Revenue (1897) Department.

PRESS SERIES.

G.O., No. 468

DATED 17th June 1897.

[Despatch Abstract.]

Kurnool-Cuddapah Canal.

Recording, with remarks, Board's Proc^s submitting to Govt report of the Spec. Deputy Collector, — for the half year ending 30th June 1896.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
99	4099	Rev.	6-8-97				

Revenue (1897) Department.

CURRENT No.

The Hon'ble Mr. Grose. C. I. E.

GOVERNMENT OF MADRAS
10 MAR 97
SECRETARIAT DEPARTMENT

From The Board of Revenue Revenue Settlement, Land Rec and Agriculture. Madras.

Order (Cons.)

Recorded.

No. 143 Press

Dated 18th February 1897.

Received

Registered

Enclosures 4

Spare copies

RS
3-3-97

To

The Board of Rev: Sett: (with encs)
— P. W. Deptt.

SUBJECT.

Kurnool - Cuddapah Canal.

Submitting to Government report of the Special Deputy — for the half year ending 30th June 1896.

Jain asst. 10/3/97

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

PROCEEDINGS OF THE BOARD OF REVENUE

(REVENUE SETTLEMENT, LAND RECORDS AND AGRICULTURE).

READ—the following paper:—

Letter from M.R.Ry. K. SUBBARAYUDU PANTULU Garu, Rao Bahadur, Specia Deputy Collector, Kurnool-Cuddapah Canal, to the Secretary to the Commissioner of R.S., L.R. and Agri. (through the Collectors of Kurnool and Cuddapah), dated Chakarazvemula, 21st September 1896, No. 234:—

Referring to the latter part of paragraph 3 of G.O., No. 964, Revenue, dated 7th November 1893, communicated with B.P., dated 16th February 1894, No. 87, I have the honour to submit the following report for the half-year ending 30th June last.

Movements of the Special Officer during the half-year.

2. From the 1st till about the 20th of January last, I was engaged mainly in the inspection of the suspicious cases of well irrigation of the Proddatur and Cuddapah taluks; and, returning to the Nandikotkur taluk of the Kurnool district by about the end of the month, I commenced the water-rate settlement of that taluk for fasli 1305 on the 1st of February. From the beginning of February till about the middle of May following, I was chiefly engaged in conducting the water-rate settlement of the Nandikotkur, Ramallakota, Nandyal and Sirvel taluks of the Kurnool district and of the Jammalamadugu, Proddatur and Cuddapah taluks of the Cuddapah district. The water-rate settlement of the remaining Koilkuntla taluk of the Kurnool district was conducted by the Collector of Kurnool along with the ordinary jamabandi of the taluk, under instructions contained in B.P., dated 9th January 1895, Mis. No. 36. On finishing the Cuddapah taluk water-rate settlement by about the middle of May, I proceeded back to Kurnool, and there commenced the work of selecting fairly irrigable canal—commanded Government lands in connection with the proposed imposition of the famine insurance rate at the next re-settlement—a work in which I have been required to assist the Special Sub-divisional Officer, Mr. Dennehy of the Public Works Department. Of course, in all my above movements up and down the canal, I have taken particular care to continue my instruction to the ryots of the Kurnool district canal villages about the experimental cultivation of dry season indigo and cummin-seed with the aid of canal water, explaining to them the fair and encouraging results that the few experiments already carried out have produced here and there in the district. In all, 171 out of 182 days have been spent by me out of head-quarters during the half-year under report.

Irrigation under the canal in fasli 1305 (1895–96).

3. As in the previous year, I beg to submit herewith two statements A and B, the former containing villagewar particulars and comparing the irrigated extent and canal water-rate of fasli 1305 (1895–96) with the figures for the preceding fasli, and the latter showing the extents irrigated in fasli 1305 (1895–96) under the different rates of water-rate, as also the

amounts of water-rate derived. It will be observed from these statements that, compared with fasli 1304 (1894–95) and taking the canal as a whole and including miscellaneous items, the year under report shows a net decrease of acres 737·15 in extent and of Rs. 4,898–10–10 in revenue—a decrease of Rs. 5,828–15–1 appearing under direct irrigation, and an increase of Rs. 930–4–3 under other items consisting of (*a*) value of water given for Kurnool town supply, (*b*) value of water run into canal-fed tanks, (*c*) value of water supplied to indigo vats and (*d*) the assessment levied on canal A and B class lands cultivated. Considered districtwar, the Kurnool district shows a net decrease of acres 1,685·6 in extent and of Rs. 5,405–7–9 in revenue, whereas the Cuddapah district shows a net increase of acres 947·91 in extent and of Rs. 506–12–11 in revenue. Besides the items mentioned above, there is another item of Rs. 5,103–2–0 realized by the Public Works Department and credited by them to the canal, and particulars of this item are stated to be as follows:—

	RS.	A.	P.
Receipts from plantations	2,327	7	7
Receipts from other canal produce	885	13	6
Navigation receipts	1,302	6	3
Rent of buildings	487	12	2
Miscellaneous	99	10	6
Total ...	5,103	2	0

4. Now to turn to talukwar particulars. The subjoined abstract compares the figures of the different canal taluks for fasli 1305 (1895–96) with those of the preceding fasli, and it will be observed from it that, so far as the Kurnool district is concerned, there is decrease in extent in all the taluks except Sirvel, and that all the five taluks of the district show decrease in water-rate. Under the head "other items," however, the Nandikotkur, Nandyal, and Sirvel taluks show increase, whereas the Ramallakota and Koilkuntla taluks show some decrease. In the Cuddapah district, the two important canal taluks of Cuddapah and Proddatur show increase under extent, whereas the insignificant and nominal canal taluk of Jammalamadugu shows a few cents decrease. Under the head "water-rate," the Cuddapah taluk shows a large increase, whereas Jammalamadugu shows some little increase and the Proddatur taluk a large decrease. Under "other items" the Cuddapah taluk shows an increase of nearly two hundred rupees, but this is only nominal being the result of the tank storage revenue of one or two canal-fed tanks shown last year under direct revenue having rightly been shown under tank storage head this year:—

Districts.	Taluks.	Fasli 1304. Extent.	Water-rate.	Other items.	Fasli 1305. Extent.	Water-rate.
1	2	3	4	5	6	7
		ACS.	RS. A. P.	RS. A. P.	ACS.	RS. A. P.
Kurnool ..	1. Ramallakota ..	2,578·53	9,237 12 1	3,815 9 9	2,119·56	7,624 11 2
	2. Nandikotkur ..	6,542 64	20,048 4 3	595 8 8	5,794·49	17,835 1 9
	3. Nandyal	3,837·81	11,668 13 10	3,630 11 0	3,431·34	10,587 11 11
	4. Sirvel	3,496·38	10,338 3 3	78 15 9	3,540·52	9,432 4 7
	5. Koilkuntla	519·81	1,581 4 6	61 10 3	404·20	1,254 14 2
	District Total ..	16,975·17	52,874 5 11	8,182 7 5	15,290·11	46,734 11 7
Cuddapah ..	6. Jammalamadugu ..	172 73	107 7 4	..	172·31	121 12 0
	7. Proddatur	6,759·23	23,358 11 8	..	6,942·53	21,842 12 7
	8. Cuddapah	9,608·97	31,974 11 4	289 7 4	10,374·00	33,787 1 0
	District Total ..	16,540·93	55,440 14 4	289 7 4	17,488·84	55,751 9 7
	Canal Total ..	33,516·10	1,08,315 4 3	8,471 14 9	32,778·95	1,02,486 5 2

Districts.	Taluks.	Fasli 1305—*cont.* Other items.	Increase or decrease. Extent.	Water-rate.	Other items.
		8	9	10	11
		RS. A. P.	ACS.	RS. A. P.	RS. A. P.
Kurnool ..	1. Ramallakota ..	3,699 15 11	— 458·97	— 1,613 0 11	— 115 9 10
	2. Nandikotkur ..	882 0 7	— 748·15	— 2,213 2 6	+ 286 7 11
	3. Nandyal	3,851 14 1	— 406·47	— 1,081 1 11	+ 221 3 1
	4. Sirvel	477 11 5	+ 44·14	— 905 14 8	+ 398 11 8
	5. Koilkuntla	5 0 0	— 115·61	— 326 6 4	— 56 10 3
	District Total ..	8,916 10 0	— 1,685·6	— 6,139 10 4	+ 734 2 7
Cuddapah ..	6. Jammalamadugu ..	..	— 0·42	+ 14 4 8	..
	7. Proddatur	..	+ 183·30	— 1,515 15 1	..
	8. Cuddapah	485 9 0	+ 765·03	+ 1,812 5 8	+ 196 1 8
	District Total ..	485 9 0	+ 947·91	+ 310 11 3	+ 196 1 8
	Canal Total ..	9,402 3 0	— 737·15	— 5,828 15 1	+ 930 4 3
	Net decrease ..	..	..	4,898 10 10	

5. As already stated in paragraph 4 of my report No. 26, dated 7th February embodied in B P., dated 7th May last, No. 91, the decrease in the Ramallakota taluk is due partly to the prohibition of the cultivation of canal A and B class lands on which wet crops were being usually raised previously, and partly to the change introduced in the system of darkhast for water from the commencement of fasli 1305 (1895–96) by which ryots are allowed to apply for water any time they like before actually taking water; instead of applying for it beforehand within two fixed dates as was the case in the preceding fasli. It was also due to some extent to the ryots having gone in for a much smaller extent of second crop in fasli 1305 (1895–96) in consequence of the early falling off of water in the canal in the previous year (please see paragraph 8 of my report No. 303, dated the 25th October last, embodied in Board's Proceedings, dated 17th December 1895, No. 400). The decrease in the Nandikotkur taluk is, as already stated in the report for the half-year ending 31st December last, mainly due to combination among the ryots of some of its canal villages, who, labouring under an erroneous impression that their lands will be converted into permanent "wet" at the next re-settlement if they raise wet crops, raised dry crops, even on lands on which they were usually raising paddy; and it is also due partly to the change in the darkhast system and to no necessity having been felt by the ryots this year for taking water for such large extents of chilly and indigo stumps as in the previous year, the crops having been affected by the heavy rains that fell about the middle of September, in the latter part of October and again towards the close of December. The previous year's early falling off of the canal resulted in some decrease in second-crop paddy in this taluk also. Of course, in the case of villages where combinations existed, all possible and reasonable endeavours were made to disabuse the ryots' minds of the erroneous impression that got into their heads, but most of them were stubborn and would not yield even to the advice of their old local Tahsildar. When questioned as to why they suddenly chose to raise dry crops on usual paddy lands, they try and put forward some other excuses, such as want of manure, &c., but there is no doubt whatever that the real cause in all such cases is the mistaken impression. In the Nandyal taluk, the decrease is due mainly to combination in two important canal villages and it is also due partly to the change in the darkhast system and partly to water having had to be taken, as in the case of the Nandikotkur taluk, for a smaller extent of *bagayat* or 3–rupee rate crops, namely, chilly, indigo stumps, &c. The Sirvel taluk shows some increase in extent because, in consequence of the comparatively hard nature of the red-soil lands of its canal villages, water had to be taken there in fasli 1305 for a much larger extent of dry crops than in the preceding year when rains first temporarily withheld in September and October; but even here, there is a decrease in revenue, and this decrease is due

partly to combination among ryots in two of its villages, and partly to no necessity having been felt by ryots for taking canal water for their chilly crops as they were, for the most part, either affected or damaged by the heavy rains that subsequently fell. There was some decrease in this taluk in second-crop paddy also in consequence of the previous year's scarcity of water during the latter part of the year. In the Koilkuntla taluk, which is an unimportant canal taluk, the decrease is due to combination in one of its canal villages and to no water having had to be taken for indigo stumps as in the preceding year. There was also some small decrease under second-crop paddy in consequence of last year's sudden falling off of the canal.

In the Cuddapah district, the Jammalamadugu taluk is an insignificant one in a canal point of view and the variations against it are trifling. The Proddatur taluk shows increase under extent and decrease under revenue. The increase under extent is due to water having had to be taken for a large extent of korra when rains withheld there in the beginning of September, and the decrease under revenue is due to a falling off in second crop or dry season indigo for want of enough water in the canal at the time of its sowing. Seeing the supply in the canal beginning to go down about the time of indigo sowing, several of the ryots who even prepared their lands for the crop gave up the idea of sowing it and refrained from taking tickets. The increase in the Cuddapah taluk, which is the most important at present of all the canal taluks, is due (*a*) to a large extent having been brought under dry season indigo generally in the villages below the Pennér which supplied water to the canal till about the end of April, and in Kottur and Kommalur where, in the light of their last year's experience, the ryots took special care this year to put down their indigo crops immediately after removal of first-crop paddy without unnecessarily losing any time; (*b*) to some lands of Yetur and Miduthur on which ragi was raised in the previous year having been brought under paddy, a higher rate crop; and (*c*) to water having been taken for a larger extent of korra crops when rains first withheld in the beginning of September.

6. Going to villagewar particulars in statement A, it will be observed that, out of eleven villages of the Ramallakota taluk, as many as ten villages show decrease and that the decrease is large and above a hundred rupees in six. Of these six, Gopalasingavaram, Nidwhur and Mamidalapad seem to be villages to which the order prohibiting the cultivation of canal A and B class lands applied to some extent; and there was more or less of decrease in all the villages especially under second crop, chiefly in consequence of the last year's early falling off of the canal. The fact, moreover, that the second or dry season indigo experimentally tried this year in Nidwhur on over twenty acres did not unfortunately take root properly, kept back others from going in for more of that crop; and, as already stated above in paragraph 5, the change introduced in the darkhast system has also to account for the variations to some extent at least. Under the rule in force in fasli 1304 (1894–95), the ryots had to put in their darkhasts for water within two fixed dates in the year, one for the first crop and the other for the second crop, and, in so putting in darkhasts in advance, the ryots had naturally to apply for guessed or estimated extents at least in some cases, whereas under the rule now in force which is no doubt suited to this canal and is at the same time fair to the ryot, they apply for water for almost precise extents according to their needs. In the Nandikotkur taluk, there are 45 canal villages in all including the three belonging to His Highness the Nizam's Dominions, and it will be observed from statement A, that thirty-one of these show decrease, the decrease in fifteen villages being large and above a hundred rupees each. Of these fifteen, (1) Maddigatla, (2) Tatipad, (3) Korapolur, (4) Mittakandala, (5) Vempenta, (6) Satlajutur, and (7) Chelimilla are villages where, as already stated above, there was more or less combination among the ryots and where dry crops were consequently raised on many of the lands on which paddy was being usually raised before. There was combination in Regadigudur and Tarigoppula also, but these two are unimportant canal villages showing small decrease. The decrease in Tatipad may also be said to be due partly to no necessity having been felt by its ryots for taking water for their indigo stumps as they did in the last year. The remaining eight villages showing large decrease are (1) Allúr, (2) Rudravaram, (3) Satanikota, (4) Mutsumurri, (5)

Maddur, (6) Pamulapad, (7) Ganapavaram and (8) Sultanpur. The decrease in Allur is due partly to some natural fluctuation in the first-crop paddy extent and partly to the ryots not having gone in for any second crop this year in consequence of last year's scarcity of water. The decrease in the case of Rudravaram is due partly to no necessity having been felt this year for ryots taking canal water for their wet lands under the Bugga or spring channel as was the case last year, and partly to the prohibitory order in regard to the cultivation of canal A and B class lands. It is also attributable to some extent to some falling off in paddy extent in hamlet Padidempad. The decrease in Satanikota and Mutsumurri is mainly due to no water having been taken there for chilly crops this year, the crops having been affected by the excessive rains that fell in the latter part of October. The decrease in Maddur is due partly to some ordinary fluctuation in the first-crop paddy extent and to reduced extent under second-crop paddy in consequence of the last year's sudden falling off of the canal. The decrease in Pamulapad seems to be the result of some extent brought under good paddy last year having been brought under Mundla or coarse paddy this year; and that in the case of Ganapavaram appears to be due to dry crops having been raised on some paddy lands with a view to give them an occasional change of crop, the lands being of rather an inferior soil. The decrease in Sultanpur is mainly under second-crop paddy and is the result of the ryots having raised no second-crop paddy at all there this year, on the ground that His Highness the Nizam's Government also would levy some extra tax from them if they should raise two crops on their lands. The heavy increase that Pratakota and Velpanur of this taluk show is the result of the ryots who combined in the preceding year, fasli 1304 (1894–95) having given up the combination this year, and to their having wet-cultivated their lands again as usual.

In the Nandyal taluk there are altogether 27 canal villages and of these eighteen show decrease. The decrease shown by only four villages is large and over a hundred rupees each; and of these four villages, the decrease against Bollavaram is due to its ryots not having this year used canal water for the Mundla or tailed paddy crop for which it was used in the previous year, and that against Karimaddula and Bilakalagudur, two important canal villages of the taluk, to combination. In fact, the ryots of these two villages wanted in the beginning to combine altogether, but endeavours made to break up the combination have partly proved successful. Otherwise, the decrease in these two villages, which is already nearly Rs. 1,200, would have been still more heavy. The decrease in Paramatur, the fourth village of the taluk showing heavy decrease, is mainly due to no necessity having been felt for its ryots taking water for rain-fed indigo stumps as in the previous year. There are 27 canal villages in the Sirvel taluk and nineteen of them show decrease. Of these nineteen, only six show heavy decrease of above a hundred rupees each. The decrease against Kotapad is due to no canal water having had to be taken for chilly crops as in the preceding year. Sirvel shows decrease, because some good paddy extent of last year seems to have been brought under coarse or Mundla paddy in fasli 1305 and because there was a falling off in second-crop paddy in consequence of last year's scarcity of water. The decrease against Nallagatla is due to no necessity having been felt for ryots taking canal water for their rain-fed indigo stumps. The decrease appearing against Chintakunta, though heavy, is only nominal, and is due to the amount of water-rate derived from the "Tirwajasti" lands under the canal-fed tank of the village, which was erroneously shown last year as direct revenue having been rightly shown this year as a separate item of revenue derived from the storage of tanks. The decrease noticeable against Rampalli is the result of combination among the ryots of the village and that appearing against Gotlur, although it was originally thought to be due to disease of cattle at the time of putting down the first-crop paddy, also seems to be really due to a premeditated combination, for even in the current year the ryots of this village seemed inclined to continue the combination, although their cattle were all right.

There are eight canal villages in the Koilkuntla taluk and of these Kondapuram and Dornipad show some large decrease. The decrease in the former village has since been found to be due to combination and that in Dornipad is due to no necessity having been felt for taking water for indigo stumps. A third village, Arjunapuram,

also shows some small decrease and the reason is the same as for Dornipad. So much for the Kurnool district. In the Cuddapah district, the figures against the Jammalamadugu taluk are almost stationary. Including shrotriems, there are 27 canal villages in all in the Proddatur taluk and of these, nine show large decrease of over Rs. 100 each. Of these, the decrease appearing against Matsnapalli, Kamanur and Bhadripalli is due to combination among some of their ryots. These are villages once noted for fraud by means of wells, and there are some such wells there even now; and, in such cases, the ryots do not naturally like close or careful supervision and check. The decrease in the case of Dhoor, Madur, Chyiyapad, Chinna Guruvalur, Pedda Guruvalur and Ketavaram is mainly the result of a falling off in second crop or dry season indigo extent, water in the canal, especially between the Razoli anicut and the Pennèr, having begun to fall about the time of sowing dry season indigo, and many a ryot, who intended to put down that crop and even prepared the land, having given up the idea of sowing in consequence. If the canal had not begun to fall then as it did, not only would the decrease now appearing in statement A against most of the villages of the Proddatur taluk have disappeared but there would, I believe, have been increase instead in all those cases. The large increase appearing against Sivapuram of this taluk is attributable to the tank of the village having breached during the heavy rains that fell in the latter part of September, and to canal water having consequently been taken for some of the wet and dry lands under that tank. In the Cuddapah taluk which has 27 canal villages including shrotriems, only two villages show a decrease of over Rs. 100 each. Of these, the decrease against Bhumayapalli is mainly due to tickets issued for paddy for certain lands of the village having had to be cancelled in consequence of frequent breaches in the Maidukur channel and to ryots' inability in consequence to raise paddy on the said lands; and even here this decrease would have been more than made up if there had been sufficient water in the canal at the time of dry season or second-crop indigo sowing. The heavy decrease of over Rs. 1,000 figuring against Khajipeta-Sunkésula is, as already stated in paragraph 4 of my report for the previous half-year, due to the ryots of the village, who bitterly complain of the partly common channel now going to their lands and who want to get an independent channel, having refused to take canal water during the first-crop season, and to their having taken and used canal water for a much smaller extent than usual even during the latter part of the year. The first of the two minor projects referred to in paragraph 19 of my report for the half-year ending 30th June 1895, No. 308, dated 25th October last, is mainly intended to remove the cause of this Khajipeta-Sunkésula people's complaint, and I understand that the project is under the investigation of the Public Works Department.

7. The subjoined statement compares the extent irrigated in the different canal taluks in fasli 1305 (1895–96) with the figures for the preceding fasli according to different rates of water-rate; and it will be seen from it that the figures under the Rs. 6 rate or crops requiring water for the time of two crops are almost stationary. Under the Rs. 4 rate which represents first-crop paddy and turmeric, there is an increase of acres 181·22 on the whole, Nandyal, Cuddapah, Proddatur and Nandikotkur showing increase, and Ramallakota, Koilkuntla and Sirvel decrease. The increase against Nandyal and the decrease against Ramallakota alone are somewhat large, and the variations in the case of the other taluks are small. Under second-crop paddy, there is a net decrease of acres 121·12, and nearly the whole of it is in the Kurnool district. Nandyal taluk alone shows an increase of acres 146·19 in second-crop paddy whereas Ramallakota, Nandikotkur, Sirvel and Koilkuntla all show decrease; and the reason for this decrease is, as already stated above, no other than the scarcity of water felt last year during the second crop season. The increase in the Nandyal taluk occurs only in two villages, Ayyavarikodur and Nunipalli, of which the former naturally occupies somewhat a favourable situation in point of supply, having a low sluice and being near below the Maddulér stream, and for the latter water was given in the latter part of the season by specially allowing a temporary dam across the main canal itself. Under the Bagayet or the Rs. 3 rate crops, there is a net decrease of nearly acres 1,300 and the whole of it is in the Kurnool

Irrigation of fasli 1305 (1895–96) compared with that of the preceding fasli according to different rates of water-rate.

district where all the taluks show decrease under this head, no necessity having been felt for irrigating affected chilly crops and indigo stumps. In the Cuddapah district, a decrease of nearly acres 400 shown by the Proddatur taluk chiefly under dry season indigo is more than made up by the Cuddapah taluk. Under the Rs. 2 rate which represents Mundla or coarse paddy, there is a net decrease of acres 386·12 and the whole of it is in the Kurnool district. There is no Mundla paddy at all in the Ramallakota taluk and there is very little of it in Koilkuntla, Jammalamadugu and Cuddapah. The chief taluks for this crop are Sirvel, Nandyal and Nandikotkur in the order the taluks are mentioned. Under the Re. 1 rate or dry crops watered, there is a net increase of nearly 900 acres; and, excepting Nandyal, Ramallakota and Jammalamadugu, all the other five canal taluks show increase, Proddatur, Sirvel and Cuddapah going in for the lion's share of it. In the Kurnool district the dry crop irrigated is generally arika, and it is korra generally in the Cuddapah district. It will be seen that, as already mentioned above, the net decrease in extent is acres 737·15 taking both the districts together.

e in fasli 1305 (1895–96), including both the seasons, as compared with fasli 1304 (1894–95).

Districts.	Taluks.	Acreage under different rates of water-rate in fasli 1304. Rupees 6. Fasli 1304.	Rupees 6. Fasli 1305.	Rupees 6. Increase or decrease.	Rupees 4. Fasli 1304.	Rupees 4. Fasli 1305.	Rupees 4. Increase or decrease.	Rupees 3. Second-crop paddy. Fasli 1304.	Rupees 3. Second-crop paddy. Fasli 1305.	Rupees 3. Second-crop paddy. Increase or decrease.	Rupees 3. Bagayet crops. Fasli 1304.
1	2	3	4	5	6	7	8	9	10	11	12
		Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.
Kurnool ..	1. Ramallakota	160·93	172·40	+ 11·47	1,218·33	1,388·13	+ 169 80	238·03	175·83	— 62·20	640·92
	2. Nandikotkur	20·43	18·03	— 2·40	3,656·89	3,648·65	— 8·24	232 19	157·29	— 74·90	1,405·92
	3. Nandyal	6·09	3·20	— 2·89	1,895 72	1,611·45	— 284·27	160 59	306·78	+ 146·19	414·27
	4. Sirvel	6·46	7·68	+ 1 22	1,157·41	1,167·27	+ 9·86	128·39	35 95	— 92·44	677·87
	5. Koilkuntla	2·47	2·47	..	192·63	226·67	+ 82·94	70·78	32·85	— 37·93	158·16
	District Total ..	196·38	203 78	+ 7·40	8,120·91	8,041·07	— 79·84	829 98	708·70	— 121·28	3,197·14
Cuddapah ..	6. Jammalamadugu	30·55	29·38	— 1·17	2,780 90	2,767·60	.. 13·40	..	..	..	3· 0
	7. Proddatur	21·54	16·18	— 5·36	5,744·45	6,656·47	+ 87·98	3·35	2·66	+ 2·66	3,374·87
	8. Cuddapah								0·85	+ 2·50	3,441·06
	District Total ..	52·09	45·56	— 6·53	8,525·35	8,423·97	+ 101·38	3·35	·3·61	+ 0·16	6,818·93
	Canal, total ..	248·47	249·34	+ 0·87	16,646·26	16,466·04	+ 181·22	833·33	712·21	— 121·12	10,016·07

1305 (1895–96), including both the seasons, as compared
4 (1894–95)—*cont.*

Districts.	Taluks.	Rupees 3—*cont.* Bagayet crops—*cont.* Fasli 1305.	Increase or decrease.	Rupees 2. Fasli 1304.	Rupees 2. Fasli 1305.	Rupees 2. Increase or decrease.	Total extent. Fasli 1304.	Total extent. Fasli 1305.	Total increase or decrease in fasli 1305 (1895–96).
1	2	13	14	15	16	17	18	19	20
		Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.
Kurnool ..	1. Ramallakota	444·83	— 196·09	289·32	193·87	.. 95·45	150·62	108·17	— 42·45
	2. Nandikotkur	704 90	— 701 02	900·02	590·66	— 309·36	946·13	1,063·61	+ 117·48
	3. Nandyal	159·47	— 254·80	990·38	964·38	— 26·00	745·39	475·61	— 269·78
	4. Sirvel	436·38	— 141·49	22·91	15·22	— 7·69	626·01	938·79	+ 312·78
	5. Koilkuntla	67·66	— 90·50				39·92	93·37	+ 53·45
	District Total ..	1,813 24	—1,383·90	2,202·63	1,764·13	— 438·50	2,507·97	2,679·35	+ 171·38
Cuddapah ..	6. Jammalamadugu	2,930·77	— 8· 0	5·15	12·95	.. 7·80	164·58	159·36	— 5·22
	7. Proddatur	3,912·82	— 384·10	52·90	90·37	+ 37·47	633 41	1,048·45	+ 615 04
	8. Cuddapah		+ 471·76	0·58	7·69	+ 7·11	485·97	692·01	+ 206·04
	District Total ..	6,903·59	+ 84·66	58·63	111·01	+ 52·38	1,183·96	1,899 82	+ 715·86
	Canal Total ..	8,716·83	—1,299·24	2,261·26	1,875·14	— 386·12	3,691·93	4,579·17	+ 887·24

Districts.	Taluks.	Total extent. Fasli 1304.	Total extent. Fasli 1305.	Total increase or decrease in fasli 1305 (1895–96).
1	2	21	22	23
		Acs.	Acs.	Acs.
Kurnool ..	1. Ramallakota	2,578·53	2,119·66	— 458 97
	2. Nandikotkur	6,542 64	5,794·49	— 748·15
	3. Nandyal	3,837·81	3,431 34	— 406·47
	4. Sirvel	3,496·38	3,540 52	+ 44·14
	5. Koilkuntla	619·81	404·20	— 115·61
	District Total ..	16,975·17	15,290 11	—1,685 06
Cuddapah ..	6. Jammalamadugu	172·73	172·31	— 0 42
	7. Proddatur	6,759·23	6,942·53	+ 183·30
	8. Cuddapah	9,608 97	10,374·00	+ 765·03
	District Total ..	16,540·93	17,488·84	+ 947·91
	Canal Total ..	33,516·10	32,778·95	— 737·15

8. Comparing canal irrigation in the Kurnool district with that in the Cuddapah district, it will be observed that the Cuddapah district is, as usual, ahead of Kurnool. Although the extent in the Kurnool district commanded by existing distributaries seems to be more than three times that of the Cuddapah district as shown in the margin, * the total extent brought under irrigation in the Cuddapah district in fasli 1305 (1895–96) is acres 2,198·13 more than that of Kurnool. Under the Rs. 6 rate, Kurnool district with its acres 196·38 no doubt shows about four times the extent of Cuddapah under that rate, but nearly the whole of it is in the Ramallakota taluk and represents topes and sugarcane to be found within a radius of 4 or 5 miles of Kurnool Town. In point of good paddy and turmeric bearing the Rs. 4 rate, the Cuddapah district, which practically comprises only two canal taluks, Cuddapah and Proddatur, has acres 8,525·35 or about acres 400 more than all the five canal taluks of the Kurnool district put together; and, under Bagayet or the Rs. 3 rate garden crops, it exceeds the Kurnool district by acres 5,090·35, Cuddapah district showing acres 6,903·59 against acres 1,813·24 of Kurnool. Second-crop paddy is almost *nil* in the Cuddapah district, whereas it is about acres 700 in the Kurnool district, but the reason for its absence in the Cuddapah district is clear. In the Kurnool district where, for the most part, the first-crop paddy is sown with the drill like a dry crop by its comparatively backward ryots, it is sown early about July along with the "mungari" or early dry crops; and, as this first-crop paddy is harvested some time before the end of December, the ryots of Kurnool having lands under low sluices find it possible to raise second-crop paddy here and there provided the canal supplies water. But in the Cuddapah district, where the system of sowing dry season or second-crop indigo on paddy-fields after the removal of the first crop paddy is generally in vogue, the second crop indigo sown about the middle of February will not be cut twice and be off the ground generally till about the middle of September following, when the first-crop paddy is sown according to the sowing-broadcast system. This first crop is harvested about the middle of February, when it will be too late to think of putting down second-crop paddy. Moreover, it is much more advantageous for a ryot to raise indigo as second crop after removal of the first-crop paddy inasmuch as, whereas the raising of paddy again on the same land as second crop must naturally tend to deteriorate the fertility of the soil, the dry season indigo raised as second crop is not only more remunerative, often paying as much as Rs. 80 to Rs. 100 per acre for two cuttings, but it also greatly fertilizes the land and obviates the necessity of any manure application for the following paddy crop of the next fasli. It is a fact well known that indigo stumps and indigo leaf refuse are among the best of manures. The absence of second-crop paddy under the canal in the Cuddapah district does not thus mean anything discreditable to the Cuddapah ryot, but it shows, on the other hand, that, unlike his Kurnool brother, the Cuddapah canal ryot is economical and wise. The Mundla or tailed paddy extent of Kurnool, which is acres 1764·13, far exceeds that of Cuddapah which is only acres 111·1, but even this speaks in favour of Cuddapah because it shows that, taken as a whole, the Cuddapah district ryot is more industrious and more advanced as an agriculturist than his Kurnool brother, a fact which is also evidenced by the enormous increase that the Cuddapah district shows over Kurnool under Bagayet or the Rs. 3 rate garden crops. In the Cuddapah district, the highly remunerative dry season indigo and cummin-seed chiefly represent the Bagayet crops, whereas in the Kurnool district they are only chillies mainly, and onions and rain-sown indigo stumps to some extent. The one rupee rate represents dry crops watered; and, as dry crops happen to be watered or

Canal irrigation in the Kurnool district for fasli 1305 (1895–96) compared with that of the Cuddapah district.

* District.	Taluk.	Approximate extent commanded by existing distributaries.
		Acs.
Kurnool ..	1. Ramallakota	2,900
	2. Nandikotkur	51,500
	3. Nandyal	14,900
	4. Sirvel	18,900
	5. Koilkuntla	6,300
	District Total ..	94,500
Cuddapah ..	6. Jammalamadugu	5,000
	7. Proddatur	13,700
	8. Cuddapah	11,800
	District Total ..	30,500
	Canal Total ..	125,000

not in the different tracts commanded by the canal according as to whether rains temporarily withhold or not occasionally, and how long they withhold, this is, after all, only a fluctuating item on which no calculations touching the financial aspect of the canal can fairly be based, and I think no comparison need, therefore, be instituted between the two districts in regard to their extents of dry crops watered, although, even under this head, the Cuddapah district beats Kurnool proportionately.

9. Although, compared with the preceding year, fasli 1305 (1895–96) shows a net decrease of Rs. 4,898–10–10 in the total canal revenue including miscellaneous items and excluding departmental collections as shown in paragraph 3 *supra*, it is yet my humble opinion that the canal is steady in the onward but slow march it has begun, since the facts (*a*) that the eighteen villages where combinations existed more or less alone show a decrease of Rs. 5,351–3–2; (*b*) that there happened to be a great falling off in the "Bagayet" or the Rs. 3 rate crops extent irrigated in the Kurnool district, because no necessity was felt to take water for affected chilly crops, &c.; (*c*) that there was decrease also in the second-crop paddy extent of the Kurnool district by reason of the early and sudden falling off of the canal in the preceding year; and (*d*) that, instead of showing a decrease of Rs. 1,516, the Proddatur taluk would have shown an increase of about Rs. 1,000 if the water in the canal between Rajoli and the Pennér had not begun to fail at the time of second crop or dry season indigo sowing, clearly indicate that the canal has not practically taken any retrograde step. Nor do I think that it will take any such step hereafter. As regards combinations, they cannot be expected to stand for ever, and that has already been noticed in the case of Pratakota and Velpanur of the Nandikotkur taluk which combined in fasli 1304 (1894–95) and broke up the combinations again in fasli 1305. Even some of the villages that combined in fasli 1305 (1895–96) have given up the combination in the current year.

10. In the margin is given a statement showing the guage readings of the Tungabhadra river at the head of the canal from January to April for the last four years, and it will be observed from it that, in point of spuply of water for dry season indigo and second paddy crops, fasli 1305 (1895–96) was equally bad with the preceding year, if not worse. The Pennér, however, gave better supply till about the end of April for the 10 miles length of the canal at the tail-end, and that is mainly why the Cuddapah taluk has been able to look up both in point of extent and revenue.

Year.	January.		February.		March.		April.	
	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.
1893 ..	7·5	7·4	6·0	5·2	5·1	7·7	4·5	2·7
1894 ..	7·3	6·0	6·1	5·2	4·4	3·4	2·5	1·5
1895 ..	7·1	5·8	4·6	4·3	3·2	2·4	2·1	2·8
1896 ..	7·2	6·5	4·9	4·0	3·0	2·7	2·2	0·5

In submitting to the Board my report for the last half-year, two suggestions have been made by the Collector of Kurnool in paragraph 17 of his endorsement with a view to prevent the early falling off of water in the canal. One of the suggestions was to utilize the Tangedantsa and other tanks through which the canal passes above Lockinsula as reservoirs by closing the flood-escapes and shutters immediately after the close of the monsoon and keeping the head-sluices at Sunkesula open until water is stored in the said tanks to the utmost of their capacity, and the other was to prevent alleged wastage of water through the Tungabhadra channels at Bellary; and in paragraph 12 of its Proceedings, dated the 7th May last, No. 91, the Board requested the Collector to consult the Executive Engineer and the Superintending Engineer and submit definite proposals on the subject.

Being a non-professional man, I do not know whether it will be found feasible or not, but, in the above connection, another suggestion strikes me, and I venture to submit it for such consideration as it may deserve. It appears that some years back the crest of the Tungabhadra anicut at Sunkesula was reduced by about three feet; and, although the circumstances which necessitated the said reduction are not known to me, it seems to my humble mind that a higher anicut than the present one would have guaranteed better supply for the second crops under the canal, coming after

December. Of course, it would be a forbiddingly expensive tax to raise up the present anicut again permanently, but what strikes me is whether it would not be feasible and advantageous to strongly fix on the present crest of the anicut something like furrowed iron bars of sufficient height and thickness and try and retain more water in the Tungabhadra itself at the head of the canal by putting in planks in the furrowed irons and thus temporarily raise the height of the anicut, say, 2 or 3 feet more, immediately after the monsoon closes and while water is yet overflowing the anicut. The planks inserted can, of course, be removed again when the canal is closed for its annual repairs. I understand that some device like the above was tried in the case of the Kistna anicut at Bezwada a few years ago, and before the height of that anicut was permanently raised; and the iron appliances and wooden planks then used in the case of the Bezwada anicut may probably be still available there. The subject being one at which I am out of my elements, it is with great diffidence that I have ventured to make the above suggestion, and I hope I will be excused for the venture.

11. The chief reason why the Cuddapah district is able to pay a water-rate of about Rs. 10,000 more than the Kurnool district, notwithstanding that the canal-commanded area of the latter district is more than three times that of the former, is that the highly remunerative garden crops of dry season indigo and cummin seed are raised there extensively, whereas in the Kurnool district these crops were altogether unknown under the canal, the former down to fasli 1303 (1893–94) and the latter down to fasli 1304 (1894–95). As already mentioned in my report for the half-year ending 30th June 1895, I went round and explained to the ryots of Kurnool the advantages of dry season indigo and succeeded in inducing a few of them to try that crop on some extent experimentally in fasli 1304 (1894–95); and, the results of some of the experiments of that year being encouraging as already detailed in paragraph 9 of the said report, I have been able to get experiments in that crop carried out again on nearly 130 acres in fasli 1305 (1895–96) and the details are as per margin.* Of these 130 acres, 124 acres are under the canal and 6 acres under a well in Yerraguntla, also a canal village. Of the 124 acres under the canal, the crop raised on 63·50 acres proved successful and the rest failed to take root properly. The six acres case tried under a well was also successful. In two successful cases of the Ramallakota taluk, one cutting of the leaf fetched Rs. 30 per acre, and in three other cases where the successful patches were small in extent, the leaf was cut and used as manure for the following paddy crop. In another successful case of the Ramallakota taluk where the crop was sparse, the first cutting fetched only Rs. 10 per acre in consequence of the sparseness. In cases where the leaf cut was sold also, the stumps seem to have been used as manure for the following paddy crops, thus obviating the necessity of other manure application. The reason why the ryots tried the crop on nearly 40 acres this time in the Ramallakota taluk was mainly the impetus given by the one very successful case of last year at Nidlohur in which the crop on 3·86 acres yielded as much as Rs. 220 for three cuttings; please see paragraph 9 of my report, No. 308, dated 25th October 1895, embodied in Board's Proceedings, dated 17th December 1895, No. 400. It is really a pity that most of this year's experiments in this taluk proved unsuccessful. If, in all the cases sown, or in a fair proportion of them, the crop had taken root properly, many other ryots of this taluk prepared to try the experiment would have also sown, but they kept back seeing the failure of others' sowings. The successful crop in the other three taluks, excepting in the one case under the well, is all yet standing and is about to be cut soon. It would have

Experimental cultivation of dry season or second crop indigo and of cummin seed in the Kurnool district.

Taluks.	Total extent cropped.	Result of experiment.	
		Extent on which crop was successful.	Extent on which crop failed.
	Acs.	Acs.	Acs.
1. Ramallakota ..	39·17	6 50	32·67
2. Nandikotkur ..	7·0	4·0	3·0
3. Nandyal	56 0	38·0	18·0
4. Sirvel	27·0	21·0	6·0
Total ..	129·17	69·50	59 67

been cut already but for the fact that there were no rains this year to help it before the canal received water and before water was let out from the canal for irrigation purposes. The standing crop is good and promising in all these cases and, as far as I can see, these cases have really encouraged the ryots not only of the villages in which the experiments have been tried, but also of other villages in the vicinity. In fact, the ryots of Kothapalli, hamlet of Nandyal, where alone there is a patch of about 30 acres of successful dry season indigo now, have expressed to me in writing that they would try this crop on not less than 100 acres in the current fasli, after harvesting the first crop paddy; and, seeing the state of the standing successful crop at Kothapalli, a ryot of Karimaddula, another important canal village of the Nandyal taluk, has told me that he would alone try it in his village on about 20 acres in the current year. The ryots of Nunepalli of the Nandyal taluk, where also there is some successful crop now, seem to feel strongly inclined to arrange between themselves and do as the Kothapalli ryots are going to do. The ryots whose dry season indigo on about 40 acres was successful last year under the Kanála canal-fed tank wanted to raise indigo again as second crop in fasli 1305, but other ryots owning lands under the same sluice of the tank and whose crop failed in fasli 1304, having gone in for second crop paddy, even those who preferred dry season indigo and were for trying it again were obliged to put in second crop paddy on their lands under that tank, in as much as indigo is not a crop that will thrive in the midst or in the vicinity of paddy fields which are always moist. Encouraged by an experiment carried out in the village last year, two ryots of Yallur of the Sirvel taluk have raised dry season indigo on about 13 acres in fasli 1305 and this is all successful. The last year's successful case of Yallur also induced certain ryots of Sambavaram of the same taluk to try the crop on about 8 acres in fasli 1305, but only 2 acres of this came out successful. The present successful cases of Yallur have already created a relish for the crop in the minds of ryots not only in Yallur, but also in Kotapad and Chintakunta, two other canal villages of the Sirvel taluk, as also in Revanur of the Koilkuntla taluk; and some ryots of these villages have told me that they have determined to try the crop in their villages in the current year. The crop on six acres under a well in Yerraguntla came to maturity earlier, because it was dependent on a well and had regular floodings, and the first cutting of the leaf is said to have been sold for Rs. 240, which comes to Rs. 40 per acre. Though under a well, this case is also an inducement to ryots owning lands under the canal. The pecuniary outturn of the yet standing successful crops will be ascertained and duly reported in my report for the next half-year.

12. Besides the above experiments in dry season or second crop indigo, I have, as already stated in my report for the half-year ending 31st December last, been able to induce a few ryots of the Kurnool district to try experiments in cummin seed on small patches ranging from 15 cents. to an acre, or nearly 8 acres in all, and in 16 different canal villages of the district. Of the 8 acres, the crop sown on between 2 and 3 acres failed and it appears that, in these cases, the ryots neglected to follow the instructions given them and sowed the crop far beyond the proper time. In one successful case of Jupad Banmer of the Nandikotkur taluk, the yield came to twelve maunds per acre and this was the highest outturn obtained in the experiments of fasli 1305 (1895–96). The ryot in this case told me that he was offered Rs. 7 per maund for his produce and at that rate the money value of the outturn comes to Rs. 84 per acre. In two other cases, namely, in the experiments carried out by Rami Reddi of Padiderupad also in the Nandikotkur taluk and by pensioned Head Constable Nabi Sahib of Kurnool, the yield per acre came to six maunds, but the land on which Rami Reddi made the experiment is rather of an inferior sort and he neglected also weeding though previously told about its importance. Rami Reddi sold his six maunds for Rs. 36; and a short 70 days' crop having fetched so much, even under neglected circumstances, this experiment seems to have created a general love for the crop in that part of the country, as can be seen from the facts that Rami Reddi himself has resolved to try it again on six acres of far better land in the current year; and that other ryots of his village have come forward for another five acres already. Nabi Sahib does not appear to have yet sold his produce, but it would certainly fetch him not less than Rs. 6 per maund. In an experiment carried out by

one Rangiah Naidu, a ryot of Mamidalapad of the Ramallakot taluk, the crop came on very well and was very promising, but in this case there was stealth of the crop before it was harvested, and so the outturn cannot be accurately stated. In the case of an experiment conducted by the Reddi of Gopalasingavaram, also of the Ramallakota taluk, the yield came to four maunds per acre, but he seems to have sown the crop rather late. An experiment carried out by a Muhammadan ryot of Sirvel was also successful and is said to have given him at about six maunds per acre. In all the other cases where there was yield, the outturn was less than 4 maunds per acre, but the extents on which the trials were made being small, the ryots in those cases seem to have not paid proper attention to the instructions given them both verbally and in writing about the method of raising the crop. There was a time when the Kurnool ryots were saying that their lands are not suited for the growth of cummin seed, and that it would not grow there at all even if tried, and it was with great difficulty that the few ryots that carried out the experiments in fasli 1305 (1895–96) could be induced to go in for them. But the few experiments carried out having shown that the ryots' original impression is wrong and unfounded, and the best case having given as much as over Rs. 80 per acre, and even some neglected cases having paid as much as nearly Rs. 40 per acre, a great change in the ryots' mind about the merits of this crop has generally been produced, more especially in the Ramallakot and Nandikotkur taluks; and several ryots from the canal villages of all the five canal taluks of the Kurnool district have cheerfully and freely come forward saying that they would like to carry out experiments in the current year, and they intend selecting good lands for the experiments and paying careful attention to the instructions. They appear to have a real desire to test the maximum outturn of the crop, and already applications have come in from 171 individuals of 55 different villages of the district for 125 acres in all. As cummin seed fit for sowing purposes is not available in the Kurnool district and as it will have to be procured from elsewhere from a distance, the ryots who offered to carry out the experiments in the current year requested that, for convenience sake, the requisite quantity of seed for the extents applied for by them be procured by Government and supplied to them in time, subject, of course, to their paying to Government the cost price of the seed supplied including conveyance charges; and I have consequently applied for the Board's sanction for an advance of Rs. 1,000 and this sanction the Board has been pleased to accord in its Proceedings, dated 9th September 1896, Mis. No. 4355. The above request was made by the ryots mainly because it must, as they allege, be difficult for them to procure, each his own small quantity of seed separately from a remote district unknown to them; and, if the seed is not procured and supplied by Government as requested by them, the result may be that they neglect to carry out the experiments promised on which the future of the canal so much depends, and it would be the canal interests that eventually and actually suffer. Of course, when the cultivation of the crop in the Kurnool district passes the experimental stage and when the crop becomes a settled and recognised crop of the district, the ryots would keep their own seed for future sowing purposes and no such arrangement as the present one would be necessary for the supply of seed. The ryots that have come forward to try cummin seed experiments in the current year assure me that, if only the current year's experiments which will be carried on on a larger scale, in many more villages, by many more individuals and with greater care and attention, prove successful in a reasonable number of cases and give an outturn of at least Rs. 30 an acre, there will be no doubt for the crop spreading like wild fire from the next year, and that it would not be too much to expect ten times the current year's extent to be applied for in the very next year. The fact that even the comparatively small results of the last year's few experiments created so much interest and given so much encouragement to ryots as to make them come forward cheerfully this year and that for over fifteen times the last year's extent is really significant. The only drawback about the cummin seed crop is that it is one subject to disease now and then like linseed and wheat crops; but, in all other respects, it is a much better and a more promising crop than even dry season indigo. In the first place, it is a crop of only 70 days' paying as much as from Rs. 60 to Rs. 100 per acre, provided it is not attacked with disease, and the

grower attends to weeding, &c., at the proper time. Before raising cummin seed, moreover, a crop of what they call "Thota or chippa korra" can be raised on the same land as the season for putting down cummin seed is about the middle of November. Again, whereas the dry season indigo is a crop which must rise or fall in extent according to the supply of water in the canal from February onwards, being a crop generally sown in February and March; the cummin seed crop is fortunate in that it is sown and harvested, while there is still ample supply of water in the canal and before any want of water for second crops is begun to be felt. Cummin seed crop will be off the ground by the end of January, and another advantage attending it is that, after its removal, dry season indigo can be sown on the land again as a third crop in the year. Considering that there are immense tracts of canal commanded land fit for the raising of cummin seed in the Kurnool district, especially in the Nandikotkur, Nandyal and Sirvel taluks, and that cummin seed is a highly remunerative "Bagayet" or garden crop requiring only a few occasional floodings and meaning far less trouble to ryots than the cultivation of paddy, I feel confident that this crop will ere long play an important part in the Kurnool district, so far as the future financial interests of the canal are concerned, and it is also my impression that it will spread there more rapidly and will be more extensively and freely taken to than even dry season indigo.

13. In addition to dry season indigo and cummin seed already introduced, I have taken steps to have ground-nut experimentally cultivated on a few small patches here and there under the canal in the current year, and their results will of course be referred to in my next report.

14. Because paddy is the prevalent crop under all other big irrigation works, it may perhaps be questioned why special care and trouble should be taken to introduce remunerative and industrial "Bagayet" crops into areas commanded by this canal; but the reason is not far to seek. Unlike the tracts commanded by other big irrigation works, the country through which this canal passes is comparatively very sparsely populated and ryotwar holdings, especially in the Kurnool district, are in consequence generally more extensive. Paddy, the raising of which is necessarily much more expensive and troublesome than the cultivation of dry and even "Bagayet" crops, is not, morever, the staple food-grain of the people; and, provided the season is normal, the Kurnool ryot generally finds it more profitable and convenient in the long run to raise his usual dry crops on a large extent than paddy on a limited scale. The same, however, cannot be said of the Bagayet crops now being introduced. They are less troublesome and at the same time more profitable crops than paddy, and this is why the people hereabouts would prefer them. Nearly all the good lands commanded by the canal are already under the occupation of local ryots; and, since the local ryots have no general relish for paddy cultivation and do not find sufficient inducement to go in for it, it is my humble opinion that it must necessarily be for the good of the canal to teach and induce them to take, as an alternative measure, to other irrigated crops which they seem to like and prefer. The amount of water-rate derived by the canal in fasli 1305 (1895–96) from dry season indigo and cummin seed in the Cuddapah district is about Rs. 14,000; and, if only the Kurnool ryot comes to know as much about these crops as his Cuddapah brother and takes to them proportionately, the Kurnool district water-rate revenue from these two crops ought eventually to develop into something not less than Rs. 40,000 a year. But, at the same time, it will have to be remembered that the introduction and spread of new crops among a class of ryots so backward and conservative as the generality of the Kurnool ryots, can be only gradual and must take some time.

15. The extent granted under the block rules to different applicants up to the end of June last is the same as that by the end of December last, namely, 1,331·52 acres assessed at Rs. 1,457–13–0, but some more blocks to the extent of 355·67 acres assessed at Rs. 218–9–1 have been

Introduction of foreign enterprise and labour.

granted to other applicants since june last. The total extent granted up to date comes, therefore, to 1,687·19 acres assessed at Rs. 1,676–6–1 as particularized in the margin. Some applicants whose applications were received previous to December last have since written to say that they do not want the blocks applied for by them, and so their applications have been cancelled as desired by them. In four other cases involving a total extent of 187·47 acres, Collector's sanction received has been communicated to the applicants, but the applicants do not appear to have yet come and taken up the blocks, nor did they write to say that they do not want the blocks. They have, therefore, been written to again with a view to ascertain from them whether they want the blocks or not, and their replies are awaited. Three applications to the extent of about 50 acres recently received have been sent to Tahsildars for enquiry and report and are pending with them; and, besides the above, four intending applicants for blocks—two from Madras, one from the Tanjore district, and the fourth from Nellore—have written to say that they would come to inspect the available waste lands under the canal.

District.		Village.	Extent.	Assessment.
			ACS	RS. A. P.
Kurnool.	1	Pudur	10·20	6 11 0
	2	Pamulapad	209·20	94 0 0
	3	Bhanumukkala ..	270·71	135 6 0
	4	Pesaravayi	71·35	67 2 1
Cuddapah.	5	Madur	570·91	690 15 0
	6	Mythukur	121·51	140 10 0
	7	Bhadripalli	25·4	312 7 0
	8	Thudumuladinne ..	81·15	101 8 0
	9	Thavvaripalli ..	102·12	127 11 0
		Total ..	1,687·19	1,676 6 1

16. Of the five block-holders of the Cuddapah district, those of Madur, Mythukur, Bhadripalli and Thudumuladinne have cleared up portions of their blocks in fasli 1305 (1895–96) and ploughed up and experimentally raised some crops on them, chiefly with a view to test the capability of the soils and their adaptability for different crops; and, according to a report received by me on the subject, the outturn of the different crops tried seems to have been as follows:—

	Blocks.	Extent cleared and cultivated.	Crops raised.	Value of outturn.
		ACS.		RS.
1	Madur block	11·57	Paddy	125
		12·0	Cummin seed	96
		9·53	Horsegram	240
		29·78	Cotton	38
		28·14	Gingelly	Crops failed.
		12·0	Dry season indigo	
		0·28	Greengram	1
		9·60	Blackgram	80
		3·0	Wheat	30
			Total ..	610
2	Mythukur block	4·79	Cholum	Crops failed.
		3·6	Gingelly	
		13·0	Horsegram	46
		2·25	Cotton	6
		15·71	Dry season indigo	150
			Total ..	202
3	Bhadripalli block	24·64	Bengal-gram	70
		2·0	Kusuma	5
		30·11	Horsegram	20
		14·58	Dry season indigo	400
			Total ..	495

The Thudumuladinne block-holder tried gingelly on some extent during the latter part of the year and that crop is reported to have failed. This has apparently discouraged him and the adjoining Thavvaripalli block-holder; for, whereas the holders of the other three bigger blocks have been cultivating their blocks in the current year, the block-holders of Thudumuladinne and Thavvaripalli appear to have not yet

touched their blocks, nor have they relinquished them. Considering (*a*) that the Madur, Mythukur and Bhadripalli block-holders entered upon their blocks rather late in the agricultural year; (*b*) that the clearing up of the waste lands and their ploughing and the removal of roots, &c., must naturally have taken them some time and caused some more delay; and (*c*) that, in the case of almost all the crops tried by them, they seem to have depended solely on the natural fertility of the soil and not applied any manures, and weighing also the fact that the first year's ploughings were not generally perfect as I have myself noticed in the case of the Madur and Mythukur blocks,—I think the outturns got in these three cases may be taken as fair and encouraging for the first year, and that of dry season indigo in the case of the Bhadripalli block is practically so. In the Kurnool district, channel has been provided to the small block of Pudur in the current year and it is expected to be cultivated hereafter. In the case of the Pamulapad block which was taken up by its holder in the latter half of fasli 1305 (1895–96), about 70 acres of land was cleared up and prepared in that year for the current year, and about February last blackgram and paddy were tried by this block-holder, only as an experiment, on some two patches of the cleared up area to test the fitness of the soil for the crops. Both the crops came on luxuriantly and well, but the canal could not supply them water till they matured, the crops themselves having been sown late, and there was therefore no yield. But the experiments made have greatly encouraged the block-holder who is going to bring in the current year nearly 100 acres of the block under cultivation with different crops including paddy, dry season indigo and cummin seed. In the case of the Madur, Mythukur, Bhadripalli, Pamulapad, Bhanumukkala and Pesaravayi blocks, the block-holders have come from their native districts and are residing in villages near their blocks, and some of them have brought their families too. The Madur, Mythukur and the Pamulapad block-holders have purchased their own stock of cattle and the others seem to have been carrying on cultivation with hired cattle for the present.

Comparison of the forecast given in paragraph 68 of the special officer's first report of 1891 with the canal revenue of fasli 1305 (1895–96).

17. On a reference to the forecast given by me before in 1890, it will be observed that the average annual revenue of this canal for the eleven years down to fasli 1299 (1889–90) was found to be Rs. 72,000 in round figures and that it was then estimated that, should a Special Revenue officer be placed on the canal temporarily for a period of five years for purposes of check of irrigation and instruction to ryots, and should certain other proposals then made be sanctioned, the revenue of the canal might increase by Rs 30,000 by the end of the fifth year of the special officer's appointment, the said increase being expected from three different sources, namely :—

	RS.	
(*a*)	15,000	... From proper check and supervision of surreptitious irrigation.
(*b*)	10,000	... From instruction to ryots and from other exertions of the special officer.
(*c*)	5,000	... From gradul extension of Mundla or tailed paddy by reduction of its rate from Rs. 4 to Rs. 2 per acre.
Total ...	30,000	

The water-rate revenue of the canal for fasli 1305 (1895–96) excluding tank storage value and other miscellaneous items being Rs. 1,02,486–5–2, it will be noticed that this amount exceeds the eleven years' average above referred to by Rupees 30,486–5–2; and, although a small portion of this excess may be due to subsequent extension of Mundla or tailed paddy cultivation, there is not the least doubt that a very large portion of the excess is attributable to better check in subsequent years and gradual suppression of surreptitious irrigation which once existed largely under the canal. It will thus be seen that the actual income from source (*a*) is nearly double the originally estimated figure. The Mundla paddy extent of fasli 1305 (1895–96), although less than that of the preceding year, is more than double that of fasli 1303

(1893–94). As regards source (*b*), the dry season indigo and cummin seed crops are yet only in their experimental stage in the Kurnool district, but there seems no reason whatever why a development of Rs. 10,000 revenue should not be expected from them in the course of three or four years more, if only the taluk revenue officers concerned take interest in the matter and see that the interest that the ryots now show in the experiments is not allowed to cool down, when there is no longer a special officer on the canal. So far as my present impression goes, cummin seed promises to help the canal in the Kurnool district even more than dry season indigo.

The income of the canal for fasli 1305 (1895–96) compared with its expenditure.

18. The total income of the canal for fasli 1305 (1895–96) including all the sources is Rs. 1,16,991–10–2 as detailed below :—

	RS.	A.	P.
Irrigation revenue direct as per statements "A" and "B".	1,02,486	5	2
Revenue derived from the storage of tanks	4,650	9	3
From Kurnool town supply	3,500	0	0
Assessment of canal lands cultivated	1,183	1	9
Value of water supplied to indigo vats	68	8	0
Miscellaneous revenue collected by the Public Works Department	5,103	2	0
Total ...	1,16,991	10	2

and the total expenditure of the canal for the official year 1895–96, as ascertained from the Executive Engineer, is Rs. 96,040–9–2, as particularized below :—

	RS.	A.	P.
Extension and improvements ...	8,403	8	5
Annual repairs ...	51,555	8	6
Special repairs ...	12,424	8	3
Contribution by the canal for its share of establishment ...	23,657	0	0
Total ...	96,040	9	2

The result of the year was thus a net saving of Rs. 20,951–1–0 in favour of the canal against Rs. 22,351–3–0 of the preceding year.

Miscellaneous.

19. Referring to paragraph 5 of G.O., No. 155, Revenue, dated 8th April last, communicated with Board's Proceedings, No. 66, dated 17th idem, I beg to submit that, in the case of both the minor projects referred to by me in paragraph 19 of my report for the half-year ending 30th June 1895, not only the lands involved are by the nature of their soils quite suited for paddy and irrigated "bagayet" crops, but the ryots of the villages concerned are really anxious to get the channels. They took me and showed the lands, and some of them even presented mahazar petitions, which I sent to the Executive Engineer in addressing him on the subject. In fact the ryots of Khajipeta-Sunkesula and the shrotriemdar of Buddayapalli—two villages involved in one of the two projects—have been dunning for one of the two channels proposed ever since I was first on special duty in connection with this canal in 1890, and the ryots of Annalur have since joined them. Chinnachouku and Ukkayapalli, two other villages of the Cuddapah taluk, for the irrigation of which the second minor project was proposed, are also wet-liking villages quite close to Cuddapah town itself, and the ryots of these villages also are really anxious to have the channel asked for by them. These villages being close to Cuddapah Municipality, command also manure convenience.

I understand that the Executive Engineer who has since inspected the Mythukur-Sunkesula line quite approves of that minor project; but, in the case of the other project proposed for the villages of Ukkayapalli and Chinnachouku, the opinion of the local officers of the Public Works Department seems to be that it cannot be feasible inasmuch as it seems to be apprehended that the present feeder channel of the

Patha Cuddapah tank cannot bear the burden of any additional villages, the duty it has now to perform in supplying Gudur lands and the big Patha Cuddapah tank being itself more than the feeder channel can bear.

20. I would have been in a position to submit this report earlier, but the compilation of the accompaniments could not be finished till about the 10th instant, certain mistakes noticed in the returns received from the Nandyal and Sirvel taluks having had to be rectified.

Endorsement thereon by the Collector of Kurnool, dated Koilkuntla, 7th October 1896, Ref. on P. No. 215-Ver.

Forwarded.

2. In this report the Special Deputy Collector in charge of the Kurnool-Cuddapah canal compares the irrigation under the canal for the past fasli (1305) with that for fasli 1304. The result of the comparison, so far as Kurnool district is concerned, is disappointing. There was a decrease of 1,685·06 acres in the area irrigated and a consequent loss of Rs 6,139–10–4 in wet assessment. The decrease was not confined to any particular taluk, but occurred in 84 out of the 118 villages under the canal.

3. The reasons assigned by the Special Deputy Collector for the decrease are: (1) prohibition of cultivation of A and B class lands, (2) combination amongst villagers, (3) change in the darkhast system, (4) need of less water for "bagayet" crops owing to adequate rainfall in September and October, and (5) abstention from second-crop cultivation owing to want of sufficient water in the previous year. These are the reasons on the surface with which we have been familiarized in previous reports. With regard to reason (1) I would invite attention to the remark of the Superintending Engineer, III Circle, in paragraph 5 of his letter, No. 1574, dated 26th August 1896, communicated to the Board with my Dis. No. 1326-Ver. of 1896, dated 4th September 1896. Reason (2) does not seem a satisfactory one. Do ryots really refuse water because they are afraid that their lands will be classified as wet? Does not the question of finance mainly influence them in their decision? With regard to reason (3) I think that more definite information is required before the Special Deputy Collector's view can be accepted—that the change in the darkhast system has adversely affected the area irrigated. Reason (4) explains the decrease of 1,384 acres in the area irrigated with bagayet crops; and reason (5) explains the decrease under second crop.

4. In his report for the half-year ending 30th June 1895 the Special Deputy Collector entertained hopes of an increase in dry season or second-crop indigo, as a result of some successful experiments with the crop in that year. Those hopes have not been fulfilled, as the ryots had in mind the rapid fall in the Tungabhadra last year and were afraid of a similar deficiency of water and loss of crop this year. This rapid fall of the Tungabhadra in March and April is a contingency that must always be looked for, and, consequently, it is a question whether dry season indigo is a crop that will prosper in this district under present conditions. As the Superintending Engineer says in another part of his letter quoted above, "we cannot get over the fact that the river falls in December and continues to do so till the following June, and that, unless we can store water, second-crop irrigation must always be precarious."

5. The question of storage of water, mooted by Mr. Mullaly in paragraph 17 of his endorsement, printed with Board's Proceedings, No. 91, dated 7th May 1896, and now by the Special Deputy Collector in paragraph 10 of this report, is under the consideration of the Superintending Engineer, and will be reported on in due course.

6. The Special Deputy Collector's account of the experiments in cummin seed cultivation is interesting and encouraging reading. It is to be hoped that his presage of increase in the cultivation this year will be fulfilled, for there can be no doubt that the crop has great chances of success in this district. Its main advantages are (1) that it is sown at a period of ensured water-supply (2), that it remains on the ground only 70 days, (3) that it is profitable.

7. The Special Deputy Collector has explained the delay in the submission of this report. It reached me on the 29th ultimo.

READ—also the following endorsement of the Sub-Collector in charge of Cuddapah, dated Cuddapah, 5th October 1896, No. 5277-Rev:—

Forwarded.

2. Regarding the complaint of the ryots of Khajipeta-Sunkesula village of Cuddapah, against the action of one Krishna Reddi in obstructing the supply of the canal water; a report has been already submitted.

RESOLUTION—dated 18th February 1897, No. 143.

With the endorsements read above, the Collectors of Cuddapah and Kurnool submit the report of the Special Deputy Collector in charge of the Kurnool-Cuddapah canal for the half-year ending 30th June 1896.

2. The Deputy Collector spent 171 days in camp out of a total of 182 days. More than half of this period was taken up in the settlement of water-rate in the canal villages. The villages in the Koilkuntla taluk were settled by the Collector of Kurnool and those in the other taluks by the Deputy Collector.

3. The following abstract shows the extent irrigated and the water-rate charged in fasli 1305, as compared with the preceding year. Details for the several villages are given in the statements accompanying the Special Deputy Collector's report:—

District.	Taluk.	Fasli 1304.				Fasli 1305.			
		First crop.	Second crop.	Total.	Net demand.	First crop.	Second crop.	Total.	Net demand.
		ACS.	ACS.	ACS.	RS.	ACS.	ACS.	ACS.	RS.
Kurnool district.	Ramallakot	1,827	752	2,579	9,553	1,688	432	2,120	7,825
	Nandikotkur	4,999	1,320	6,319	19,793	4,873	693	5,566	17,806
	Nizam's villages	188	36	224	851	228	..	228	911
	Nandyal	3,155	682	3,837	15,300	2,669	762	3,431	14,439
	Sirvel	3,260	236	3,496	10,417	3,362	379	3,541	9,910
	Koilkuntla	431	89	520	1,648	333	71	404	1,260
	Total (*a*) ..	13,860	3,115	16,975	57,557	13,153	2,137	15,290	52,151
Cuddapah district.	Jammalamadugu ..	173	..	173	108	172	..	172	122
	Proddatur	5,061	1,698	6,759	23,358	5,923	1,019	6,942	21,843
	Cuddapah	7,238	2,371	9,609	32,264	7,216	3,158	10,374	34,272
	Total (*b*) ..	12,472	4,069	16,541	55,730	13,311	4,178	17,489	56,237
	Kurnool water-supply (*c*).	..	..	..	3,500	..	..	..	3,500
	Grand total of (*a*), (*b*) and (*c*) ..	26,332	7,184	33,516	1,16,787	26,464	6,315	32,779	1,11,888

In the Kurnool district, there was a falling off in the area of 707 acres under first crop, and 978 acres under second crop, with a corresponding decrease of Rs. 6,140 in the water-rate. There was, however, a slight increase of Rs. 734 under revenue from "other items" such as "assessment of canal A and B class lands," "water supplied to indigo vats," "storage of tanks," so that the net decrease for the district was Rs. 5,406 as compared with the previous year. In the Cuddapah district, there was an increase of 839 acres under first crop and 109 acres under second crop, with a total increase of Rs. 507 in the net demand, of which Rs. 311 are due to revenue from direct irrigation, and Rs. 196 to "other items." Taking the two districts together, there was an increase of 132 acres under first crop, and a decrease of 869 acres under second crop, with a resultant decrease of Rs. 4,898 in the total revenue from all sources. The causes of the variations in the different taluks are fully explained in paragraphs 4 and 5 of the Deputy Collector's report.

4. The main reasons assigned for the decrease are (*a*) prohibition of the cultivation of A and B class lands, (*b*) cultivation of a smaller extent of second crop owing to apprehended deficiency in water-supply, (*c*) change in the system of darkhast for water and (*d*) combination of villagers owing to the impression that if they took water, their lands would be permanently assessed as "wet" at the ensuing resettlement. As

regards the cultivation of A and B class lands and the early falling off of water in the canal, which is the cause ascribed for the decrease in the extent of second crop cultivation, a separate communication submitted by the Collector, after consulting the Superintending Engineer, with reference to paragraphs 8 and 12 of B.P., dated 7th May 1896, No. 91, has been disposed of in B.P., dated 16th November 1896, No. 350; and the suggestion of the Deputy Collector to again raise the anicut of the river has also been dealt with in the same Proceedings. It is observed from the Deputy Collector's statement A that there was a decrease in the cultivation of A and B class lands in Ramallakota, Nandyal and Koilkuntla taluks, and a corresponding increase in the remaining two taluks, so that the total revenue derived from these lands was almost equal to that of the previous year. As regards the change in the darkhast system referred to by the Deputy Collector, the Board agrees with the Collector of Kurnool in thinking that more definite information is required before the Deputy Collector's view, namely, that the change in the system has adversely affected the area irrigated can be accepted. With reference to the alleged combination of the villagers, the Collector of Kurnool questions the correctness of the explanation that the ryots refuse water, because they are afraid of their lands being classified as wet and seems inclined to think that the question of finance mainly influences them in their decision. The Board is inclined to believe that the view taken by the Deputy Collector, who has been in close touch with the ryots, is likely to be correct.

5. The Special Deputy Collector states that the chief reason why the Cuddapah district is able to pay a water-rate of about Rs. 10,000 more than the Kurnool district, notwithstanding that the area commanded by the canal in the latter district is more than three times that in the former, is that in the first-named district the ryots cultivate the dry season indigo and cummin-seed on an extensive scale, as they know from experience that these crops are highly remunerative, while the Kurnool ryot has had no such experience until very recently. The cultivation of indigo as a second crop was introduced experimentally at the suggestion of the Deputy Collector only in fasli 1303, and that of the cummin-seed in fasli 1304. The experiments in the cultivation of dry season or second crop indigo, during the fasli, were not as encouraging as in the previous year, nor is the cultivation of the crop likely to prove successful in the present precarious state of water-supply for second crop, as rightly observed by the Collector of Kurnool. The extent cultivated amounted to nearly 130 acres, of which only one-half yielded a good crop, the greater portion of this extent being in the Nandyal and Sirvel taluks.

6. The experiments with cummin-seed, however, are, as remarked by Mr. Gillman, more encouraging. The crop is grown at a period of ensured water-supply, remains on the ground only for seventy days, and yields good profit. Experiments were made during the fasli in sixteen canal villages on small patches ranging in area from 15 cents to an acre, and covering a total extent of nearly 8 acres. Most of these experiments having proved successful, many of the ryots who had been under the impression that their lands were unsuited for the cultivation of cummin-seed, came forward this year with promises to try the experiments on their lands; and with a view to purchase and supply the seed, a sum of Rs. 1,000 was, at the request of the Deputy Collector, sanctioned in B.P., dated 9th September 1896, No. 4355. The price of the seed will be recovered from the ryots concerned. The results of these further experiments should be reported in due course. The Deputy Collector states that he has taken steps to have ground-nut experimentally cultivated on a few small patches under the canal, and the Board trusts that the experiments will be made with due regard to the conditions of the soils of the lands selected. The crop grows best on sandy soils.

7. During the half year under report, no lands were granted under the block rules; but since the close of the fasli, an extent of about 356 acres has been granted. Some of the applications pending at the end of the previous half year were cancelled at the request of the applicants. In four cases involving an extent of 187 acres, the applications were sanctioned by the Collector; but the applicants have not yet taken possession of the blocks. Several of the block-holders have cleared up portions of their lands and commenced experimental cultivation; and the results of the cultivation are stated to have been fair and encouraging.

8. The total revenue from the canal for fasli 1305, exclusive of the miscellaneous receipts collected by the Public Works Department (Rs. 5,103) amounted to Rupees 1,11,888 as detailed below:—

Items.	Fasli 1304.	Fasli 1305.
	Rs.	Rs.
Water-rate	1,08,315	1,02,486
Revenue derived from storage of tanks	3,747	4,651
Payment from Kurnool Municipality for water supplied to town	3,500	3,500
Assessment of canal A and B class lands	1,176	1,183
Water supplied to indigo vats	49	68
Total ...	1,16,787	1,11,888
Miscellaneous receipts collected by the Public Works Department	5,296	5,103
Grand Total ...	1,22,083	1,16,991
Expenditure as reported by the Executive Engineer ...	99,732	96,041
Balance in favour of the canal ...	22,351	20,950

The revenue due to irrigation was Rs. 1,02,486 or Rs. 30,486 more than the average of the eleven years ending with fasli 1298 (Rs. 72,000). This increase is slightly more than the amount estimated by the Deputy Collector in paragraph 68 of his report printed in B.P., dated 25th May 1893, No. 204. Including the miscellaneous revenue collected by the Public Works Department, the total income of the canal amounted to Rs. 1,16,991 and the expenditure, as ascertained from the Executive Engineer, came to Rs. 96,041, leaving a balance of Rs. 20,950 in favour of the canal against Rs. 22,351 in the previous year. There is, however, another point of view from which the canal may be considered, viz., as a protective work against famine. The whole canal tract has been saved in the current year, and the value of the crop so saved is roughly 17 lakhs—B.P., dated 19th January 1897, No. 40.

9. With reference to paragraph 5 of G.O., No. 155, Revenue, dated 8th April 1896, the Deputy Collector reports in paragraph 19 of his letter that the lands commanded by the two minor projects are, by the nature of their soils, suited for paddy and irrigated "bagayat" crops; that the ryots concerned are "really anxious to get the channels" and that he understands that while in respect of one of these projects, viz., the Mythukur-Sunkesula channel, the Executive Engineer's opinion is favourable, in respect of the other, namely, the project proposed for the villages of Ukkayapalli and Chinnachouku, the opinion of the local Public Works Officers appears to be that it is not feasible.

10. It is observed that the statistics of area irrigated and of the revenue derived, as furnished by the Deputy Collector, differ slightly from those furnished by the Collectors of Kurnool and Cuddapah and embodied in B.P., dated 8th October 1896, No. 267. The discrepancies should be explained by the Collectors concerned.

District.	—	Fasli 1304.				Fasli 1305.			
		First crop.	Second crop.	Total.	Net demand.	First crop.	Second crop.	Total.	Net demand.
		Acs.	Acs.	Acs.	Rs.	Acs.	Acs.	Acs.	Rs.
Kurnool ..	As furnished by the Collector and printed in B.P., dated 8th October 1896, No. 267	14,183	2,900	17,083	57,384	13,433	2,130	15,563	46,697
	As given by the Deputy Collector	13,860	3,115	16,975	57,557	13,153	2,137	15,290	52,151
Cuddapah ..	As furnished by the Collector and printed in B.P., dated 8th October 1896, No. 267	12,411	4,046	16,457	55,722	13,183	4,157	17,340	56,237
	As given by the Deputy Collector	12,472	4,069	16,541	55,730	13,311	4,178	17,489	56,237

11. The report regarding the complaint of the ryots of Khajipeta-Sunkesula, referred to in paragraph 2 of the endorsement of the Collector of Cuddapah, has been disposed of in B.P., dated 12th December 1896, No. 6500.

(True Copies and Extract.)

R. V. Sundaram
Secretary.

To the Secretary to Government, Revenue Department, with two enclosures, in original, to be returned.
" Collector of Kurnool.
" " of Cuddapah.
" Special Deputy Collectors of Kurnool-Cuddapah Canal.

Exd. Shaik Karim.

REVENUE DEPARTMENT.

1897.

Board of Revenue

(Revenue Settlement, Land Records and Agriculture),

MADRAS.

Printed March th.

Proceedings, 18*th Feb.* 1897, *No.* 143.

Kurnool-Cuddapah canal.—Submitting to Government report of the Special Deputy Collector, —, for the half-year ending 30th June 1896.

D/4 1,000—8-4-97.

468

17-6-97

REVENUE DEPARTMENT.

C No. 2166/97.

From the Board of Revenue. Lett.

Dated 189 .

the Hon: Sir Lovell Ch

C 5/6/97

FOR ORDERS.

The current road above embodies the Board's Proc: on the report of the Dy Collector on Special duty, Kurnool-Cuddapah Canal for the half year ending 30. 6. 96.

2. movements of the Special officer during the half-year:- The Dy: Collector spent 171 days in camp out of a total of 181 days, and during the period was engaged in

(a) the inspection of suspicious cases of well irrigation in the Proddatur and Cuddapah talukas:

(b) the settlement of water-rate in the Canal villages of all the talukas, except Koil Kuntla (Kurnool) which was settled by the collector; and

(c) the selection of fairly large Canal commanded areas in connection with the imposition of the famine assessment rate at the ensuing resettlement of Kurnool.

selection

the Case

3. Canal irrigation. Out-turn of a Canal commanded area of acres 94,500 in Kurnool and acres 30,500 in Cuddapah, the extent actually irrigated in the two districts was only acres 15,290 or 16 p.c. in the former district and acres 17,499 or 57 p.c. in the latter district. The percentage as well as the actual extent under irrigation in Cuddapah was greater than that in Kurnool and the water-rate levied in the former district is also over Rs 2000 less in excess of that collected in the latter. The Special Dy Collector explains that the difference is due to the fact that the Cuddapah ryot is more advanced than the Kurnool one and consequently more ready to avail himself of the advantages of improved irrigation offered by the Canal.

Compared with the previous fasli there has been a decrease of acres 1,685 in the extent irrigated in Kurnool and an increase of acres 958 in Cuddapah. The marginally noted statement exhibits the extent irrigated and the water-rate levied in the two districts during the three faslis 1304 and 1305. In para 506 report, the Dy Collector states the

	Extent irrigated in			Water-rate levied		
	Fasli 1303	Fasli 1304	Fasli 1305	Fasli 1303	Fasli 1304	Fasli 1305
Kurnool	acres	acres	acres	Rs	Rs	Rs
Ramallakota	3,024	2,578	2,120	8,024	9,238	7,625
Nandikotkur	5,975	6,543	5,794	19,799	20,048	17,835
Nandyal	4,113	3,838	3,431	12,995	11,669	10,588
Sirvel	3,123	3,496	3,541	10,864	10,338	9,432
Koilkuntla	346	520	404	11,37	1,531	1,253
District-total	15,581	16,975	15,290	52,019	52,874	46,735
Cuddapah						
Jammalamadugu	262	173	174	274	187	122
Proddatur	6,250	6,757	6,943	21,446	23,337	21,843
Cuddapah	9,665	9,609	10,374	30,688	31,975	33,787
District-total	16,177	16,541	17,489	51,408	55,441	55,752
Canal-total	31,758	33,516	32,779	103,427	108,315	102,487

Para 3. of B.P. 350 16.11.96
Flog CC

causes of the decrease to be :-

(i) prohibition of cultivation of the A & B. class Lands. — Effects observed in the Ramallakot tals. The Collector of Kurnool invites attention in this connection to the remarks of the Supg Engineer in para 5 of his letter dy 26-8-96 No. 1674, extracted below "I do not think that the Special Dy Collector's statement that the decrease of irrigation under the Canal is partly due to the prohibition of cultivation of A & B class lands is quite borne out by facts. In conversation with him on the 25th I he could only bring forward two instances to substantiate the statement and so far as the revenue of the Canal is concerned, the question does not seem to be at present of serious importance."

(ii) Change in the system of darkhasting for water from the commencement of fasli 1305, by which ryots are allowed to apply for water at any time they like, by actually taking water, instead of applying for it beforehand with in two fixed dates — Effects observed in the case of Ramallakot, the Case

and Nandyal talukas. Both the Collector of Kurnool and the Board of Revenue consider that more definite information is required before this view can be accepted.

(iii) Early fall of water in the Canal in the preceding year. Owing to an apprehension that there might be a similar shortfall in the current year also, the ryots went in for a much smaller extent of second-crops in Fasli 1305.— Effects observed in Pamallakot, Nandikotkur, Sirvel and Koilkuntla talukas.

(iv). Combination among the ryots, who labouring under an impression that their lands will be converted into "permanent-wet", at the next resettlement if they cultivated them with paddy, raised dry crops even on lands on which they were usually raising paddy.— Effects observed in Nandikotkur, Nandyal, Sirvel and Koilkuntla talukas. The Collector doubts whether this reason affords a satisfactory explanation of decrease and whether the question of ryots' combination is not more likely the

The Board of Revenue

The Dy Coll. thinks however that this system is fair. Under the previous system the ryots had to apply for water and an estimate of the quantity that might be wanted. Now they have only to apply for the quantity that can be actually used

JG

* In the case of this taluk the impression seems to be deep-rooted; the Dy Coll. is repeating the same cause in each successive report.

is however inclined to believe that the view taken by the Dy Collector, who has been in close touch with the ryots, is likely to be more correct.

(v). The bagayat crops having been injuriously affected by the heavy rains which fell in Sept. Oct. & Dec. 1905, ~~there~~ water was taken for a smaller extent of bagayat crops.— Effects observed in Nandikotkur, Nandyal, Sirvel and Koilkuntla talukas.

4. Experimental cultivation. In Kurnool, experiments in the cultivation of second-crop indigo (begun in fasli 1303) and of Cummin seed (begun in fasli 1304) were continued during fasli 1305. The results of the experiments are detailed in paras 11 to 14 of the report. The cultivation of these crops is widely adopted in Cuddapah, a fact which accounts for the higher revenue realized in that district; but it is as yet new to the ryots of Kurnool. An extent of acres was cultivated with dry-seed indigo, but only 70 acres bore the crop, ~~The~~ the whole extent of the Cary

and in the Ramallakot taluk having proved a failure; this is reported to have had the effect of keeping back others who would have tried the experiment. On this subject the Collector of Kurnool observes in para 4 of his forwarding endorsement:- "In his report for the half-year ending 30th June 1895, the Special Dy. Collector entertained hopes of an increase in dry season or second-crop indigo, as a result of some successful experiments with the crop in that year. These hopes have not been fulfilled, as the ryots had in mind the rapid fall of the Tungabhadra last year and were afraid of a similar deficiency of water and loss of crops this year. This rapid fall of the Tungabhadra in March and April is a contingency that must always be looked for and consequently it is a question whether dry season indigo will prosper in this district under present conditions. As the superintending Engineer says..... "we cannot get over the fact that the river falls in December and remains so till the following June, at which time we can store water second-crop irrigation must always be precarious."

The experiments in cummin seed were also continued during the fasli. This is a remunerative crop that is grown at a period of ensured water-supply and which remains on the ground only 70 days. With a view to stimulate the adoption of its cultivation by the ryots, the Board of Revenue has sanctioned, on the application of the Dy. Collector, an advance of Rs.[illegible] for procuring seed for distribution among the ryots. The results of the experiments are set forth in para 12 of the report and are interesting; but the Dy. Coll. states that the crop is subject to disease now & then like linseed and wheat. This is a serious drawback in the case of an experimental cultivation and the necessity that exists on the part of the Special Officer and of the other officers to give clear instructions to the ryots as to how the cultivation should be carried on and to see by frequent inspection that these instructions are car-

unobserved, cannot be over-rated.
Col [illegible] The Dy Coll: has also
adopted steps during the year to have
a ground-nut experimentally cultivated
on a few small patches here
and there. The Board of Revenue
has instructed him to make
other experiments with due regard
to the condition of the soils of the
grounds selected, the crop being
that which grows best on sandy
soils.

The ryots appear eager to
follow up the experiments wherever
successful, but are prone
to be easily disheartened by failure.
The Dy Collector hopes that with
time the cultivation of these re-
munerative crops will take firm
root and be adopted widely through-
out the Canal Commanded area.
The Board agree: however doubts the
advisability of stimulating the culti-
vation of these second crops as the
natural water fails in the months
of January to June, and has
drawn the attention of the Special
Officer to the importance of directing
chief attention to encouraging and
extending first crop cultivation.

5. Suggestion as to
to ensure a better supply of ca
waters. In this connection th
Dy. Collector urges the considera
of a proposal already put forw
by Mr. Sullaby, viz: to stor
water in the several tanks
through which the canal pas
by closing the flood escapes a
shutters immediately after the
close of the monsoon and kee
the head-sluices at Sunkaras
open until the tanks are ful
to the utmost of their capacity.
further suggests that if possibl
the crest of the Tungabhadra
anicut may be raised by tw
or three feet by means of remo
able planks shutters. The matte
reported to be under the consider
ation of the Superintending Engi
Nat. Officer, however, has alrea
expressed doubts as to the feasi
bility of the first portion of the
project, the good effects of wh
would, in his opinion, tend
to diminish annually as
bed of the river silted up.

6. Grant of lands under Block
No lands were granted

2

and 6 applicants under the block rules
Col during the half-year under report,
Rs 1 but since its close an extent of
in fasli 67 acres, assessed at Rs 218-9-1
tion have been so granted. The total
said ent up to the close of the half-year
thereby 219.40 acres in Kurnool and
Cuddapah 2.12 acres in Cuddapah
thereby of an extent of canal com-
manded waste of acres 10,000 and
Rs 4,000 respectively in the two
districts. It cannot be said
that the applicants are
unwilling to obtain lands, especially
in Kurnool.

To 7. Financial results.

The total Canal revenue from all
sources in fasli 1305 was Rs 116991-10-2,
as against Rs 122083 in fasli 1304,
and the total expenditure Rs 96041 in
fasli 1305 against Rs 99732 in fasli 1304,
leaving a balance in favour of
the Canal of Rs 20951 in fasli 1305
against Rs 22351 in fasli 1304.

8. The P.W.D may be requested to
expedite the report on the investigation
of the two minor projects referred
to in para 19 of the Dpl Dy Coll's report.

4/10/97.

Dept. Do. 1/11/1897

Yes, it may be remarked that though the revenue is less than in the preceding year by Rs 4099 this decrease is fully accounted for by the Spl. Officer as arising from temporary causes, & in no way showing that the improvement shown in previous reports has been interrupted. Dy 11/6/97

Order (Press) No. 468 of 17th June

Recorded. The Govt no

that though the total revenue der
from the canal, exclusive of the
cellaneous receipts collected by t
P.W.D., in fasli 1305 is less tha
that in the preceding fasli by Rs.
4899, the decrease is fully accoun
for by the Special Dy Collector a
arising from temporary causes and
no way indicating that the improv
shown in previous reports has be
interrupted.

The X.XEX P.W.D. will be
quested to expedite the report on
investigation of the two minor proj
referred to in para 19 of the Deput
Collector's report.

(from orders)

17.6.97

RS
16-6-97

To

The Board of Rev (Sett)
" (L.R.)
" P.W.D. (I)

17.6.97

Government {1897} of Madras.

REVENUE.

Recd. } 1897. *Enclosures*

Regd. } *Spare copies*

G.O., No. 468, 17th June 1897.

JUNE.

Kurnool-Cuddapah Canal.

Recording, with remarks, Board's Proceedings submitting to Government report of the Special Deputy Collector, —, for the half-year ending 30th June 1896.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 18th February 1897, No. 143 :—

Read—the following paper :—

Letter from M.R.Ry. K. SUBBARAYUDU PANTULU Garu, Rao Bahadur, Special Deputy Collector, Kurnool-Cuddapah Canal, to the Secretary to the Commissioner of R.S., L.R. and Agri. (through the Collectors of Kurnool and Cuddapah), dated Chakarazvemula, 21st September 1896, No. 234 :—

Referring to the latter part of paragraph 3 of G.O., No. 964, Revenue, dated 7th November 1893, communicated with B.P., dated 16th February 1894, No. 87, I have the honour to submit the following report for the half-year ending 30th June last.

2. From the 1st till about the 20th of January last, I was engaged mainly in the inspection of the suspicious cases of well irrigation of the Proddatur and Cuddapah taluks; and, returning to the Nandikotkur taluk of the Kurnool district by about the end of the month, I commenced the water-rate settlement of that taluk for fasli 1305 on the 1st of February. From the beginning of February till about the middle of May following, I was chiefly engaged in conducting the water-rate settlement of the Nandikotkur, Ramallakota, Nandyal and Sirvel taluks of the Kurnool district and of the Jammalamadugu, Proddatur and Cuddapah taluks of the Cuddapah district. The water-rate settlement of the remaining Koilkuntla taluk of the Kurnool district was conducted by the Collector of Kurnool along with the ordinary jamabandi of the taluk, under instructions contained in B.P., dated 9th January 1895, Mis. No. 36. On finishing the Cuddapah taluk water-rate settlement by about the middle of May, I proceeded back to Kurnool, and there commenced the work of selecting fairly irrigable canal—commanded Government lands in connection with the proposed imposition of the famine insurance rate at the next re-settlement—a work in which I have been required to assist the Special Sub-divisional Officer, Mr. Dennehy of the Public Works Department. Of course, in all my above movements up and down the canal, I have taken particular care to continue my instruction to the ryots of the Kurnool district canal villages about the experimental cultivation of dry season indigo and cummin-seed with the aid of canal water, explaining to them the fair and encouraging results that the few experiments already carried out have produced here and there in the district. In all, 171 out of 182 days have been spent by me out of head-quarters during the half-year under report.

Movements of the Special Officer during the half-year.

3. As in the previous year, I beg to submit herewith two statements A and B, the former containing villagewar particulars and comparing the irrigated extent and canal water-rate of fasli 1305 (1895–96) with the figures for the preceding fasli, and the latter showing the extents irrigated in fasli 1305 (1895–96) under the different rates of water-rate, as also the

Irrigation under the canal in fasli 1305 (1895–96).

amounts of water-rate derived. It will be observed from these statements that, compared with fasli 1304 (1894–95) and taking the canal as a whole and including miscellaneous items, the year under report shows a net decrease of acres 737·15 in extent and of Rs. 4,898–10–10 in revenue—a decrease of Rs. 5,828–15–1 appearing under direct irrigation, and an increase of Rs. 930–4–3 under other items consisting of (*a*) value of water given for Kurnool town supply, (*b*) value of water run into canal fed tanks, (*c*) value of water supplied to indigo vats and (*d*) the assessment levied on canal A and B class lands cultivated. Considered districtwar, the Kurnool district shows a net decrease of acres 1,685·6 in extent and of Rs. 5,405–7–9 in revenue, whereas the Cuddapah district shows a net increase of acres 947·91 in extent and of Rs. 506–12–11 in revenue. Besides the items mentioned above, there is another item of Rs. 5,103–2–0 realized by the Public Works Department and credited by them to the canal, and particulars of this item are stated to be as follows :—

	Rs.	A.	P.
Receipts from plantations	2,327	7	7
Receipts from other canal produce	885	13	6
Navigation receipts	1,302	6	3
Rent of buildings	487	12	2
Miscellaneous	99	10	6
Total ...	5,103	2	0

4. Now to turn to talukwar particulars. The subjoined abstract compares the figures of the different canal taluks for fasli 1305 (1895–96) with those of the preceding fasli, and it will be observed from it that, so far as the Kurnool district is concerned, there is decrease in extent in all the taluks except Sirvel, and that all the five taluks of the district show decrease in water-rate. Under the head "other items," however, the Nandikotkur, Nandyal, and Sirvel taluks show increase, whereas the Ramallakota and Koilkuntla taluks show some decrease. In the Cuddapah district, the two important canal taluks of Cuddapah and Proddatur show increase under extent, whereas the insignificant and nominal canal taluk of Jammalamadugu shows a few cents decrease. Under the head "water-rate," the Cuddapah taluk shows a large increase, whereas Jammalamadugu shows some little increase and the Proddatur taluk a large decrease. Under "other items" the Cuddapah taluk shows an increase of nearly two hundred rupees, but this is only nominal being the result of the tank storage revenue of one or two canal-fed tanks shown last year under direct revenue having rightly been shown under tank storage head this year :—

Districts.	Taluks.	Fasli 1304.			Fasli 1305.	
		Extent.	Water-rate.	Other items.	Extent.	Water-rate.
1	2	3	4	5	6	7
		Acs.	Rs. A. P.	Rs. A. P.	Acs.	Rs. A. P.
Kurnool ..	1. Ramallakota ..	2,578·53	9,237 12 1	3,815 9 9	2,119·56	7,624 11 2
	2. Nandikotkur ..	6,542 64	20,048 4 3	595 8 8	5,794·49	17,835 1 9
	3. Nandyal	3,837·81	11,668 13 10	3,630 11 0	3,431·34	10,587 11 11
	4. Sirvel	3,496·38	10,338 3 3	78 15 9	3,540·52	9,432 4 7
	5. Koilkuntla	519·81	1,581 4 6	61 10 3	404·20	1,254 14 2
	District Total ..	16,975·17	52,874 5 11	8,182 7 5	15,290·11	46,734 11 7
Cuddapah ..	6. Jammalamadugu ..	172·73	107 7 4	..	172·31	121 12 0
	7. Proddatur	6,759·23	23,358 11 8	..	6,942·53	21,842 12 7
	8. Cuddapah	9,608·97	31,974 11 4	289 7 4	10,374·00	33,787 1 0
	District Total ..	16,540·93	55,440 14 4	289 7 4	17,488·84	55,751 9 7
	Canal Total ..	33,516·10	1,08,315 4 3	8,471 14 9	32,778·95	1,02,486 5 2

Districts.	Taluks.	Fasli 1305—*cont.* Other items.	Increase or decrease. Extent.	Water-rate.	Other items.
		8	9	10	11
Kurnool ..	1. Ramallakota ..	Rs. A. P. 3,699 15 11	Acs. — 458·97	Rs. A. P. — 1,613 0 11	Rs. A. P. — 115 9 10
	2. Nandikotkur ..	882 0 7	— 748·15	— 2,213 2 6	+ 286 7 11
	3. Nandyal	3,851 14 1	— 406·47	— 1,081 1 11	+ 221 3 1
	4. Sirvel	477 11 5	+ 44·14	— 905 14 8	+ 398 11 8
	5. Koilkuntla	5 0 0	— 115·61	— 326 6 4	— 56 10 3
	District Total ..	8,916 10 0	— 1,685·6	— 6,139 10 4	+ 734 2 7
Cuddapah ..	6. Jammalamadugu ..	..	— 0·42	+ 14 4 8	..
	7. Proddatur	..	+ 183·30	— 1,515 15 1	..
	8. Cuddapah	485 9 0	+ 765·03	+ 1,812 5 8	+ 196 1 8
	District Total ..	485 9 0	+ 947·91	+ 310 11 3	+ 196 1 8
	Canal Total ..	9,402 3 0	— 737·15	— 5,828 15 1	+ 930 4 3
	Net decrease ..	..	..	4,898 10 10	

5. As already stated in paragraph 4 of my report No. 26, dated 7th February embodied in B.P., dated 7th May last, No. 91, the decrease in the Ramallakota taluk is due partly to the prohibition of the cultivation of canal A and B class lands on which wet crops were being usually raised previously, and partly to the change introduced in the system of darkhast for water from the commencement of fasli 1305 (1895–96) by which ryots are allowed to apply for water any time they like before actually taking water, instead of applying for it beforehand within two fixed dates as was the case in the preceding fasli. It was also due to some extent to the ryots having gone in for a much smaller extent of second crop in fasli 1305 (1895–96) in consequence of the early falling off of water in the canal in the previous year (please see paragraph 8 of my report No. 308, dated the 25th October last, embodied in Board's Proceedings, dated 17th December 1895, No. 400). The decrease in the Nandikotkur taluk is, as already stated in the report for the half-year ending 31st December last, mainly due to combination among the ryots of some of its canal villages, who, labouring under an erroneous impression that their lands will be converted into permanent "wet" at the next re-settlement if they raise wet crops, raised dry crops, even on lands on which they were usually raising paddy; and it is also due partly to the change in the darkhast system and to no necessity having been felt by the ryots this year for taking water for such large extents of chilly and indigo stumps as in the previous year, the crops having been affected by the heavy rains that fell about the middle of September, in the latter part of October and again towards the close of December. The previous year's early falling off of the canal resulted in some decrease in second-crop paddy in this taluk also. Of course, in the case of villages where combinations existed, all possible and reasonable endeavours were made to disabuse the ryots' minds of the erroneous impression that got into their heads, but most of them were stubborn and would not yield even to the advice of their old local Tahsildar. When questioned as to why they suddenly chose to raise dry crops on usual paddy lands, they try and put forward some other excuses, such as want of manure, &c., but there is no doubt whatever that the real cause in all such cases is the mistaken impression. In the Nandyal taluk, the decrease is due mainly to combination in two important canal villages and it is also due partly to the change in the darkhast system and partly to water having had to be taken, as in the case of the Nandikotkur taluk, for a smaller extent of *bagayat* or 3-rupee rate crops, namely, chilly, indigo stumps, &c. The Sirvel taluk shows some increase in extent because, in consequence of the comparatively hard nature of the red-soil lands of its canal villages, water had to be taken there in fasli 1305 for a much larger extent of dry crops than in the preceding year when rains first temporarily withheld in September and October; but even here, there is a decrease in revenue, and this decrease is due

partly to combination among ryots in two of its villages, and partly to no necessity having been felt by ryots for taking canal water for their chilly crops as they were, for the most part, either affected or damaged by the heavy rains that subsequently fell. There was some decrease in this taluk in second-crop paddy also in consequence of the previous year's scarcity of water during the latter part of the year. In the Koilkuntla taluk, which is an unimportant canal taluk, the decrease is due to combination in one of its canal villages and to no water having had to be taken for indigo stumps as in the preceding year. There was also some small decrease under second-crop paddy in consequence of last year's sudden falling off of the canal.

In the Cuddapah district, the Jammalamadugu taluk is an insignificant one in a canal point of view and the variations against it are trifling. The Proddatur taluk shows increase under extent and decrease under revenue. The increase under extent is due to water having had to be taken for a large extent of korra when rains withheld there in the beginning of September, and the decrease under revenue is due to a falling off in second crop or dry season indigo for want of enough water in the canal at the time of its sowing. Seeing the supply in the canal beginning to go down about the time of indigo sowing, several of the ryots who even prepared their lands for the crop gave up the idea of sowing it and refrained from taking tickets. The increase in the Cuddapah taluk, which is the most important at present of all the canal taluks, is due (*a*) to a large extent having been brought under dry season indigo generally in the villages below the Pennér which supplied water to the canal till about the end of April, and in Kottur and Kommalur where, in the light of their last year's experience, the ryots took special care this year to put down their indigo crops immediately after removal of first-crop paddy without unnecessarily losing any time; (*b*) to some lands of Yetur and Miduthur on which ragi was raised in the previous year having been brought under paddy, a higher rate crop; and (*c*) to water having been taken for a larger extent of korra crops when rains first withheld in the beginning of September.

6. Going to villagewar particulars in statement A, it will be observed that, out of eleven villages of the Ramallakota taluk, as many as ten villages show decrease and that the decrease is large and above a hundred rupees in six. Of these six, Gopalasingavaram, Nidwhur and Mamidalapad seem to be villages to which the order prohibiting the cultivation of canal A and B class lands applied to some extent; and there was more or less of decrease in all the villages especially under second crop, chiefly in consequence of the last year's early falling off of the canal. The fact, moreover, that the second or dry season indigo experimentally tried this year in Nidwhur on over twenty acres did not unfortunately take root properly, kept back others from going in for more of that crop; and, as already stated above in paragraph 5, the change introduced in the darkhast system has also to account for the variations to some extent at least. Under the rule in force in fasli 1304 (1894–95), the ryots had to put in their darkhasts for water within two fixed dates in the year, one for the first crop and the other for the second crop, and, in so putting in darkhasts in advance, the ryots had naturally to apply for guessed or estimated extents at least in some cases, whereas under the rule now in force which is no doubt suited to this canal and is at the same time fair to the ryot, they apply for water for almost precise extents according to their needs. In the Nandikotkur taluk, there are 45 canal villages in all including the three belonging to His Highness the Nizam's Dominions, and it will be observed from statement A, that thirty-one of these show decrease, the decrease in fifteen villages being large and above a hundred rupees each. Of these fifteen, (1) Maddigatla, (2) Tatipad, (3) Korapolur, (4) Mittakandala, (5) Vempenta, (6) Satlajutur, and (7) Chelimilla are villages where, as already stated above, there was more or less combination among the ryots and where dry crops were consequently raised on many of the lands on which paddy was being usually raised before. There was combination in Regadigudur and Tarigoppula also, but these two are unimportant canal villages showing small decrease. The decrease in Tatipad may also be said to be due partly to no necessity having been felt by its ryots for taking water for their indigo stumps as they did in the last year. The remaining eight villages showing large decrease are (1) Allúr, (2) Rudravaram, (3) Satanikota, (4) Mutsumurri, (5)

Maddur, (6) Pamulapad, (7) Ganapavaram and (8) Sultanpur. The decrease in Allur is due partly to some natural fluctuation in the first-crop paddy extent and partly to the ryots not having gone in for any second crop this year in consequence of last year's scarcity of water. The decrease in the case of Rudravaram is due partly to no necessity having been felt this year for ryots taking canal water for their wet lands under the Bugga or spring channel as was the case last year, and partly to the prohibitory order in regard to the cultivation of canal A and B class lands. It is also attributable to some extent to some falling off in paddy extent in hamlet Padidempad. The decrease in Satanikota and Mutsumurri is mainly due to no water having been taken there for chilly crops this year, the crops having been affected by the excessive rains that fell in the latter part of October. The decrease in Maddur is due partly to some ordinary fluctuation in the first-crop paddy extent and to reduced extent under second-crop paddy in consequence of the last year's sudden falling off of the canal. The decrease in Pamulapad seems to be the result of some extent brought under good paddy last year having been brought under Mundla or coarse paddy this year; and that in the case of Ganapavaram appears to be due to dry crops having been raised on some paddy lands with a view to give them an occasional change of crop, the lands being of rather an inferior soil. The decrease in Sultanpur is mainly under second-crop paddy and is the result of the ryots having raised no second-crop paddy at all there this year, on the ground that His Highness the Nizam's Government also would levy some extra tax from them if they should raise two crops on their lands. The heavy increase that Pratakota and Velpanur of this taluk show is the result of the ryots who combined in the preceding year, fasli 1304 (1894–95) having given up the combination this year, and to their having wet-cultivated their lands again as usual.

In the Nandyal taluk there are altogether 27 canal villages and of these eighteen show decrease. The decrease shown by only four villages is large and over a hundred rupees each; and of these four villages, the decrease against Bollavaram is due to its ryots not having this year used canal water for the Mundla or tailed paddy crop for which it was used in the previous year, and that against Karimaddula and Bilakalagudur, two important canal villages of the taluk, to combination. In fact, the ryots of these two villages wanted in the beginning to combine altogether, but endeavours made to break up the combination have partly proved successful. Otherwise, the decrease in these two villages, which is already nearly Rs. 1,200, would have been still more heavy. The decrease in Paramatur, the fourth village of the taluk showing heavy decrease, is mainly due to no necessity having been felt for its ryots taking water for rain-fed indigo stumps as in the previous year. There are 27 canal villages in the Sirvel taluk and nineteen of them show decrease. Of these nineteen, only six show heavy decrease of above a hundred rupees each. The decrease against Kotapad is due to no canal water having had to be taken for chilly crops as in the preceding year. Sirvel shows decrease, because some good paddy extent of last year seems to have been brought under coarse or Mundla paddy in fasli 1305 and because there was a falling off in second-crop paddy in consequence of last year's scarcity of water. The decrease against Nallagatla is due to no necessity having been felt for ryots taking canal water for their rain-fed indigo stumps. The decrease appearing against Chintakunta, though heavy, is only nominal, and is due to the amount of water-rate derived from the "Tirwajasti" lands under the canal-fed tank of the village, which was erroneously shown last year as direct revenue having been rightly shown this year as a separate item of revenue derived from the storage of tanks. The decrease noticeable against Rampalli is the result of combination among the ryots of the village and that appearing against Gotlur, although it was originally thought to be due to disease of cattle at the time of putting down the first-crop paddy, also seems to be really due to a premeditated combination, for even in the current year the ryots of this village seemed inclined to continue the combination, although their cattle were all right.

There are eight canal villages in the Koilkuntla taluk and of these Kondapuram and Dornipad show some large decrease. The decrease in the former village has since been found to be due to combination and that in Dornipad is due to no necessity having been felt for taking water for indigo stumps. A third village, Arjunapuram,

also shows some small decrease and the reason is the same as for Dornipad. So much for the Kurnool district. In the Cuddapah district, the figures against the Jammalamadugu taluk are almost stationary. Including shrotriems, there are 27 canal villages in all in the Proddatur taluk and of these, nine show large decrease of over Rs. 100 each. Of these, the decrease appearing against Matsnapalli, Kamanur and Bhadripalli is due to combination among some of their ryots. These are villages once noted for fraud by means of wells, and there are some such wells there even now; and, in such cases, the ryots do not naturally like close or careful supervision and check. The decrease in the case of Dhoor, Madur, Chyiyapad, Chinna Guruvalur, Pedda Guruvalur and Ketavaram is mainly the result of a falling off in second crop or dry season indigo extent, water in the canal, especially between the Razoli anicut and the Pennèr, having begun to fall about the time of sowing dry season indigo, and many a ryot, who intended to put down that crop and even prepared the land, having given up the idea of sowing in consequence. If the canal had not begun to fall then as it did, not only would the decrease now appearing in statement A against most of the villages of the Proddatur taluk have disappeared but there would, I believe, have been increase instead in all those cases. The large increase appearing against Sivapuram of this taluk is attributable to the tank of the village having breached during the heavy rains that fell in the latter part of September, and to canal water having consequently been taken for some of the wet and dry lands under that tank. In the Cuddapah taluk which has 27 canal villages including shrotriems, only two villages show a decrease of over Rs. 100 each. Of these, the decrease against Bhumayapalli is mainly due to tickets issued for paddy for certain lands of the village having had to be cancelled in consequence of frequent breaches in the Maidukur channel and to ryots' inability in consequence to raise paddy on the said lands; and even here this decrease would have been more than made up if there had been sufficient water in the canal at the time of dry season or second-crop indigo sowing. The heavy decrease of over Rs. 1,000 figuring against Khajipeta-Sunkésula is, as already stated in paragraph 4 of my report for the previous half-year, due to the ryots of the village, who bitterly complain of the partly common channel now going to their lands and who want to get an independent channel, having refused to take canal water during the first-crop season, and to their having taken and used canal water for a much smaller extent than usual even during the latter part of the year. The first of the two minor projects referred to in paragraph 19 of my report for the half-year ending 30th June 1895, No. 308, dated 25th October last, is mainly intended to remove the cause of this Khajipeta-Sunkésula people's complaint, and I understand that the project is under the investigation of the Public Works Department.

Irrigation of fasli 1305 (1895–96) compared with that of the preceding fasli according to different rates of water-rate.

7. The subjoined statement compares the extent irrigated in the different canal taluks in fasli 1305 (1895–96) with the figures for the preceding fasli according to different rates of water-rate; and it will be seen from it that the figures under the Rs. 6 rate or crops requiring water for the time of two crops are almost stationary. Under the Rs. 4 rate which represents first-crop paddy and turmeric, there is an increase of acres 181·22 on the whole, Nandyal, Cuddapah, Proddatur and Nandikotkur showing increase, and Ramallakota, Koilkuntla and Sirvel decrease. The increase against Nandyal and the decrease against Ramallakota alone are somewhat large, and the variations in the case of the other taluks are small. Under second-crop paddy, there is a net decrease of acres 121·12, and nearly the whole of it is in the Kurnool district. Nandyal taluk alone shows an increase of acres 146·19 in second-crop paddy whereas Ramallakota, Nandikotkur, Sirvel and Koilkuntla all show decrease; and the reason for this decrease is, as already stated above, no other than the scarcity of water felt last year during the second crop season. The increase in the Nandyal taluk occurs only in two villages, Ayyavarikodur and Nunipalli, of which the former naturally occupies somewhat a favourable situation in point of supply, having a low sluice and being near below the Maddulér stream, and for the latter water was given in the latter part of the season by specially allowing a temporary dam across the main canal itself. Under the Bagayet or the Rs. 3 rate crops,

there is a net decrease of nearly acres 1,300 and the whole of it is in the Kurnool district where all the taluks show decrease under this head, no necessity having been felt for irrigating affected chilly crops and indigo stumps. In the Cuddapah district, a decrease of nearly acres 400 shown by the Proddatur taluk chiefly under dry season indigo is more than made up by the Cuddapah taluk. Under the Rs. 2 rate which represents Mundla or coarse paddy, there is a net decrease of acres 386·12 and the whole of it is in the Kurnool district. There is no Mundla paddy at all in the Ramallakota taluk and there is very little of it in Koilkuntla, Jammalamadugu and Cuddapah. The chief taluks for this crop are Sirvel, Nandyal and Nandikotkur in the order the taluks are mentioned. Under the Re. 1 rate or dry crops watered, there is a net increase of nearly 900 acres; and, excepting Nandyal, Ramallakota and Jammalamadugu, all the other five canal taluks show increase, Proddatur, Sirvel and Cuddapah going in for the lion's share of it. In the Kurnool district the dry crop irrigated is generally arika, and it is korra generally in the Cuddapah district. It will be seen that, as already mentioned above, the net decrease in extent is acres 737·15 taking both the districts together.

Districts.	Taluks.	Acreage under different rates of water-rate in fasli 1305 (1895–96), including both the seasons, as compared with fasli 1304 (1894–95).										
		Rupees 6.			Rupees 4.			Rupees 3.				
								Second-crop paddy.			Bagayet crops.	
		Fasli 1304.	Fasli 1305.	Increase or decrease.	Fasli 1304.	Fasli 1305.	Increase or decrease.	Fasli 1304.	Fasli 1305.	Increase or decrease.	Fasli 1304.	
1	2	3	4	5	6	7	8	9	10	11	12	
Kurnool ..	1. Ramallakota	Acs. 160·93	Acs. 172·40	Acs. + 11·47	Acs. 1,388·13	Acs. 1,218·33	Acs. — 169 80	Acs. 238·03	Acs. 175·83	Acs. — 62·20	Acs. 640·92	
	2. Nandikotkur	20·43	18·03	— 2·40	3,648·65	3,656·89	+ 8·24	232·19	157·29	— 74·90	1,405·92	
	3. Nandyal	6·09	3·20	— 2·89	1,611·45	1,895 72	+ 284·27	160·59	306·78	+ 146·19	414·27	
	4. Sirvel	6·46	7·68	+ 1·22	1,167·27	1,157·41	— 9·93	128·39	35 95	— 92·44	577·87	
	5. Koilkuntla	2·47	2·47	..	225·57	192·63	— 32 94	70·78	32·85	— 37·93	158·16	
	District Total ..	196·38	203 78	+ 7·40	8,041·07	8,120·91	+ 79·84	829 98	708 70	— 121·28	3,197·14	
Cuddapah ..	6. Jammalamadugu	..	..	..	..	..	..	..	..	..	3·00	
	7. Proddatur	30·55	29·38	— 1·17	2,767·50	2,780 90	+ 13·40	..	2·66	+ 2·66	3,374·87	
	8. Cuddapah	21·54	16·18	— 5·36	5,656·47	5,744·45	+ 87·98	3·35	0·85	— 2·50	3,441·06	
	District Total ..	52·09	45·56	— 6·53	8,423·97	8,525·35	+ 101·38	3 35	3 51	+ 0·16	6,818·93	
	Canal Total ..	248·47	249·34	+ 0·87	16,465·04	16,646·26	+ 181·22	833·33	712·21	— 121·12	10,016·07	

Districts.	Taluks.	Acreage under different rates of water-rate in fasli 1305 (1895–96), including both the seasons, as compared with fasli 1304 (1894–95)—*cont.*								Total extent.		Total increase or decrease in fasli 1305 (1895–96).
		Rupees 3—*cont.*		Rupees 2.			Rupee 1.					
		Bagayet crops—*cont.*								Fasli 1304.	Fasli 1305.	
		Fasli 1305.	Increase or decrease.	Fasli 1304.	Fasli 1305.	Increase or decrease.	Fasli 1304.	Fasli 1305.	Increase or decrease.			
		13	14	15	16	17	18	19	20	21	22	23
Kurnool ..	1. Ramallakota	Acs. 444·83	Acs. — 196·09	Acs. ..	Acs. ..	Acs. ..	Acs. 150·52	Acs. 108·17	Acs. — 42·35	Acs. 2,578·53	Acs. 2,119·56	Acs. — 458 97
	2. Nandikotkur	704 90	— 701·02	289·32	193·87	— 95·45	946·13	1,063·51	+ 117·38	6,542 64	5,794·49	— 748·15
	3. Nandyal	159·47	— 254·80	900·02	590·66	— 309·36	745·39	475·51	— 269·88	3,837·81	3,431 34	— 406·47
	4. Sirvel	436·38	— 141·49	990·38	964·38	— 26·00	626·01	938·79	+ 312 78	3,496 38	3,540 52	+ 44·14
	5. Koilkuntla	67·66	— 90·50	22·91	15·22	— 7·69	39·92	93·37	+ 53·45	519·81	401·20	— 115 61
	District Total ..	1,813 24	—1,383·90	2,202·63	1,764·13	— 438·50	2,507·97	2,679·35	+ 171·38	16,975·17	15,290 11	—1,685 06
Cuddapah ..	6. Jammalamadugu	..	— 3· 0	5·15	12·95	+ 7·80	164·58	159·36	— 5·22	172·73	172·31	— 0·42
	7. Proddatur	2,990·77	— 384·10	52·90	90·37	+ 37·47	533 41	1,048·45	+ 515·04	6,759·23	6,942·53	+ 183·30
	8. Cuddapah	3,912·82	+ 471·76	0·58	7·69	+ 7·11	485·97	692·01	+ 206·04	9,608 97	10,374·00	+ 765·03
	District Total ..	6,903·59	+ 84·66	58·63	111·01	+ 52·38	1,183·96	1,899·82	+ 715·86	16,540·93	17,488·84	+ 947·91
	Canal Total ..	8,716·83	—1,299·24	2,261·26	1,875·14	— 386·12	3,691·93	4,579·17	+ 887·24	33,516·10	32,778·95	— 737·15

8. Comparing canal irrigation in the Kurnool district with that in the Cuddapah district, it will be observed that the Cuddapah district is, as usual, ahead of Kurnool. Although the extent in the Kurnool district commanded by existing distributaries seems to be more than three times that of the Cuddapah district as shown in the margin, * the total extent brought under irrigation in the Cuddapah district in fasli 1305 (1895–96) is acres 2,198·73 more than that of Kurnool. Under the Rs. 6 rate, Kurnool district with its acres 196·38 no doubt shows about four times the extent of Cuddapah under that rate, but nearly the whole of it is in the Ramallakota taluk and represents topes and sugarcane to be found within a radius of 4 or 5 miles of Kurnool Town. In point of good paddy and turmeric bearing the Rs. 4 rate, the Cuddapah district, which practically comprises only two canal taluks, Cuddapah and Proddatur, has acres 8,525·35 or about acres 400 more than all the five canal taluks of the Kurnool district put together; and, under Bagayet or the Rs. 3 rate garden crops, it exceeds the Kurnool district by acres 5,090·35, Cuddapah district showing acres 6,903·59 against acres 1,813·24 of Kurnool. Second-crop paddy is almost *nil* in the Cuddapah district, whereas it is about acres 700 in the Kurnool district, but the reason for its absence in the Cuddapah district is clear. In the Kurnool district where, for the most part, the first-crop paddy is sown with the drill like a dry crop by its comparatively backward ryots, it is sown early about July along with the "mungari" or early dry crops; and, as this first-crop paddy is harvested some time before the end of December, the ryots of Kurnool having lands under low sluices find it possible to raise second-crop paddy here and there provided the canal supplies water. But in the Cuddapah district, where the system of sowing dry season or second-crop indigo on paddy-fields after the removal of the first crop paddy is generally in vogue, the second crop indigo sown about the middle of February will not be cut twice and be off the ground generally till about the middle of September following, when the first-crop paddy is sown according to the sowing-broadcast system. This first crop is harvested about the middle of February, when it will be too late to think of putting down second-crop paddy. Moreover, it is much more advantageous for a ryot to raise indigo as second crop after removal of the first-crop paddy inasmuch as, whereas the raising of paddy again on the same land as second crop must naturally tend to deteriorate the fertility of the soil, the dry season indigo raised as second crop is not only more remunerative, often paying as much as Rs. 80 to Rs. 100 per acre for two cuttings, but it also greatly fertilizes the land and obviates the necessity of any manure application for the following paddy crop of the next fasli. It is a fact well known that indigo stumps and indigo leaf refuse are among the best of manures. The absence of second-crop paddy under the canal in the Cuddapah district does not thus mean anything discreditable to the Cuddapah ryot, but it shows, on the other hand, that, unlike his Kurnool brother, the Cuddapah canal ryot is economical and wise. The Mundla or tailed paddy extent of Kurnool, which is acres 1764·13, far exceeds that of Cuddapah which is only acres 111·1, but even this speaks in favour of Cuddapah because it shows that, taken as a whole, the Cuddapah district ryot is more industrious and more advanced as an agriculturist than his Kurnool brother, a fact which is also evidenced by the enormous increase that the Cuddapah district shows over Kurnool under Bagayet or the Rs. 3 rate garden crops. In the Cuddapah district, the highly remunerative dry season indigo and cummin-seed chiefly represent the Bagayet crops, whereas in the Kurnool district they are only chillies mainly, and onions and rain-sown indigo stumps to some extent. The one rupee rate represents dry crops watered; and, as dry crops happen to be watered or

Canal irrigation in the Kurnool district for fasli 1305 (1895–96) compared with that of the Cuddapah district.

* District.	Taluk.	Approximate extent commanded by existing distributaries.
		Acs.
Kurnool ..	1. Ramallakota	2,900
	2. Nandikotkur ..	51,500
	3. Nandyal	14,900
	4. Sirvel	18,900
	5. Koilkuntla	6,300
	District Total ..	94,500
Cuddapah ..	6. Jammalamadugu ..	5,000
	7. Proddatur	13,700.
	8. Cuddapah	11,800
	District Total ..	30,500
	Canal Total ..	125,000

not in the different tracts commanded by the canal according as to whether rains temporarily withhold or not occasionally, and how long they withhold, this is, after all, only a fluctuating item on which no calculations touching the financial aspect of the canal can fairly be based, and I think no comparison need, therefore, be instituted between the two districts in regard to their extents of dry crops watered, although, even under this head, the Cuddapah district beats Kurnool proportionately.

9. Although, compared with the preceding year, fasli 1305 (1895–96) shows a net decrease of Rs. 4,898–10–10 in the total canal revenue including miscellaneous items and excluding departmental collections as shown in paragraph 3 *supra*, it is yet my humble opinion that the canal is steady in the onward but slow march it has begun, since the facts (*a*) that the eighteen villages where combinations existed more or less alone show a decrease of Rs. 5,351–3–2; (*b*) that there happened to be a great falling off in the "Bagayet" or the Rs. 3 rate crops extent irrigated in the Kurnool district, because no necessity was felt to take water for affected chilly crops, &c.; (*c*) that there was decrease also in the second-crop paddy extent of the Kurnool district by reason of the early and sudden falling off of the canal in the preceding year; and (*d*) that, instead of showing a decrease of Rs. 1,516, the Proddatur taluk would have shown an increase of about Rs. 1,000 if the water in the canal between Rajoli and the Pennér had not begun to fail at the time of second crop or dry season indigo sowing, clearly indicate that the canal has not practically taken any retrograde step. Nor do I think that it will take any such step hereafter. As regards combinations, they cannot be expected to stand for ever, and that has already been noticed in the case of Pratakota and Velpanur of the Nandikotkur taluk which combined in fasli 1304 (1894–95) and broke up the combinations again in fasli 1305. Even some of the villages that combined in fasli 1305 (1895–96) have given up the combination in the current year.

10. In the margin is given a statement showing the guage readings of the Tungabhadra river at the head of the canal from January to April for the last four years, and it will be observed from it that, in point of spuply of water for dry season indigo and second paddy crops, fasli 1305 (1895–96) was equally bad with the preceding year, if not worse. The Pennér, however, gave better supply till about the end of April for the 10 miles length of the canal at the tail-end, and that is mainly why the Cuddapah taluk has been able to look up both in point of extent and revenue.

Year.	January.		February.		March.		April.	
	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.
1893 ..	7·5	7·4	6·0	5·2	5·1	7·7	4·5	2·7
1894 ..	7·3	6·0	6·1	5·2	4·4	3·4	2·5	1·5
1895 ..	7·1	5·8	4·6	4·3	3·2	2·4	2·1	2·8
1896 ..	7·2	6·5	4·9	4·0	3·0	2·7	2·2	0·5

In submitting to the Board my report for the last half-year, two suggestions have been made by the Collector of Kurnool in paragraph 17 of his endorsement with a view to prevent the early falling off of water in the canal. One of the suggestions was to utilize the Tangedantsa and other tanks through which the canal passes above Lockinsula as reservoirs by closing the flood-escapes and shutters immediately after the close of the monsoon and keeping the head-sluices at Sunkesula open until water is stored in the said tanks to the utmost of their capacity, and the other was to prevent alleged wastage of water through the Tungabhadra channels at Bellary; and in paragraph 12 of its Proceedings, dated the 7th May last, No. 91, the Board requested the Collector to consult the Executive Engineer and the Superintending Engineer and submit definite proposals on the subject.

Being a non-professional man, I do not know whether it will be found feasible or not, but, in the above connection, another suggestion strikes me, and I venture to submit it for such consideration as it may deserve. It appears that some years back the crest of the Tungabhadra anicut at Sunkesula was reduced by about three feet; and, although the circumstances which necessitated the said reduction are not known to me, it seems to my humble mind that a higher anicut than the present one would have guaranteed better supply for the second crops under the canal, coming after

December. Of course, it would be a forbiddingly expensive tax to raise up the present anicut again permanently, but what strikes me is whether it would not be feasible and advantageous to strongly fix on the present crest of the anicut something like furrowed iron bars of sufficient height and thickness and try and retain more water in the Tungabhadra itself at the head of the canal by putting in planks in the furrowed irons and thus temporarily raise the height of the anicut, say, 2 or 3 feet more, immediately after the monsoon closes and while water is yet overflowing the anicut. The planks inserted can, of course, be removed again when the canal is closed for its annual repairs. I understand that some device like the above was tried in the case of the Kistna anicut at Bezwada a few years ago, and before the height of that anicut was permanently raised; and the iron appliances and wooden planks then used in the case of the Bezwada anicut may probably be still available there. The subject being one at which I am out of my elements, it is with great diffidence that I have ventured to make the above suggestion, and I hope I will be excused for the venture.

Experimental cultivation of dry season or second crop indigo and of cummin seed in the Kurnool district.

11. The chief reason why the Cuddapah district is able to pay a water-rate of about Rs. 10,000 more than the Kurnool district, notwithstanding that the canal-commanded area of the latter district is more than three times that of the former, is that the highly remunerative garden crops of dry season indigo and cummin seed are raised there extensively, whereas in the Kurnool district these crops were altogether unknown under the canal, the former down to fasli 1303 (1893–94) and the latter down to fasli 1304 (1894–95). As already mentioned in my report for the half-year ending 30th June 1895, I went round and explained to the ryots of Kurnool the advantages of dry season indigo and succeeded in inducing a few of them to try that crop on some extent experimentally in fasli 1304 (1894–95); and, the results of some of the experiments of that year being encouraging as already detailed in paragraph 9 of the said report, I have been able to get experiments in that crop carried out again on nearly 130 acres in fasli 1305 (1895–96) and the details are as per margin.* Of these 130 acres, 124 acres are under the canal and 6 acres under a well in Yerraguntla, also a canal village. Of the 124 acres under the canal, the crop raised on 63·50 acres proved successful and the rest failed to take root properly. The six acres case tried under a well was also successful. In two successful cases of the Ramallakota taluk, one cutting of the leaf fetched Rs. 30 per acre, and in three other cases where the successful patches were small in extent, the leaf was cut and used as manure for the following paddy crop. In another successful case of the Ramallakota taluk where the crop was sparse, the first cutting fetched only Rs. 10 per acre in consequence of the sparseness. In cases where the leaf cut was sold also, the stumps seem to have been used as manure for the following paddy crops, thus obviating the necessity of other manure application. The reason why the ryots tried the crop on nearly 40 acres this time in the Ramallakota taluk was mainly the impetus given by the one very successful case of last year at Nidlohur in which the crop on 3·86 acres yielded as much as Rs. 220 for three cuttings; please see paragraph 9 of my report, No. 308, dated 25th October 1895, embodied in Board's Proceedings, dated 17th December 1895, No. 400. It is really a pity that most of this year's experiments in this taluk proved unsuccessful. If, in all the cases sown, or in a fair proportion of them, the crop had taken root properly, many other ryots of this taluk prepared to try the experiment would have also sown, but they kept back seeing the failure of others' sowings. The successful crop in the other three taluks, excepting in the one case under the well, is all yet standing and is about to be cut soon. It would have

* Taluks.	Total extent cropped.	Result of experiment.	
		Extent on which crop was successful.	Extent on which crop failed.
	Acs.	Acs.	Acs.
1. Ramallakota ..	39·17	6 50	32·67
2. Nandikotkur ..	7·0	4·0	3·0
3. Nandyal	56 0	38·0	18·0
4. Sirvel	27·0	21·0	6·0
Total ..	129·17	69·50	59 67

been cut already but for the fact that there were no rains this year to help it before the canal received water and before water was let out from the canal for irrigation purposes. The standing crop is good and promising in all these cases and, as far as I can see, these cases have really encouraged the ryots not only of the villages in which the experiments have been tried, but also of other villages in the vicinity. In fact, the ryots of Kothapalli, hamlet of Nandyal, where alone there is a patch of about 30 acres of successful dry season indigo now, have expressed to me in writing that they would try this crop on not less than 100 acres in the current fasli, after harvesting the first crop paddy; and, seeing the state of the standing successful crop at Kothapalli, a ryot of Karimaddula, another important canal village of the Nandyal taluk, has told me that he would alone try it in his village on about 20 acres in the current year. The ryots of Nunepalli of the Nandyal taluk, where also there is some successful crop now, seem to feel strongly inclined to arrange between themselves and do as the Kothapalli ryots are going to do. The ryots whose dry season indigo on about 40 acres was successful last year under the Kanála canal-fed tank wanted to raise indigo again as second crop in fasli 1305, but other ryots owning lands under the same sluice of the tank and whose crop failed in fasli 1304, having gone in for second crop paddy, even those who preferred dry season indigo and were for trying it again were obliged to put in second crop paddy on their lands under that tank, in as much as indigo is not a crop that will thrive in the midst or in the vicinity of paddy fields which are always moist. Encouraged by an experiment carried out in the village last year, two ryots of Yallur of the Sirvel taluk have raised dry season indigo on about 13 acres in fasli 1305 and this is all successful. The last year's successful case of Yallur also induced certain ryots of Sambavaram of the same taluk to try the crop on about 8 acres in fasli 1305, but only 2 acres of this came out successful. The present successful cases of Yallur have already created a relish for the crop in the minds of ryots not only in Yallur, but also in Kotapad and Chintakunta, two other canal villages of the Sirvel taluk, as also in Revanur of the Koilkuntla taluk; and some ryots of these villages have told me that they have determined to try the crop in their villages in the current year. The crop on six acres under a well in Yerraguntla came to maturity earlier, because it was dependent on a well and had regular floodings, and the first cutting of the leaf is said to have been sold for Rs. 240, which comes to Rs. 40 per acre. Though under a well, this case is also an inducement to ryots owning lands under the canal. The pecuniary outturn of the yet standing successful crops will be ascertained and duly reported in my report for the next half-year.

12. Besides the above experiments in dry season or second crop indigo, I have, as already stated in my report for the half-year ending 31st December last, been able to induce a few ryots of the Kurnool district to try experiments in cummin seed on small patches ranging from 15 cents. to an acre, or nearly 8 acres in all, and in 16 different canal villages of the district. Of the 8 acres, the crop sown on between 2 and 3 acres failed and it appears that, in these cases, the ryots neglected to follow the instructions given them and sowed the crop far beyond the proper time. In one successful case of Jupad Banmer of the Nandikotkur taluk, the yield came to twelve maunds per acre and this was the highest outturn obtained in the experiments of fasli 1305 (1895–96). The ryot in this case told me that he was offered Rs. 7 per maund for his produce and at that rate the money value of the outturn comes to Rs. 84 per acre. In two other cases, namely, in the experiments carried out by Rami Reddi of Padiderupad also in the Nandikotkur taluk and by pensioned Head Constable Nabi Sahib of Kurnool, the yield per acre came to six maunds, but the land on which Rami Reddi made the experiment is rather of an inferior sort and he neglected also weeding though previously told about its importance. Rami Reddi sold his six maunds for Rs. 36; and a short 70 days' crop having fetched so much, even under neglected circumstances, this experiment seems to have created a general love for the crop in that part of the country, as can be seen from the facts that Rami Reddi himself has resolved to try it again on six acres of far better land in the current year; and that other ryots of his village have come forward for another five acres already. Nabi Sahib does not appear to have yet sold his produce, but it would certainly fetch him not less than Rs. 6 per maund. In an experiment carried out by

one Rangiah Naidu, a ryot of Mamidalapad of the Ramallakot taluk, the crop came on very well and was very promising, but in this case there was stealth of the crop before it was harvested, and so the outturn cannot be accurately stated. In the case of an experiment conducted by the Reddi of Gopalasingavaram, also of the Ramallakota taluk, the yield came to four maunds per acre, but he seems to have sown the crop rather late. An experiment carried out by a Muhammadan ryot of Sirvel was also successful and is said to have given him at about six maunds per acre. In all the other cases where there was yield, the outturn was less than 4 maunds per acre, but the extents on which the trials were made being small, the ryots in those cases seem to have not paid proper attention to the instructions given them both verbally and in writing about the method of raising the crop. There was a time when the Kurnool ryots were saying that their lands are not suited for the growth of cummin seed, and that it would not grow there at all even if tried, and it was with great difficulty that the few ryots that carried out the experiments in fasli 1305 (1895–96) could be induced to go in for them. But the few experiments carried out having shown that the ryots' original impression is wrong and unfounded, and the best case having given as much as over Rs. 80 per acre, and even some neglected cases having paid as much as nearly Rs. 40 per acre, a great change in the ryots' mind about the merits of this crop has generally been produced, more especially in the Ramallakot and Nandikotkur taluks; and several ryots from the canal villages of all the five canal taluks of the Kurnool district have cheerfully and freely come forward saying that they would like to carry out experiments in the current year, and they intend selecting good lands for the experiments and paying careful attention to the instructions. They appear to have a real desire to test the maximum outturn of the crop, and already applications have come in from 171 individuals of 55 different villages of the district for 125 acres in all As cummin seed fit for sowing purposes is not available in the Kurnool district and as it will have to be procured from elsewhere from a distance, the ryots who offered to carry out the experiments in the current year requested that, for convenience sake, the requisite quantity of seed for the extents applied for by them be procured by Government and supplied to them in time, subject, of course, to their paying to Government the cost price of the seed supplied including conveyance charges; and I have consequently applied for the Board's sanction for an advance of Rs. 1,000 and this sanction the Board has been pleased to accord in its Proceedings, dated 9th September 1896, Mis. No. 4355. The above request was made by the ryots mainly because it must, as they allege, be difficult for them to procure, each his own small quantity of seed separately from a remote district unknown to them; and, if the seed is not procured and supplied by Government as requested by them, the result may be that they neglect to carry out the experiments promised on which the future of the canal so much depends, and it would be the canal interests that eventually and actually suffer. Of course, when the cultivation of the crop in the Kurnool district passes the experimental stage and when the crop becomes a settled and recognised crop of the district, the ryots would keep their own seed for future sowing purposes and no such arrangement as the present one would be necessary for the supply of seed. The ryots that have come forward to try cummin seed experiments in the current year assure me that, if only the current year's experiments which will be carried on on a larger scale, in many more villages, by many more individuals and with greater care and attention, prove successful in a reasonable number of cases and give an outturn of at least Rs. 30 an acre, there will be no doubt for the crop spreading like wild fire from the next year, and that it would not be too much to expect ten times the current year's extent to be applied for in the very next year. The fact that even the comparatively small results of the last year's few experiments created so much interest and given so much encouragement to ryots as to make them come forward cheerfully this year and that for over fifteen times the last year's extent is really significant. The only drawback about the cummin seed crop is that it is one subject to disease now and then like linseed and wheat crops; but, in all other respects, it is a much better and a more promising crop than even dry season indigo. In the first place, it is a crop of only 70 days' paying as much as from Rs. 60 to Rs. 100 per acre, provided it is not attacked with disease, and the

grower attends to weeding, &c., at the proper time. Before raising cummin seed, moreover, a crop of what they call "Thota or chippa korra" can be raised on the same land as the season for putting down cummin seed is about the middle of November. Again, whereas the dry season indigo is a crop which must rise or fall in extent according to the supply of water in the canal from February onwards, being a crop generally sown in February and March; the cummin seed crop is fortunate in that it is sown and harvested, while there is still ample supply of water in the canal and before any want of water for second crops is begun to be felt. Cummin seed crop will be off the ground by the end of January, and another advantage attending it is that, after its removal, dry season indigo can be sown on the land again as a third crop in the year. Considering that there are immense tracts of canal commanded land fit for the raising of cummin seed in the Kurnool district, especially in the Nandikotkur, Nand[illegible] and Sirvel taluks, and that cummin seed is a highly remunerative "Bagayet" or ga[illegible] a crop requiring only a few occasional floodings and meaning far less trouble to ryots than the cultivation of paddy, I feel confident that this crop will ere long play an important part in the Kurnool district, so far as the future financial interests of the canal are concerned, and it is also my impression that it will spread there more rapidly and will be more extensively and freely taken to than even dry season indigo.

13. In addition to dry season indigo and cummin seed already introduced, I have taken steps to have ground-nut experimentally cultivated on a few small patches here and there under the canal in the current year, and their results will of course be referred to in my next report.

14. Because paddy is the prevalent crop under all other big irrigation works, it may perhaps be questioned why special care and trouble should be taken to introduce remunerative and industrial "Bagayet" crops into areas commanded by this canal; but the reason is not far to seek. Unlike the tracts commanded by other big irrigation works, the country through which this canal passes is comparatively very sparsely populated and ryotwar holdings, especially in the Kurnool district, are in consequence generally more extensive. Paddy, the raising of which is necessarily much more expensive and troublesome than the cultivation of dry and even "Bagayet" crops, is not, morever, the staple food-grain of the people; and, provided the season is normal, the Kurnool ryot generally finds it more profitable and convenient in the long run to raise his usual dry crops on a large extent than paddy on a limited scale. The same, however, cannot be said of the Bagayet crops now being introduced. They are less troublesome and at the same time more profitable crops than paddy, and this is why the people hereabouts would prefer them. Nearly all the good lands commanded by the canal are already under the occupation of local ryots; and, since the local ryots have no general relish for paddy cultivation and do not find sufficient inducement to go in for it, it is my humble opinion that it must necessarily be for the good of the canal to teach and induce them to take, as an alternative measure, to other irrigated crops which they seem to like and prefer. The amount of water-rate derived by the canal in fasli 1305 (1895–96) from dry season indigo and cummin seed in the Cuddapah district is about Rs. 14,000; and, if only the Kurnool ryot comes to know as much about these crops as his Cuddapah brother and takes to them proportionately, the Kurnool district water-rate revenue from these two crops ought eventually to develop into something not less than Rs. 40,000 a year. But, at the same time, it will have to be remembered that the introduction and spread of new crops among a class of ryots so backward and conservative as the generality of the Kurnool ryots, can be only gradual and must take some time.

Introduction of foreign enterprise and labour.

15. The extent granted under the block rules to different applicants up to the end of June last is the same as that by the end of December last, namely, 1,331·52 acres assessed at Rs. 1,457–13–0, but some more blocks to the extent of 355·67 acres assessed at Rs. 218–9–1 have been

granted to other applicants since june last. The total extent granted up to date comes, therefore, to 1,687·19 acres assessed at Rs. 1,676–6–1 as particularized in the margin. Some applicants whose applications were received previous to December last have since written to say that they do not want the blocks applied for by them, and so their applications have been cancelled as desired by them. In four other cases involving a total extent of 187·47 acres, Collector's sanction received has been communicated to the applicants, but the applicants do not appear to have yet come and taken up the blocks, nor did they write to say that they do not want the blocks. They have, therefore, been written to again with a view to ascertain from them whether they want the blocks or not, and their replies are awaited. Three applications to the extent of about 50 acres recently received have been sent to Tahsildars for enquiry and report and are pending with them; and, besides the above, four intending applicants for blocks—two from Madras, one from the Tanjore district, and the fourth from Nellore—have written to say that they would come to inspect the available waste lands under the canal.

District.		Village.	Extent.	Assessment.
			Acs.	Rs. A. P.
Kurnool.	1	Pudur	10·20	6 11 0
	2	Pamulapad	209·20	94 0 0
	3	Bhanumukkala ..	270·71	135 6 0
	4	Pesaravayi	71·35	67 2 1
Cuddapah.	5	Madur	570·91	690 15 0
	6	Mythukur	121·51	140 10 0
	7	Bhadripalli	250·4	312 7 0
	8	Thudumuladinne ..	81·15	101 8 0
	9	Thavvaripalli ..	102·12	127 11 0
		Total ..	1,687·19	1,676 6 1

16. Of the five block-holders of the Cuddapah district, those of Madur, Mythukur, Bhadripalli and Thudumuladinne have cleared up portions of their blocks in fasli 1305 (1895–96) and ploughed up and experimentally raised some crops on them, chiefly with a view to test the capability of the soils and their adaptability for different crops; and, according to a report received by me on the subject, the outturn of the different crops tried seems to have been as follows:—

	Blocks.	Extent cleared and cultivated.	Crops raised.	Value of outturn.
		Acs.		Rs.
1	Madur block	11·57	Paddy ..	125
		12·0	Cummin seed	96
		92·53	Horsegram	240
		29·78	Cotton	38
		28·14	Gingelly	Crops failed.
		12·0	Dry season indigo	
		0·28	Greengram	1
		9·60	Blackgram	80
		3·0	Wheat	30
			Total ..	610
2	Mythukur block ..	4·79	Cholum	Crops failed.
		3·6	Gingelly	
		13·0	Horsegram	46
		2·25	Cotton	6
		15·71	Dry season indigo	150
			Total ..	202
3	Bhadripalli block ..	24·64	Bengal-gram	70
		2·0	Kusuma	5
		30·11	Horsegram	20
		14·58	Dry season indigo	400
			Total ..	495

The Thudumuladinne block-holder tried gingelly on some extent during the latter part of the year and that crop is reported to have failed. This has apparently discouraged him and the adjoining Thavvaripalli block-holder; for, whereas the holders of the other three bigger blocks have been cultivating their blocks in the current year, the block-holders of Thudumuladinne and Thavvaripalli appear to have not yet

touched their blocks, nor have they relinquished them. Considering (*a*) that the Madur, Mythukur and Bhadripalli block-holders entered upon their blocks rather late in the agricultural year; (*b*) that the clearing up of the waste lands and their ploughing and the removal of roots, &c., must naturally have taken them some time and caused some more delay; and (*c*) that, in the case of almost all the crops tried by them, they seem to have depended solely on the natural fertility of the soil and not applied any manures, and weighing also the fact that the first year's ploughings were not generally perfect as I have myself noticed in the case of the Madur and Mythukur blocks,—I think the outturns got in these three cases may be taken as fair and encouraging for the first year, and that of dry season indigo in the case of the Bhadripalli block is practically so. In the Kurnool district, channel has been provided to the small block of Pudur in the current year and it is expected to be cultivated hereafter. In the case of the Pamulapad block which was taken up by its holder in the latter half of fasli 1305 (1895–96), about 70 acres of land was cleared up and prepared in that year for the current year, and about February last blackgram and paddy were tried by this block-holder, only as an experiment, on some two patches of the cleared up area to test the fitness of the soil for the crops. Both the crops came on luxuriantly and well, but the canal could not supply them water till they matured, the crops themselves having been sown late, and there was therefore no yield. But the experiments made have greatly encouraged the block-holder who is going to bring in the current year nearly 100 acres of the block under cultivation with different crops including paddy, dry season indigo and cummin seed. In the case of the Madur, Mythukur, Bhadripalli, Pamulapad, Bhanumukkala and Pesaravayi blocks, the block-holders have come from their native districts and are residing in villages near their blocks, and some of them have brought their families too. The Madur, Mythukur and the Pamulapad block-holders have purchased their own stock of cattle and the others seem to have been carrying on cultivation with hired cattle for the present.

17. On a reference to the forecast given by me before in 1890, it will be observed that the average annual revenue of this canal for the eleven years down to fasli 1299 (1889–90) was found to be Rs. 72,000 in round figures and that it was then estimated that, should a Special Revenue officer be placed on the canal temporarily for a period of five years for purposes of check of irrigation and instruction to ryots, and should certain other proposals then made be sanctioned, the revenue of the canal might increase by Rs. 30,000 by the end of the fifth year of the special officer's appointment, the said increase being expected from three different sources, namely:—

Comparison of the forecast given in paragraph 68 of the special officer's first report of 1891 with the canal revenue of fasli 1305 (1895–96).

	Rs.	
(*a*)	15,000	... From proper check and supervision of surreptitious irrigation.
(*b*)	10,000	... From instruction to ryots and from other exertions of the special officer.
(*c*)	5,000	... From gradual extension of Mundla or tailed paddy by reduction of its rate from Rs. 4 to Rs. 2 per acre.
Total	30,000	

The water-rate revenue of the canal for fasli 1305 (1895–96) excluding tank storage value and other miscellaneous items being Rs. 1,02,486–5–2, it will be noticed that this amount exceeds the eleven years' average above referred to by Rupees 30,486–5–2; and, although a small portion of this excess may be due to subsequent extension of Mundla or tailed paddy cultivation, there is not the least doubt that a very large portion of the excess is attributable to better check in subsequent years and gradual suppression of surreptitious irrigation which once existed largely under the canal. It will thus be seen that the actual income from source (*a*) is nearly double the originally estimated figure. The Mundla paddy extent of fasli 1305 (1895–96), although less than that of the preceding year, is more than double that of fasli 1303

(1893–94). As regards source (*b*), the dry season indigo and cummin seed crops are yet only in their experimental stage in the Kurnool district, but there seems no reason whatever why a development of Rs. 10,000 revenue should not be expected from them in the course of three or four years more, if only the taluk revenue officers concerned take interest in the matter and see that the interest that the ryots now show in the experiments is not allowed to cool down, when there is no longer a special officer on the canal. So far as my present impression goes, cummin seed promises to help the canal in the Kurnool district even more than dry season indigo.

The income of the canal for fasli 1305 (1895–96) compared with its expenditure.

18. The total income of the canal for fasli 1305 (1895–96) including all the sources is Rs. 1,16,991–10–2 as detailed below :—

	Rs.	A.	P.
Irrigation revenue direct as per statements "A" and "B".	1,02,486	5	2
Revenue derived from the storage of tanks	4,650	9	3
From Kurnool town supply	3,500	0	0
Assessment of canal lands cultivated	1,183	1	9
Value of water supplied to indigo vats	68	8	0
Miscellaneous revenue collected by the Public Works Department	5,103	2	0
Total	1,16,991	10	2

and the total expenditure of the canal for the official year 1895–96, as ascertained from the Executive Engineer, is Rs. 96,040–9–2, as particularized below :—

	Rs.	A.	P.
Extension and improvements	8,403	8	5
Annual repairs	51,555	8	6
Special repairs	12,424	8	3
Contribution by the canal for its share of establishment	23,657	0	0
Total	96,040	9	2

The result of the year was thus a net saving of Rs. 20,951–1–0 in favour of the canal against Rs. 22,351–3–0 of the preceding year.

Miscellaneous.

19. Referring to paragraph 5 of G.O., No. 155, Revenue, dated 8th April last, communicated with Board's Proceedings, No. 66, dated 17th idem, I beg to submit that, in the case of both the minor projects referred to by me in paragraph 19 of my report for the half-year ending 30th June 1895, not only the lands involved are by the nature of their soils quite suited for paddy and irrigated "bagayet" crops, but the ryots of the villages concerned are really anxious to get the channels. They took me and showed the lands, and some of them even presented mahazar petitions, which I sent to the Executive Engineer in addressing him on the subject. In fact the ryots of Khajipeta-Sunkesula and the shrotriemdar of Buddayapalli—two villages involved in one of the two projects—have been dunning for one of the two channels proposed ever since I was first on special duty in connection with this canal in 1890, and the ryots of Annalur have since joined them. Chinnachouku and Ukkayapalli, two other villages of the Cuddapah taluk, for the irrigation of which the second minor project was proposed, are also wet-liking villages quite close to Cuddapah town itself, and the ryots of these villages also are really anxious to have the channel asked for by them. These villages being close to Cuddapah Municipality, command also manure convenience.

I understand that the Executive Engineer who has since inspected the Mythukur-Sunkesula line quite approves of that minor project; but, in the case of the other project proposed for the villages of Ukkayapalli and Chinnachouku, the opinion of the local officers of the Public Works Department seems to be that it cannot be feasible inasmuch as it seems to be apprehended that the present feeder channel of the

Patha Cuddapah tank cannot bear the burden of any additional villages, the duty it has now to perform in supplying Gudur lands and the big Patha Cuddapah tank being itself more than the feeder channel can bear.

20. I would have been in a position to submit this report earlier, but the compilation of the accompaniments could not be finished till about the 10th instant, certain mistakes noticed in the returns received from the Nandyal and Sirvel taluks having had to be rectified.

Endorsement thereon by the Collector of Kurnool, dated Koilkuntla, 7th October 1896, Ref. on P. No. 215-Ver.

Forwarded.

2. In this report the Special Deputy Collector in charge of the Kurnool-Cuddapah canal compares the irrigation under the canal for the past fasli (1305) with that for fasli 1304. The result of the comparison, so far as Kurnool district is concerned, is disappointing. There was a decrease of 1,685·06 acres in the area irrigated and a consequent loss of Rs. 6,139–10–4 in wet assessment. The decrease was not confined to any particular taluk, but occurred in 84 out of the 118 villages under the canal.

3. The reasons assigned by the Special Deputy Collector for the decrease are : (1) prohibition of cultivation of A and B class lands, (2) combination amongst villagers, (3) change in the darkhast system, (4) need of less water for "bagayet" crops owing to adequate rainfall in September and October, and (5) abstention from second-crop cultivation owing to want of sufficient water in the previous year. These are the reasons on the surface with which we have been familiarized in previous reports. With regard to reason (1) I would invite attention to the remark of the Superintending Engineer, III Circle, in paragraph 5 of his letter, No. 1574, dated 26th August 1896, communicated to the Board with my Dis. No. 1326-Ver. of 1896, dated 4th September 1896. Reason (2) does not seem a satisfactory one. Do ryots really refuse water because they are afraid that their lands will be classified as wet? Does not the question of finance mainly influence them in their decision? With regard to reason (3) I think that more definite information is required before the Special Deputy Collector's view can be accepted—that the change in the darkhast system has adversely affected the area irrigated. Reason (4) explains the decrease of 1,384 acres in the area irrigated with bagayet crops; and reason (5) explains the decrease under second crop.

4. In his report for the half-year ending 30th June 1895 the Special Deputy Collector entertained hopes of an increase in dry season or second-crop indigo, as a result of some successful experiments with the crop in that year. Those hopes have not been fulfilled, as the ryots had in mind the rapid fall in the Tungabhadra last year and were afraid of a similar deficiency of water and loss of crop this year. This rapid fall of the Tungabhadra in March and April is a contingency that must always be looked for, and, consequently, it is a question whether dry season indigo is a crop that will prosper in this district under present conditions. As the Superintending Engineer says in another part of his letter quoted above, "we cannot get over the fact that the river falls in December and continues to do so till the following June, and that, unless we can store water, second-crop irrigation must always be precarious."

5. The question of storage of water, mooted by Mr. Mullaly in paragraph 17 of his endorsement, printed with Board's Proceedings, No. 91, dated 7th May 1896, and now by the Special Deputy Collector in paragraph 10 of this report, is under the consideration of the Superintending Engineer, and will be reported on in due course.

6. The Special Deputy Collector's account of the experiments in cummin seed cultivation is interesting and encouraging reading. It is to be hoped that his presage of increase in the cultivation this year will be fulfilled, for there can be no doubt that the crop has great chances of success in this district. Its main advantages are (1) that it is sown at a period of ensured water-supply (2), that it remains on the ground only 70 days, (3) that it is profitable.

7. The Special Deputy Collector has explained the delay in the submission of this report. It reached me on the 29th ultimo.

Read—also the following endorsement of the Sub-Collector in charge of Cuddapah, dated Cuddapah, 5th October 1896, No. 5277-Rev:—

Forwarded.

2. Regarding the complaint of the ryots of Khajipeta-Sunkesula village of Cuddapah, against the action of one Krishna Reddi in obstructing the supply of the canal water; a report has been already submitted.

Resolution—dated 18th February 1897, No. 143.

With the endorsements read above, the Collectors of Cuddapah and Kurnool submit the report of the Special Deputy Collector in charge of the Kurnool-Cuddapah canal for the half-year ending 30th June 1896.

2. The Deputy Collector spent 171 days in camp out of a total of 182 days. More than half of this period was taken up in the settlement of water-rate in the canal villages. The villages in the Koilkuntla taluk were settled by the Collector of Kurnool and those in the other taluks by the Deputy Collector.

3. The following abstract shows the extent irrigated and the water-rate charged in fasli 1305, as compared with the preceding year. Details for the several villages are given in the statements accompanying the Special Deputy Collector's report:—

District.	Taluk.	Fasli 1304.				Fasli 1305.			
		First crop.	Second crop.	Total.	Net demand.	First crop.	Second crop.	Total.	Net demand.
		Acs.	Acs.	Acs.	Rs.	Acs.	Acs.	Acs.	Rs.
Kurnool district.	Ramallakot	1,827	752	2,579	9,553	1,688	432	2,120	7,825
	Nandikotkur	4,999	1,320	6,319	19,793	4,873	693	5,566	17,806
	Nizam's villages	188	36	224	851	228	..	228	911
	Nandyal	3,155	682	3,837	15,300	2,669	762	3,431	14,439
	Sirvel	3,260	236	3,496	10,417	3,362	179	3,541	9,910
	Koilkuntla	431	89	520	1,643	333	71	404	1,260
	Total (*a*) ..	13,860	3,115	16,975	57,557	13,153	2,137	15,290	52,151
Cuddapah district.	Jammalamadugu ..	173	..	173	108	172	..	172	122
	Proddatur	5,061	1,698	6,759	23,358	5,923	1,019	6,942	21,843
	Cuddapah	7,238	2,371	9,609	32,264	7,216	3,158	10,374	34,272
	Total (*b*) ..	12,472	4,069	16,541	55,730	13,311	4,178	17,489	56,237
	Kurnool water-supply (*c*).	..	..	..	3,500	..	..	..	3,500
	Grand total of (*a*), (*b*) and (*c*) ..	26,332	7,184	33,516	1,16,787	26,464	6,315	32,779	1,11,888

In the Kurnool district, there was a falling off in the area of 707 acres under first crop, and 978 acres under second crop, with a corresponding decrease of Rs. 6,140 in the water-rate. There was, however, a slight increase of Rs. 734 under revenue from "other items" such as "assessment of canal A and B class lands," "water supplied to indigo vats," "storage of tanks," so that the net decrease for the district was Rs. 5,406 as compared with the previous year. In the Cuddapah district, there was an increase of 839 acres under first crop and 109 acres under second crop, with a total increase of Rs. 507 in the net demand, of which Rs. 311 are due to revenue from direct irrigation, and Rs. 196 to "other items." Taking the two districts together, there was an increase of 132 acres under first crop, and a decrease of 869 acres under second crop, with a resultant decrease of Rs. 4,898 in the total revenue from all sources. The causes of the variations in the different taluks are fully explained in paragraphs 4 and 5 of the Deputy Collector's report.

4. The main reasons assigned for the decrease are (*a*) prohibition of the cultivation of A and B class lands, (*b*) cultivation of a smaller extent of second crop owing to apprehended deficiency in water-supply, (*c*) change in the system of darkhast for water and (*d*) combination of villagers owing to the impression that if they took water, their lands would be permanently assessed as "wet" at the ensuing resettlement. As

regards the cultivation of A and B class lands and the early falling off of water in the canal, which is the cause ascribed for the decrease in the extent of second crop cultivation, a separate communication submitted by the Collector, after consulting the Superintending Engineer, with reference to paragraphs 8 and 12 of B.P., dated 7th May 1896, No. 91, has been disposed of in B.P., dated 16th November 1896, No. 350; and the suggestion of the Deputy Collector to again raise the anicut of the river has also been dealt with in the same Proceedings. It is observed from the Deputy Collector's statement A that there was a decrease in the cultivation of A and B class lands in Ramallakota, Nandyal and Koilkuntla taluks, and a corresponding increase in the remaining two taluks, so that the total revenue derived from these lands was almost equal to that of the previous year. As regards the change in the darkhast system referred to by the Deputy Collector, the Board agrees with the Collector of Kurnool in thinking that more definite information is required before the Deputy Collector's view, namely, that the change in the system has adversely affected the area irrigated can be accepted. With reference to the alleged combination of the villagers, the Collector of Kurnool questions the correctness of the explanation that the ryots refuse water, because they are afraid of their lands being classified as wet and seems inclined to think that the question of finance mainly influences them in their decision. The Board is inclined to believe that the view taken by the Deputy Collector, who has been in close touch with the ryots, is likely to be correct.

5. The Special Deputy Collector states that the chief reason why the Cuddapah district is able to pay a water-rate of about Rs. 10,000 more than the Kurnool district, notwithstanding that the area commanded by the canal in the latter district is more than three times that in the former, is that in the first-named district the ryots cultivate the dry season indigo and cummin-seed on an extensive scale, as they know from experience that these crops are highly remunerative, while the Kurnool ryot has had no such experience until very recently. The cultivation of indigo as a second crop was introduced experimentally at the suggestion of the Deputy Collector only in fasli 1303, and that of the cummin-seed in fasli 1304. The experiments in the cultivation of dry season or second crop indigo, during the fasli, were not as encouraging as in the previous year, nor is the cultivation of the crop likely to prove successful in the present precarious state of water-supply for second crop, as rightly observed by the Collector of Kurnool. The extent cultivated amounted to nearly 130 acres, of which only one-half yielded a good crop, the greater portion of this extent being in the Nandyal and Sirvel taluks.

6. The experiments with cummin-seed, however, are, as remarked by Mr. Gillman, more encouraging. The crop is grown at a period of ensured water-supply, remains on the ground only for seventy days, and yields good profit. Experiments were made during the fasli in sixteen canal villages on small patches ranging in area from 15 cents to an acre, and covering a total extent of nearly 8 acres. Most of these experiments having proved successful, many of the ryots who had been under the impression that their lands were unsuited for the cultivation of cummin-seed, came forward this year with promises to try the experiments on their lands; and with a view to purchase and supply the seed, a sum of Rs. 1,000 was, at the request of the Deputy Collector, sanctioned in B.P., dated 9th September 1896, No. 4355. The price of the seed will be recovered from the ryots concerned. The results of these further experiments should be reported in due course. The Deputy Collector states that he has taken steps to have ground nut experimentally cultivated on a few small patches under the canal, and the Board trusts that the experiments will be made with due regard to the conditions of the soils of the lands selected. The crop grows best on sandy soils.

7. During the half year under report, no lands were granted under the block rules; but since the close of the fasli, an extent of about 356 acres has been granted. Some of the applications pending at the end of the previous half year were cancelled at the request of the applicants. In four cases involving an extent of 187 acres, the applications were sanctioned by the Collector; but the applicants have not yet taken possession of the blocks. Several of the block-holders have cleared up portions of their lands and commenced experimental cultivation; and the results of the cultivation are stated to have been fair and encouraging.

8. The total revenue from the canal for fasli 1305, exclusive of the miscellaneous receipts collected by the Public Works Department (Rs. 5,103) amounted to Rupees 1,11,888 as detailed below:—

Items.	Fasli 1304. Rs.	Fasli 1305. Rs.
Water-rate	1,08.315	1,02,486
Revenue derived from storage of tanks	3,747	4,651
Payment from Kurnool Municipality for water supplied to town	3,500	3,500
Assessment of canal A and B class lands	1,176	1,183
Water supplied to indigo vats	49	68
Total ...	1,16,787	1,11,888
Miscellaneous receipts collected by the Public Works Department	5,296	5,103
Grand Total ...	1,22,083	1,16,991
Expenditure as reported by the Executive Engineer ...	99,732	96,041
Balance in favour of the canal ...	22,351	20,950

The revenue due to irrigation was Rs. 1,02,486 or Rs. 30,486 more than the average of the eleven years ending with fasli 1298 (Rs. 72,000). This increase is slightly more than the amount estimated by the Deputy Collector in paragraph 68 of his report printed in B.P., dated 25th May 1893, No. 204. Including the miscellaneous revenue collected by the Public Works Department, the total income of the canal amounted to Rs. 1,16,991 and the expenditure, as ascertained from the Executive Engineer, came to Rs. 96,041, leaving a balance of Rs. 20,950 in favour of the canal against Rs. 22,351 in the previous year. There is, however, another point of view from which the canal may be considered, viz., as a protective work against famine. The whole canal tract has been saved in the current year, and the value of the crop so saved is roughly 17 lakhs—B.P., dated 19th January 1897, No. 40.

9. With reference to paragraph 5 of G.O., No. 155, Revenue, dated 8th April 1896, the Deputy Collector reports in paragraph 19 of his letter that the lands commanded by the two minor projects are, by the nature of their soils, suited for paddy and irrigated "bagayat" crops; that the ryots concerned are "really anxious to get the channels" and that he understands that while in respect of one of these projects, viz., the Mythukur-Sunkesula channel, the Executive Engineer's opinion is favourable, in respect of the other, namely, the project proposed for the villages of Ukkayapalli and Chinnachouku, the opinion of the local Public Works Officers appears to be that it is not feasible.

10. It is observed that the statistics of area irrigated and of the revenue derived, as furnished by the Deputy Collector, differ slightly from those furnished by the Collectors of Kurnool and Cuddapah and embodied in B.P., dated 8th October 1896, No. 267. The discrepancies should be explained by the Collectors concerned.

District.	—	Fasli 1304. First crop.	Second crop.	Total.	Net demand.	Fasli 1305. First crop.	Second crop.	Total.	Net demand.
		Acs.	Acs.	Acs.	Rs.	Acs.	Acs.	Acs.	Rs.
Kurnool ..	As furnished by the Collector and printed in B.P., dated 8th October 1896, No. 267	14,183	2,900	17,083	57,384	13,433	2,130	15,563	46,697
	As given by the Deputy Collector	13,860	3,115	16,975	57,557	13,153	2,137	15,290	52,151
Cuddapah ..	As furnished by the Collector and printed in B.P., dated 8th October 1896, No. 267	12,411	4,046	16,457	55,722	13,183	4,157	17,340	56,237
	As given by the Deputy Collector	12,472	4,069	16,541	55,730	13,311	4,178	17,489	56,237

11. The report regarding the complaint of the ryots of Khajipeta-Sunkesula, referred to in paragraph 2 of the endorsement of the Collector of Cuddapah, has been disposed of in B.P., dated 12th December 1896, No. 6500.

(True Copies and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department,
with two enclosures, in original, to be returned.
" Collector of Kurnool.
" " of Cuddapah.
" Special Deputy Collectors of Kurnool-Cuddapah Canal.

Order—No. 468, Revenue, dated 17th June 1897.

Miscellaneous.

Recorded. The Government notes that though the total revenue derived from the canal, exclusive of the miscellaneous receipts collected by the Public Works Department in fasli 1305, is less than that in the preceding fasli by Rs. 4,899, the decrease is fully accounted for by the Special Deputy Collector as arising from temporary causes and as in no way indicating that the improvement shown in previous reports has been interrupted.

The Public Works Department will be requested to expedite the report on the investigation of the two minor projects referred to in paragraph 19 of the Deputy Collector's report.

(True Extract.)

(Signed) G. STOKES,
Ag. Secretary to Government.

To the Board of Revenue (Revenue Settlement),
with enclosures.
" the " (Land Revenue).
" the Public Works Department (Irrigation Branch).

Exd. Shaik Karim.

70 Copies.