. Care had to be taken in distributing the supply of water to the hot weather and perennial crops, the area under which was almost equal to that of the previous jear.
3. The rainfall of the year in the kharif and rabi seasons is given in the $\begin{array}{ll}\text { Rainfall. } & \text { following table in contrast wit } \\ \text { seasons in the previous year :- }\end{array}$

|  | Kharif, |  | Rabi. |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 3894, | 1895. |  | 1895. |
| At Canal had. | Ins. cts. | Ins. cts. | Ins.cts. | Ins. cts. |
| Jámda Bungalow ... | $20 \quad 71$ | 2315 | 366 | $096{ }^{\circ}$ |
| About middle of Canal. |  |  |  |  |
| Kolgaon Chauki $\quad$.. | $24 \quad 74$ | $24 \quad 68$ | $5 \quad 87$ | 156 |
| At tail of Canal. |  |  |  |  |
| Bhädgaon Kacheri | 2947 | 34, 71 | 462 | 122 |

The favourable kharif rain led to a falling off in the irrigation of monsoon dry crops and the decrease in the rabi rain caused an increase in the rabi areas.

в 1239-9

Area irrigated.
,
4. The area irrigated during the jear amounted to
against 1,148 acres of previous year. The increase is due to larger irrigation of monsoon wet and eight months crops and also of wheat and gram owing to short rain in the rabi season.
5. The assessments of the year from all sources

Gross revenue. are contrasted with those of the previous year in the following table:-

|  | 1894.95., | 1893-96. | - Increasa. | Docreasa. |
| :---: | :---: | :---: | :---: | :---: |
| - | Rs. | Rs. | Rs. |  |
| Water-rates | 7,744 | 8,212 | 468 |  |
| Miscellaneous | '2,734 | 4,355 | 1,621 |  |
| Total ... | 10,478 | 12,567 | 2,089 |  |

The increase in water-rate is due to larger cultivation of hot weather and eight months crop as well as to a larger rabi area having been watered. The increase in miscellaneous revenue is due to large sale of full grown bábul trees.
6. The remissions during the year amounted to Rs. 24 and the realizations to-

|  | .... | Rs. |  |
| :---: | :---: | :---: | :---: |
|  |  | $\cdots$ | 7,270 |
| Miscellaneous |  |  | 4,355 |
|  |  | Total | ... 11,625 |

or Rs. 364 more than the amount realized last year:
7. The unrealized balance of assessed water-rates is Rs. 1,830, in addition to the rabi assessment of Rs, 1,610 sent for realization after the close of the year. Measures are being adopted to effect the recovery of the amount unrealized.
8. The average incidence of water-rate assessment per acre during the year under report was Rs. 5-9-3 against Rs. 6-11-11 in the previous year.
9. The following table contains a contrast of the year's working expenses with the amount of the previous year :-


There was an incrense of Rs. 374 daring the jear owing to certain repairs which had to be carried out to meet the requirements of irrigation. - Notwithstanding this itcrease the gross revenue shows a margin of Rs. 2,485 over working expenses.

Cost of measurements of crops.
10. The cost of measurements of crops irrigated during the year on the tro canals separately is given below:-

|  | Area irrigated. | Area measared. | Cost of measurement. | Rate per Acre. |
| :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Acres. | Rs.. a. p. | Rs. a, p. |
| Left Bank Canal | 1,061 | 471 | 49104 | 0 1-8 |
| Right Bank Camal ... .... | 411 | 70 | 91011 | 0 2. 2 |

On the Right Bank Canal there was an increase in the perennial area; which required more elaborate and accurate measurements.
11. The area applied for amounted to 1,442 acres, whereas the actual

Areas applied for and actually irrigated.

Duiy of water. irrigation was 1,472 acres. 'The difference of a little over 2 per cent. is due to under-estimates in water applications.
12. No special observations of the duty of water were taken during the jear.
13. The expenditure on plantations during the year was Rs. 106 which brings Plantation. the expenditure to end of the year to a total of Rs. 16,475. The number of trees on the canals has been reduced from 15,344 in the previous year to 11,568 during the year owing to large sales of bábul trees. Arrangement is being made to replace the deficiency by new plantation.

## (16)--PARSUL TANK.

1. This tank has been in operation for seven years. During the year under Area under command. report a survey of the area under command was made with the following result :-

2. The tank works with the distributaries have been completed with the State of Work. .... Exception of the extension of the Saundána channel to irrigate the lands of Nándgaon. This was delayed pending settlement of the question of the formation of fixed bágáyat at Saundána and Umáa. The villagers have, however, now decided on the crop rate system, and the work of channel extension will be resumed to allow of irrigation at . Nándgaqu.
3. The tank supply during the year was sufficient to meet all -demands. Tank supply. The storage in the tank at the commencement of the year was 70.37 million cubic feet, which fell to $42 \cdot 49$ million cubic feet on the 9 th June 1895 when the tank received its first replenish: ment. The full starage was reached on 22nd September 1895 when water began to overflow the waste weir. The tank remained full up to 6th November 1895. At the ond of the jear the storage was $63 \cdot 70$ million cubic feet.
4. The rainfall of the year was 18.93 inches (kharif $16 \cdot 47$ and rabi $2 \cdot 46$ ) Rainfall. against $25 \cdot 37$ inches in the previous year and 21.77 inches, the average of the past thirfeell years. By seasons the year's fall was as given below in comparison with that of the previous year:-


Although the rainfall in both the seasons was less than in the previous year, the irrigation was less during the year. under report. This falling off was due to fear on the part of the villagers that all irrigated lands would be classed as bágáyat at the coming revision settlement, and they consequently restricted the area as far as possible.
5. The areas irrigated during the year amounted to 252 acres, distributed

Area irrigated. as under by seasons and villages, in comparison with those of the previous year:-


There was a falling off in the irrigation of fodder crops during the hot weather, 21 acres being irrigated during the year against 68 in the previous year. Owing to the shortness of rainfall in the kharif season 29 acres of bajri and 34 acres of sesamum crops had to depend upon the tank supply.

Gross Revenie,
6. The total assessment of the jear amounted

|  |  |  |  | Rs. |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Water-rates | $\ldots$ |  | $\ldots$ | $\ldots$ | 902 |
| Miscellaneous | $\ldots$ |  | $\ldots$ | ... | 25 |
|  |  |  |  | Total | $\ldots$ |

against Rs. 1,704 of the previous year, The falling off is due to less rabi and hot weather irrigation.
7. Remissions of Rs. 178-8-0 on account of Parsul tank water-rates, on kájam bágáyat land at Saundána had to be granted during the year, as this land is entitled to water under the existing settlement to the end of February.
8. The realisations amounted to-

9. The outstandings amount to-

| Kharif, 1895-96 | ... | ... | $\cdots$ | Rs. |
| :---: | :---: | :---: | :---: | :---: |
| Rabi, 189j-96 | ... | ... | .. | 57 |
|  |  |  |  | 578 |

The first sum remained unrecovered because the Taluka Revenue Officer received order to realize it only after the close of the year. The rabi demands were sent for realization after the close of the year.

Working expenses. 10. The working expenses amounted to-


Total 1,080
is compared with Rs. 1,359 of the previous year.
11. The same scale of water-rates as in the previous year was in force Water-rates. during the year under report and is detailed in statement I-F. The perennial area was assessed at Rs. 11 er acre as explained in paragraph 12 of the report for 1894.45.
12. The jear's irrigation may be classified as under :-

| Crops. | Area. | Assessment. |
| :---: | :---: | :---: |
|  | Acres. | Rs. |
| Kharif ... ... ... ... | 65 | 65 |
| Rabi (including 8 months' crops) ... | 139 | 565 |
| Hot.weather (including perennial) | 48 | 272 |
| Total ... | 252 | 902 |

13. There was no separate charge for measure-

Measurement of crops. ment of irrigated crops which was done by the canal kárkun.
14. The area applied for compares as below with

Area applied for and irrirated. actual irrigation :-

| Area applied for Do. actually irrigated |  | . |  | Kharif. Acres: | Rabi. <br> Acres. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | ... | ... | - | 111 | 116 |
|  |  | -•• | ... | 108 | 144 |
|  |  | Difference | ..' | -3 | $+28$ |

The difference is due to wrong estimates in water applications.
Eraporation and absorption. 15. The calculated loss by evaporation and absorption was as under:-

Kharif Season.


## (17).-PRAYARA RIVER WORKS-OJHAR CANAL.

The area irrigated during the year was 1,896 acres, of which 577 were

## Area irrigated.

 under kharif and 1,319 under rabi crops. The total shows an increase of $3: 2$ acres on the area of previous year. The area of kharif was 16 acres less and that of rabi 363 acres greater than in the previous year. The decrease in the kharif season is due to timely rainfall, which resulted in no water being taken for 492 acres for which applications had been submitted. It is also due to the decrease in area of perennial crops, as the cultivators were doubtful whether their applications for water for the perennial crops within $\frac{1}{4}$ mile of the villages would be sauctioned without undue delay, as they had to be referred to the Chief Engineer and Sanitary Commissioner hefore acceptance. Of this decrease 6 acres 20 guntbas were on account of rejection of applications for water for proposed new plantain gardens within the $\frac{1}{4}$ mile radius.Comparison of area applied 2. The following statement compares the area for and irnigated. applied for and irrigated during the year:-

| Year. | Ebarif. |  | Rabi. |  | Totar. |  | Diprenenciless irmigatid. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Applied } \\ \text { for. } \end{gathered}$ | Irri. gated. | Applied for. | Irrigatod. | Applied for. | Irrigatei. | Eharif. | Eabi. | Total. |
|  | Acres. | dcres. | Acres. | Acres, | Acres. | Acres. | Acres. | Acres. | Acres. |
| 1895-96 | 888 | 577 | 1,548 | 1,319 | 8,436 | 1,896 | 311 | 229 | 540 |

The area applied for but not irrigated is 22.17 per cent. of the total area applied for. The decrease in kharif season is due to good rainfall in July und September, which rendered canal water unnecessary.
3. The water-rate assessments amounted to

Water-rate assessments.
Rs. 6,189 against Rs. 4,678 in the previous year.
The details are:-

|  |  |  |  |  | Rs. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Kharif | ... | ... | $\cdots$ | ... | 2,496 |
| Rabi | ... | ... | ... | ... | 3,693 |
|  |  |  |  | ... | 6,189 |

The assessment under the old scale would have been Rs. 4,837. The introduction of higher rates and the orders regarding restriction of perennial irrigation within $\frac{1}{4}$ mile of all villages have unfavourably affected the revenue, but these causes are likely to have a temporary effect only.
4. Kemissions amounting to Rs. 13-12-4 were

Remissions. granted during the year on account of erroneous assessments.
5. Refunds amounting to Rs. 12 were sanctioned during the year on account of wrong assessment.
Refands.
6. The revised water-rates sanctioned in Government Resolution No. 110 A.I-607, dated 30th March 1895, were brought
Water-rates. into force from 1st April 1895. They are to continue for five years, and compare with the previous rates as follows:-

7. The area irrigated per mile of main canal

Area irrigated per mile of main canal and of main canal and branches. was kharif $30 \cdot 37$ and rabi $60 \cdot 42$ arres, and that of main canal and branches was kharit 14.42 and rabi 32.97 acres.
8. The following table compares the area irrigated

Comparison of area irigated and revenue.
and revenue derived during the previous three years with the figures of the year under report:-

|  | Year. | Area irrigated. | $\begin{aligned} & \text { Revenue } \\ & \text { from } \\ & \text { Water-rates. } \end{aligned}$ | Rainfall from 1st April 1895 to 31st March 1896. |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Acres. | Rs. | [n. cts. |
| 1892-93 | ... | 1,100 | 3,471 | 3772 |
| 1893-94 | ... | 2,243 | 6,030 | $25 \quad 09$ |
| 1894-95 | ... | 1,544 | 4,678 | 2546 |
| 1895-90 | $\cdots$ | 1,896 | 6,189 | $24 \quad 57$ |

The rainfall was deficient in August and also in and after October.
9. 'The incidence' of water-rate per acre was Rs. $3 \cdot 26$ against Rs: 3.03 in the previous year, the increase being due to revision of water-rates.
Water rate per acre.
10. The working expenses amounted to Rs. 14,230

Working expenses. as detailed below, against Rs. 28,766 in the previous year :-

|  |  |  | Rs. |  |
| :---: | :---: | :---: | :---: | :---: |
| Maintenance and repairs | ... | ... | ... | 3,196 |
| Share of establishment | ... | ... | ... | 9,223 |
| 'Tools and plant ... | ... | ... | ... | 255 |
| Share of collection charges | ... | ... | ... | 253 |
| Indirect charges ... | ... | $\cdots$ | $\ldots$ | 1,291 |
| Refund of revenne ... | ... | ... |  | 12 |
| Total .. $\because 14,230$ |  |  |  |  |

The rate of working expenses per mile of main canal open was Rs. 749, and per acre irrigated Rs. 7.51 .

The expenditure on maintenance and repairs was Rs. 1,386 less than in 1894-95, most of which saving is due to no special clearance work having been carried out as in the previous year.

The cust of tools and plant increased from Rs. 122 to Rs. 255, or by Rs. 133 over that of 1894-95. As a large number of tools had been lying on this canal useless for want of repairs, the greater part of the allotment for the district was expended on them.
11. The total cost of measurement of 1,516 acres (excluding 380 acres Cost of measurement. sub-divided) during the year was Rs. 150 , or 1 anna and 7 pies per acre, as compared with 1 anna and 9 pies per acre last year.
12. The duty per cubic foot per second of water admitted into the canal

Duty of water. was $15 \cdot 72$ acres in the kharif and 33.97 acres in the rabi season. That of water actually utilized was 19.79 acres in the kharif and 56.25 acres in the rabi season.
13. The rainfall, as gauged at Ashvi, was kharif $22 \cdot 73$, rabi 1.84 , total Rainfall. 24.57 inches, or $1 \cdot 41$ inches more than the averige of the last five years.
14. The supply of water in the river was more than sufficient to meet all River sapply. requirements for kharif and rabi. In January 1896 a temporary earthen bund was constructed on the weir
as usual to increase backwater during the hot weather of 1896-97. The discharge of the river on 31st March 1896 was 15 cubic feet per second against 40.60 on the same date in the previous year. A project for a storage reservoir to increase the hot weather supply is under consideration.
15. At the end of the year the number of trees Plantation. . on this canal was 13,783 . The numbers of principal kinds were:-

| Pábul | ... |  | ,610 | Bakan | $\cdots$ | $\ldots$ | 35 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mango | ... | ... | 930 | Jámbul | ... | ... | 199 |
| Do. . grafts | ... | ... | 53 | Sandal | ... | ... | 89 |
| Orange | ... | ... | 29 | Nimb | $\cdots$ | ... | 1,586 |
| Bor | ... | ... | 153 | Bamboo |  | ... | 46 |
| Moho | ... | ... | 4 | K yene |  | ... | 2 |
| Siras | ... | ... | 4 | Miscella | rees | $\ldots$ | 44 |

The total number last year was 13,105 .
16. The canal was closed five times for silt and weed clearance, for periods aggregating 23 days. It was also closed for 13 days more on account of rains in July and August 1895.

## (18).-BHATODI TANK.

Area irrigated:
The area irrigated during the year amounted to-

|  |  |  |  |  | Acres. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Kharif | ... | ... | ... | ... | ... 86 |
| Rabi | ... | ... | ... | ... | 791 |
|  |  |  |  |  | ... 877 |

The areas of the preceding year were 517 acres kharif and 1,181 acres rabi, but subsequent enquiries proved that 37 acres kharif and 65 acres rabi, which had taken no water, had been wrongly included. Deducting these, the areas of the two years compare as follows:-

|  |  |  |  | 1894-95. <br> Acres. | 1895-96. Difference less, |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Acres. | Acres. |
| Kharif | $\ldots$ | ... | $\cdots$ |  | 480 | 86 | 394 |
| Rabi | ... | ... | ... | 1,116 | 791 | 325 |
|  |  |  | , Total decrease .. |  |  | 719 |

The reasons for the decrease are, good rainfall during the kharif season, increase in rates which came into force this year, and doubts entertained by the cultivators as to whether their applications for cultivation within the $\frac{1}{4}$ th mile radius of villages would be sanctioned or refused on sanitary grounds: see Government Resolution No. 154 W.-I.-1769, dated 18th November 1895. These causes of decrease are not likely to influence the area under irrigation in succeeding years.
2. The area applied for was 831 acres (kharif 60 acres and rabi 771 acres) and the area irrigated was 877 acres. The difference is due principally to errors in entering areas of pot numbers in water applications.

Comparison of area applied for and irrigated.
3. During the year the water-rate assessments amounted to Rs, 3,271;

Water-rale assessments. detailed as below, against lis. 5,467 in the previous year:-

|  |  |  | Rs. |  |
| :--- | :---: | :---: | :---: | ---: |
| Kharif | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$. |
| labi | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots 2,544$ |
|  |  |  |  |  |
|  |  |  |  | Total |
|  | $\ldots, 03,271$ |  |  |  |

- The assessment under the old scale would have been Rs. 2,540. The reasons for the decrease are given in paragraph 1, and another reason is the large falling off in the area of ground-nuts which fell from 372 acres to 63 acres. There was no increase in water-rates for ground-nuts, and the reason for the falling off is not known.

4. Remissions amounting to Rs. 308-0-5 were sanctioned during the year on account of erroneous assessments for 1894-95. Remissions. These were necessitated by the incompetence and dishonesty of the Canal Inspector who was dismissed in September 1895.
5. Refunds amounting to Rs. 262 were sanctioned during the year on account of erroneous assessment, but Rs. 146 only Refandse were repaid during the year; the remaining amount will be paid in 1896-97.
6. The revised water-rates sanctioned in Government Resolution No. 154 A.I.-898, dated 7th June 1895, were brought into force since 16 th October 1895, They are to continue for five years, and compare with the previous rates as follows:-

Old rate Revised rate
per Acre. per Acre.
Rs. . Rs.

| Class | I.-Perennial | $\cdots$ | ** | ... | 12 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Do. | II.-Eight months | ... | ... | .... | 4 | 4 |
| Do. | III.-Four months | ... | ... | ... | 2 | 3 |
| Do. | IV,-Monsoon dry | ... | ... | ... | 1 | 1 |
| Do. | V.-Special hot wea | ther | ... | . $*$ | 4 | 4 |

7. The following table compares the areas irriComparison of area irri- gated and the revenue derived during the previous gated ard revenue. . three years with the figures of the year under report:-

| Year. |  | Area ${ }^{\text {. }}$ irrigated. | Revenue from Water-rateq. | Rainfall from 1st April 1895 to 31st March 1896. |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Acres. | Rs. | Ins. cts. |
| 1892-93 | ... | 1,337 | 4,038 | $46 \quad 63$ |
| 1893-94... | -.. | 1,613 | 5,173 | 3150 |
| $189+95$ | ... | 1,698 | 5,467 | 2855 |
| 1895-96 ... | ... | 877 | 3,271 | 2465 |

The increase of rates from Rs. 2 to Rs. 3 may have affected the area of jowári and gram, which fell from 690 acres to 431 acres and from 245 acres to 153 acres respectively, while ground-nuts, on which there was no increase in waterrate, fell from 372 acres to 63 acres.

- 8. The incidence of water-rate per acre was Rs. 3.73 against Rs. 3.22 in the previous year. The increase is due to the revision of water-rates.

9. The working expenses amounted to Rs. 9,101

Working expenses. detailed as below, against Rs, 12,281 in the previous jear:-

| Maintenance and repairs | ... | ... | $\cdots$ | $\underset{\text { 2,043 }}{\text { Rs. }}$ |
| :---: | :---: | :---: | :---: | :---: |
| .Share of establishment | $\ldots$ | $\ldots$ | ... | 5,761 |
| Tools and plant ... | ... | .. | ... |  |
| :Share of collection charges | ... | - | ... | 344 |
| Indirect charges ... | ... | $\therefore$ | ... | 807 |
| Refund of revenue ... | .. | ... | $\cdots$ | 146 |
|  |  |  |  | 9,101 |

- The rate of working expenses per mile of main canal open was Rs, 2,022 and por acre irrigated Rs. $10 \cdot 38$, The expenditure on repairs to head-works was reduced from Rs. 681 to Rs. 566. This item includes expenditure on account of raising a temporary dam across waste weir channel, and saving was on this dam. The cost of repairs to masonry works increased from Rs. 99 to lis. 152 ; this was due to the necessity of replacing the teakwood planks. of many of the escapes, the old ones having become unsound and incapable of being rendered whter-tight; there was also increased expenditure on earth-work-main canalamounting to Rs. 89, due to the necessity for clearance to parts of the canal in 2nd, 3rd and 4th miles and of Rs. 31 on earth-work-branch canals. The total expenditure for maintenance and repairs exceeded that of the previous year by Rs. 80 .

The increase of Rs. 64 under collection charges is due to the increase in the amounts to be collected during the year.
10. The duty per cubic foot per second of water

- Duty of water. actually utilized was $18 \cdot 70$ acres in the kharif and $123 \cdot 40$ acres in the rabi season.

11. The cost of measurement of 90 acres (excluding 787 acres subdivided) was Rs. 9-15-0 or Re. 0-1-9, against Rs. 30 or Re. 0-3-10 per acre last year.
Cost of measurement.
12. The rainfall as gauged at Bhatodi was kbarif $23 \cdot 51$, rabi $1 \cdot 14$, total $24 \cdot 65$ inches, or 2.02 inches less than the average of the last five years.
13. On the 1 st $\Delta$ pril 1895 the water in the tank stood at 11.85 feet above

Water-sapply. sill of outlet, i.e. 6.25 lower than on the same date
in the previous year. The first replenishment was on llth June 1895; water rose from R. L. 7688 to $76 \cdot 90$. The highest R. L. of waste weir. On 31st March the R. L. of water was $87 \cdot 34$ against $81 \cdot 90$ on the same date in the previous year. The supply of water in the tank was ample,
14. On 31st March 1896 the number of trees on the canal was 11,537 as Plantation. compared with 7,681 in the previous year. The numPlantation. bers of principal kinds were:-


> (19).-MA'TOBA TANK.

The water in this tank stood at 17.83 feet above sill of outlet on 1st April $\begin{array}{ll}\text { - Tank supply. } & 1895 \text {. The draw-off for irrigation reduced the supply } \\ \text { until 4th June, when it stood at } 8.85\end{array}$ until 4th June, when it stood at 8.85 . From the 5th June it commenced to be replenished, and filled to overflowing on the 2nd August, and on the 31st March 1896 the level was $19 \cdot 44$ abore sill of outlet, or 1.50 feet higher than on the same date in the previous year.
2. The area irrigated from the tank during the year was 1,108 acres, of which 84.0 acres were under kharif and 328 acres under rabi crops. The total shows a decrease of 252 acres as compared with that of the previous year, and is
The assessments of water-rates amounted to Rs. 8,971 ments. due to favourable rainfall. The assessments of water-rates amountod to Rs. 8,971 . Ms. 10,079 in the previous year. The cause of the decrease is chiefly due to the reduction in the area of sugarcane, as explained in para. 3 of the Mutha Canals Report. $\cdot$ The incidence of water-rates was Re. 7.63 per acre irrigated agaiust $\mathrm{Rs}_{1} 7.00$ in the previous year.
3. The cost of measurement amounted to Rs. 63 for an area of 1,168 acres, or at the rate of 10 pies per acre.
4. The working expenses amounted to Rs. 3,014, which represents a rate Working expenses. per mile of canal in operation of Rs. 177.29, or 2.58 per acre irrigated.
5. The following statement shows the duty of water ascertained from Duty of water. special observations of discharge and. area actually under irrigation during the months referred to :-


Area irrigated and applied for.

| Arba $\triangle$ prlibd for. |  |  | - Abra mbigated. |  |  | More. |  | Less, |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Kharif, | Rabi. | Total. | Kharif. | Rabi. | Total. | Eharif. | Rabi. | Kharif. | Rabi. |
| 1,019 | 531 | 1,550 | 840 | 328 | 1,168 | $\cdots$ | ... | 179 | 203 |

Decrease due to favourable rainfall.
(20).-KȦSURDI TANK.

During an unusually heary storm, on the night of 9th June 1895, the Tank supply. Kásurdi tank dam was breached and the necessary repairs were in progress during this jear at an estimated cost of Rs. 3,001 .

Area irrigated and assess- 2. The area irrigated was 3 acres of rabi only ments. on leakage water.
The assessments amounted to Rs. 54, of which Rs. 8 were on account of water-rates and Rs. 46 for miscellaneous revenue.
3. The working expenses amounted to Rs. 3,766. The excess was due

Working expenses. to expenditure on special repairs to the dam and proportionate charge for establishment on the increased outlay.

## (21).-SHIRSDPHAL TANK.

On the 1şt April 1895 there was no water in the tank, and it remained Tank supply. empty till the 25th May 1895:- The tank was replenished on the 26 th May and water rose to $11 \cdot 00$ abore the outlet sill on that day; the draw-off commenced from the same date and on 6th September water stood at 7.88 feet. Between September and November the water rose to 25.75 feet above outlet. The draw-off commenced from. 10th November, and on 31st March 1896 the water stood at 19.55 feet, \& ..
2. The area irrigated was 131 acres of kharif and 589 acres of rabi, mak-

Area irrigated and assessment. ing a total of 720 acres against 177 acres in the previous year. The increase was due to increased supply of water in the tank for rabi crops. The assessments of water-rates amounted to Rs. 2,064, and the miscellaneous revenue to Rs. 173, making a total of Rs. 2,237 against Rs. 1,304 in the previous year.

Cost of measurement.
3. The cost of measurement amounted Rs. 15 for an area of 720 acres, or at the rate of 4 pies per acre.
4. The working expenses amounted to Rs. 2,692, which represents a rate Working expenses. for maintenance per mile of canal in operation of Rs, $215 \cdot 36$ and Rs. $3 \cdot 74$ per acre irrigated.

Area applied for and irri-
5. The following is the comparison of areas irrigated. gated and applied for:-

|  |  |  | Arba ibrigatid, |  |  | Morr, |  | Less. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Eharif. | Rabi. | Total. | Eharif, | Rabi. | Total | Kharif. | Eabi, | Kharif. | Rabi. |
| Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. |
| 168 | 520 | 688 | 131 | 589 | 720 | $\ldots$ | 69 | 37 |  |

The difference is due to approximate areas being given by the cultivators in their applications for water.
6. To ascertain the loss by evaporation and leakage from the tank during

Evaporation and leakage. the year, gaugings were taken- for broken periods during the months of May 1895 to September 1895 and November 1895 to March 1896, or a total number of 252 days. During this period the loss amounted to $75,906,304$ çubio feet, or nearly $\frac{1}{5}$ th of the total capacity of the tank above outlet level. The tank was empty up to 25th May 1895.
(22). - BHÃDALVADI TANK,

At the beginning of the year the water level stood at 20.07 feet above the Tauk supply. outlet sill, or $9 \cdot 17$ feet higher than on the same date in the previous year. The tank filled to overflowing on the 15th September 1895. The draw-off commenced from 21st Oct.ober, and at the close of the year, 31st March 1896, the water level stood at 28.2i, or 8.08 feet higher tban on the same date in the previous gear.
2. The areas irrigated were 313 acres of kbarif and 523 acres of rabi, making a total of 836 acres against 299 aores in the previous year. The increase was due to good supply of water in the tank.
The assessments of water-rates amounted to Rs. 2,202 and the miscellane. ous revenue to Rs. 8, making a total of Rs. 2,300 against Rs. 746 in the previous year.

Cost of measurement.
3. The cost of measurement amounted to Rs, 41 for an area of 836 acres, or at the rate of 9 pies per acre.
4. The working expenses amounted to Re. 1,968, which represents a rate Working expenses. of Rs. 201.85 per mile of canal in operation and Rs. $2 \cdot 35$ per acre irrigated.

Area applied for and irrigated.
5. The following is the comparison of arcas irri, gated and applied for:-

| AREA APSLIDD POR. |  |  | Area ibrigated, |  |  | Мовz. |  | Less. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Kharif. | Rabi. | Total. | Kharif. | $\mathrm{H}_{\text {abi }}$. | Total. | Kharif. | Rabi. | Kharit. | Rabi. |
| Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. |
| 466 | 470 | 936 | 313 | 523 | 836 | $\cdots$ | 53 | 153 | ... |

The difference is due to approximate areas being given by the cultivators in their applications for water.
6. To ascertain the loss by evaporation and leakage from the tank during the year gaugings were taken for broken perinds during April 1895 to March 1896, or a total number of Evaporation and leakago. 310 days. During this period the loss amounted to $57,120,196$ cubic feet, or $\frac{1}{4}$ th of the total capacity of the tank above outlet level.
(23).-KOREGAON TANK.

The rainfall for the year under report was 43.95 inches (kharif 41.75 and Rainfall. rabi 2.20) against $23 \cdot 10$ inches of the previous year (kharif 21.20 and rabi $1 \cdot 90$ ).
2. The lowest water level in the tank was 83.60 on 19th June 1895, Replenishment. representing a depth of water of $3 \cdot 60$ feet over the sill of canal sluice. Replenishment commenced on 22nd June 1895, and the waste weir began to overflow on 20th September 1895.
3. The area irrigated during the year was 343 acres (kharif 51 and rabi

## Area irrigated.

 292) against 391 acres of the previous year (kharif 85 and rabi 306). The area applied for was 57 acres and 305 acres of kharif and rabi respectivety. The difference between the areas applied for and areas actually irrigated is due to the cultivators being ignorant of the areas of their fields.4. The assessment on account of water-rates was Rs, 850 against Rs. 1,150

Assessed revenue. . of the previous year. The gross revenue from all sources amounted to Rs. 890 against Rs. 1,175 of the previous year. The decrease is due to a smaller area being irrigated during the year.
Comparison with previous 5. The following table gives a comparison with years. previous seven years:-

| Yasre. |  |  | Kharif. <br> Acres | Rabi, | Total . | Waterrates. | Cross Revenue. | Working Expenses. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Acres, | Acres. | Rs. | Rs. | Rs. |
| 1888.80 |  | - ${ }^{\prime}$ | 151 | 79 | 230 | 714 | 1,2S9 | 757. |
| 1889-90 |  | ... | 13 | 323 | 336 | 743 | 746 | 895 |
| 1890-91 |  | $\cdots$ | 121 | 99 | 220 | 590 | 599 | 773 |
| 1891-92 | ... | ... | 66 | 363 | 429 | 1,061 | 1,073 | 886 |
| 1892-93 |  | .. | 47 | 255 | 302 | 769 | 779 | 1,087 |
| 1893-94 |  | ..' | 94 | 258 | 352 | 1,006 | 1,015 | 822 |
| 1894-95 | ... | :., | 85 | 306 | 391 | 1,150 | 1,175 | 730 |
| 1590.96. | ... | ... | 51 | 292 | 343 | 850 | . 890 | 815 |

The decrease under kharif of 34 acres in 1895-96, as compared with the previous year, was due to insufficient storage of water in the tank. The - 1230-12
decrease under rabi is small ( 14 acres), and is due to favourable rainfall during that season.

> 6. The working expenses, including indirgct charges, were Rs. 815, of Working expenses. which Rs. 365 were for maintenance and repairs, representirg Rs. 97 per nile of canal, which is 3 q miles in length, against Rs. 83 of the previous year. The increase was on account of extra repairs to the dam and the canal during the year.

Measuring charges. 7. The area irrigated was measured at a cost of
8. The rainfall over $4 \cdot 40$ square miles of the catchment area from lst June Tank supply. to 31 st . October 1895 . was 43.95 inclies, which gives $449 \cdot 26$ millions of cubic feet of water as laving fallen on the catchment area. Forty-four per cent. of this ran off into the tank. The run-off from 1st June to 20th September 1895, on which date the waste weir began to overflow, was 0.32 .

Plantations.
9. There were no nerr plantations made during the year.
10. No special experiments were made during the year for ascertaining Duty of water. the duty of water required for different kinds of crops.
(24).-ASHTI TANK.

The rainfall for the year under report was 29.55 inches (kharif 25.60 and Rainfall. rabi 3.95 inches) against 21.70 inches of the previous year (kharif $19 \div 30$ and rabi 240 inches), and was seasonable.
2. The lowest water level in the tank was $1,535 \cdot 90$ prior to replenishment, Replenishment. and the depth of water over sill of canal sluice was 8.30 feet. The tank commenced to fill on 8 th July 1895, and the cut in the waste weir began to overflow on 8th September 1895.
3. The area irrigated during the year was 1,323 acres (kharif 486 and Area irrigated. rabi 837) against 1,459 acres of the previous year (kharif 645 and rabi 814). The area actually irrigated was nearly the same as that applied for. The land under command being subdivided into smaller irrigation numbers, the cultivators know the esact area of land to be irrigated.
4. The assessment on account of water-rates was Rs. 3,077 against Assessed revenue. Rs. 4,717 of the previous year. The gross revenue from all sources amounted to Rs. 4,545 against Rs. 5,136 of the previous year. The decrease is due to less area irrigated under kharif during the year.
Comparison with previons 5. The following statement compares the results years.
of the year with those of the previous seven years:-


There was a decrease of 159 acres in kbarif and an increase of 23 acres in rabi as compared with the previous year. The decrease is due partly to unfavourable rainfall at the commencement of the monsoon season for sowing ground-nut, and partly to the cultivators not having sown ground-nut owing to the number of wild pigs in some of the villages under command. The increase in rabi is very small, and requires no explanation. The revenue from sources, other than water-rates, was Res. 568, and was on account of land let out for cultivation and grazing, sale of aloe leaves and trees, \&c. The incidence of waterrate per acre irrigated was Rs. 3 against Rs. $3 \cdot 23$ of the previous year.
6. The working expenses, including indirect charges, were Rs. 3,918, of

Working expenses. which Rs. 2,360 were spent for maintenance and repairs, including special repairs to canals, representing a charge of Rs. 80 per mile of canal against Rs. 70 in the previous year, the length of canals, branch canals and distributaries being $29 \frac{1}{2}$ miles. The increase was due to special repairs to canals costing Rs. 268.
7. No. measuring charges were incurred as the lands under command Measuring charges. have been subdivided into smaller pôt numbers for irrigation purposes.
8. The rainfall over 92 square miles of catchment area of the tank was Tank supply. gauged at two stations, and the average rainfall was 30.65 inches against 21.62 of the previous year. The run-off into the tank is calculated to have been 0.40 of the rainfall from 1st June to 31st October 1895. .The run-off from 1st June to 8th September 1895, on which date the cut in the waste weir began to overflow, was 0.30 .
9. The following figures show the storage of

Evaporation and absorption. water and loss by evaporation and absorption during the year:-

Cubit feet.
Quantity of water in tank on 31st March 1835 plus the quantity that flowed into the tank during the year ...

$$
3,119,107,415 \cdot 50
$$

Quantity of water $\dddot{\text { discharged }} \ldots \ldots$

$$
\text { uantity of water cuscharged tarough canals and- } 1,622,532,752 \cdot 00
$$

Balance of water in tank on | 31st |
| :---: |
| March |
| $\mathbf{1}$ |
| 8 | 36

... $\quad 838,180,734: 50$
2,460,713,486.50
Quantity lost bey vaporation and absorption
$658,393,929 \cdot 00$
10. Nọ new trees were planted during the year. The system mentioned Plantations. in the Mhasvad Tank Report regarding new plantations and sales of existing trees, applies to this tank also. The existing trees on the tank contour and canals on 31st March 1896, were 52,932 in number as detailed below. Of these, 38,854 were over 5 feet and 14,078 under 5 feet in height detailed as below:-

(25).-Reyíri canal.
11. Special experiments were made to determine the duty of water required Daty of water: to mature certain kinds of crops, and the results were as under:-
One cubic foot of water per second was found sufficient to irrigate 91 acres of sugarcane, 172 acres of ground-nut, 166 acres of inferior rice, 125 acres of jod wheat.
(25).-REVA'RI CANAL.

The Capital Account of this canal was closed on 31st March 1893. Capital Account. The only expenditure that was incurred on it during account of land taken up for the extension of the canal-vide note explaining the differences between the sanctioned and actual expenditure under II.-Main Canal and Branches, B.-Land, in the completion report of the work.
2. The rainfall, as gauged at Revári near the Rainfall. head-works, is shown in the following table:-

| Years. | Kharif. | Rabi. | Total. |
| :---: | :---: | :---: | :---: |
|  | Ins.cts. | Ins, cts. | Ins. cts. |
| 1895-96 | 2166 | $10 \quad 24$ | 3190 |
| 1894-95 | 2791 | 385 | 3176 |
| Average, 1891-94 | 2234 | 582 | 2816 |

3. The area irrigated, the assessments, working expenses and average water-rate as compared with the average of the previous four years were:-

| Years. | Kharif. |  | Rabi. |  | Total. |  | $\left\lvert\, \begin{aligned} & \text { Average } \\ & \text { Water }{ }^{\text {atate. }}\end{aligned}\right.$ | Working Expense. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Ris. | Acres. | Rs. | Acres. | Rs. | Re. | Rs. |
| 1895-96 | 141 | 1,628 | 1,083 | 4,054 | 1,224 | 5,682 | 4.64 | 3,464 |
| Average, 1891-92 to |  |  |  |  |  |  |  |  |
| 1894-95 | 219 | 2,400 | 966 | 3,077 | 1,185 | 5,477 | 4.70 | 1,837 |
| Increase |  |  | 117 | 977 |  | 205 |  | 1,627 |
| Decrease ... | 78 | 772 | :.. | ... | ... | ... | 0.06 |  |

4. As compared with the average of the previous four jears there is a

Area irrigated and assees. decrease of 78 acres in area and of Rs. 772 in assessment in the kharif and an increase of 117 acres in area and of Rs. 977 in assessment in the rali. The net increase in the water-rate assessment is Rs. 205 orer the average of previous four years. But compared with the last year there is a decrease of Rs. 902 in assessment, which is due to timely and sufficient rainfall, Remissions of Rs. 27 and Rs. 38 were granted in the kharff and rabi seasons, respectively-vide Government Resolution No. 3610, dated 23rd August 1865.
5. The principal crops irrigated during the ycar were as follows compared with the previous four years:-

| Name of crop. |  | Area irrigated, 1896.46. | Arerage area of the previout fuar years. |
| :---: | :---: | :---: | :---: |
|  |  | Acres. | Acres. |
| Sugarcane | ... | 52 | 91 |
| Wheat... |  | 124 | 134 |
| Ground-nut | . | 369 | 555 |
| Jowári... | ... | 577 | 309 |

6. The area irrigated was 34 per cent. of that irrigable and 15 per cent. less than that applied for.
7. The working expenses, including direct and indirect charges, amounted

Working exponses. , to Rs. 3,464 against Rs. 1,938 in the previous year, and are 60 per cent. of the gross revenue. The rate per mile of canal was Rs. 693 and the rate per acre irrigated was Rs. 2.83 as compared with Rs. 387 and Rs. $1 \times 26$ for the previous year.

The excess expenditure during the year is partly due to works of the nature of original works having been charged to the Revenue Account, viz.:-

and in addition to this a sum of Rs. 503 was spent on special silt clearance.
8. The operations of the year show a net profit of Rs. 2,332 , or 4 per cent. on the direct capital outlay of Rs. 56,771 . This being an old native work the whole cost of construction is not included in the capital outlay.
9. The average water-rate and cost of measure-

Average water-rate and cost of measarement. ment, as compared with the previous years, were as follows:-

| Yearn. | Area irrigated. | Average incidence of Water-rate per Acre. | Cost of Mbastrbiment amd Reverua Establishmart. |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Cost. | Per Acre. |
|  | Acres, | Rs. | Rs. | Rs. a. p. |
| 1892-93 | 1,011 | $4 \cdot 15$ | - 181 | 029 |
| 1893-94 ... | 1,348 | $4 \cdot 64$ | 217 | 027 |
| 1894-95 .. | 1,541 | $4 \cdot 27$ | 271 | 029 |
| 1895-96. | 1,224 | $4 \cdot 64$ | 316 | $\begin{array}{lll}0 & 4 & 2\end{array}$ |

Excluding the charge for Revenue Establishment, the cost of crop measurement alone was Rs. 233, which is equal to Re. 0-3-1 per acre against Rs. 187, or Re. 0-1-11 per acre for 1894-95,
10. The average duty of water obtained was for the kharif season 21 acres

Duty of water. and for the rabi season 160 acres per cubic foot per second.
11. The number of trees of all classes on the canal at the beginning of the Plantations. year was 1,729 and at the end of the jear 1,776.

The principal varieties are bábul 1,188, jámbul 139, mango 106 and bamboo 124. The net revenue from plantation was Rs. 87,

## (26).-UPPER MA'N RIVER WORKS,

The Capital Account of this project was closed on the 31st March 1892. Capital Account. The only expenditure incurred during the year was quin R. 120 paid by the Civil Department on account of acquiring land likely to be damaged by the floods from the Pingli Tank.

в 1239-13
2. The rainfall, as gauged at Gondowli, the centre of the irrigated area, is Rainfall. shown in the following table:-

3. The area irrigated, the assessment, working expenses and average waterrate were as follows:-

| Years. | Kharif. |  | Rabi, |  | Total, |  | Average Water-rate. | Working Ехреавяв. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Rs. | Acres. | Rs. | Acres, | Rs. | Rs. | Rs. |
| 1895 -96 | 723 | 4,072 | 912 | 2,592 | 1,635 | 6,664 | $4 \cdot 08$ | 5,193 |
| $\begin{array}{cc} \text { Average, } & 1891-92 \\ 1894-95 \quad \ldots \end{array}$ | 756 | 3,368 | 517 | 1,899 | 1,303 | 5,267 | 4.04 | 4,710 |
| Increase |  | 704 | 365 | 693 | 332 | 1,397 | 0.04 | 483 |
| Decrease | 33 | ... | . $\cdot$ | ... | . ${ }^{\circ}$ |  | ... | ... |

4. As compared with the average of the previous four years, there is an decrease of 33 acres in area and an increase of Rs. 704 Ares irrigated and assess- $\begin{aligned} & \text { decrease assment in the kharif season and an increase of } \\ & \text { in }\end{aligned}$ ment. 365 acres in area and of Rs. 693 in assessment in the rabi season. The assessment of the year under report is Rs. 1,397 more than the average of past four years, but is nearly equal to that of $1894-95$. The area irrigated was 21 per cent. of the irrigable area and 4 per cent. in excess of that applied for.

Principal orops,
5. The principal crops irrigated during the year were as follows compared with the previous four years:-

| Name of Crop. | Ares irrigated <br> in 1895.96. | Average of the <br> previous four <br> years, |  |
| :--- | :---: | :---: | :---: |
|  |  |  | Acres. |
|  | Acres. |  |  |
| Sugarcane | $\ldots$ | $\ldots$ | 92 |
| Wheat... | $\ldots$ | $\ldots$ | 226 |
| Jowári ... | $\ldots$ | $\ldots$ | 567 |
| Ground-nut | $\ldots$ | $\ldots$ | 287 |

6. The revenue from all other sources amounted to Rs. 112, bringing the gross revenue of the year to Rs. 6,776.
7. The working expenses, including direct and indirect charges, amounted Working expenses, to Rs. 5,193 against Rs. 4,239 for $1894-95$. The rate per mile of canal was Rs. 297 and per acre irrigated Rs. 3.18. The working expenses amounted to Rs. 77 per cent. on the gross revenue. The excess expenditure during the year under report is due to Rs. 788 spent on special repairs to the Pingli Tank and Canal, consisting of removing silt from canal and repairs to banks, \&cc., and the construction of a Famine Memorial Tablet at a cost of Rs. 136.
8. After deducting working expenses from the gross revenue, there was a net profit of Re. $1_{2} 583$, equal to a rate of 0.38 per cent, on the outlay of Rs, $4,07,541$.
9. The average water-rate and cost of measure-

Average water-rate and cost of measarement. ment, as compared with the previous three years, were as under:-

|  | Yeara. |  |  | Total area irrigated. | Averaga incidence of water-rate per Acre. | Cost op Mrastrembit and Rbybnta Establibhmbit. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Total Cost. | Per Acre, |
|  |  |  |  | Acres. | Rs. | Rs. | Rs. a. p. |
| 1892-93... | $\cdots$ | ... | ... | 1,039 | 2:90 | 303 | 0 048 |
| 1893-94... | . | ... | ... | 1,490 | 4.75 | 474 | $\begin{array}{llll}0 & 5 & 1\end{array}$ |
| 1894-95... | ... | ... | ... | 1,294 | $5 \cdot 16$ | 414 | 0 051 |
| 1895-96... | $\cdots$ | . $\cdot$, | ... | 1,635 | 4.08 | 432 | 043 |

Excluding the charge for revenue establishment, the cost of crop measurement alone was Rs. 298, or Re. 0-2-11 per acre, against Rs. 175, or Re. 0-2-2 per acre, for the previous year.
10. The average duty of water obtained was for kharif 209 acres and for Duty of water, rabi 174 acres per cubic foot per second.
11. The following table shows the principal levels

'Ihere were no waste weir floods over 2 ' deep during the year.
12. The number of trees of all classes on the canal at the beginning of the Plantations. year was 5,003 , and at its close 5,166 .
The principal varieties are bábul 4,944, jámbul 32 , saundad 20, mango 21, \&c. The net revenue from plantation was Rs. 61.

## (27).-YERLA RIVER TRRIGATION WORKS.

The works (1) Reconstructing a portion of Nehr Tank Dam, (2) Nehr Tank Capital expenditure. Service Road, (3) Special repairs to Nehr Store, and (4) last year and were all of them completed during the year under report, with the exception of No. 1. The expenditure incurred on them during the year was Rs. 6,360 on "Works." .

Rainfall.
2. Therainfall, as gauged at Khatgum near the head of the irrigated area, is shown in the following table:-

| Years. | $\bullet$-Kharif, | Rabi. | Total |
| :---: | :---: | :---: | :---: |
|  | Ins. cts. | Ins. cts. | Ins. cts. |
| 1895-96 | 1842 | $10 \quad 18$ | 2860 |
| 1894-95 | 2349 | 591 | 2940 |
| Average, 1891-94 | 2108 | 723 | 2831 |

3. The ares irrigated, the assessment, working expenses and average waterrate were as under:-

| Yeare | Eharit |  | Rabi. |  | Total. |  | $\begin{gathered} \text { Avenge } \\ \begin{array}{c} \text { Water. } \\ \text { rate. } \end{array} \end{gathered}$ | Warking Expenset. <br> Expensea |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Rs. | Acres. | Rs. | Acres. | Rs. | Rs. | Re. |
| 1395-96 ... | 773 | 4,166 | 1,834 | 4,907 | 2,807 | 9,073 | $3 \cdot 48$ | 6,418 |
| $\begin{array}{cc} \text { Average, } & 1891-92 \\ \text { to } 1894-95 & \ldots \end{array}$ | 513 | 3,020 | 1,592 | 4,868 | 2,105 | 7,883 | 3.75 | 10,636 |
| Increase | 261 | 1,146 | 242. | 39 | 502 | 1,185 | ... | ... |
| Decrease ... | $\cdots$ | $\cdots$ | ... | ... | ... | ... | $\cdot 27$ | 4,218 |

4. As compared with the average of the previous four years there was an Area irrigated and assess-
ment. increase in area in both the seasons. This is principally due to the unfarourable rainfall in the kharif season. The replenishment to the Nehr Tank during the monsoon was good and the supply lasted throughout the hot season. During the year under report although the supply was certain and the people were giren assurance of the same, yet the culticators having failed with their sugarcane crop during the previous two or three years thought it wiser not to sow sugarcane.

Remissions to the extent of Rs. 6 were granted in the khárif season-ride - Government Resolution No. 107 W.-I.- 327 of 22nd Augast 1877. The revenue from other sources was Rs. 1,383 and the gross revenue Rs. 10,456.

6. The area irrigated was 24 per cent. of that irrigable and 9 per cent. in excess of that applied for.
7. The working expenses, including direct and indirect charges, amounted Working expenses, to Rs. 6,418 against Rs, 23,752 for 1891-95. The open and Rs. $2 \cdot 46$ per acre irrigated, and amount to 61 per cent. of the gross гегепие.
8. The average water-rate and cost of the

Average water-rute and crop measurement. measurement as compared with the previous three years were as under :-

|  | Years. | - | : <br> Total area irrigated. | Average incidence of Waterrate per Acre. ${ }^{\text {. }}$ | Cost of Mrasurement and Revenue Establishment. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Total cost. | Per Acre. |
|  |  |  | Acres. | Rs. | Rs. | Rs. a. p. |
| 1892-93 | ... |  | 1,831 | $3 \cdot 48$ | 466 | $\begin{array}{llll}0 & 4 & 1\end{array}$ |
| 1893.94 | ... |  | 1,958 | $3 \cdot 57$ | 527 | 0 4 4 |
| 1894.95 | ... |  | 2,385 | $3 \cdot 66$ | 556 | $0 \quad 38$ |
| 1895-96 |  |  | 2,607 | 348 | 681 | 0.42 |

Excluding the charge for the revenuc establishment, the cost of crop measurement alone was Rs. 503 , or Re. $0-3-1$ per acre, agaiust Rs. 216, or Re. 0-1.5 per acre, for 1894-95.

Daty of water: $\quad 9$. The average duty of water obtained was for kharif 95 acres and for rabi 192 per cubic foot per second.
10. The following table shows the principal

Tank supply.
levels of Nehr Tank:-


There were no waste weir floods over $\varrho^{\prime}$ deep during the year. The general character of the supply and replenishments during the monsoon was fairly satisfactory.
11. The number of trees of all classes on the canal at the beginning of the

Plantations,
year was 30,715 and atits close 24,756 . The principal varieties are bábul 17,538, mango 4,257, karanj 533 , jámbul 148, teak 90 and bamboo 345. The net revenue from plantation was Rs. 1,178.
(28).-CHIKHLI CANAL.

The Capital Account of this canal was closed on

Capital decount.
Rainfall 31st March 1883 ,
2. The rainfall, as gauged at Chhikli near the head of the irrigated area, is shown in the following table:-

| Year, | Kharif. |  | Rabi. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ins. |  | Ins |  | Ins. |  |
| 1595-96 ... ... | 17 | 50 |  | 86 | 22 | 36 |
| 1894-95. |  | 03 | 4 | 93 | 20 | 02 |
| Average, 1891-1834 |  | 92 | 6 | 81 | 21 | 73 |

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3. The area irrigated, the assessments, working expenses and average waterrate as compared with the average of the previous four years were as follows:-

| - Years. | Khari. |  | Rabi. |  | Total. |  | Average Water. rate | Working Expeusea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Rs. | Acres. | Rs. | Acres. | Rs. | Rs. | Rs. |
| 1895-96 ... | 322 | 1,462 | 55 | 194 | 377 | 1,656 | 4.39 | 967 |
| $\begin{gathered} \text { Average, } 1831-92 \\ \text { to } 1894-95 \\ \hline \text {... } \end{gathered}$ | 251 | 1,319 | 108 | 400 | 359 | 1,719 | 478 | 859 |
| Increase | 71 | 143 | $\cdots$ | ... | 18 | $\cdots$ | ... | 115 |
| Decrease | $\cdots$ | ... | 53 | 203 | ... | 63 | 0.39 | ... |

4. This year there was an increase in the area of 71 acres and of lis. 143 in the revenue in the kharif season over the average of the preceding four years; while in the rabi season
Area irrigated and absessment. there was a decrease in both area and revenue of 53 acres and Rs. 206 respectively. The net decrease in the water-rate assessment is Rs. 63 as compared with the average of the previous four years.
5. The principal crops irrigated during the year

Principal crops. were as follows compared with the previcus four years:-

| Name of crop. |  | $\begin{gathered} \text { Area } \\ \text { irrigated, } \\ 1895.96 . \end{gathered}$ | Average arem of the previous |
| :---: | :---: | :---: | :---: |
|  |  | Acres. | Acres. |
| Sugarcane |  | 27 | 29 |
| Wheat ... |  | 8 | 28 |
| Ground-nat... | ... | 186 | 150 |

6. The area irrigated was 26 per cent. of the irrigable area and 7 per cent. less than that for which applications were received.
. 7. Revenue from other sources was Rs.. 44 and the gross revenue amounted to Rs. 1,700.
7. The working expenses, including direct and indirect charges, were Rs. 967, and represent 57 per cent. on the gross reve-
Working expenses. nue, Rs. 149 per mile of canal open, and Rs. 2.56 per acre irrigated.
The operations of the year show a net profit of Rs. 733 , or $1 \frac{1}{3}$ per cent. on the direct capital outlay of Rs. 53,803 .
Average water-rate and 9. The average water-rate and cost of measurecost of measarement. ment as compared with previous three years were:-

| Years. |  |  | $\begin{gathered} \text { Total } \\ \text { arean } \\ \text { irrigated. } \end{gathered}$ | Average incidence of Waterrate per Acre. | Cost of Mrasobeyent and Revenoe Eitablibhimext. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Total cost. | Per Acre, |
|  |  |  | Acres. | Re. | Rs. | Rs. a, p. |
| 1832-93 | ..* | - | 263 | 465 | 62 | 0 O 38 |
| 1893-94 | ... | ... | 370 | $5 \cdot 43$ | 113 | 0410 |
| 1894-95 | ... | ... | 405 | 4.88 | 120 | 049 |
| 1835-96 | ... | -• | 377 | $4 \cdot 39$ | 133 | 058 |

Excluding the charge for revenue establishment the cost of the measurement alone was Rs. 13, or Re. 0.0-7 per acre, against Rs. 36 , or Re, 0-1-7 per acre, for 1894-95.

Duty of water. . the kharif season 102 acres and that for the rabi 6 acres
10. The average duty of water obtained was for per cubic foot per second.

Plantations.
11. The number of all classes of trees on the canal at the beginning of the year was 2,652 , and at its close 2,583.
The principal varieties are bábul 2,408 and mango 94. The net revenue from plantation was Rs. 44.

## (29).-MAINI TANK.

The Capital Account of this work was closed on
Capital Account 31st March 1892.
2. The rainfall, as gauged at Maini at the head of the irrigated area, is shown in the following table :-

| Years. | Kharif. |  | Rabit. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - | Ins. |  | Ins. |  | Ins. |  |
| 1895.96 | 19 | 90 | 9 | 66 | 29 | 56 |
| 1894-95 ... ... | 12 | 31 | 2 | 12 | 14. | 43 |
| A verage 1891 to 1894. |  | 25 | 6 | 12 | 19 | 87 |

3. The area irrigated, the assessment, working expenses and average waterrate were as follows:-

| Years. | Kharif, |  | Rali. |  | Total. |  | Average Waterrate. | Working Expenses. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Rs. | Acres. | Rs. | Acres. | Rs. | Rs. | Rs. |
| 1895-96 | 705 | 3,496 | 493 | 1,229 | 1,198 | 4,725 | 3.94 | 3,320 |
| 1894-95 ..i | 744 | 3,978 | 612 | 2,152 | 1,356 | 6,130 | $4 \cdot 52$ | 7,705. |
| $\begin{array}{ll} \text { Increase } & \text {... } \\ \text { Decrease } & \text {... } \end{array}$ | $\cdots$ | $\dddot{482}$ | 119 | 923 | 158 | 1,405 | 00.58 | $\dddot{4,385}$ |

4. The kbarif area irrigated during the year was less by 39 acres and the

Area irrigated and assessment. rabi area less by 119 acres than the average irrigated during the previous four years. The assessment during the year was less than that of the average of the past four years by Rs. $1 ; 405$. The reason for this decrease is the timely rainfall in the rabi season and the accumulation of silt in the tank which is now 14 feet above the outlet sill.
5. The principal crops irrigated during the year were as follows compared

Principal crops.
with average of the previous four years :-

| $\dot{\text { Name of Crop. }}$ | $\begin{gathered} \text { Area } \\ \text { irrigated, } \\ 1895-96 . \end{gathered}$ | Average of the Area of previous 4 years. |
| :---: | :---: | :---: |
|  | Acres. | Acres. |
| Sugarcane | 53 | 66 |
| Wheat... | 82 | 153 |
| Ground-nut ... | 439 | 532 |
| Jowári... | 131 | 91 |

6. The area irrigated ras 26 per cent. of the irrigable area under command of the canal and 10 per cent. in excess of that applied for.
7. The revenue from other sources amounted to Rs. 86 and the gross revenue to Rs. 4,811.
8. The rorking expenses, including direct and indirect charges, amounted

Working expenses. $\quad$ to Rs. 3,320, i.e. Rs. 197 per mile of canal open, Rs. 2.77 per acre irrigated, and about 69 per cent. of the gross revenue.
The operations of the jear show a net profit of Rs. 1,491.

| Average water-rate and <br> 9. The average water-rate and cost cost of measarement. ment, as compared with previous three as under:- |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Years, |  |  | Total Area irrigated. | Average incidence of Waterrate per Acre. | Cost of Mrastriment and Revence Etablisayest. |  |
|  |  |  | Total Cost. |  | Fer Acre. |
|  |  |  |  | Acre. | Rs. | Rs. | Rs. 8. |
| 1892-93 | ... | ... | 1,101 | $4 \cdot 46$ | 419 | 0. 6 |
| 1893-94 | ... | . $\cdot$ | 1,359 | 481 | 532 | 06 |
| 1834-95 | ... | ... | 1,280 | 3.98 | 440 | 05 |
| 1895-96 | ... | ... | 1,198 | 3-94 | 330 | 04 |

Excluding the charge for revenue establishment the cost of crop measurement alone was Rs. 140, or Rs. 0-1-10 per acre, against Rs. 224, or Re. 0-2-9 per acre, for $189 \pm-95$.
10. The average duty of water obtained for the kharit season was 171

Daty of water.
acres and for the rabi season 73 acres per cubic foot per second.
11. The following table shows the principal levels of the Maini Tank: -

| Particnlars. |  |  |  | Height above II. S. $\mathbf{L}_{0}$ | Reysmeg |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Water level on | 31st March 1895... |  |  | 2,291.02 |  |
| " | 1st June 1895 ... | $\cdots$ | ... | 2,28882 | Lowest pre-monsoon level. |
| , | 23rd September 1835 | $\cdots$ | ... | 2,300.87 | Highest monsoon level. |
| " | 31st October 1895 | $\ldots$ | ... | 2,300.87 | Level at end of monsoon. |
| \% | 31st March 1896... | $\ldots$ | $\cdots$ | 2,294.65 | . |

The outlet sluice sill is at $2,263 \cdot 32$ abore MI. S. L. and F. S. L. at $2390 \cdot 52$ above M. S. L.

There was only one waste weir flood nearly 2 feet deep during the year.
12. The number of trees of all classes on the canal at the beginning of

Plantation. the year was 8,800 and at its close 8,219 . The net revenue from plantation was Rs. 58.
(30).-MUCEKUNDI TANK.

1. The rainfall of the year compares with that of the previous year and Rainfall. with the average of the 10 previous years as under:-

|  | Kharit. | Rati. | Tots, |
| :---: | :---: | :---: | :---: |
| Average of 10 years ... | 12.57 | 703 | 1960 |
| 1894-95 | 13:22 | 485 | $17 \cdot 87$ |
| 1895-98 $\quad . \cdot$, - | $7 \cdot 53$ | 5.02 | 12.58 |

Aran irtigated and assessments.
2. The areas irrigated and assessed revenue of the past three years are shown below:-


The area applied for during 1895-96 was 30 acres (kharif 25 and rabi 5), or 10 acres more than that actually irrigated. The less irrigation was due to some of the applicants having not cultivated some perennial crops for want of funds and also to some applicants having applied for water for areas in excess of their requirements.

Miscellaneous revenue.
3. In addition to water-rates, a sum of Rs, $45 \Omega$ was realized under miscellaneous revenue as detailed below:-

Rs.
(1) By sale of tarvad plants and grass within the limits of the tank … ...
(2) Sale of water to the Manager, Ginning Factory at Bagalkot.... $\stackrel{3}{24}$
(3) Sale of dead trees in the bed of the tank ... ... 77
4. The working expenses amounted to Rs. 292 against Rs. 566 as shown in

Working expenses the previous year's report. The charge of Rs. 292 is made up as under:-
(1) Amount spent on account of survey for increasing the catch-

Rs, $\begin{array}{lllll}\text { ment area of the tank } \ldots & \ldots & . . . & 17 \\ \text { Maintenance and repairs of the tank } & \ldots & \ldots & \ldots & 203\end{array}$
(3) Establishment charges-

Direction at 5 per cent. on Rs. 209 ... ... ... 10
Executive at 18 per cent. on Rs. 209 .... .... 37
(4) Revenue Establishment-Pay of kárkan for measuring crops.
(5) Tonls and Plant (Rs. 3) and Leave and Pension allowance (Rs.7) and Share of collection charges (Rs. 4) as debited in the Examiner's Office .., ... 14
Total ... 292
5. The supply in the tank during the year under report, though less than that of the previous year, was sufficient for the small Storage. area under irrigation. On the 15th October 1895 the tank held 7.94 feet of water against $13 \cdot 82$ feet on the same date of the previous year. The run-off during the year amounted to 0.076 against 0.165 of the previous year.
6. The total number of trees and plants on the main and branch canals was 753, consisting of bábul 722, nimb 28 and tamarind 3, as detailed below :-

| Main Canal Broach Canal | Brbul. | Nimb. | Tamarind. |
| :---: | :---: | :---: | :---: |
|  |  | 25 |  |
|  | 213 | 3 | 3 |
|  | 722 | 28 | 3 |

The babbul are mostly fair sized trees; the others are only small plants.

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7. The area irrigated being small, no separate measurers were entertained. Measuring charges. The crops were measured by the gauge kárkún, part of whose pay, proportional to the time spent by him on the work, i. e. Rs. 5 , has been debited to measuring.

> (31).-NILGUND TANK.

An expenditure of Rs. 21 only was incurred on this work for remoring the shutters of the sluice and conveying them to Bijápur. There is no irrigation under this tank, as in accordance with Government Kesolution No. 98 W.-I.- 1141 of 17 th July 1894, the sluice is left full open in order that the water may not rise above sluice level.
(32).-GADIKERI TANK.

The management of this tavk is in the hands of the Revenue Department.

Rainfall.

Alea irrigated and revenue.

Working expenses.
2. The rainfall of the year was 28.36 inches against $28: 53$ of the previous year.
3. The area irrigated was 337 acres and the irrigation share of the consolidated revenue amounted to Rs. 1,987.
4. The working expenses, direct and indirect, amounted to Rs. 199 against Rs. $230^{\circ}$ of the previous year.
(33).-DA'MBAL TANK.

The rainfall gauge at the tank site amounted to $14: 58$ inches ( 10.68 inches Rainfall. during the kharif and 3.90 during the rabi season), against 12.98 inches of the previous year and $10 \cdot 61$ inches, the average annual rainfall for 16 years.
2. The tank was dry at the beginning of the year. Small replenishments Tank supply. in April brought some water in the tank, but it again ran dry at the ond of that month and remained so till 3rd of July 1895. The tank received a fair supply of water by replenishments in October and November, but it ran dry several times in the interval. On the 6th November 1895 the water level was at R. L. 143.98 and it gradually fell to R. L. $136^{\circ} 56$, i.e. $11 \cdot 56$ feet above the outlet sluices and $2 \cdot 56$ feet above the present bed of the tank on the 31st March 1896.

The supply was insufficient to meet the requirements of irrigation, and for this reason remissions for kharif crops were in some cases granted.
3. The following table shows the new area irrigated, assessment, working expenses and average water-rate as compared with the two previous jears:-

| Years, | Kharif. |  | $\underbrace{}_{\text {abi. }}$ |  | Total. |  | Averago <br> Water-rate | Working Expences |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Rs. | Acres. | Rs. | Acres. | Re. | Rs. | Rs. |
| 1893.94 ... | 110 | 623 | 17 | 50 | -127 | 679 | 5.35 | 560 |
| 1894-95 ... | 98 | 624 | 74 | 261 | 172 | 885 | $5 \cdot 15$ | 918 |
| 1895-96 .. | 10 | 93 | 33 |  | 49 | 179 | $3 \cdot 65$ | 1,098 |

4. The reason for the decrease in the area irrigated and in the assessment Area irrigated. above.
5. In addition to the above, 144 acres were irrigated under consolidated

Revenue. - rates bearing assessment (irrigation revenue) of Rs. 981 ; thus the total revenue from both sources was Rs. 1,160 , giving an incidence of Rs. 3.65 and Rs. 6.81 per acre for new and old irrigation respectively.
6. A sum of Rs. 401-3-0 was also received as miscellaneous revenue, Rs. 79-4-0 being on accout of bábul trees, \&c., sold by this Department and Rs. 321-15-0 on account of
Miscellaneous revenue. sale-proceeds of grazing by the Revenue Department.
7. The revenue from all sources amounted to Rs. 1,561 , and the net profit,

Net profit.
after deducting the direct and indirect expenses and a remission of Rs. 29, was Rs, 434, or equal to 0.71 per cent, on the direct capital outlay of Rs. 60,847 .

Duty of water.
8. The average duty of water per cubic foot per second was during the kharif season 171 acres and during the rabi season 72 acres.
(34).-MEDLERI TANK.

The rainfall of the year amounted to 18.70 inches, of which 14.35 inches Rainfall. fell during the kharif season and $4: 35$ during the rabi season. The rainfall of the previous year was $9 \cdot 29$ and the average rainfall for 18 years is $21 \cdot 23$ inches.
2. The water was below the sill of the outlet at the beginning of the year, and it was then used by lift for irrigation purposes. Tank sapply. - The tank received replenishments in May, June, September and October. The water level stood at R. L. 180, i.e. up to the waste weir crest, on the 8 th of October. After that date it gradually fell to R. L. $170 \cdot 10$, i. e. $5 \cdot 10$ feet above the outlet sluices, on the 31st of March 1896. The tank maintained a sufficient supply of water for irrigation purposes.


The comparison shows a steady though small increase in the area under irrigation and in the assessment, though at the same time the working expenses have increased and the net result is not so good as it was. The new rates come into force this year and it is hoped that the result will show an improvement in revenue realised.

Duty of water,
4. The average duty of water per cubic foot per second during the kharif season was 159 acres and during the rabi 43 acres.
(35).-MADAG TANK.

The rainfall of the year (kharif 13.73 inches and rabi 7.77 inches) was
Rainfall. $21: 50$ inches against $19 \cdot 74$ inches in the previous year. The average annual rainfall for 26 years is $29 \cdot 12$ inches.
(36).-ASTNDI TAME.
2. The area irrigated, water assessment, morking

Area irrigated and Assessment. expenses and arerage water-rate, as compared with the two previous jears, were:-

| Years, | Wharit |  | Rabi, |  | Totail |  | Average Water-rate | Working Eirfenses. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Rs. | Aeres. | Rs. | Acres. | Rs. | Rs. | Rs. |
| 1993-94 ... | 318 | 796 | 374 | 1,096 | 632 | 1,822 | 2.73 | 920 |
| $1834.95{ }^{\circ}$ | 583 | 1.274 | 835 | 965 | 924 | 2,33 | 248 | 1,687 |
| 1595-96 ... | 576 | 1,277 | 357 | 996 | 933 | 2,273 | $2 \cdot 44$ | 1,600 |

3. The difference in area irrigated and in assessment, as compared with the figures of the last year, is trifling.
4. Rs. 190-4-0 from sale of grass, trees, \&c., were realized during the year making a gross revenue from all sources of Rs. 2,373.
5. The total number of trees above $8 \frac{1^{\prime \prime}}{}$ in girth on the canals is 2,916 , consisting chiefly of nango, bábul, nimb, sandal and tamarind,
6. The net profit from this work during the year, after deducting the

Net profit. amount of working expenses, Rs. 1,660, amounted to Rs. 713, equal to about 0.44 per cent. on the direct capital outlay of Rs. 1,61,248.
7. The average duty of water per cubic foot per second was during the Duty of water. $\quad 112$ acres. 166 acres and during the rabi season 112 acres.

> (36).-ASUNDI TANK.

The rainfall of the year was diring the kbarif season 13.22 inches and
Rainfall. during the rabi season 3.65 inches, total 16.87 inches, against 13.49 inches of the previous year. The average annual rainiall for 28 years is $23 \cdot 12$ inches.
2. The tank was empty up to 13th April 1895, after which several small replenishments were received till October. The water
Tank supply. was at R. L. 104•46, i.e. $7 \cdot 46$ feet above the outlet sill, on the 1st of November 1895; it then gradually fell and stood at R. L. 99.02, i. e. $2 \cdot 02$ feet above the outlet sill, on the 31st March 1896. A fair supply of water was maintained throughout the whole jear under this tank.
3. The area irrigated, assessment, working ex-

Area irrigated and assessment. penses and average water-rate, as compared with the tro previous years, were:-

| Yeare | Sharit. |  | Eabi, |  | Total. |  | A Arerage | Working Expenkea |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres. | Rs. | Acres. | Ks. | Acres. | Rs. | Rs. | $\mathrm{R}_{6}$. |
| 1893-94 ... | 60 | 175 | 25 | 116 | 85 | 291 | 3.42 | 731 |
| 34-95 ... | 112 | 476 | 93 | 303 | 211 | 87 | 3.63 | 903 |
| 1835-96 ... | 93 | 335 | 46 | 102 | 112 | 437 | 3.08 | 964 |

4. The considerable decrease in the area irrigated and in the assessment, as compared with the figures for the previous year, was due to seasonable rainfall, especially in the rabi season.
5. The area irrigated under consolidated assessment was 185 acres with an irrigation revenue of Rs. 632; thus the total revenue derived from both sources amounted to Rs. 1,069.
6. Deducting Rs. 964 on account of working expenses, direct and indirect,

Net profit. from the total revenue, the net profit under this tank during the year was Rs. 105, or equal to about $0 \cdot 17$ per cent. on the direct capital outlay of Rs. 60,741.

Daty of water.
7. The average duty of water per cubic foot per second was during the kharif season 133 acres and during the rabi 216 acres.
(37).-MA'VINKOP TANK.

The management of this tank is in the hands of the Revenue Department.
2. During the year under report 540 acres were irrigated with a consolidated assessment of Rs. 2,321, the irrigation share of which is Rs. 1,857.
3. There was considerable increase in the area irrigated and in assessment as compared with the figures of the previous year owing to the revision settlement brought into force in 1895-96.
4. The total revenue from the tank amounted to Rs. 1,862 , including Rs. $5-4-0$ on account of miscellaneous receipts.

## (39).-GOKA'K CANAL, 1st SECTION, AND STORAGE WORKS.

The eapital expenditure, including direct and indirect charges, during the year was Rs, 16,707 and the total up to the end
Capital outlay. of the year under report was Rs. 12,11,583 against the estimated sum of Rs. $12,33,013$. The principal items of the year's outlay on works were:-


The Konur ford and extension of Gokák Canal, sanctioned in Government Resolutions No. 30 W.-I.-329, dated 22nd February 1894; and No. 151 W.-I.-1940, dated 21st December 1894, respectively, were completed during the year under report.
2. The rainfall gauged at the head of the canal compares with the

Rainfall. average of the last ten years and with the fall of 1894-95 as under :-


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It will be seen that there was an increase of 9.75 inches in the kharif season and $1-27$ inches in the rabi season as compared with last year, and that there were in all $3: 59$ inches over the average.
3. The storage reached its lowest level during the hot weather of 1895 on the 10th April of that year, when the water level was 18.86 feet above the sill of the canal sluices. The storage began to be drawn upon on the 5th January 1896. The tank filled and began to overflow on the 4th June 1895.

The maximum flood occurred on the 9th August 1895, rising to 2.95 feet above the weir crest and representing a volume of 50,828 cubic feet per second and a run-off of 0.08 inch per hour from the catchment basin.
4. The following table compares the areas irrigated and the water-rate Area irrigated and water assessments of the year with the average of the four rate assessments. years since the works were completed in 1891 :-


During the kharif season water was allowed free to an area of 116 acres under command of the new extension.

There was an increase of 512 acres irrigated in the kharif season, which was partly due to the small extension of the canal and partly to the rainfall being untimely. There was a decrease of 411 acres in the rabi season, which was due to a suitable rainfall during that season.

The area irrigated during the hot weather was 53 acres against 34 acres in the previous year.

No applications for perennial crops were refused during the year excepting in 4 or 5 cases where new land within $\frac{1}{4}$ mile of village sites was sought to be put under perennial:irrigation. This matter has been referred to the Sanitary Commissioner for his decision under the orders contained in Government Reso. lution No. 52 W.I.-646, dated 4th May 1896.

The irrigated area ( $4,46 \pm$ acres) amounted to 62 per cent. of the entire irrigable area ( 7,200 acres) under the canal so far as it has lieen constructed.

No remissions were granted during the year.
The irrigators under the newly extended canal-were allowed water froe to the value of his. 117 -vide Government Resolution No. 54 A.-I.-202, dated 7th May 1881, paragraph 2.
5. The arerage water-rate per acreirrigated was Average water-rate per acre. Rs. $2 \cdot 47$ against hs. $2 \cdot 73$ during the previous year.
6. The realizations of the year amounted to Rs. 22,797, including Realizationa and outstand- Rs. 10,816 paid by the Falls Mills Company. Of this ings. sum no amount remains outstanding.
7. In addition to water-rates the following miscellaneous revenue was derived from the canal:-

|  | - |  | Rs. |
| :---: | :---: | :---: | :---: |
| Water sapplied to the mills | . ${ }^{\text {a }}$ | ... | 10,816 |
| Sale of conal produce ... | ...' | .. | 227 |
|  | Total | ... | 11,043 |

The increased revenue derived from the Mills Company was due to the increased water-supply sanctioned to them from 1st August 1895, as per Government Resolution No. 109 W.-I.-1183, dated 26th July 1895.

Total assessed revenue. 8. The total assessed revenue of the year was :-

|  |  |  |  | Rs. |
| :--- | :---: | :---: | :---: | :---: |
| Water-rates ... | $\ldots$ | $\ldots$ |  | $\ldots$ |
| Water-power | $\ldots$ | 11,024 |  |  |
| Canal produce | $\ldots$ | $\ldots$ | $\ldots$ | 10,816 |
|  |  | $\cdots$ | $\cdots$ | 227 |
|  |  |  | Total | $\ldots$ |

There was a decrease of Rs. 801 in the assessed revenue on account of waterrates as compared with that of the previous year, which is chiefly due to the fall in the rabi irrigation.
9. The working expenses, including direct and indirect charges, compare

Working expenses. as under for the last five years, being the period during
which the present works have been in operation:-

| Particalars. | 1891.9?. | 1893.93. | 1893-94. | 1894-95. | 1895.96. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - | Rs. | Rs. | Rs. | Rs. | Rs. |
| Works ... ... | 2,426 | 2,654 | 2,433 | 2,416 | 2,466 |
| Establishment .. | 1,501 | 1,650 | 1,587 | 1,859 | 2,348 |
| Tools and Plant | 199 | 302 | 282 | 300 | 299 |
| Refund of Revenue | 10 | 14 |  | 24 | 3 |
| Collection ... ... | 837 | 867 | 1,522 | 827 | 1,140 |
| Leave and Pension Allowances | 210 | 231 | 222 | 260 | 329 |
| Total | 5,383 | 5,718 | 6,052 | 5,686 | 6,585 |

The outlay on works was practically the same as last year. Establishment cost Rs. 489 more in consequence of the debit of the share of the canal (Pátkaris, Fead Pátkaris, \&c.) and sub-divisional office establishment to revenue management. Collection charges exceeded by Rs. 313 those of last year, and the whole cost of working was Rs. 899 more than that of the previous year.

Cost of working per mile of 10. The annual working expenses are compared canal and per ncre irrigated. below:-

|  | Years. |  | Per mile of <br> Canal. |
| :---: | :---: | :---: | :---: |
|  |  | Per Acre |  |
| irrigated. |  |  |  |

In this statement the length of both the main canal as far as constructed and also of the Waddarhatti Branch have been taken into calculation-vide remark on page 65, paragraph 10, of the printed Revenue Report for 189.1-95.

The total length now taken is thus $16 \cdot 10$ miles for the year under report and for previous years.

The rate of working expenses per acre irrigated is rather higher than that of last year on account of the extra establishment charges taken into account under the orders issued in Government Resolution No. 12 A.-I.-70, dated 12 th January 1895.
11. The following table compares the gross assessed revenue with the working expenses for the last five years :-


After deducting the working expenses from the assessed revenue of the year there remains a surplus of Rs. 15,482 , which represents a net return of nearly $1 \frac{1}{4}$ per cent. on the whole capital outlay (Rs. 12,11,583) to the end of the year, (both direct and indirect).

There was no change in the water-rates and the current rates will continue ${ }^{\circ}$ till the end of 1897-98.
12. From the 1st August 1895 a constant supply of 58 cubic feet per second was sanotioned to the Falls Mills in place of the 47 cubic feet per second given to them before, as per
Water-supply to the mills. Government Lesolution quoted in paragraph 7.
13. The area irrigated was measured by a special establishment consisting of two measurers and the required number of khalásis,
Cost of measarement. The cost of measurement was Rs. 610, which is equal to Re 0-2.2 per acre irrigated against Rs. 749 , or $\operatorname{Re}, 0-2-9$ per acre of the previous year. The decrease in the rate is due to reduction of the measurers' salaries during the last five months of the year;

$$
\begin{array}{cll}
\text { Daty of water. } & \text { for } & \text { 14. The average discharge of the canal was } \\
& \\
\begin{array}{lll}
\text { Kharif } & \ldots & \ldots \\
\text { Rabi } & \ldots & \ldots \\
16 \cdot 92 & \text { cubic feet per second. }
\end{array}
\end{array}
$$

and the duty of water was thus as follows:-

$$
\begin{array}{llll}
\text { Kharif } & \text {... } & 210 \text { acres per cubic foot per second. } \\
\text { Rabi } & \ldots & \ldots & 81 \\
\text { do. }
\end{array}
$$

15. The number of existing trees during the year was 7,228 , consisting Plantations. chiefly of babul 6,607: The others are pimpari 64, banian 76, shami 128, mango 48, tamarind "8, jambul 18, bori 11, guava 7, nimb 147, nandarki 2, karanji 3, nibeti 37 and ajani 2; of the total number, 3,386 trees are over 6 feet in height and 3,842 are below 6 feet and upwards of 2 feet in. height.

## PART II.

## WORKS IN OPERATION FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.

1. The following table shows the areas irrigated in the different districts in the Deccan and Gujarat and the consolidated revenue assessed during the year:-

| Collectorater. | $\begin{gathered} \text { Namber } \\ \text { of } \\ \text { works. } \end{gathered}$ | Area irrigated. | Mevrnue. |  |  | Remarig. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Irrigation share. | Land share. | Total. |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|  |  | Acres. | Rs. | Rs. | Rs. |  |
| Ahmedabad | 65 | 10,802 | 21,94S | 29,128 | 51,076 |  |
| Kaira ... | 2 | 7,286 | 29,658 | 21,652 | 51,310 |  |
| Surat ... | 291 | 12,377 | 49,415 | 1,17,229 | 1,66,644 |  |
| Broach ... | 28 | 905 | 3,027 | 4,739 | 7,766 |  |
| Khándesh | 82 | 9,017 | 5S,433 | 12,475 | 70,90S |  |
| Násik | $\left\{\begin{array}{l}191 \\ * 80\end{array}\right.$ | 17,817 | 80,804 | 26,002 | 1,06,805 | * In clarge of the Khandesh |
| Masik | * 60 | 10,483 | 80,602 | 11,780 | 92,382 | $\}_{\text {Irrigation District. }}$ |
| Ahmednagar | 2 | 147 | 353 | 132 | 485 |  |
| Poona ... | 3 | 515 | 2,857 | 1,015 | 3,972 |  |
| Sátára ... | 1 | 100 | 623 | 415 | 1,03S |  |
| Belgaum | 67 | 9,910 | 33,019 | 8,255 | 41,304 |  |
| Dhárwár | 474 | 61,657 | 1,73,008 | 43,250 | 2,16,258 |  |
| Bijápur ... | 17 | 1,440 | 5,924 | 1,474 | 7,398 |  |
| Ratnágiri | 4 | 1,349 | 3,664 | 2,798 | 6,462 |  |
| Total | 1,308 | 1,43,805 | 5,43,365 | 2,80,344 | 8,23,709 |  |

2. The following table shows the actual expenditure and receipts for the year 1895-96 on all the irrigation works in the Deccan and Gujarát for which only Revenue Accounts are kept:-

(a) Expenditure and revenue on account of the works in charge of the Khandesh Irrigation Dintrict,
(c) Hepresents charges in the Civil Department not adjuated in the Finance Accoounte,

- 1289-17

3. The total amount of revenue realized from

Comparison with previous years. and the expenditure incurred on this class of works during the past three years were as follows:-

| Revenue realized Expenditure |  |  | 1893-94. | 1894.95. | 1895.96. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Re. | Rs. | Rs. |
|  | ... |  | 5,46,333 | 5,47,425 | 5,48,730 |
|  | ... |  | 2,80,571 | 2,78,906 | 2,36,878 |
| Net Revenue |  |  | 2,65,762 | 2,68,519 | 3,11,852 |
| Percentage of Expenditure to Revenue |  |  | 51.35 | 50.94 | 43.17 |

4. The expenditure from contributions and Pátphala funds on all irrigation works for which only revenue accounts are kept for the year $1895-96$ is as shown in table below:-


## AHMEDABAD DISTRICT.

5. The rork of improving and extending the Naika Channel, estimated to Khári Irrigation Slaices. cost Rs. 16,274 and sanctioned in Government Resolution No. 224 W.I.-262 of 13th February 1891, was completed during the year under report at a total cost of Rs, 16,137.
6. The receipts for the year amounted to Rs. 60,283 derived from the following sources:-

|  | Acres. | Abscesmenta. |
| :---: | :---: | :---: |
| I.-Irrigation above the Kalambandi villages | 1,108 | 4,891 |
| $\begin{array}{cccc}\text { II.- Irrigation from tanks fed ly the river } \\ \text { Khári } & . . . & \text {... } & \text {... }\end{array}$ | 249 | 1,500 |
| III.-Irrigation below the Kalambandi villages | 50 | 238 |
| IV.-Irrigation from Khári Sluices proper (i.e. Kalumbandi villages) | 7,537 | 53,3:3 |
| Total ... | 8,944 | 60,283 |

The figures of area and assessment were not furnished last year and as the assessment statements hare not been received from the Collectors, the results for the year under report are compared below with the figures of 1893-94:-
I. There has been a small decrease of about 4 acres in irrigation above the Kalambandi villages.
II. Irrigation from tanks fed by Khári river has remained stationary.
III. Irrigation below the Kalambandi villages has increased by 30 acres and the revenue by Rs. 158; a large number of lifts were used owing to scantiness of water.
IV. The area of irrigation from the Khári sluices proper decreased by 747 acres, but there has been an increase of revenue of Rs. 12,298, as no remissions were necessary, with the exception of Rs, 136-8-10 to Naika cultivators.
7. The mean rate of assessment was Rs. 4-6-8 on land irrigated by lift above the Kalambandi villages, Rs. 7-3-8 on land irrigated by the tanks fed from the Khári river, and Rs. 4-12-6 on land irrigated below Kalambandi villages. On lands under the Khári sluices proper, i. e. Kalambandi villages, the rates are consolidated, the shares per acre for the land and for water privileges being as under :-

8. The working expenses during the year, exclusive of charges for revenue collection, amounted to Rs. 987, the figure of the previous year being Rs. 1,133.

Old works.
9. The old works in this district were fully described in the report for 1892-93, and there is nothing to add thereto.
10. During the year under report three tanks were repaired at a total cost of Rs. 2,324, inclusive of R.s. 181 contributed by villagers.
11. The revenue derived and areas irrigated from tanks in this district are as under:-

|  | Number of tanks | ... | ... | ... | 66 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Areas irrigated | ... | ... |  | 10,502 |
| Revenue | $\left\{\begin{array}{l} \text { Irrigation share } \\ \text { Land share } \end{array}\right.$ | ... |  |  | Rs. |
|  |  |  | ... | ... | 21,9+8 |
|  |  |  | -. | ... | 29,128 |
|  |  |  |  | ... | 51,076 |

## SURAT AND BROACH.

12. During the year 30 tanks were repaired at a total cost of Rs. 20,862, Tanks. of which Ks. 13,592 were spent on repairs and Rs. 7,270 on improvements. Of the above a sum of Rs. 2,080 was contributed by the villagers interested. Last year 38 tanks were repaired at a cost of Rs. 15,200 for repairs and Rs. 16,160 for improvements, and Rs. 3,083 were contributed by the villagers.
13. Of the 30 tanks, 4 belong to the Broach district, the total cost of repairs and improvements carried out to them amountiug to Rs. 673. Last year two tanks were treated at a cost of Rs. 1,869 .
14. A sum of Rs. 24 was expended in surveying tanks for preparation of estimates for repairs and improvements as compared with Rs, 496 last year.
15. The total area irrigated and the consolidated revenue assessel on lands under irrigation tanks in the Surat and Broach districts, as reported in Canal Return No. VIII by the Collectors, are as under:-

| District. |  |  | Area. | Net consolidated Assesbment | Irrigation thare. | Land share. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Acres. | Rs. | Rs. | Rs. |
| Surat ... | . ${ }^{\text {a }}$ | ... | 12,375 | 1,66,644 | 49,415 | 1,17,293 |
| Broach | ** | -** | 952 | 7,766 | 3,027 | 4,839 |

The figures are almost identical with those of last year. The management of irrigation tanks rests with the Revenue Department; hence no separate establishment is entertained on this account. The receipts also are realized by the Revenue authorities.

## NA'SIK DISTRICT.

16. The area under permanent bagáyat is 17,817 acres, paying Rs. $1,06,806$ Area irrigated. consolidated assessment; of which the irrigation share is $\mathrm{Rs} .80,804$, representing about $4 \frac{1}{2}$ rupees per acre.
17. The expenditure on maintaining the works was Rs. 5,638 on extensions Expenditure. and improvements, and Rs. 1,185 on repairs. These and improrements, and Rs. 1,185 on repairs. These
amounts include contributions by the rayats of $\mathrm{Rs}, 1,364$ for improvements and Rs. 41 for repairs.
18. The improvements to the Dátáli bandhára mentioned in the last report have been completed. The bandhára at Gondegaon, táluka Dindori, has been provided with protection works as a precaution against floods, and small improvements and repairs have been made to the channel. All the other works are of too small and unimportant a character to deserve special description.

| No. | Names of Works, | 1895-96. |  |  | Pexabeg |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Allutment. |  | Outlay. |  |
| 1 | REPAIRS. <br> Na'sig. <br> Surveys for bandhára repairs in the Godavari basin for 1895-96. <br> Dindori. | Rs. a. p. |  | Rs. | Completed. |
|  |  | 18200 |  | 112 |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| 2 | Repairs to old Wadáli Canal... . | 183 | 00 | 150 | Do. |
|  | Repairs to Rámeshwara Baudhára at Dindori. | 365 | 00 | 3.6 | Do, |
|  | Nipha'd. |  |  |  |  |
| 4 | Repairs to Bandbára No. 27 at Gondegaon and No. 7 at Niphád. | 131 | $\begin{array}{ll}0 & 0\end{array}$ | 130 | Do. |
| 5 | Repairs to Pálkhed Strect Bandhára at Shirwada (Wani). | 88 | 0 | E0 | Do. |
| 6 | Repairs to Dhotarkhed Bandhára at Slirwada (Wani). | 67 | 00 | C2 | Do. |



[^8]20. The following statement shows the areas assessed as irrigated and

Revenue. the consolidated rerenue assessed on second class Revenue Works during the jear 1895-96:-


## KHA'NDESH IRRIGATION DISTRICT.

Area irrigated and Revenue.
21. The following table gives a summary of the area irrigated and the revenue derived from old irrigation works :-

| - Particulars. | Khandesh, | NGuik. | Total. |
| :---: | :---: | :---: | :---: |
| Area irrigated at consolidated rates... Area irrigated at separate water-rates <br> Total area in acres |  |  |  |
|  | 9,017 | 10,483 | 19,500 |
|  | 0,017 | $\cdots 330$ | 330 |
|  | 9,017 | .10,813 | 19,830 |
| Consolidated revenue ... . ... Rs. | 70,908 | 92,382 | 1,03,290 |
| $\begin{array}{cccc}\text {-Irrigation © } \mathrm{share} \text { of consolidated revenue } & \text { Rs. } \\ \text { Beparate water-rates } & \text {... } & . . . & \text { Rs. }\end{array}$ | 58,433 | 80,602 | 1,39,035 |
|  |  | 1,168 | 1,168 |
| Total, revenue realized, in Rupees | 58,433 | 81,770 | 1,41,203 |

The above figures are exclusive of the old irrigation. under the Lower Pánjbra system. The miscellaneous revenue from these works realized in the Public Works Department amounts to Rs. 35. This sum, added to the total revenue in the above table, makes the gross irrigation revenue from those works Rs. 1,40,238.
22. A sum of Rs. 763 is outstanding from the separate water-rates from works improved by the. State. Out of this amount the sum of. Res. 222 is reported to hare been realized in April 1896, and measures are being taken to realize the balance.
23. Revenue is also due from a portion of the new 'Thal' that was added to the irrigation at Sampur in Báglán in 1882. The irrigators pleaded insufficiency of water-supply and asked for exemption from the assessment. But the Assistant Collector bas observed that there was no insufficiency of water. The people neglected the silt-clearance, which caused a shortness in the supply and they are themselves responsible for it. The revenue due will be recovered in 1896-97.
24. The outlay on improvements and repairs of these works during the
year is given in the following table in contrast with expenditure in the previous jear.


It will be observed that in the year under report, although the expenditure under Improvements increased, the total outlay was less than in the previous sear. The establishment charges were considerably less, as the charge is now made proportionateiy to the expenditure. .The improvements carried out are all with one exception in the interest of the present revenue and not with the object of increasing it. The exceptional case is that of the restoration of the KbánápurSarai Bandhára in Navápur Petha, which is expected to bring in an additional annual revenue of Rs. 150 from the next year.
25. In addition to the above outlay from Imperial funds some expenditure from the Pátphála Fund was incurred on up-keep as well as on works designed to meet the local wants of the irrigators. The amount spent was Rs. 2,700 only during the year against Rs. 4,772 in the previous year. This fund is now abolished. Arrangements are being made to profitably expend the available balances, and it is expected that a considerable sum will be spent in 1896-97.
26. Local Fund money was also obtained to supplement the Imperial grants in order to defray partly the cost of works for local convenience such as communication bridges over channels. The outlay was:-


## AUMEDNAGAR DISTRICT.

. Old Works,

- : .
- :

Area irrigated and revenve.
27. The only two works of this class are situated in the Akola táluka-
1 Sávargaon Bandhára.
2 Gârdáni do.
28. The following table shows the area irrigated and the consolidated revenue assessed during the year:-.


POONA DISTRICT.
29. The following are the works in this Collectorate for which only Revenue Old Works. accounts are kept :-

1. Dam at Kasur.
2. Dam at Vadaj.
3. Dam at Náráyengaon.
4. Dam at Agar.
5. Dam at Pátas.

- 

The description of these works was given in the Revenue report for 1881-82.
30. During the year 1895-96 Rs. 50 were expended in strengthening the banks of the existing channel at Náráyengaon Bandhára.
31. Rs. 27 were expended during the year for gauging the heights of water in Supa, Wadhána and nẹv Pátas tanks.

## BELGAUM DISTRICT.

32. The total number of second class tanks in this district irrigating over 50 acres each is 67 with an irrigation area of 9,910 acres, paying a consolidated assessment amounting to Rs. 41,304 , of which the irrigation share is Rs. $33 ; 049$. Of the above, some slight repairs were made to one only, viz. the Kiledkeri Tank at Belgaum. •The work was taken in hand and completed during the year at a cost of Rs. 102.

Rupees 255 were paid as land compensation during the year on account of repairs to the Tumbavakeri Tank (No. 18) at Margankop.
33. The following table shows the progresis made in repairing and improving the tanks during the year:-

| Nature of Tanks, | Cokmbnced in perviots yrar, |  | Comicrnaed and completed dubing the ybab. |  | Commanchat bit not completed dobisg the Ybar. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of Tanks. | Cost of Work. | Number of Tsukg. | Cost of Work. | Number of Tanks, | Cont of Work, | Number <br> of Tauke | Cost of Work. |
|  |  | Rs. |  | Rs. |  | Rs, |  | Rs. |
| Irrigating over 50 acres | 1 | 255 | 2 | - 102 | 2 | 304 | 5 | 661 |
| Irrigating less than 50 acres | ... | ... | 1 | 19 | ${ }^{1}$ | 80 | 2 | 99 |
| Total ... | 1 | 255 | 3 | 121 | 3 | 384 | 7 | 760 |

34. An expenditure amounting to Rs. 594 was incurred during the year on surveying some of the irrigation tanks of the district.

## DHA'RWA'R DISTRICT.

35. The number of tanks according to the printed list, irrigating over 50 acres, is 471. .Since the date of the printed list, areas irrigated under the tanks in this district have in some cases been reduced and in others increased. The discrepancies will disappear when complete tank lists, which are being prepared separately for each táluka, are ready.

Expenditure.
36. The following table shows the progress made in repairing and improving these tanks during the year:-

| Nature of Tanka, | Commencridin pebyiote yeab. |  | Commriced and completed durxa the Year. |  | Commenced hot not COMPLETED DUBIEG the yeab. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of Tanke. | Cost of Work. | Number of Tank. | Cout of Work. | Number of Tank. | Cont of Work. | $\begin{gathered} \text { Number } \\ \text { of Tanke, } \end{gathered}$ | Cont of Work. |
|  | . | Re, |  | Rs. |  | Rs. |  | Rs. |
| Irrigating over 50 <br> acres ... $\ldots$ | 23 | 14,747 | 8 | 5,083 | 23 | 17,272 | 54 | 87,102 |
| Irrigating less than 50 acres | 10 | 1,507 | 9 | 1,285 | 18 | 3,798 | 37. | 6,500 |

A sum of Res. 6,031 as rayats' contribution was utilised towards the expenditure incurred on these tanks during the year under report.
37. The area irrigated under the $474^{*}$ tanks which irrigate over 50 acres each is 61,657 acres assessed at Rs. $2,16,258$, of which

[^9] Rs. $1,73,008$ represents the irrigation share. In addition to this Rs. 1,768 were realized under the following heads:-

| , | Rs. a. |
| :---: | :---: |
| Water-rates ... ... | 52387 |
| Other canal produce-Sale of grass, \&c. (Miscellaneous) . | 1,244 40 |

$$
\text { Total } \quad . . \quad 1,76712 \quad 7
$$

38. Since the receipt of Government Resolution No. 125 W.-I-1473, dated 15 th September 1892, many tanks irrigating each less than 50 acres were repaired or improved, but no portion of the consolidated assessment derived from them has yet been credited to this department as irrigation share.

## BIJA'PUR DISTRICT.

39. There are altogether 17 small irrigation works at present in charge of the Public Works Department in the Bijápur District. The area irrigated was 1,440 acres and the irrigation revenue under the sventeen works was Rs. 5,924.
40. During the year Rs. 305 from Imperial funds and Rs. 14 from rayats' contribution were spent on extensions and improvements and repairs to four tanks.

## RATNA'GIRI DISTRICT.

41. There are only four irrigation tanks in this district. Annual ordinary repairs to two of them, viz, the Pat and Warad tanks, were executed hy this department during the year under report at a cost of Rs. 40 and Kis. 86 respectively.

## AGRICULTURAL WORKS.

Drainage Channels in
Broach.

Broach.
42. The following table shows the financial results of the several drainage channels constructed in the Broach Collectorate:-


в 1239-19
43. Of the figares in the penultimate column those marked* are the same as those for last year. The second iten was $25 \cdot 35$ last year ; the fifth was $9 \cdot 1$ 응 and the last was $22 \cdot 13$. The arerage last year was $23 \cdot 19$, so that the high rate of profit has been practically maintained.
44. The amount realized from sale of occupancy rights during the year $\mathbf{1 5 0 5 - 9 6}$ was as follows:-

Anklezvar Túluka.

## Adol-Hajat-Piludra Channel ... ... ... Rs. is

No land has as yet been taken up on the Sindhav Drainage Channel owing to the poverty of the people and the unfarourable nature of the seasons.
45. Two new channels, ciz. the Akhod-Nadirda and the Jolwa channels, both in Vágra Taluka, were commenced during the year and completed leföre the rains of 1896; arrangements are being made to commence the Ora Vichiad Channel during the next cold season.
46. The total revenue from all the drainage channels amounts to 21.55 per cent. of the total net outlay.
47. Current repairs to the dam at Borri in the Kolaba Collectorate were Dam at Borri.
carried out during the year at a cost of Rs. 33.

# Revenue Report of Irvigalion Works in the 

 Bombay Presidency, cxcluding Sind, for 1895-96-Review of the.
## No. 16 W. I.-225 of 1807.

Public Works Department.

Bombay Castle, 11th February 1897.

Letter from the Chief Engineer, Central Division, No. 4722, dated 5th October 1806. Forwards the Irrigation Revenue Report, Parts I. and II. of works in the Central Division for 1895-96, with the uspal statements.

Atter from tho Superintending Engineer, Northern Division, No. 4077, dated 10th October 1896.

Forwards similar report for works in the Northern Division.
Letter from the Examiner of Public Works Accounts, No. B.-3-1203, dated 12th October 1896.

Submits the statements and tables required in connection with the Rerenue Report of Irrigation Works in the Deccan and Gujarát for 1890゙-96.

Letter from the Superintending Engineor, Central Division, No. 4854, dated 12th October 1896.

Reports certain figures for insertion in statement IV.E.
Letter from the Superintending Engineer, Central Division, No. 4977, dated 19th October 1890.

Letter from the Superintending Engineer, Southern Division, No. 3647, dated 26th October 1896.

- Forwards the Irrigation Revenue Report, 1995-96, Parts I. and II., with the asual statements.

Memorandum from the Superintending Engineer, Southern Division, No. 3002, dated 30th October 1896.

Advises certain corrections in statement IV.E., and reports certain figares for insertion in the same statement.

Resolutrov.-The salient points of the year's operatious are noticed in the general remarks prefacing the report.
2. The number of works in operation included in Part I. is the same as in the previous year. The capital expenditure amounted to Rs. $1,43,733$, and was incurred mainly on the Nirra and Mutha Canals. The large debit shown naginst the Mhaswad Tank during the year was on account of capitalization. The entire capital outlay at the end of the year stood at Rs. 2,62,61,246, including Rs. 2,94,655 on the three projects which are still in abeyance.
3. The totalarea irrigated was 74,923 acres, and compared with 84,237 acres of the previous year, it shows a falling off of 0,314 acres, due to various causes mentioned in the reviers of the annual statement of Irrigation and Rainfall. 'The general' prohibition, for sanitary reasons, of perennial irrigation within a quarter of a mile of villages, is also responsible in some snall measure for the decrease in area.
4. The principal crops irrigated were sugarcane ( 11,897 acres), wheat ( 8,315 acres), rice ( 6,056 acres), jowári ( 18,581 acres), bijuri ( 6,869 acres), and ground-nuts ( 7,874 acres), and there was a decrease in the area under most of them.
5. The assessed revenue amounted to Rs. $6,32,211$, arainst Rs. $5,93,737$ in the previous year. The increase in assessed revenue, notwithstanding the decrease in area irrigated, is a notable result of this year's operations. The increase, which is mainly under water-rates, is almost wholly from Productive Public Works, principally the Mutha Canals, and is due chiefly to the bigher rates introduced for perennial crops. There was also increased revenue from the Poona Water-supply. It is satisfactory to note that the total revenue from the Mutha Canals amounted to Rs. 2,98,470, which is the highest obtained since the work came into operation. The total revenue realized was Rs. $5,98,839$. The outstandings at the end of the year amounted to Rs. 81,016 , the greater portion of which has since been realized.
6. A satisfactory feature of the year's operations is the Jarge decrease in working expenses which fell from Rs. $3,50,926$ in $1894-95$ to Rs. 2,94,287 in 1895-96. Looking to the distribution of charges under the principal heads, the greatest decrease is under ' Establishment.'
7. The net revenue of the year was

$$
\begin{array}{ll}
\text { (1) on basis of assessment... } & \text {... Rs. } 3,37,924 \\
\text { (2) do. of realizations } & \ldots
\end{array}, 3,04,552
$$

as compared with Rs, $2,42,811$ and Rs. 2,12,556, respectively, in the previous year.
8. Protective works show a profit of Rs. 35,878 (entirely due to the Níra Canal) against Rs, 12,500 in the previous year. Productive Public Works show a profit of Rs. 2,37,194 against Rs. 2,10,824 in 1894-95. Minor Works, Imperial, also give a profit of his. 15,042, against a loss of Rs. 21,862 in the preceding year. The only Provincial Irrigation Work, Gokik Canal, shows an improvement to the extent of Rs. 5,344.
9. Under Part II., Works for which only Revenue Accounts are kept, there is a slight improvement in revenue receipts and a decrease in expenditure, Looking to the details of expenditure there is a decrease under nearly all heads. The decrease under Extensions and Improvements and Maintenance and Repairs of these old works is to be regretted, and endeavour should be made to work up to the grants which Government allot. On the Agricultural works the bigh rate of profit has been practically maintaiued.
10. In reviewing the report for 1894-95 Government remarked that the record of that year showed unsatisfactory results, and it is gratifying to be able to note that the operations of the jear under review produced a marked improvement. Increased assessments and decreased working expenses have contributed to the satisfactory increase recorded in the net earnings of the year. Government trust that no effort will be spared to establish a continuance of the good results exhibited in the report of the year under review; this is most likely to be secured by careful attention to economy in the working expenses.-
11. Copies of the report and of this review should, as usual, be forwarded to the Government of India and the Secretary of State.

## S. REBSCH, Under Secretary to Government,

To
The Pevenue Department, Secretariat.
The Financial Department, Secretariat.
The Commissioner N. D.
The Commissioner C. D.
The Commissioner S. D.
The Survey Commissioner and Director of Land Records and Agriculture.
The Superintending Engineer C. D.
The Superintending Engineer N. D.
The Superintending Engineer S. D.
The Chief Engincer, Indus Right Bank Division.
The Superintending Engineer, Indus Left Bank Division.
The Examiner of Public Works Accounls. The Government of India. The Secretary of State for India. $\}$ By letter. With copies of report. . The Editors' Table.
Exa. R. B. P.

$$
\text { No. of } 1897 .
$$

Copy forwarded for information and guidance to







\section*{EREANDPSRE COLITCTORATE區AS <br> Scale of Miles <br> | 5 | 0 | 10 |
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 Market Town
$\oplus$ Petty Division Hend-muarters
- Petty Division Head guarters and
- Markel Tonn
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in Truvellers' Bungalow
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울 Head Post Office
Q Sub Pest Oftice
e Branch Do:
T Telegmph Office
M Muniapality
H Hospital
D Dispensary
:o Ferry
$\asymp$ Bridge
$\otimes$ Soll
E3 Fort
- Mruie Road

Railway open.
-517. Iteights above mean Sera level









[^0]:    All classes of works show a decrease with the exception of Provincial

[^1]:    14. The following table contrasts the charges
    Charges under principal under the principal heads with those of the two preheads.
[^2]:    Mf tief finished arest of weir.
    B 1250-0

[^3]:    (a) Exclusive of irrigution share of consolidated assessment.

[^4]:    Toke,-(1) For ift irrigation halt the ordinary rates are charyed.
    (2) Double the ordinary ratea are charged as penal rates for taking watar without permisriona

[^5]:    - Includes $\mathrm{Ro}_{9}$ 5-4.0, amount received in excess to be refunded as ger Treasury Othicer's report.

[^6]:    Classification of area irrigated.

[^7]:    Comparison of areas and assessments.

    B 1239-4

[^8]:    B 1239-18

[^9]:    - According to Canal Return No. VIIL.

