

Tahsil.	ASSESSMENT CIRCLE.	Total produce.	Deduction for kamins.	Irrigated or Unirrigated.	Owners' share at average rate of rent in kind.	Do. of whole produce after deduction in col. (4.)	Percentage of half-assessment to gross value of produce.
Samrála.	Bét ...	100	7.5	Irrigated ...	50	46.25	23.12
	Lower Dháia ...	100	7.5	Unirrigated ...	50	46.25	23.12
	Upper Dháia ...	100	7.5	Irrigated ...	36	44.3	17.5
				Unirrigated ...	39	36	18
	Bét I kacha ...	100	7.5	Irrigated ...	50	46.25	23.12
	Bét I packa ...	100	7.5	Unirrigated ...	50	46.25	23.12
Ludhiana.	Bét II ...	100	7.5	Irrigated ...	42	38.84	19.42
	Lower Dháia ...	100	7.5	Unirrigated ...	46	42.54	21.27
	Upper Dháia ...	100	7.5	Irrigated ...	36	34.3	17.15
				Unirrigated ...	38	35.14	17.57
	Pawádh ...	100	7.5	Irrigated ...	33	30.52	15.26
				Unirrigated ...	36	34.3	17.15
	Tihára ...	100	7.5	Irrigated ...	36	34.3	17.15
				Unirrigated ...	40	37	18.5
	Jangal ...	100	7.5	Irrigated ...	41	37.92	18.96
				Unirrigated ...	41	37.92	18.96
Jagraon.	Bét ...	100	7.5	Irrigated ...	48	44.4	22.2
	Lower Dháia ...	100	7.5	Unirrigated ...	...	...	...
	Upper Dháia ...	100	7.5	Irrigated ...	30	28.6	14.3
				Unirrigated ...	42	38.8	19.4

218. It remains for me to give an account of the rates and actual Account of the assess- assessments of each of the Tahsils and Circles; ments of each Circle. and in the following paragraphs I have embodied so much of the details given in the Assessment Reports as appear likely to be useful for reference. :—

#### TAHSIL SAMRALA, BET CIRCLE.

219. This Circle contains 68 villages with a total area of 26,773 acres, of which 16,175 acres or 60 per cent. are cultivated, 4,511 or 17 per cent. culturable or recently thrown out of cultivation, and 6,087 or 23 per cent. unculturable. It consists in the first place of the land (called "Mand") immediately adjoining the Satlej and liable to annual inundation. The deposit left by the River is very fertilizing, and a rich clay soil is formed; but in places this is shallow and the under stratum of sand is soon reached, and land that looks very good may thus have a very poor yield. Beyond the *mand* the land is higher, and the soil of more ancient formation and deeper (generally three or four feet.) Water is near the surface, and there is seldom lack of moisture; so that artificial irrigation is not wanted. The soil of this, the *packa* Bét, is generally a rich dark clay, very fertile, but requiring a great deal of tillage. In places there are sand drifts left by the

River, but these are rare. Under the High bank runs the Budha nála in the old bed of the Satlej. The land to the south of the Budha, between it and the High bank, is generally very good, as it rises away from the former, and the soil has a mixture of sand from the Dháia. On the other side of the stream there is a strip of land rendered permanently barren by the proximity of the water, or actually swamped.

220. The proportions of area under the principal crops are :—

Crops and husbandry.				
Rabí 53 per cent.	{	Wheat	...	43
		Barley and <i>masar</i>	...	7
		Others	...	3
Kharíf 47 per cent.	{	Sugar	...	11½
		Cotton	...	2½
		Maize	...	18
		Rice	...	3½
		Fodder ( <i>charri</i> )	...	8
		Others	...	3½

In the villages of the *packa* the land round the site generally produces two crops (wheat and maize) in the year, being heavily manured and fully tilled. Sugarcane is grown in selected fields, not necessarily close to the site. In the villages near the River the twice cropped land may be at some distance from the homestead, the people preferring to build on the higher ground, but cultivating their best land, which lies low, most carefully. Outside the *dofasti* area a single crop is grown, generally of wheat in the Rabí, or fodder in the Kharíf. *Masar* (lentils), or barley and *masar*, is sown in the newly recovered land of the *mand*. Owing to the floods an equal area cannot be sown in both harvests, and thus the greater portion of the cultivation is on the *ekfasi harsála* system, bearing a Rabí harvest year after year. Cotton is grown principally in the drier, and rice ("dhán") in the *mand* or flooded lands. The cotton crop is generally good.

The most important crop in every way is the sugarcane; and it requires special mention, as the prosperity of the tract may be said chiefly to depend on it. There is nothing remarkable about the method of cultivation, which has been described in detail elsewhere; and an account has also been given of the manufacture of the *ráb* into sugar, and the trade in *khand*, *burah*, &c. Enormous profits are made out of this trade; but the people who grow the cane have very little share in them, and are for the most part hopelessly involved in debt. The cause of this is to be found in the relation subsisting between the money-lender and cultivator. The latter can command almost unlimited credit, and it is generally necessary that he should have an advance on his crop, which has no return for more than a year. This debt he has to repay with interest; and in discharge of it he gives his *ráb*, which is taken over at a price agreed on according to its quality between the parties, really at the price that the creditor



chooses to fix. If the crop is successful a good part of the debt will be wiped out ; but a fresh advance is required ; while, if the crop fails, the debt with compound interest gets too large ever to be cleared off, and the cultivator is in the hands of the money-lender.

221. Of the whole area 60 per cent. is in the hands of Mahomedan Jats ; 23 per cent. of Mahomedan Rájputs ; and 5 per cent. of Gujars : and it is much the worst feature of this Circle that 88 per cent. of the land is held by the most improvident classes. I do not think that there is very much difference in the character of the three tribes as far as the absence of those qualities that go to make up a good "málguzár" or revenue payer are concerned ; but the Jats are somewhat better than the rest, and their villages are in better condition than any others, except the two or three belonging to Hindu Rájputs and Sainis. Of the cultivated area 3,490 or 21 per cent. is held by tenants-at-will ; and 1,336 or 8 per cent. by tenants with occupancy right ; or in all 30 per cent. of the cultivation is by tenants. These belong for the most part to the same classes as the proprietors.

222. Our returns show that since Settlement 512 acres, or two per cent. of the whole land, has been sold and that Sales and mortgages : impoverished condition of the tract. 2,040, or nearly eight per cent., is now in mortgage with possession of the mortgagee. The percentages on cultivation are three sold, and twelve mortgaged ; and it is probable that only cultivated or culturable land has been transferred. The average price of the land sold is Rs. 34 an acre ; and the amount secured on mortgage, Rs. 33. The land transferred has gone almost entirely into the hands of strangers. Thus on the whole nearly ten per cent. of the total or fifteen per cent. of the cultivated area, has been transferred since the Regular Settlement ; and most of it to the money-lending classes. These statistics are far from showing the whole indebtedness of the people. There are a few villages able to hold their own ; but they are a small proportion of the whole. Some have gone entirely into the hands of the money-lenders, the land having been sold or being held in mortgage for such an amount that there is no chance of it ever being redeemed. There are colonies of bankers (Suds, Khatrís, Baniyas) in Máchiwárah and Bahlolpur who live entirely by lending to the Bét cultivators ; and many of these classes have established themselves in the villages (Panjgraien, Sherpur, &c.) The amount of money owed on book debts is enormous. I have totalled it up in some villages, and find that it comes to Rs. 10 or 15 an acre. The villages are all small, averaging about 400 acres total area ; and many are on the money-lenders' books for Rs. 5,000 or upwards.

There can be no doubt that the tract is in a bad way ; and that a large proportion of the land is passing out of the hands Causes, of the old proprietors into those of the money-lending class : and there are many causes at work to produce this result. In the first place, the bulk of the people are improvident by nature, and

it is probable that if the land were in the hands of Hindu Jats they would be able to hold their own. The tract is one of the richest in the Province; and, if the people had the necessary qualities for tiding over an occasional bad season, or could subsist without borrowing while the cane crop was growing, they would now be very well off. The ordinary cultivator is, however, so incapable of making his own terms with the money-lender that I believe he has to pay, or is debited, with Rs. 200 for every Rs. 100 that he borrows. I do not think that there is over population, for the density (600 a square mile of cultivation) is less than in the richer tracts of Hoshiárpur and Jálándhar. The produce is more than sufficient for the support of the people if it were not diverted. It would be much out of place here to discuss any remedies for the condition of things described, and I will only say that, with a prosperous agricultural class, the Government demand might be very largely increased without exceeding the half net asset standard; and that at present the bulk of the profits of agriculture are finding their way into the hands of the money-lending class. I see no reason why, if things are left alone, the proprietary rights should not in time pass bodily away from the agricultural class.

Connection between this  
and Government revenue  
demand.

I can find nothing to show that the indebtedness is in any way to be attributed to the pressure of the Government demand. The manner in which the money-lenders have fixed on the tract, and their willingness to advance any amount on the land, shows what a profitable investment it is. I do not think that a complete remission of the revenue would much benefit the mass of the agriculturists, who are too far involved to extricate themselves. A heavy assessment might have the result of keeping off the money-lender; but I was not prepared to make any proposal in this direction. When the people themselves complain of their indebtedness, it is not generally with a view to having their assessment decreased; but they ask that some arrangement may be made between them and the money-lender. They attribute their difficulties, and rightly I think, to this that they cannot get the full value of their produce or cattle, and that their accounts are turned over and compound interest added so frequently. A small debt, which has at first been neglected, soon gets too large to be bearable.

223. There is an increase in cultivation of less than 2 per cent.,  
Increase in resources. plough-cattle are shown as being 8 per cent.  
in excess of what they were at the Regular  
Settlement; but it is clear that the condition of the tract is stationary, and that the produce-growing area has not been extended. Neither is there any apparent advance in the system of agriculture or in the productive power of the soil. An enhancement of the revenue must therefore be based entirely on the increase in the value of produce. Referring to the note on prices in Appendix XII, we find that there has been a rise in the prices of the three principal products (comparing the two periods of 20 years, 1840-59, 1860-79).



Per cent. of area.	Crop.	Per cent. of increase in price.
43	Wheat ... ..	58
18	Maize ... ..	62
12	Sugar ... ..	40

On the other hand, the population increased between 1854 and 1868 by 14 per cent., and we have nearly the whole tract in the hands of the worst class of husbandmen, and a large proportion of these involved in debt.

Former rates.

224. The revenue rates adopted at last Settlement were :—

	Irrigated.	UNIRRIGATED.				
		Niái sailáb (dofasli.)	Rousli and Dákhar.	Bhúr.	Jadíd.	Qadím.
Rate ...	3-10-0	3-10-6	1-6-9	0-12-9	0-9-6	0-4-8
Area ...	188	4,638	10,804	25	338	4,619

The assessment announced was 9 per cent. under that given by these rates. Soil rates were used for distribution in only two villages and the details are—

Irrigated.			Niái Sailáb.			Rousli, &c.			Bhúr.			Jadíd.			Qadím.		
Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
8	4	2	2	11	6	1	5	0	0	12	0	0	8	8	0	4	6

The returns show 2,884 acres, or 18 per cent. of the cultivated area, as under all tenants paying nothing or a cash rent ; and 1,564, or 10 per cent., under tenants-at-will so paying. Of this latter 66 acres are rent free, and 368 acres pay at revenue rates only. We may exclude these latter from our calculations, for it is land lent to relations &c. for cultivation gratis, and not properly rented. Leaving out the irrigated area, we have left, with land that pays rent in addition to revenue, 1,120 acres ( $6\frac{1}{2}$  per cent. of the cultivation) paying a rent of Rs. 6,720, or at the rate of Rs. 6 an acre.

To the east of the Samrála Bét lies that of Rupar (Amballa district). The proportion of irrigation is about the same in both (2 per cent.); but the returns show that the proportion of *dofasli* and sugarcane land is considerably greater in Samrála now than it

Rates in neighbouring  
Bet tracts. Rupar Bét.

was in Rupar at the last Settlement (1852). The Rupar rates are : Irrigated, Rs. 3-14-0 against our proposed rate of Rs. 4-0-0 ; and unirrigated, Rs. 2-0-6 against Rs. 2-2-9. As far as I have seen the Rupar Bét I think that it is inferior to that of Samrála in natural advantages, being a good deal cut up by such streams as the Budki, which cause deterioration to a large area of land. The cultivation in Samrála is undoubtedly superior ; and the area under sugarcane more than double that recorded for Rupar ; but besides this the Rupar rate is that of the last Settlement, and it is almost the same as the Regular Settlement rate for Samrála. The proportion of bad *málguzárs* is much the same in both tracts.

Opposite Rupar is the Garshankar Bét (Hoshiárpur District), with  
 Garshankar Bét. *dofasli* 18 per cent., sugar  $4\frac{1}{2}$  per cent., and irrigation 2 per cent., at the time of the Regular Settlement, and paying Rs. 2-7-1 an acre. Mr. Melvill assessed both, and states in paragraph 125 of his Amballa Report that the latter tract is much superior. Directly facing Samrála is the Nawashahr or Ráhon (Jálandhar) Bét ; and there is probably little difference between the two. In fact 15 of the villages now in Samrála were at Settlement in the Ráhon Bét, and have come over by change in the course of the River. The Ráhon rate is Rs. 2-12-0 an acre.

If it were fair to make the comparison with native territory I might point to the Patiála villages belonging to the Khumánonjágir, which are in the very middle of the Samrála Bét tract ; and pay at least double what our villages do. The *jágirdars* appear to fix their own demand ; and the rates are consequently higher than elsewhere in Patiála. In Manza Hedon, one of these villages, the collections are at the rate of about Rs. 5 an acre, while in the adjoining village of Bairsál in our territory the rate is Rs. 2-2-0. In the latter village the people are all involved in debt, and the revenue is with difficulty realized ; while in the former the demand is paid and the people are at all events free from debt, and in fact cannot get credit.

The following statement shows the chief features and the rates in the tracts with which comparison may be made :—

District.	Tahsíl.	Per cent. irrigated.	Per cent. <i>dofasli</i> and sugar.	RATES.			
				Irrigated.	Unirrigated.	General.	Rainfall.
				Rs. As. P.	Rs. As. P.	Rs. As. P.	Inches
Ambala ...	Rupar ...	2½	{ 25 } 30	3 14 0	2 0 6	2 1 3	32
Hoshiárpur ...	Garshankar	2	{ 18 } 23	3 12 9	2 6 9	2 7 1	33
Ludhiána ...	Samrála ...	2	{ 28 } 42	4 0 0	2 2 9	...	27
Jálandhar ...	Nawashahr	...	...	...	...	2 12 0	26



225. Some discussion took place as to the revenue rates to be adopted for this Circle. Owing to the high rate at which rents in kind are paid it was recognized that the assessment must, in the very depressed condition of the tract, be much under the half-asset estimate. The following statement shows the revenue rates finally adopted and their result :—

Soil.	Area in acres.	Revenue rate.	Resulting Jama.	Half-asset estimate.	Former assessment.
Irrigated ... ..	293	Rs. As. P. 4 0 0	Rs. 1,172	Rs. 1,493	Rs. ...
Dofasli ... ..	10,897	2 10 0	28,604	35,305	...
Ekfali ... ..	4,995	1 8 0	7,492	8,906	...
Total ... ..	16,185	2 4 10	37,268	45,704	32,503

The calculated increase by these rates was 4,765 or 13 per cent.; but, owing to the necessity of assessing lightly new alluvial lands, it was expected that the village assessments would fall short of the sum. In this and the other Bet Circles the areas given in the Assessment Reports were those of 1879; and the rates were actually applied to the area as we found it in the years of announcement (1880-82). The assessments, former and new, and the result of the rates actually reported, were as follows, the differences being due to changes in the land subject to alluvion and diluvion :—

	Rs.
(1). Demand for 1880-81 ... ..	= 32,234
(2). Assessment by the sanctioned rates	= 38,468
(3). Actually announced .. ..	= 37,063

an increase of Rs. 3,829 or 12 per cent. This increase is a small one; and it was on the whole distributed evenly over the villages. I do not think that this amount of enhancement is likely to make much difference in the condition of the tract; and, if regard be had to the productive power of the land, the new assessment is moderate, for the tract is a very fertile one. The greater part of the proprietors, and certainly all the Mahomedan Rájputs, are hopelessly involved in debt, and the only measure that could do them any good would be the suspension of the action of the ordinary Civil Courts.

#### LOWER DHAIA CIRCLE.

226. This consists of a strip of land just under the High bank, and the Dháia proper, or land over it. The former belongs to villages which have also land in the Dháia, and I have thrown the whole area of them into this Circle for convenience. The total area is 31,482 acres (con-

tained in 30 villages), of which 25,035 or 79 per cent. are cultivated, 2,461 culturable or lately abandoned, 2,514 unculturable waste, and 1,472 Government property (land under the Canal and roads).

The Bét portion of the Circle is for the most part very fertile, the land sloping down to the Budha nála, where this stream is at a little distance from the High bank. The soil is generally lighter than that

of the rest of the Bét, there being a mixture of sand from the Dháia with it, and produces splendid crops of sugarcane and cotton, &c.; and there is also some good irrigated cultivation. But to the east about Poáwat and Bahlolpur the Budha is close under the High bank, and there is a great deal of swamp, the land being all to the north of the stream.

The Dháia proper is a tract with an uneven surface and a light sandy soil, which shifts about under a strong wind, and is blown into hillocks. Ordinarily it has the appearance of a desert; but the soil

is very retentive of moisture, and under favourable circumstances good crops are grown. The Kharíf crop is mostly *moth*, for the growth of which the soil is adapted. With a light rainfall, when better land will bear nothing, fair Rabí crops of wheat, or wheat and gram, are grown; but they are liable to be buried under the shifting sand. A good rainfall, such as suits soils with more clay in them, is bad for this.

Round the villages are the wells, and the land attached to them is generally superior and highly cultivated; but there is a continual struggle to keep out the drifting sand. For this purpose trees (the "ber" generally) are planted, or hedges put up as barriers. The worst villages are those adjoining the High bank. The surface in them is very hillocky, and the soil therefore more liable to shift. The villages adjoining the Upper Dháia Circle have generally a more level surface; and, though the soil is poor, the crop is not so subject to injury from drift. But altogether the tract is an inferior one as regards natural advantages. The proportion of soils is for Dháia portion:—

Bhúr or sand	...	...	63 per cent.
Rouslí or sandy loam	...	...	30 "
Irrigated	...	...	7 "
The Rouslí is all very light.			

227. The percentages of area under the principal crops are:—  
For the Bét.

Rabi, 37.				Kharif, 63.			
{	Wheat	...	31	{	Sugar	...	20
	Others	...	6		Maize	...	17
					Rice	...	8
					Cotton	...	7
					Charri	...	7
					Others	...	4



The proportion of land under the higher crops is greater here than in the Bét Circle. For the Dháia portion the figures are :—

Rabí, 51.	Wheat	...	28	Kharíf, 49.	Cotton	...	2
	Wheat and gram	...	17		Maize	...	2
	Barley and gram	...	4		Moth	...	37
	Others	...	2		Charri, &c.	...	6
					Others	...	2

Very little sugarcane is grown in the Dháia, and the large proportion of area under *moth*, which is only sown in the sandiest lands, and is a very inferior crop, is a proof of a poor soil. The yield of superior crops in the irrigated land is not good ; and the unirrigated crops are all poor and stunted in comparison with those of the Bét and Upper Dháia.

The system of cultivation in the low lands is the same as that described for the Bét Assessment Circle. There are some wells under Máchiwárah, &c. ; and superior garden cultivation at them, crops of vegetables, tobacco, &c., being raised. The land sloping down to the Budha nála is heavily manured and richly cultivated. In the Dháia portion of the Circle the wells are grouped round the village site ; and the cultivation at them is fair, though in places the best land sometimes gets covered with sand. Sugarcane is grown, and double crops of maize or cotton followed by wheat, barley or fodder. Appendix I gives an area of 10 acres to each well, or  $6\frac{1}{2}$  to each bucket. There are no outlying wells ; and the distinction between *Nídi* and *Khális* is not worth maintaining. Of the irrigated area 75 per cent is twice cropped or under sugarcane. The unirrigated cultivation is almost entirely on the system called *dofasli dosála*.

228. Hindu Jats hold 49 per cent. of the area ; Mahomedan Jats, 27 per cent. ; and Mahomedan Rájputs, 7 per cent. The Mahomedans are found in the villages on the High bank just over the Bét ; and the character given to those in the Bét applies to them. The Hindu Jats are not so well-to-do as men of their class generally. They are for the most part industrious ; but the soil is very inferior and yields only a poor return for their labour, and they find it difficult to subsist. Of the cultivated area 938 acres (or  $3\frac{1}{2}$  per cent.) are held by tenants with rights of occupancy, and 6,226 (or  $24\frac{1}{2}$  per cent.) by tenants-at-will ; in all 7,164 acres or 28 per cent.

229. About six per cent of the whole area has been sold since Settlement, and of this two-thirds to strangers of the money-lending class ; while eight and a half per cent. is mortgaged with possession, three-fifths to strangers. The prices per acre are Rs. 18 for sale, and Rs. 15 secured by mortgage ; and the low averages show that the land is not valued as an investment. There is not much debt outside of these figures, for money cannot be raised without the security of the land. Complaints are made very generally ; and a good many of the villages are badly off. Discontent is general, and there can be no doubt that the tract is by no means in a flourishing condition—a result that may be

attributed chiefly to the poverty of the soil. The assessment of the Settlement Officer in 1852 was not very well received; and was revised in 14 out of 30 villages by the Commissioner, who gave a reduction on the whole jama of  $4\frac{1}{2}$  per cent.

230. There is a decrease of population shown between 1854 and 1868; and there has probably been no increase since the Regular Settlement. In fact the tract is not capable of supporting more people than it now has, for there is no room for expansion of the resources. I have come across many instances of proprietors living on the money that they could raise on their land till this was exhausted, and then going away to seek a livelihood elsewhere. There is a decrease shown in the cultivated area, due to the land that has been taken up for the Sirhind Canal; but for this the former and present areas would be the same. The Canal runs along the whole length of the Circle and has cut up the best land of a few villages, passing close to the site. The loss of such a large area (1,472) must have deprived a good many people of their means of subsistence and diminished the resources of the tract. On the other hand, the Canal may give occasional employment to some, and has already done so. There is a decrease of 200 acres or 6 per cent. in the cultivation of the Bét portion, due to land being permanently swamped; while, if we exclude the area taken up for the Canal, there is a slight increase of cultivation in the Dháia land. Irrigation has increased 10 per cent., the increase being chiefly in the Bét. The other statistics point to the tract being stationary in every way; and, if we are to take an enhancement of the assessment, it must be based entirely on the rise in prices. But the amount of surplus produce available for sale is very small, and the Dháia proper can do little more than support its population.

231. The jama by the Regular Settlement revenue rates was Rs. 29,437; but the actual demand was fixed at Rs. 27,587. This was reduced to Rs. 26,324 by the Commissioner in 1855; and has fallen on account of remission for the Canal land taken-up to Rs. 25,440. In 9 villages the jama was distributed by rates on soils. I give below for the Dháia proper the rates adopted by the Settlement Officer (revenue rate jama) and those used for the distribution.

				AVERAGE.					
				Revenue rates.			Distribution ("Tafrik") rates.		
				Rs.	As.	P.	Rs.	As.	P.
Níái	...	...	...	5	4	3	3	5	0
Khális	...	...	...	2	1	0	2	1	6
Rouslí	...	...	...	0	15	6	0	12	6
Bhúr	...	...	...	0	12	6	0	9	3

} With rates on  
jadíd and qa-  
dím (fallow  
and cultur-  
able.)



Most tenants pay in kind, because the harvest is so uncertain. The area under tenants-at-will paying in cash is 1,522, or 6 per cent. of the cultivation; but of this 663, or nearly half, pays revenue only. The area actually under competition cash rents is 700 acres or less than 3 per cent. Most of this is in the Bét portion of the Circle, and the area of the Dháia so held is less than 2 per cent. of cultivation. The rent statistics for the Dháia land such as they are, I give:—

*Paying at a rate on the biga.*

Irrigated.			Rouslí.			Bhúr.			Mixed.		
Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.
7	49	7-0-0	19	38	2-0-0	46	66	1-7-0	35	87	2-7-9

*Paying lump sums.*

Irrigated.			Rouslí.			Bhúr.			Mixed.		
Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.
41	469	11-6-0	37	93	2-8-9	63	115	1-13-6	183	509	2-12-0

Revenue rates sanctioned and results.

232. The revenue rates finally sanctioned and their results are shown in this statement:—

Soil.		Area in acres.	Rate.			Resulting jama.	Half-asset estimate.	Former assessment.
Bét.	Irrigated ...	173	Rs.	As.	P.	773	1,111	
	Dofasli ...	2,275	4	8	0	6,825	9,193	
	Eckfasli ...	948	1	12	0	1,659	2,374	
Dháia.	Cháhi ...	1,311	3	0	0	3,933	4,771	
	Rouslí ...	641	1	0	0	6,411	5,074	
	Bhúr ...	13,917	0	10	0	8,698	8,389	
Total ...		25,035	1	2	1	28,299	30,912	25,892

The above gives an increase of Rs. 2,407 or 8 per cent. The assessments actually announced amounted to Rs. 28,154, and were well received. The tract is a very poor one; but the assessment was and still is very light; and there is some very good land in the villages adjoining the Bét, and again in those next to the Upper Dháia Circle.

### THE UPPER DHAIA CIRCLE.

233. This Circle contains 175 villages with a total area of 126,324 acres, of which 107,750, or 84 per cent., are cultivated; 8,627, culturable or recently out of cultivation; and 9,947, Government property or unculturable waste. It stretches south from the Lower Dháia in a plain of uniform surface except where two belts of sand, each of about one mile in width, run across it from north-east to south-west.

The soil varies from a stiff clay to a light sand, the latter being found in the neighbourhood of these belts, and the former in depressions. The prevailing soil is a good loam, generally of dark colour, friable and most fertile. The proportion of soils according to our present classification is—

Irrigated	...	...	42 per cent.
Unirrigated	Dákhar (clay)	...	3 "
Ditto	Rouslí (loam)	...	43 "
Ditto	Bhúr (sand)	...	12 "
Total			100 per cent.

234. The percentages of area under the principal crops are—

Rabi, 48 per cent.	Wheat	...	26	Kharif, 52 per cent.	Sugar	...	5½
	Wheat or barley and gram	...	13		Cotton	...	7
	Barley or gram alone	...	7		Maize	...	9
	Others	...	2		Moth	...	9
					Charri	...	11
					Moth and Charri	...	8
					Others	...	2½

The husbandry of the tract need not be described in detail after the general account given in paragraphs 104 and 105 of this Report.

235. Of the revenue-paying area 80 per cent. belongs to Hindu Jats; 8½, to Mahomedan Rájputs; 2½, to Mahomedan Gújars; and 2½, to Mahomedan Jats. The Hindu Jats are a most industrious and thrifty class; and it is fortunate that the proportion of them is so large. The Mahomedan Rájputs are notorious for their improvidence; and are the worst possible revenue payers. At the Regular Settlement this was fully



recognized, and allowance was made in the assessments of their villages: but I do not think that such consideration has much effect on their condition. They are, as a class, very much involved in debt; and their villages contribute most of the area in the return of sale and mortgage. I have seen in many places the land of a Rájput village mortgaged to the neighbouring Hindu Jats, although the latter were paying a much higher assessment on their own than the Rájputs. All Mahomedans are put at a disadvantage by the custom which prevents the female portion of their households from assisting them in out-of-door work, whereas every member of a Hindu Jat's family gives him some help. It is to this that all Mahomedans attribute their bad success as cultivators, but it is only one reason. A Rájput will, if possible, rent his land to some one else, and thus save himself all trouble. If he is compelled to cultivate it, he does so in a most perfunctory manner, ploughing once for every three or four times that the Jat does.

236. The returns show one per cent. of the total area sold since Settlement, but nearly three-fourths of this has gone to coparceners. The average price realized is Rs. 35 an acre. The land mortgaged with possession of the mortgagee amounts to four and a half per cent. of the whole, and of this nearly one-half is in the hands of members of the village community. The whole area transferred to the money-lending class proper by sale and mortgage is thus about two per cent. The amount secured per acre on usufructuary mortgage is Rs. 27. The inference to be drawn from these figures is that a very small portion of the land has changed hands, and that very little of it has gone to the money-lending class. The ordinary Jat is most tenacious of his land, and will submit to any thing rather than that it should go out of his possession. If he cannot raise money without a mortgage, he will retain a part of his holding, and take the first opportunity of redeeming. The price paid for the land shows how it is valued.

My own experience of the tract agrees entirely with the result of these statistics. The people are uncommonly well-to-do, except in some of the Rájput villages where the thriftless habits of the land-owners are bringing them to ruin. But the money-lender has scarcely any hold at all on the Jats, nor is he ever likely to have more. There is a good deal of hard cash amongst them; and, if one of the number is in difficulties, he can always find some of his fellows to make an advance on the usufruct of a part of his land. There is of course a certain amount of floating debt; but this is no more than a couple of good harvests will clear off. If a money-lender has got a hold on the borrower he will insist on having the land and receiving a share of the produce; and it is a sure sign of the temporary nature of the debt when the land remains with the proprietor. There are not many external signs of prosperity such as one is led to expect

from the experience of other districts. The people are very fond of their money, and waste none of it on show. The houses are neat, but have seldom any pretensions. A well-to-do Jat has no horse and not more cattle than he absolutely requires. He dresses very plainly, and spends little on the clothes and food of his family. His great aim is to get some more land into his hands; and he will keep his savings till a chance occurs of investing them in a mortgage. The best evidence of the prosperity of the agricultural population is that they can always dispose of their surplus produce to whom they like, and when they like. In most houses will be found stocks of grain or cotton more than sufficient for the use of the household, and kept in the hopes of a rise of prices. The *gur* is bought up from them as fast as it is made. They have not even the trouble of taking their produce to market, for there is a keen competition between the traders, who go amongst the villages and buy on the spot. The Jats are careful to get a good price; and the margin of profit left to the trader is never excessive.

237. Notwithstanding the large area taken up for roads, canals, &c. there has been an increase of 7 per cent. in cultivation, 4 per cent. in irrigated, and 10 per cent. in unirrigated. The masonry wells have increased by 6 per cent.; ploughs are shown as having increased by 13 per cent.; and plough-cattle (bullocks) by 16 per cent. These latter figures are probably near the truth. The former details of "other cattle" are unreliable: and there has not been any increase in them, I should think, for there is no attempt to rear cattle for sale. No waste land is left, and fodder is valuable, so that the people much prefer to buy bullocks and cows ready for use and to sell the young stock.

238. I give below a statement showing the revenue soil rates adopted at the Regular Settlement, and those used in the villages in which the assessment was distributed on soils (26 out of 175). The revenue rate *jama* was 10 per cent. above that actually imposed.

Soil.				Revenue rates.			Distribution rates.		
				Rs.	As.	P.	Rs.	As.	P.
Irrigated	...	Nái cháhí	...	6	12	3	4	14	0
		Khális cháhí	...	2	8	10	2	5	0
Unirrigated	...	Rouslí and Dákhar	...	1	6	8	1	4	2
		Bhúr...	...	0	14	6	0	13	6

The following statement, condensed from Appendix IIB, shows the cash rents of the Circle. I have been able to obtain reliable data as to cash rents from the annual papers of two or three villages only:—



*I.—Paying zabti or crop rates.*

SUGAR.						COTTON.					
NIAL.			KHALIS CHAHL.			NIAL.			KHALIS CHAHL.		
Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.
136	1,628	12-0-0	141	1,648	11-11-9	28	206	7-5-9	40	263	6-9-2

MAIZE.						CHARRI.		
NIAL.			KHALIS CHAHL.			Rousli baráni.		
27	275	10-2-6	26	240	8-7-0	456	2,034	4-7-6

*II.—Paying at an annual rate on the biga.*

NIAL.			KHALIS CHAHL.			ROUSLI.			BHUR.			MIXED.		
Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.
89	585	6-9-2	304	1,755	5-12-6	854	3,716	4-5-9	21	68	3-4-0	352	1,957	5-9-0

*III.—Paying lump sums for the year.*

NIAL.			KHALIS CHAHL.			ROUSLI.			BHUR.			MIXED.		
Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.	Area.	Amount.	Rate.
27	2,611	9-7-6	473	3,554	7-8-6	543	3,540	1-10-6	73	174	2-6-6	2,884	13,422	4-10-9

The annual papers of three villages give—

SUGAR (IRRIGATED.)			LUMP SUMS (UNIRRIGATED.)		
Area.	Amount.	Rate.	Area.	Amount.	Rate.
35	377	11-1-9 *	3-866	13,897	3-9-6

A detailed analysis of the rents show that II does not give the proper relations between irrigated and unirrigated land. It is usual in some villages to take rent at a general rate per *bíghah*, irrespective of irrigated and unirrigated; and, when we distribute this over the area in our returns, we get a result that is misleading. The general rate is fixed for the convenience of the proprietor, and does not mean, as our returns would show, that all the land has the same renting value. Thus in mauza Raháwan, where the proprietors are Rájputs who cannot cultivate their own land, a general rate of Re. 1 a *kacha bíghah* (Rs. 5 an acre) is charged for all land; and, when we have distributed this over the whole rented area, we get the result—

IRRIGATED.			UNIRRIGATED.		
Area.	Amount.	Rate.	Area.	Amount.	Rate.
124	590	4-14-0	381	1,750	4-9-0

Giving nearly the same rate for irrigated as for unirrigated land, neither being the true rate. For this reason the irrigated rent rate in II is too low; and consequently the unirrigated too high. Again, if we take the lump sum rates of villages where land is scarce, we get a much higher rate than where tenants are scarce. Thus the irrigated lump sum rates for Isru, Nasráli, Aikoláha, Utálan, Bhamadi (5 villages) give—

NÍAI.			KHÁLIS.		
Area.	Amount.	Rate.	Area.	Amount.	Rate.
		Rs. A. P.			Rs. A. P.
68	812	12 0 0	159	1,431	8 0 0

On the other hand Kheri, belonging to the *jágirdárs*, who find tenants with difficulty, give rates—*níai*, Rs. 7; *khális*, Rs. 4. The crop rent rates are a much better index of the relative values of land. The



area under cash rents is not sufficiently large to eliminate such discrepancies as these; and we must bear in mind that 80 per cent. of the whole land is in the hands of cultivating proprietors, and 10 per cent. more held by tenants paying in kind.

239. In framing my rates I kept all these considerations in view—the former rates (revenue and distribution), cash and kind rents, and the relative renting value of the different soils. My rates as compared with those of the former Settlement are—

SOILs	REGULAR SETTLEMENT.		
	Revenue rate.	Distribution rate.	Rate proposed.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Níái ... ..	6 12 3	4 14 0	4 12 0
Khális ... ..	2 8 10	2 5 0	3 8 0
General rate on well land ... ..	4 6 6	.....	3 15 0
Rouslí and Dákhar ... ..	1 6 8	1 4 2	1 6 0
Bhúr ... ..	0 14 6	0 15 6	0 14 0

There are former rates on fallow and culturable waste; but I Results. proposed none. The results of the application of these rates were :—

SOIL.		Area.	Rate.	Jama.	TOTAL.
			Rs. A. P.	Rs.	Rs.
Níái ... ..	...	16,049	4 12 0	76,236	
Simple well ... ..	...	28,791	3 8 0	1,00,765	
Other irrigation ... ..	...	28	3 0 0	84	
Rouslí ... ..	...	49,536	1 6 0	68,112	
Bhúr ... ..	...	13,346	0 14 0	11,678	2,56,875

The assessment of the last year of the Regular Settlement, including máfi jama, was Rs. 2,07,296; and the proposed assessment would have given an increase of Rs. 49,579 or 24 per cent. In reviewing the Report the Financial Commissioner recorded the following orders:—

"The Financial Commissioner thinks that the reasons given for proposing these rates are sufficient and he sanctions their adoption. They are, in the Financial Commissioner's opinion, better proportioned than those fixed at the Regular Settlement, and are fully justified by the statistics of rent and produce. They are however still a little higher on well land than Mr. Lyall likes; and any approach to putting too much on well irrigation is of course to be most carefully avoided. He therefore agrees with you that a larger increase than 20 per cent. should not be taken. The Settlement Officer should in assessing practically reduce the well rates so as to make the new rates give an increase of 20 per cent. only, and he should also be very careful how he assesses villages in which the proprietors' holdings are very small." (No. 7106, dated 10th October 1881, from the Settlement Secretary to Financial Commissioner, Panjáb, to the address of the Settlement Commissioner). His Honor the Lieutenant-Governor in formally sanctioning the instructions of the Financial Commissioner said: "In agreeing to the announcement of the assessments the Lieutenant-Governor requested the Financial Commissioner to impress upon the Settlement Officer the necessity for treating with care and leniency those villages in which, from the small size of the holdings, an increase was likely to be felt, and His Honor further considered that 20 per cent. should be the maximum increase to be taken on the Upper Dháia circle. It is observed that in Mr. Lyall's belief, the holdings are not, as a rule, very small in Ludhiána. But the average size of proprietors' holdings should, as is now proposed, always be noticed by Settlement Officers in Assessment Reports. In the present instance, observation should be particularly directed to the effect of the new rates upon the petty properties; and there should be no hesitation in granting immediate relief wherever it appears to be required. The subject should be fully discussed in the final report in the light of the experience which will accumulate in the interval." (No. 103, dated 3rd April 1882, from the Secretary to Government, Panjáb, to the address of the Financial Commissioner). I have quoted these orders in full because the Assessment Report of this Tahsíl was the first submitted, and the orders on it were my guides in the treatment of the rest of the district. The actual results reported in form E (detailed village assessments) for this Circle were as follows:—

	Rs.
Jama of the last year (with máfi, &c.)...	2,07,643
Jama announced ...	2,46,293
	<hr/>
Increase ...	38,650 or 19 per cent.

This increase was somewhat under that directed; but I found that there were several Mahomedan villages in which we had to go very far below rates; and I preferred reporting the deficiency to attempting to make up the sanctioned total by taxing the industry of the good cultivators. With the exception of these villages the enhancement was evenly distributed over the tract, and the new assessments were well received. The holdings are smallest in the older villages like Isru and Utálan, and the instructions of Government were acted on in the treatment of such as were made up of attenuated properties; but the difference between



one village and another in this respect is seldom very great in the Samrála Tahsíl ; most of them being on the same level. Where the holdings were below the average size, this was usually found to go along with a larger proportion of irrigation, an intensified condition of agriculture, and a very high rate of assessment ; and the new revenue rates seldom indicated much of an increase in such cases. For further information on this point I would refer to the village note-books.

### TAHSIL LUDHIANA. THE BET CIRCLES. BET I—KACHA.

240. In paragraph 202 I have given reasons for subdividing the

General description.

Bét of this Tahsíl into three Circles. The first Circle for consideration is the *mand* or strip of land along the margin of the River ; and I have included in this only the villages of which the greater part of the area is liable to annual inundation. The Circle contains 15 villages with an area of 8,757 acres, of which only 2,677, or 30 per cent., are cultivated ; 3,487, or 39 per cent., culturable ; and 480, or 5 per cent., lately abandoned. The remainder, 26 per cent., is unculturable. The small proportion of cultivated area to culturable and barren is not to be wondered at in a tract like this. The unculturable is sand along or in the bed of the River, and the culturable is the ordinary new land found on its banks, covered with a growth of "pilchi" or of reeds. Most of this will eventually be cultivated, unless destroyed by the River. Of the area lately abandoned 272 acres are in one village, having been cultivated one year to secure possession (as the land was in dispute), and never again. The land of this Circle is nearly all liable to annual inundation : and people live in adjoining villages of the *packa* Bét, and sometimes in a corner of their own, as the land is under water during most of the hot weather. The silt left by the overflow of the River is generally very fertilizing, and the land is really renewed annually. The soil is a clay-loam on a substratum of sand. When the deposit has attained a depth of nine inches to a foot, the plough can be worked in it without bringing up the sand, and cultivation is possible. But good crops cannot be grown unless the sand is from one to three feet distant from the surface, the further the better.

Crops and husbandry.

241. The percentages of area under the various crops are :—

Wheat	...	...	48	Maize	...	...	20
Barley	...	...	7	Rice	...	...	3
Barley with <i>masar</i>	...	...	7	Sugar	...	...	3
Others	...	...	7	Charri	...	...	3
Total Rabi	...	...	69	Others	...	...	2
				Total Kharif	...	...	31

The irrigated area is insignificant. In *dofasli* land the crops are maize, and sometimes rice, followed by wheat or barley, or a single crop of sugar or cotton is grown. Manure is not much used except for the cane, as good crops of maize and wheat can be raised in succession without it. *Ekfasli* land, when newly broken up, is cropped for two or three years with a mixture of barley and *masar*; and then it becomes capable of growing wheat. There is little or no Kharif crop in the *ekfasli* land, for it lies low and cannot be sown in time. The *dofasli* land is so situated that the water drains off it in time to enable the cultivator to sow maize, or the crop is rice. The wheat crop is magnificent, the yield being equal to that of irrigated land in the Dháia; and the maize, too, is good. Rice is grown in the wet lands near the river. It is in the ground only 40 to 50 days and may be followed by other crops.

242. The land is held by the various Tribes of proprietors. tribes, thus :—

Mahomedan Rájputs	...	...	...	57 per cent.
Ditto Gújars	...	...	...	10 „
Ditto Jats	...	...	...	14 „
Hindu Lobánas and Binjáras	...	...	...	16 „
Others	...	...	...	3 „
Total				100 per cent.

The Mahomedans are not well suited to the ups and downs of an alluvial circle, but they are fairly well-to-do. The Binjáras engage a good deal in trade, and do not depend entirely on cultivation.

243. Of the total area less than one per cent. has been sold since the Regular Settlement, and eight per cent. is now held in mortgage. The price in the case of sale is Rs. 40 an acre, and the mortgaged money per acre Rs. 17. The whole area mortgaged has gone to money-lenders; but it is made up almost entirely by one Rájput village (Satiánah), of which the whole land (565 acres) has been mortgaged. With the exception of this one village the Circle is in good condition. The produce is excellent and the people keep out of debt, and are generally well-to-do. But they are of course liable to lose their land any year from the action of the River. The Regular Settlement gave a large reduction on the jama of the Summary Assessment, and was 20 per cent. under rates. The present assessment is very light.

244. A comparison of the former and present resources is not of much use in a Circle like this, where the assessment varies with the cultivation. The incidence of the present population is 522 to the square mile of cultivation.

245. The Regular Settlement revenue rates were :—

Regular Settlement rates.				Rs. As. P.		
Irrigated	...	..	...	2	10	0
Dofasli	...	...	...	2	5	8
Ekfasli	...	...	...	1	4	3
Jadíd	...	...	...	0	4	7
Qadím	...	...	...	0	5	5



The jama actually sanctioned was 20 per cent. below that given by rates. Soil rates were not used in any village for distributing the assessment.

No cash rents. There are no cash rent statistics except of a small area of sugarcane, which pays Rs. 9 an acre.

The following statement shows the rates sanctioned and their result as compared with the produce estimate :—

Soil.				Area.	Rate			Resulting assessment.	Half-asset estimate.
					Rs.	As.	P.		
Irrigated	...	...	...	24	3	12	0	90	141
Dofasli	...	...	...	1,283	2	12	0	3,558	4,798
Ekfali	...	...	...	1,370	1	12	0	2,397	2,858
Total	...	...	...	...	...	...	...	6,045	7,797

As in Samrála it was expected that the village assessments would fall short of the above total on account of new land favourably assessed; and in the case of the land included in the *kacha chak* (see the account of the system in Chapter IX) *dofasli* rates of Rs. 2-10-0 and Rs. 1-10-0 were to be applied instead of the full rates. The assessments announced and reported amounted to Rs. 4,900, as against a total by rates of 5,039, there having been considerable changes in the area of the report as in the case of Samrála; and the enhancement on the demand of the last year, Rs. 4,049, was 21 per cent.

#### BET I—PACKA.

246. *Bét I, Packa*, comprises the rest of the villages of the Bét portion of Bhartgarh and Sáhnewál parganas. General description. It contains 57 villages with a total area of 32,048 acres, of which 21,237, or 66 per cent., are cultivated; 8,078, or 25 per cent., culturable or lately abandoned; and 2,733, or 9 per cent., barren waste. Part of the land of one or two villages is in the *mand* and subject to inundation, but with this exception the tract lies high, beyond the direct influence of the River. Towards the High bank, too, very few villages adjoin the *Budha nála*, which runs for the most part through the Bét portion of the Lower Dháia Circle. There are a good many *nálas* or streams, running across the tract, which fill in the rains, but seldom overflow their banks. The soil, like that of Bét lands generally, is a stiff dark clay-loam on a substratum of sand, very fertile when properly cultivated. The water level is near the surface, and there is always abundance

of moisture. In places there is tendency to *kallar*; but this is not common, and land so affected is mostly uncultivated. Sand ridges occur, but the sand does not shift.

The stratum of clay is shallow here and there, and the sand appears on the surface; but, as a rule, the clay reaches to five or six feet below the surface. Irrigation is everywhere easy, as water is found at a depth of eight to twelve feet, and it is more common than in Samrála. The proportion of irrigated land is 5 per cent. of the cultivated area of the whole Circle; but it lies mostly in the villages to the west. In the eastern part, as in the Samrála Bét, irrigation is not required, and superior or *dofasli* cultivation is carried on in the unirrigated land.

247. The percentages of area under the various crops are :—

RABI, 58.				KHARIF, 42.			
Crop.	Irrigated.	Unirri-gated.	Total.	Crop	Irrigated.	Unirri-gated.	Total.
Wheat ...	2½	46½	49	Maize	3	14	17
Barley ...	½	4½	5	Sugar	...	2	2
Vegetables ...	...	2½	2½	Cotton	...	3	3
Others ...	1	½	1½	Charri	...	13½	13½
				Others	1	5½	6½
Total ...	4	58	54	Total	4	38	42

In the Rabi wheat is grown as a single crop in *ekfasli*, or following maize in irrigated and *dofasli* land. Sometimes barley is sown instead of wheat. The "vegetables" are principally melons. In the Kharif maize is grown in the *dofasli*, and *charri* in the *ekfasli* lands. The proportion of sugarcane and cotton is small, the former being grown in a few villages adjoining Samrála, and the cultivation being apparently on the increase. The *dofasli* and irrigated lands usually lie close round the village site, are well tilled and heavily manured. The *ekfasli* land either bears a Rabi crop year after year (flooded lands); or is cultivated on the *dofasli dosála* system, that is a wheat crop is taken and then one of maize or *charri*, after which the land has a year of fallow. There is a considerable area of *ekfasli* land shown in our crop returns as growing maize or cotton, and for these crops manure is used; but the land is really *ekfasli*, for there is none of it that gives more than two crops in two years, and in fact the following crop of wheat cannot be taken. The cultivation



of the *ekfasi* land is difficult, and it is not altogether the fault of the cultivators that the tilth is not so good as in the Dháia. The soil is naturally stiff, and a few weeks' rest produces a rank growth of thistles, "piázi" &c., which it is not easy to keep down. Ploughing is very hard work, and has to be repeated much oftener than in the lighter Dháia lands. Still the cultivation is slovenly, and would be improved by some exertion on the part of the cultivators. What they principally fail in is weeding. One sees whole fields of wheat choked with "piázi" weed, which a Jat and his family would clear in a few days. The ordinary cultivator of the Bét thinks he has done his duty when he has sown the land, and seldom touches it again.

Agricultural tribes.		248. Of the whole area 93 per cent. is held by Mahomedans, thus :—				
Rájputs	...	...	...	...	...	22
Gújars	...	...	...	...	...	34
Jats	...	...	...	...	...	19
Araiens	...	...	...	...	...	7
Others	...	...	...	...	...	11
Total		...	...	...	...	93

The "others" are made up of Awáns and Saiads principally. The Hindus, who hold 7 per cent., are mostly Lobáns. The Rájputs are bad husbandmen, and do not willingly cultivate their own land. The Jats and Gújars are more industrious and well-to-do.

249. The condition of the tract is better than that of the Samrála Bét — a result that I attribute principally to the small area under sugarcane cultivation; for, where cane is grown, the cultivator is driven to the money-lender. There is no such eagerness here on the part of the money-lenders to make advances to the agriculturists; and the latter are more thrown on their own resources, and, as a rule, incur debt only when compelled to do so for a marriage, on account of a bad harvest, or for some such cause. They ordinarily live on the grain that they grow themselves. Some of the villages, such as Kariáná, Baliewál, &c., are very prosperous; and few are really much involved, though proprietors in most will be found in debt. It cannot be said that there is a great deal of wealth in the Circle. The wheat and cotton are mostly sold; and good prices are realized for vegetables, which are bought by traders from the City, and for straw sometimes. The proportion of the agricultural population who are well-to-do, and can dispose of their own surplus produce when they like, is considerable; but not nearly so large as in the Dháia. Such money as may be saved is generally kept in hard cash or invested in land. There is no display of brass dishes &c., for the Mahomedans do not use them; and only sufficient cattle are kept for the use of the household, except by the Gújars who dispose of the milk and *ghí* produced by their buffaloes and cows.

Of the total area one and a half per cent. has been sold since the	
Sales and mortgages.	Regular Settlement, and six and a half per cent. is now in mortgage. Of the sales 33 per cent.

are to agriculturists, and of the mortgages 50 per cent., so that the area transferred since the Regular Settlement to the money-lending classes is less than five per cent. on total area, and six and a half per cent. on cultivation. The average price per acre is for sale Rs. 46, and for mortgage Rs. 34. There is good deal of money owed on book accounts, as might be expected from the character of the people, for Mahomedans seldom get on without the assistance of the money-lender; but the debt of this sort is not nearly so great as in the Samrála Bét, nor does it press very hard.

The difference in the rates of former assessment of the two tracts (Samrála Bét and this) is not greater than might be expected from the difference in quality of the produce (Rs. 2-2-0 in Samrála and Re. 1-13-6 here per acre of cultivation.) The Regular Settlement gave in this a large reduction (27 per cent.) on the Summary Assessment, which again was much under the average of the old collections, so that everything has been done to promote the prosperity of the Circle, so far as it could be affected by the revenue demand. The price of land is decidedly high, and speaks of a moderate assessment. The revenue is paid punctually, except in one or two Gújar villages, which would never willingly pay anything.

250. There has been an increase in cultivation of 12 per cent., and in irrigation of 22 per cent. *Kacha* wells, lined with wattles and worked with a "dhenkli," or pole and pot, have been almost entirely replaced by masonry wells, the number of the latter having increased from 46 to 107. There is an increase shown in the number of ploughs amounting to 45 per cent.; and of plough-cattle, 20 per cent. Our enumeration of cattle was not very carefully done; but the results are approximately correct. The people do not keep much stock beyond what is necessary for wells, ploughing, and dairy purposes; and an increase of cultivation is likely to act as a check on the increase of cattle where the extent of waste land for grazing is not excessive.

By the Census returns population increased 26 per cent. between 1854 and 1868; and only  $2\frac{1}{2}$  per cent. between 1868 and 1881. The incidence per square mile of cultivation was at the time of Regular Settlement (1854) 511; and is now 588. In Samrála Bét the figures are 520 and 590 (Census of 1868). There has thus been a very material addition to the resources of the Circle since the Regular Settlement. There is, it is true, a much larger population to feed; but the increase has been small in the last 12 or 13 years. The present density is not excessive for a tract of such fertility.

251. The unirrigated area shown in the present returns as *dofasli* is very largely in excess of that so returned at the Regular Settlement. But our classification has been done on the principle explained in detail in paragraph 203. With a view to avoiding the



objection against the former classification, that it was too arbitrary because founded on the returns of only one year's crops, we have included in *dofasli* all land that appeared, after a careful observation of the crops of three years, to be ordinarily capable of bearing two crops in the year, or one of sugarcane. That there has been some actual improvement in the agriculture is seen from the fact that, while the increase in unirrigated cultivation is 11 per cent., the area of crops in the two harvests has increased by 14 per cent., and the sugarcane area has been quadrupled. Our present classification is designedly made much wider than the former one. That it is made very much on the same standard as that of Samrála is seen from an examination of the crop returns. A cultivated area of 7,016 acres gives 9,735 of crops in the two harvests; of which 362 are sugarcane, and 360 under cotton. That is 100 acres cultivated give 138 acres of crops, of which 5 are sugar, 5 cotton, and 2 indigo. It was to be expected that the proportion of *dofasli* to total cultivation would be much less in the Ludhiána than in the Samrála Bét, thus :—

		Dofasli.	Ekfasli.	TOTAL.
Samrála Bét	... ..	68	33	100
Ludhiána Bét	... ..	35	65	100

*Dofasli* cultivation in unirrigated lands is really confined to the villages in the east of the Ludhiána Bét, and about half way along it where there is no irrigation. In Matewára and the western villages the better cultivation is at the wells, and the unirrigated *dofasli* area very small. In the Núrúp Bét we find the proportion of *dofasli* unirrigated much smaller still.

252. The revenue rates of the Regular Settlement were:—  
Rates : Regular Settlement.

SOIL.						Rate.		
						Rs.	As.	P.
Irrigated	...	...	...	...	...	2	10	0
Dofasli	...	...	...	...	...	2	8	0
Ekfasli	...	...	...	...	...	1	6	3
Jadíd	...	...	...	...	...	0	4	11
Qadím	...	...	...	...	...	0	4	6

In considering these rates regard must be had to the great improvement in the character of the irrigation; and also to the alter-

ation of proportions between *dofasli* and *ekfasli*. The actual jamas also were about 10 per cent. under rates.

For distributing the revenue soil rates were used in five villages. These are Matewára and four others in its neighbourhood, all villages in the western part of the Circle. The rates used were:—

SOIL.				Rate.			Area.
				Rs.	As.	P.	
Irrigated	...	...	...	2	11	3	156
Dofasli	...	...	...	2	9	6	428
Ekfasli	...	...	...	1	6	2	2,585

The area under tenants-at-will paying cash rent is 1,209, or 6 per cent.; but most of this (727 acres) is held rent free or for payment of revenue only, that is by relations of the proprietors, or by proprietors who have been wrongly shown as tenants. The area under competition rents is thus very small, and we need only refer to the lump sum and *zabti* or crop rates. The details for the former are:—

SOIL.			Area.	Rent.	Rate of rent per acre.		
					Rs.	As.	P.
Dofasli	...	...	94	363	3	13	6
Ekfasli	...	...	189	466	2	7	6
Mixed	...	...	159	604	3	13	0

Cash rents are usually paid to absentee proprietors, and are not intended in many cases to do more than cover the assessment: and the rates do not represent the renting value of the land. It is a fact also that the worst land in the Bét is given to tenants paying in cash, and the whole area is small.

Revenue rates sanctioned. 253. The rates sanctioned and the resulting assessments are:—

SOIL.			Area.	Rate.	Resulting Jama.	Half-asset Estimate.
Irrigated	...	...	1,118	3 12 0	4,192	6,051
Dofasli	...	...	7,016	2 8 0	17,540	21,488
Ekfasli	...	...	13,103	1 7 0	18,836	22,704
TOTAL			.....	.....	40,568	50,243



There are some villages in this Circle too with new alluvial land, which had to be assessed favourably; and the assessments announced gave a total of Rs. 41,519, being an enhancement of 20 per cent. on the demand of the last year (Rs. 34,207), and the jama given by rates for the year of announcement being 41,602.

## BET II.

254. Assessment Circle Bét II is the western part of the Ludhi-  
 General description. ána Bét and includes nearly the whole of  
 pargana Núrpúr. It is about twelve miles in  
 length and four in breadth, and contains 67 villages with a total area  
 of 41,305 acres, of which 26,121 or 63 per cent. are cultivated. There  
 has been a loss by diluvion since the Regular Settlement of 14 per cent.  
 of the total area, and some villages have lost almost the whole of their  
 land. I have not separated off a *kacha* Circle, because there is very  
 little good *mand*. Here and there fresh land has been thrown up in  
 place of the old cut away; and to the east of the Railway embank-  
 ment, about Kásabád, this is of fairly good quality and yields well.  
 But there are no whole villages which we could throw into a separate  
 circle. The soil of Bét II is for the most part much inferior to that  
 of Bét I (*Packa*), and the rainfall is considerably less. The Budha  
 nála is the boundary of the Circle to the south, and joins the River just  
 outside it, so that all the land on the north bank of this stream is  
 included. This is in parts very inferior, being either unfit for cultiva-  
 tion, or yielding very poor crops and that not every year. *Kallar* is more  
 prevalent than in the eastern Bét, and barren patches are to be found in  
 the best wheat fields, especially about Núrpúr. As in Bét I irrigation  
 is easy, water being at about the same depth. The proportion of irri-  
 gated land is 9 per cent. of the cultivation.

Crops and husbandry.

255. The percentages of area under the  
 various crops are:—

Crop.	Irrigated.	Unirrigated.	Total.
Wheat ... ..	4½	42½	47
Barley ... ..	1	3	4
Vegetables ... ..	1	2	3
Others ... ..	½	2½	3
Total Rabi ... ..	7	50	57

  

Crop.	Irrigated.	Unirrigated.	Total.
Maize ... ..	5½	7½	13
Cotton ... ..	...	1½	1½
Moth ... ..	...	4	4
Charri ... ..	...	15	15
Others ... ..	2½	7	9½
Total Kharif ... ..	8	35	43

The irrigated cultivation is of the same sort as that of Bét I, the wells lying round the village site; and the land is heavily

manured and cropped with maize and wheat in succession. The unirrigated area is seldom capable of producing two crops regularly every year, except in a few villages with *mand* land, where a rather poor crop of maize or "másh" is followed by one of wheat: and there is really no *dofasli* cultivation such as in Bet I, save in a couple of villages in the eastern part of the Circle. In the *mand*, where two harvests are not attempted, one of wheat (or of barley mixed with *masar* in the new land) is grown in the *Rabí*. In the higher lands the cultivation is on the *dofasli dosala* system, the land yielding wheat and *charri* in succession, and then having a year's fallow. Vegetables and melons are grown in the *ekfasli* land of the villages under the city of Ludhiána; and have a ready sale, being bought up on the spot by vegetable sellers. The land of this Circle gets as manure most of the refuse of the City. None of this goes to the Dháia land, but a good deal to the Bét lands of Lower Dháia, and not much to Bét I. This manure is used largely for well land, and enables the people to raise wonderful crops even on the poorest soils. The Aráien villages, such as Rajowál and Bahádarke, are models of garden cultivation; some of the land yielding regularly three crops every year. "Ponda" sugarcane is raised in some villages and sold at a great profit. Onions, tobacco, &c., are commonly grown.

Agricultural tribes.

256. The land is thus distributed amongst

the agricultural classes:—

Mahomedan	Gújars	...	...	44 per cent.
"	Rájputs	...	...	10 "
"	Aráiens	...	...	10 "
"	Awáns	...	...	11 "
"	Dogars	...	...	10 "
Hindus		...	...	4 "
Others		...	...	11 "
Total				100

Gújars predominate as proprietors. The Aráiens are very common as tenants, besides cultivating a large proportion as proprietors. The Awáns and Aráiens are as a rule well-to-do; and so are the Gújars in the villages away from the river and near the City.

257. The tract is for the most part in fairly good condition.

Condition of the tract.

The villages on the margin of the River, which belong mostly to Gújars, have lost a great deal of land; and the proprietors have become involved on this account. But there are a number of first rate villages removed from the River with a great deal of irrigated land, belonging to all classes of proprietors. The people of these derive great benefit from the proximity of Ludhiána, where they have a ready market for their produce of all sorts, and whence they can obtain a plentiful supply of manure. The Regular Settlement gave a small reduction on the summary assessment. The revenue has been realized without any difficulty, except in one or two of the Gújar villages along the River, which have suffered most from its action. The returns show three and a half per cent. of the total area (or five and a half of the cultivated area) sold since Settlement, and four and a half (or seven) held in mortgage now. The prices per acre are Rs. 27 for sale and Rs. 29 for mortgage, the price per rupee of Govern-



ment demand being much the same as in Bét I. Of the land sold two-thirds has gone to agriculturists, and one-third of the mortgaged land is held by them. Thus the proportion of land transferred to outsiders is four and a half of the total, or six per cent. of the cultivated area.

258. The cultivated area is  $5\frac{1}{2}$  per cent. less than it was at Regular Settlement; but, on account of land lost by diluvion, the assessment has been reduced nearly 8 per cent. If we were to leave the villages along the River out of account, we should have a small increase of cultivation since the last Settlement. Irrigation has increased by 26 per cent.; and, as in Bét I, masonry wells have replaced the old unlined ones. Population has slightly decreased since 1868, and is now 12 per cent. in excess of that of 1854. The density is much less than in Bét I (456 as against 588). Plough-cattle are shown as having increased by 15; and the number of ploughs, by 50 per cent. Our enumeration of ploughs, which gives eight acres cultivated to one plough, is probably correct. There is a decrease shown in "other" cattle; but this is improbable.

Rates of Regular Settlement.

259. The revenue rates of the Regular Settlement were:—

Soil.						Rate.		
						Rs.	As.	P.
Irrigated	...	...	...	...	...	2	5	7
Dofasli	...	...	...	...	...	2	15	5
Ekfasli	...	...	...	...	...	1	4	6
Jadíd	...	...	..	...	...	0	4	10
Qadím	...	...	...	...	...	0	3	9

The reason for the high *dofasli* rate is that the produce of this class of land was much over-estimated. The resulting rate jama was very high, and only 80 per cent. of it was actually taken. Soil rates were used for distribution in 12 villages, thus:—

Soil.				Area.	Rate.		
					Rs.	As.	P.
Irrigated	...	...	...	1,044	1	6	7
Dofasli	...	...	...	341	1	13	4
Ekfasli	...	...	...	5,462	1	1	6

These villages are mostly near to Ludhiána, and superior ones : but the large village of Núrpúr is included, for which the figures are :—

Soil.				Area.	Rate.		
					Rs.	As.	P.
Irrigated...	...	...	...	473	1	10	8
Ekfasli ...	...	...	...	1,317	0	13	0

The area under tenants-at-will paying cash rents is altogether 1,584, or 6 per cent. of the cultivation, as against 3,624 or 14 per cent. under tenants paying in kind. Only 900 acres, or  $3\frac{1}{2}$  per cent. of the cultivation, pay competition cash rents. The results from the returns are :—

Paying.	Irrigated.		Dofasli.		Ekfasli.	
	Area.	Rent.	Area.	Rent.	Area.	Rent.
At a rate on the bígah ...	11	34 3-1-5	6	12 2-0-0	163	258 1-9-4
Lump sums ...	21	170 8-1-6	49	148 3-0-4	538	1,181 2-3-1

The last item, as having the largest area, may be taken as most reliable. But the whole area of the return is not large enough to justify any conclusion, and the cultivation by tenants is in no way to be compared to that by proprietors. The custom of the whole Bét is to take rents in kind, and it is only when he cannot let his land in this way that a proprietor takes a cash rent.

Revenue rates sanctioned. 260. The rates sanctioned and the resulting assessments are as follows :—

Soil.				Area.	Rate.	Resulting assessment.	Half-asset Estimate.
					Rs. As. P.		
Irrigated ...	...	...	...	2,454	3 12 0	9,202	11,036
Dofasli ...	...	...	...	* 1,458	1 10 0	2,369	2,994
Ekfasli ...	...	...	...	22,209	1 4 0	27,761	29,428
Total ...	...	...	...	...	...	39,332	43,458



When I came to distribute the assessment given by the rates over the villages of this Circle I found that, even after making allowance for the new alluvial lands, the rates gave higher jamas than I could take; and those finally reported amounted to 35,535, as against a rate jama of 36,738, which was still an actual increase of 23 per cent. on the last year's demand of 28,288.

### LOWER DHAIA CIRCLE.

261. The Lower Dháia Circle of Ludhiána is a continuation of that of Samrála, and a detailed description of it is not necessary. It extends for the whole breadth of the Tahsíl, and contains 78 villages with a total area of 73,604 acres, of which 79 per cent. is cultivation. The Dháia portion is much better than that of Samrála, because several fine villages have been included, and the percentage of irrigation and good soils is as follows:—

Irrigated	...	...	7½
Rouslí	...	...	62½
Bhúr	...	...	30
Total cultivation ...			100

The crops and husbandry of the Dháia portion are the same as in Samrála, while in the Bét lands they agree with those described for the *Packa Bét* Circles of Ludhiána. The land is divided thus between the various agricultural tribes:—

Mahomedan Rájputs	...	...	30 per cent.
„ Gújars	...	...	9 „
„ Aráiens	...	...	4 „
„ Jats	...	...	3 „
„ Awáns	...	...	6 „
„ Others	...	...	6 „
Total Mahomedans			58 „
Hindu Jats	...	...	35 „
Other classes	...	...	7 „
			100

The Mahomedans hold the villages along the High bank, those with land in Bét and Dháia; and the Hindus, those adjoining the Upper Dháia.

262. Some of the large villages along the High bank belonging to Rájputs are in very bad condition (such as Kum, Dhanáusu, Bírmí). The lands of these (both Bét and the Dháia) are not very good, and the cultivation poor; but the assessment is extremely light, and it is entirely owing to the thriftless habits of the proprietors that they are in such a state. The Hindu Jat, Awán and Aráien villages are all well conditioned, and there is little complaint of debt in most of them. But the tract does not enjoy many natural advantages; and is, as a whole, the worst off in the Tahsíl. The present assessment was a considerable increase on

that of the Summary Settlement; but it is realized without trouble, except in one or two villages where the lambardárs are themselves in difficulties. On the whole, though some of the Dháia lands are very inferior, the condition of the Circle is not really bad.

Of the total area three per cent. has been sold since the Regular Settlement, but three-fourths of this has gone to agriculturists; while seven and a half per cent. is now held in mortgage, half of it by the money-lending classes. The prices realized are by Appendix V (a and b) Rs. 45 an acre on sale, and Rs. 28 on mortgage: and by Appendix Vc. (Registration returns) Rs. 40 and Rs. 28. The land sold and mortgaged is mostly in the Dháia. In the returns are included two whole villages (one sold and one mortgaged); and this has run up the area. There is a good deal of book debt; and the Rájput and Gújar villages more especially owe large sums. Land has clearly a very good price.

Changes in resources :  
cultivation and irrigation.

263. In the Bét portion of the Circle there has been a large increase in irrigation, and a considerable one in total cultivation, thus :—

	Irrigated.	Unirrigated.	TOTAL.
Former ... ..	652	8,787	9,439
Present ... ..	1,439	9,205	10,644
	+120 p. c.	+5 p. c.	+12 p. c.

There is the same improvement in irrigation as in the Bét Circles, masonry wells taking the place of unlined ones. In the Dháia portion irrigation has decreased owing to a few wells having fallen out of use. The details are :—

	Irrigated.	Unirrigated.	TOTAL.
Former... ..	3,874	43,440	47,314
Present... ..	3,613	44,442	48,055
	—6 p. c.	+2½ p. c.	+2 p. c.

There is the same complaint here as in Samrála, that the sand is spreading; and the loss of wells in several villages would appear to support this. Our returns of soil show a larger proportion of *bhúr* than at the Regular Settlement; but this probably means that we have adopted a standard more favourable to the cultivators. At best



the Dháia portion can only be said to be stationary, and there has been a decided decrease in irrigation of about 6 per cent. The other details are for the Circle as a whole, and show that plough-cattle have increased by 11, and ploughs by 22 per cent. The increase in population from 1854 to 1868 was 22 per cent., and only 3 per cent. between 1868 and 1881. The density is not great (399 per square mile of cultivation), and is less than in any other circle except the Jangal.

264 The rates sanctioned, and the resulting assessments are shown in the following statement. I was directed Rates adopted. in the orders sanctioning the rates to go above them and to take up to a 10 per cent. enhancement if it appeared prudent to do so :—

	Soil.	Area.	Rate.	Resulting Jama.	Half-asset Estimate.
			Rs. As. P.		
Bét.	Irrigated ... ..	1,439	3 12 0	5,396	6,874
	Dofasli ... ..	2,675	2 4 0	6,018	7,075
	Ekfasli ... ..	6,530	1 4 0	8,162	7,894
Dháia.	Níái cháhi ... ..	2,444	3 8 0	8,554	11,256
	Khális cháhi ... ..	1,169	2 8 0	2,922	3,380
	Rouslí ... ..	29,933	1 2 0	33,674	30,454
	Bhúr ... ..	14,509	0 12 0	10,882	9,612
	Total ... ..	...	1 4 1	75,608	76,546

I may say here that, when I came to assess the villages in detail, I found it necessary to make some transfers from one to the other of this and the following Circles; and my doing so will account for differences in the jama by rates as shown in the Assessment Reports and in those of the detailed village assessments (Statement E), which latter I also give in all cases. I had no difficulty in taking a total assessment of 80,100 as against an assessment by rates of 79,341, which is an enhancement of 10 per cent. on the last year's jama of 71,404.

#### UPPER DHAIA CIRCLE.

265. The Upper Dháia Circle contains 117 villages with a total area of 108,145 acres, of which 95,135 or 88 per cent. are cultivated. It is the central portion of the Tahsíl, stretching right across it. The greatest length from east to west is 22 miles, and the breadth varies from 2 to 12. The tract does not differ much in character from the

Samrála Upper Dbáia. The soil is generally somewhat lighter, and the surface cut up more irregularly by sand ridges; but stretches of as good loam as any in Samrála occur, and the proportion of actually inferior soil is not quite so great. The water level lies at about the same depth (40 feet), and irrigation is quite as easy. The proportion of irrigation is less here than in Samrála (22 as against 42 per cent.); and there is not so much high cultivation. But the unirrigated lands at all events are equal to those of Samrála, perhaps even better adapted to *baráni* cultivation. The proportion of irrigation, *rouslí* and *bhúr* are—

Irrigated ...	...	...	... 22 per cent.
Rouslí ...	...	...	... 63 „
Bhúr ...	...	...	... 17 „

No detailed account need be given of the crops and husbandry of the tract, as the description of the Samrála Circle applies to this.

Agricultural tribes, and tenures.

266. The proportions of land held by the various agricultural tribes are—

Hindu Jats ...	...	...	... 86 per cent.
Other Hindus ...	...	...	... 8 „
Mahomedan Jats ...	...	...	... 3 „
Others ...	...	...	... 3 „
Total ...			... 100

Of the Hindu Jats the Garewál *got* hold 26 per cent. of the whole area of the Circle, the rest being divided between the Gil, Sekhon, Dhilon and other *gots*. The Garewáls are probably not much inferior as cultivators to the others, but more given to extravagance. Most of the land of the Circle therefore belongs to the best class of agriculturists. The cultivating tenures are :—

By proprietors cultivating their own land ...	...	... 76
By occupancy tenants ...	...	... 4
By tenants-at-will ...	...	... 20
Total ...		... 100

The land under tenants-at-will is thus made up :—

By mortgagors cultivating their own land ...	... 2½
By proprietors of other land ...	... 9½
By tenants who have no proprietary or occupancy rights	8

267. Of the total area two per cent. has been sold to agriculturists since the Regular Settlement, most of it (five-eighths) within the village; and only one half per cent. to money-lenders. The proportion of area mortgaged is four per cent. to money-lenders; and of this about one-third is without possession of the mortgagee. The total transfers amount to two and a half per cent. sold since Regular Settlement, and eight per cent. now in mortgage.

In such a large Circle it might be expected that the condition of all villages would not be alike. Some are weak, either on account of



inferior soil, or because the people have got into debt in bad years and have not been able to extricate themselves. One or two villages were disorganized in the Summary Settlement, and had their land transferred. But the tenacity with which it has been held by the purchasers, and the constant attempts of the original owners to recover it, show how much it is valued. The great majority of the villages are strong communities, perfectly self-dependent. The proprietors seldom owe more money than they could pay off with a slight effort; and they are able to dispose of their surplus produce themselves in Ludhiána, and watch the market quite as keenly as the ordinary trader does. The dwellings present generally an appearance of prosperity; and there is more display of it than in Samrála. Good houses, good cattle, brass dishes, jewelry are the signs of wealth to be looked for; and they are generally to be found. Most houses have a store of grain, the produce of one harvest being kept till the next one is secure, unless very high prices tempt it out. Large sums of money are spent on marriages and funerals; extravagance of this sort being greatly on the increase. Altogether I think there are unmistakeable signs that the tract has thriven under the former assessment, which gave a slight reduction in the villages that had been summarily assessed, and has been collected without any trouble at all.

268. Notwithstanding that a considerable area has been taken up for public purposes (Canal and roads) there is an increase in cultivation of about 6 per cent. The irrigated area has not been extended; but there is an increase of  $3\frac{1}{2}$  per cent. in the number of wells. A comparison of the area irrigated per well gives for this and the corresponding Circle of Samrála:—

Tahsíl.	Area per well of one bucket.	
	Níái.	Khális.
Ludhiána      ...      ...	11	13
Samrála      ...      ...	12	16

The average area of crops irrigated annually is about the same in both Tahsíls. There has been a great improvement in the quality of the irrigated cultivation, the returns showing the area of irrigated crops as 24 per cent., and that of sugarcane 12 per cent. in excess of what it was before. The increase in the actual productive power of the Circle has not then been very great; but it is quite as much as we should have expected from the small margin left at the Regular Settlement for the extension of cultivation. It is in the value of the produce, and consequently in the profits of cultivation, that

there has been a marked improvement. On the other hand population increased 30 per cent. between 1854 and 1881.

269. It would take up too much space if I were to repeat here for each Circle the data on which our revenue Rates adopted, rates have been founded. They are of the same character as those given in the preceding paragraphs, and will be found in the printed Assessment Reports. My object in detailing them in full for the first few Circles is to give an idea of their nature; but in those remaining I will not go into such particulars. The following statement gives the rates finally adopted for this Circle and their results:—

Soil.	Area.	Rate.	Resulting Jama.	Half-asset Estimate.
		Rs. As. P.		
Níái cháhi ... ..	12,437	4 8 0	56,166	65,715
Khális cháhi ... ..	8,170	3 4 0	26,952	30,442
Dákhar and Rouslí ... ..	60,196	1 6 0	82,770	95,158
Bhúr ... ..	14,332	0 14 0	12,541	12,469
Total ... ..	.....	.....	1,78,429	2,00,784

The assessments announced and reported in Form E amounted to Rs. 1,70,630, the result of the rates, after such alteration in the limits of the Circle as it was necessary to make, being Rs. 1,71,212, and the increase 17 per cent. on the previous demand.

### THE PAWADH CIRCLE.

270. Circle Pawádh contains 39 villages with a total area of 34,972 acres, of which 27,332 or 78 per cent. are cultivated, and 5,867 or 16 culturable or recently abandoned. It embraces the upper part of pargana Maloud; and is held in jágir by the Sardárs of Maloud, with the exception of three or four villages. There are two outlying villages attached to the Circle. The Pawádh does not materially differ from Upper Dháia, except that the soil is generally harder, containing more clay, and better adapted to irrigated than to unirrigated cultivation. There are one or two sand drifts, and lighter soil in their neighbourhood; but a stiff loam of dark colour predominates. The water level is closer to the surface, being generally at a depth of about 30 feet. Irrigation from wells covers 29 per cent. of the cultivation. The average population per square mile of cultivation (630) is much higher than in any other Circle of the Tahsíl; and only a little lower than that in Upper Dháia Samrála.

271. The cultivation is on the same system as in Upper Dháia, Ludhiáná and Samrála, so I need not describe it in detail. The proportions of crops grown in a year on the níái and simple well lands are as follows for every 100 acres of cultivation:—



	Nái (five-sixths.)	Khális (one-sixth.)
Area of crops grown ... ..	138	110
Of which sugar ... ..	14	8
Cotton ... ..	15	10

The irrigated cultivation is probably as a whole superior to that of any other part of the District—a result that is due chiefly to the industry of the cultivators. The soil repays to the full the labour, manure and irrigation which it receives; and (the principal advantage) the water level is nearer to the surface than anywhere else in the Uplands, and consequently the labour of irrigation is less.

The unirrigated cultivation is almost entirely on the *dofasli dosála* system. Owing to the nature of the soil much greater labour is required to produce a good tilth than in Upper Dháia, and the want of rain is much more severely felt. When the rainfall is copious, very good crops are grown, the yield being probably better than in lighter soils; but, if the fall is at all scanty, the crop dries up. The large percentage of gram and *charri* sown alone is a proof of a hard soil; for in lighter lands mixtures are always grown.

272. Of the total area 94 per cent. belongs to Hindu Jats of the Bhandar and miscellaneous Agricultural tribes. *gots*. They are a most industrious and thrifty race; and no other tract can show such a large proportion of good cultivators. Even amongst Jats the people of the Pawádh are noted for their industry.

The land is thus cultivated:—

By proprietors ... ..	82
By occupancy tenants ... ..	2
By tenants-at-will ... ..	16

273. The returns show that of the whole area one and a half per cent. has been sold since the Regular Settlement and seven per cent. is now held in mortgage. Sales and mortgages. About one half of the sales have been to other members of the village community, and only a third to non-agriculturists. About one-quarter of the mortgages are without possession of the mortgagee,

while the whole of these and about half the mortgages with possession are to money-lenders. Thus :—

	To agriculturists.	To non-agriculturists.	Total.
Percentage sold ... ..	1	$\frac{1}{2}$	$1\frac{1}{2}$
Mortgaged with possession ...	$2\frac{1}{2}$	$2\frac{1}{2}$	5
Mortgaged without possession ...	.....	2	2
Total ...	$3\frac{1}{2}$	5	$8\frac{1}{2}$

The people have by their thrift and industry attained a condition of great prosperity; and the villages are almost without exception held by strong independent communities. In fact I do not know any one village that can be said to be badly off; while some are notorious as containing great wealth. The proprietors dispose of their produce either to traders on the spot, or take it to Ludhiāna, and there is not much debt of any sort. The villages were not assessed in the Summary Settlement, but paragraph 10 of Mr. Barnes' Review gives the following details for the whole jāgīr, that is this and the Jangal Circle —

Jāgīrdars' estimate of their collections ...	1,15,938
Regular Settlement assessment ...	74,950

The jāgīrdar's took in grain and in cash; and their estimate was naturally exaggerated, though not very much; and there is no doubt that they took the equivalent of nearly half as much again as the Regular Settlement assessment. The rates at which they made their collections were little if anything under proprietors' rates; and the Regular Settlement assessment gave a reduction of nearly two-fifths on these.

274. Cultivation has increased 16 per cent., and irrigation 21 per cent.; but the number of wells only by 6 per cent. The present return of irrigated area gives per well :—

Class.	One bucket.	Two buckets.
Níái ... ..	12	18
Khális ... ..	14	21

These are nearly the same averages as in Upper Dhāia Samrála, and our present returns may, therefore, be taken as correct. Plough-cattle has increased by 53 per cent., and the number of other cattle



is shown as somewhat less than before, a result perhaps due to the breaking up of waste. On the other hand, population has increased by 28 per cent., and the present density is 630 the square mile of cultivation.

Rates sanctioned.

275. The following is a statement of the sanctioned rates, and the results.

Soil.	Area.	Rate.	Resulting Assessment.	Half-Asst. Estimate.
Níai cháhí ... ..	6,649	4-2-0	27,427	28,879
Khális cháhí ... ..	1,341	3-0-0	4,023	4,145
Rousli and Dákhar .. ..	16,228	1-4-0	20,285	21,776
Bhur ... ..	3,114	0-13-0	2,530	2,577
Total ... ..	...	.....	54,265	57,377

The assessments actually announced amounted to 54,360, an enhancement of 22 per cent.

### TIHÁRA CIRCLE.

276. The Tihára Circle contains 57 villages with a total area of 66,112 acres, of which 59,167 or 90 per cent. are cultivated. It is the south-west corner of the upper part of the Tahsíl, and comprises the whole of pargana Pakhowál, and some villages of Ghungrána. Two outlying villages are included, as belonging to this rather than to the Jangal Circle. The natural features of the Circle do not differ very much from those of Upper Dháia. The soil is somewhat lighter, and although the water level is nearer to the surface (about 35 feet generally), irrigation is not so common, only 15 per cent. of the cultivation being irrigated. Of the unirrigated area 78 per cent. is good soil (that is *dákhar* or *rousli*); and 22 per cent., *bhur* or sand. We have no proper record of the rainfall; but it may be taken as two or three inches less than that of the last two Circles. The present density of the population is 493 to the square mile of cultivation.

277. No sugar is grown save in one or two villages. The irrigated crops are cotton or maize in the Kharíf, and wheat or barley in the Rabí. The cotton and maize receive the attention that is devoted to sugarcane in the other Circles, and are very superior. The yield of maize in particular is in some villages better than in any other part of the Tahsíl. The well cultivation is not so laborious as in the other Circles.

The unirrigated crops are *berra* in the Rabí (that is wheat or barley mixed with gram, and *sarson* sown at intervals); and *moth*, *charri*, or a mixture of them in the Kharíf; and the soil is generally very well adapted to the

cultivation of these. Some land yields a Rabi crop every year, but most of the unirrigated cultivation is on the *dofasli dosála* system.

Tenures and agricultural tribes.

278. The land of the Circle is cultivated—

By proprietors	...	...	84 per cent
„ tenants with occupancy rights	...	...	2 „
„ tenants-at-will	...	...	14 „
Total			100

Hindu Jats own 78 per cent. of the whole; and there are one or two Rájput villages, this tribe having 9 per cent. of the whole land. The principal *gots* of Hindu Jats are Garewál (13 per cent.), Dháliwál (10 per cent.), Bhandher (4 per cent.). The Rájputs of the Circle are perhaps worse than their class generally, more thriftless and poorer cultivators.

279. Most of the villages are in very good condition, being in the hands of large and strong communities. Condition of the Circle. The Rájputs are in debt; but the Jats are well to-do, and, as a rule, independent of the money-lender. A succession of good harvests, and the high prices now realized for the inferior grains grown in unirrigated land, have brought a great deal of wealth into the Circle; and in every village some of the proprietors are engaged in trade, and own carts or camels which they ply for hire. Numbers too are in service all over the country. The houses are well built and comfortable, and generally contain good stores of grain and cash. It was not found necessary to give much reduction of assessment in the Regular Settlement (about 3 per cent.); and the present jama has been collected without any difficulty.

Of the total area three quarters per cent. is shown in Appendix Va as sold since Regular Settlement, and of this most has gone to agriculturists. The Registration returns, which are up to date, give a much larger area, amounting to one and a half per cent. of the whole. The area now held in mortgage is four and a half per cent. with possession of mortgagee, and one per cent. without possession. Of the former about one-third is to outsiders and two-thirds to agriculturists. The price of land sold is by Va Rs. 72, and by Vc Rs. 36 an acre; while the averages for the mortgages with possession are Rs. 37 and Rs. 32. For sale the price per rupee of Government revenue is Rs. 50, and for mortgage Rs. 26. Appendix Va gives the price realized for land in this Circle as higher than in any other, and there can be no doubt that this is the sort of land that has most attractions to an investor.

280. There has been an increase in cultivation of 8 per cent. Increase in resources. The irrigated area has remained almost as it was before; but the area of irrigated crops has increased by 30 per cent., showing, if the former crop returns are correct, that the irrigated cultivation has improved greatly in character. There has been an increase in plough-cattle of 24 per



cent., while the number of other cattle is returned the same as before. Population has increased between 1854 and 1881 by 37 per cent.; and the present density is 493 to the square mile of cultivation. The increase in the productive power of the Circle has not been very marked, for there was not room for a great extension of cultivation; and it is principally on the rise in prices that we must found an enhancement of the revenue. This rise has been relatively greater in the inferior rain crops, which are grown so largely in this Circle.

281. The following is a statement of the revenue rates sanctioned for this Circle, with the results on the figures of the Report:—

Soil.				Area.	Rate.	Resulting assess- ment.	Half Asset Estimate.
					Rs. As. P.		
Niál chahí...	...	...	...	5,947	4 0 0	23,788	29,602
Khális chahi	...	...	...	3,310	2 12 0	9,102	10,137
Rousli	...	...	...	39,117	1 4 0	8,4854	48,745
Bhúr	...	...	...	11,243	0 12 0	7,807	8,790
Total	...	...	...	...	...	89,553	97,274

The assessments announced amounted to 95,998, the jama by rates being, after the transfer of two or three villages from Upper Dhaia, 96,073, and the enhancement 20 per cent.

### THE JANGAL CIRCLE.

282. The Jangal Circle contains 29 villages with a total area of 69,026 acres, of which 59,208 or 85 per cent. are cultivated, and 7,479 or 11 per cent. culturable. The villages are all held in jagir by the Maloud family, and lie to the south of the Jagraon Tahsil in detached groups, surrounded by Nábhá and Patiála territory. The distance from Khiáli, the most northern village, to Bhaini Chuphar, the most southern, is nearly 40 miles. The latter is more than half way from the boundary of

Jagrāon Tahsil to that of the Sirsa District. The principal groups are those of Sahna and Dhapáli, which are adjacent and between them contain 21 villages. Sahna may be taken as the centre of the tract, and it is 24 miles from the nearest point of Tihára Circle. The villages are very large, averaging 2,300 acre of total area, and the sites are at great distances from each other. This with the uneven character of the surface and the absence of irrigation, gives the country rather a wild appearance, although there is really little more waste land than in any part of the District. In places great ridges of sand occur, but they are not common; and the soil is generally a good

loam, sometimes with a considerable mixture of clay. The returns give the proportion of *bhur* or sand to good soil as 13: 87. There is a little irrigation in the first two villages of the Circle; and there was some formerly in a village of the Sahna group, but the latter has been given up as unprofitable. Water is found at a depth of 75 to 130 feet; and is with considerable difficulty raised in the wells round the village sites which are used for drinking purposes. The Sirhind Canal, already under construction as far as Sahna, passes through three villages of the Sahna group; and it is probable that every village in the Circle will within a few years be reached by some of the distributaries.

283. The following is a statement of the crops grown in the circle:—

RABI TOTAL		55	KHARÍF TOTAL		45
Barley	...	5	Joár and Bájra	...	17
Gram	...	8	Moth, &c	...	3.5
Wheat and gram	...	4	Moth with Joár	...	21
Barley and gram	...	32	Charri	...	2.5
Others	...	6	Others	...	1.

The cultivation is mostly on the *dofasli dosála* system; but the area under the Rabi crops is somewhat greater than that under the Kharíf. The principal crops, it will be seen, are in the Rabi *berra*, which is here a mixture of barley and gram sown together, with *sarson* separately in lines at regular intervals. The barley and gram are cut together some weeks after the *sarson*, and the grains remain mixed. In the Kharíf *joár* or *bájra* or *moth*, &c., are grown separately, or a mixture of them is sown. Where the crops are mixed the heads of *joár* or *bájra* are usually plucked before the crop is cut, and the grains are kept separate. The labour of cultivation is slight, and very few ploughings are required: while, once the seed has been sown, there is nothing more to



be done but to wait for its ripening. The Kharif crop is less liable to failure than the Rabi. With good autumn rains the former is secured, and sowing for the Rabi is possible; but if there is a failure of rain at the end of the autumn, the yield of the Kharif will be poor, and sowing for the Rabi at the proper time impossible. The people will go on waiting in the hope of rain; and, if there is no fall till after the season for sowing the *berra* has passed, a late crop of barley (called "kanouja") is taken, the yield of which could never be more than about one third or half of a proper crop of *berra*. Much moisture is not required for the Rabi sowings, as the soil is very retentive; and even with a short fall there will be a good yield in most land. With favourable rain at sowing time, and afterwards in the winter and spring, magnificent crops are grown.

These conditions are the same as for unirrigated land in other tracts, but here the whole harvest is at the mercy of the seasons. I have given in paragraph 12 reasons for supposing that the average rainfall at Sahna is about 18 inches per annum, while in the more remote villages it is less. There have been few really bad seasons during the currency of the assessment.

Tenures and agricultural tribes.

284. Of the cultivated area only 8 per cent is held by tenants, who mostly pay in kind.

The land is thus owned by the various tribes:—

Hindu Jats	...	...	...	86
Other Hindus	...	...	...	9
Other tribes	...	...	...	5
Total				100

The people of the Jangal villages are a very fine race. They have little labour to do in the fields, and spend their spare time profitably in moving about and picking up what they can by trade. A great many of them take service in the army (see paragraph 49).

Condition of the tract. 285. No part of the district has such a reputation for prosperity as this Circle. The people of the more highly cultivated parts are never weary of telling one what immense profits the Jangal zamindars are making, and what an abundance of land there is; and there can be no doubt that a succession of good seasons, and the great demand for the inferior grains, which are the principal staples, together with the trading habits of the people, have raised the general condition of this tract within the last ten or fifteen years much more comparatively than that of any other. There is every sign of prosperity in the Circle. The houses are large and comfortable, the cattle superior to those of any other parts: and a large proportion of the proprietors own carts or camels with which they go all over the country, disposing of their own grain or carrying for hire. It is for this purpose that such high class cattle are kept, for inferior ones would do for agriculture. Perhaps the way in which money is now spent on marriage and other celebrations is

the best proof of the profits made by cultivation. It is not uncommon for a Jat to expend Rs. 500 to Rs. 1,000 on such an occasion, and I have come across cases where Rs. 1,500 had been wasted in this manner by proprietors of ordinary means. Of course this is extravagance, and often means debt; but still it betokens the presence of wealth.

The area returned as sold since the Regular Settlement is very small (about one-third per cent). The area mortgaged is ten per cent. of the whole area; but of this six per cent. is to agriculturists of the village, and two and a half to non-agriculturists; while eight and a half per cent. is mortgaged with possession of the mortgagee; and one and a half per cent. without possession. The latter is all to money-lenders. I have elsewhere remarked that land was often mortgaged where there was no necessity, and this is the state of a greater part of the mortgages in this Circle, to fellow-sharers of the village. The mortgage is sometimes merely a form of tenure, the proprietor being unwilling or unable to cultivate himself, and the mortgagee paying down a lump sum for the right of cultivation, which he retains till the money is repaid. The price of the land sold averages Rs. 38 an acre, or Rs. 79 per rupee of Government revenue; but the area is small. The average per acre of mortgage money is Rs. 30, or 60 per rupee of Government demand. These prices are comparatively (with the revenue demand) higher than in any other Circle, and absolutely higher than in most.

The people have been able to tide over any failures of harvest that have occurred during the currency of the Regular Settlement, and to pay their revenue punctually in the worst years. This they do from their stores of grain; for experience has taught them foresight to an extent that is not required in more favoured tracts, and in the possession of most proprietors will be found sufficient grain for at the very least a year's food. The amount stored at any time will depend on the state of the market, for the people can always wait for favourable prices; but I do not think that it is ever reduced below this until the next harvest is insured; which may be before it is cut. The failure of a single harvest, though it cripples the resources of the tract, is not likely to produce any permanent effect, and good ones following soon restore them. The failure of two harvests, that is a Kharif and Rabi in succession, would be more severely felt. The first effect would be a great loss of cattle, many either dying or being sold for next to nothing; and this is what actually happened in the droughts of 1862 and 1868. Besides suffering a great loss of cattle, many of the people would have after a time to incur debt for their own living. Since 1868 there has been a succession of good seasons, very few having been below the average; and this with high prices has not only removed the traces of the previous bad years; but has raised the Circle to its present state of prosperity.

286. There has been an increase in cultivation of 18 per cent. Some irrigation has been given up since the Regular Settlement; but the whole area is trifling. Population increased by 41 per cent. between 1854 and

Increase in resources.



1881; and the present density is 318 to the square mile of cultivation, that is half as great as in Circle Pawádh. There has thus been a material increase in the resources of the Circle. The advantages derived from the improvement of communications are greater than in any other tract, and the consequent rise in prices is more marked; and, although great caution is necessary in the assessment of a tract like this, where cultivation is entirely unprotected by irrigation, it is clear that a considerable enhancement might be taken.

Rates sanctioned.

287. The rates sanctioned and their results are as follows:—

Soil.	Area.	Rate.	Resulting Assessment.	Half Assets Estimate.
		Rs. as. p.		
Irrigated ... ..	91	1 6 0	125	401
Rouslí ... ..	52,314	0 11 0	35,966	47,705
Bhúr ... ..	6,803	0 8 0	3,401	4,459
Total ... ..	.....	.....	39,492	52,565

These sanctioned rates gave an increase of about 39 per cent; but the actual enhancement was to be restricted to 33 per cent on the former jama, and the assessments actually announced, which amounted to 38,265, gave this proportion

#### TAHSIL JAGRAON, BET CIRCLE.

288. The Bét Circle of Jagraon contains 18 villages with a total area of 15,998 acres, of which 9,924 acres or 62 per cent. are cultivated; 4,239 or 26 per cent. barren waste; and the remaining 12 per cent. culturable or recently thrown out of cultivation. To the east for about six miles the River runs at some distance from the High bank; and between them lies a tract three or four miles wide, similar to the Ludhiána Bét, having some land annually inundated, and the rest beyond the direct action of the River (*kacha* or *mand* and *packa*). We have here been able to include villages with only Bét land in this Circle, and to throw those with Bet and Dháia lands into the Lower Dháia Circle: but from Bhundri westward the Dháia and River are only about a mile apart, and the floods reach almost right up to the former, while the villages are large, and their lands stretch from the River several miles south of the High bank. There are none of these entirely in the Bét, and we have here thrown a few into the Circle, although they have Dháia lands also, in order that the whole tract may be represented in our returns. In the western villages there is very little *packa* Bét land.

The Budha nála runs through the eastern part of the Circle, and joins the River a mile to the west of Bhundri. Its banks are high, and it does no harm to the land, which is cultivated right up to them.

Budha nála.

The soil of the *mand* or inundated land is a stiff moist loam of varying depth on a substratum of sand. It is generally of great fertility, and is covered with a fresh deposit of silt every year, so that two crops (*másh* or rice followed by *masar* or wheat) can be grown in the year without the aid of manure. Sometimes good land goes by diluvion or is covered with sand and left barren; but as a rule the action of the River is beneficial. There is little *packa* land west of Bhundri, and the Satlej appears to be getting nearer to the High bank, cutting down the old land and throwing up new *mand* on its site. To the east there is a good deal of *packa* land between the Budha nála and the High bank: and the soil of this is generally very stiff and hard. In places there is enough moisture to permit of two crops being grown in the year with the aid of manure; but such land is not very common. Of the cultivated area nearly 4 per cent. is irrigated from wells which lie just under the High bank, or (in the eastern part) round the village site in the *packa* land. The cultivation at these is very superior, more especially where it is by Araiens. Water is at a depth of 10 or 12 feet from the surface, and can be raised by very ordinary cattle. The average area attached to a Bét well is 8 acres, and 13 or 14 acres of crop are irrigated annually. The account given of the Lower Dháia Circle will apply to the Dháia lands of this, so I need not describe them here.

289. The following statement shows the crops grown in the Circle:—

Crop.	Irrigated.	Unirrigated.	Total.	Crop.	Irrigated.	Unirrigated.	Total.
Wheat ... ..	2	24	26	Maize ... ..	2	11	13
Barley ... ..	...	3	3	Rice ... ..	...	4	4
Gram ... ..	...	3	3	Másh ... ..	...	5	5
Masar ... ..	...	4	4	Charri ... ..	...	4	4
Wheat and Gram ...	...	29	29	Moth ... ..	...	2	2
Others ... ..	1	4	5	Others ... ..	1	1	2
Total Rabi ... ..	3	67	70	Total Kharif ...	3	27	30



In irrigated land maize in the Kharif is followed by wheat in the Rabi: and every 100 acres of *Cháhi Bét* land gives 180 acres of crop in the year. The maize crop is generally splendid, the land being heavily manured and constantly irrigated, besides being naturally very good. I have known fields to yield at the rate of upwards of 30 maunds of maize corn an acre. The maize is followed by a Rabi crop of wheat or fodder (*senji*, &c), for which no manure is ordinarily used.

In the *mand* or inundated land the Kharif crop is rice (where there is a great deal of moisture), or *másh*. These are followed in some lands by wheat, barley or *masar* in the Rabi, or only one crop (Rabi or Kharif) is grown in the year.

In places there are plots of land which, though removed from the direct influence of the River, are naturally moist from their proximity to some stream or because lying low; and in these two superior crops (maize followed by wheat) are grown in the year with the aid of manure. Where only one crop is grown in the year, it is generally a Rabi of wheat (or of *masar* in poor land), more rarely a Kharif of *charri* or maize. The rice, *másh* and *masar* crops grown in the *mand* are very fair, though at best they are of little value. The rice grown is of a very coarse kind, and sells at about 30 seers for the rupee. The maize crop is good in manured land, and very poor in *mand* or other unmanured land. The *charri* is grown entirely for fodder, and is poor and stunted. The wheat crop is the best of all the unirrigated. The system of cultivation of ordinary land is almost entirely *ekfasi harsála*, either a Rabi or Kharif crop being grown year after year. It is usual to go on growing a Rabi of wheat for three or four years, and then change to a Kharif of *charri* or maize for a year or two.

290. The land is owned by the various tribes in the following proportions:—

Agricultural tribes and tenures.

Gújar	...	...	...	39 per cent.
Rájput	...	...	...	28 "
Aráien	...	...	...	15 "
Other Mahomedans	...	...	...	8 "
Hindu Jats	...	...	...	7 "
Others	...	...	...	3 "
Total				100

Of the whole cultivation 31 per cent. is by tenants and 69 per cent. by proprietors. The land under tenants is thus divided:—

Held with rights of occupancy.	...	...	7 per cent.
Cultivated by tenants who have rights of occupancy or ownership in other land	...	...	11 "
By tenants who have no such rights	...	...	13 "

291. A large proportion of the land is in the hands of Rájputs and Gújars; and, as in the Bét tracts of the other Tahsils, there is a good deal of debt, incurred principally from want of thrift. But there are a great many well-to-do families in all three tribes (Rájputs, Gújars, Aráiens); and some of the villages are in very good condition. The land just over the High bank is the poorest in the Tahsíl, and most of the Dhaia villages have also land exposed to the direct action of the River; and therefore not always to be relied on. Some have suffered a good deal by loss of land, and this is a sure cause of debt; but on the whole I think the Circle may be said to be in fairly good condition. The Patwáris' papers show one and a half per cent. sold since Regular Settlement, and ten per cent. (of the total area) as now held in mortgage with possession of the mortgagee. The proportion mortgaged to money-lenders is small (two per cent. of the whole area). Nearly half of the area shown as mortgaged to agriculturists of other villages is in the village of Bhundri, where a share of a *patti* has been alienated to some Gújars from across the River, who were in want of land.

292. Appendix I shows an increase of 6 per cent. in cultivation, and of 47 per cent. in irrigation; but the whole area irrigated is small, and we cannot draw the same conclusion from an increase of cultivation in a Circle like this as we could in the uplands. What has actually happened is that one village, assessed at Rs. 800, has completely gone, and a new village has been thrown up in the middle of the River. A large proportion of the present cultivation is new land. Old land assessed at full rates has gone by diluvion, and light rates have been put on the new land, and the assessment of the whole Circle has fallen from Rs. 10,960 to Rs. 10,163, although the cultivated area is actually larger than before. The area of crops has nominally increased nearly 10 per cent. There is also an increase in the number of ploughs of 47 per cent., and in plough-cattle of 25 per cent., while the number of other cattle is shown as having decreased. The enumeration of the last is not very reliable; and a falling off would have no significance, as the people do not keep more cattle than are required for cultivation and for dairy purposes, except in one or two Gújar villages.

293. The revenue rates sanctioned for this Circle and the estimated results of their application were as follows :—



Soil.		Area.	Rate.	Resulting Jama.	Half Assets Estimate.
Bét.	Irrigated ...	287	Rs. As. P. • 3 12 0	1,076	1,686
	Dofasli ...	2,263	2 0 0	4,526	5,200
	Ekfasli ...	3,586	1 4 0	4,483	4,170
Dháia.	Cháhi ...	91	3 0 0	273	488
	Rousli ...	259	1 0 0	259	318
	Bhúr ...	3,438	0 10 0	2,149	2,962
	Total ...	...	...	12,766	14,824

As in other Bét Circles the area to which the rates were actually applied differed from that in the Report, and the total of the village assessments reported was Rs. 11,364 (the rate jama being Rs. 11,314), or an increase of 5 per cent.

### LOWER DHAIA CIRCLE.

294. The Lower Dháia of Jagráon resembles that of the other two Tahsils. It consists in the first place of villages along the High bank, with some good Bét land, irrigated and unirrigated. Some of the villages in the western part run right down to the River and have Bét land, both inundated and beyond the reach of the floods, besides Dháia land. The Circle is about 14 miles from east to west and 8 from north to south. It contains 57 villages with a total area of 71,966 acres or 12 square miles, of which 89 per cent. is cultivation. The village sites are generally just on the ridge, and the soil for two or three miles south of it is very light and poor. The surface is uneven in places, and the sand is shifted about by the strong winds from the south-east. The crops and husbandry are much the same as those described for the corresponding Circles of the other Tahsils.

295. The ownership is thus divided amongst the various agricultural tribes :—  
 Agricultural tribes and tenures.

Hindu Jats	...	...	...	70 per cent.
Mahomedan Rájputs	...	...	...	5 „
Do. Gújars	...	...	...	4 „
Do. Aráiens	...	...	...	11 „
Others	...	...	...	10 „
Total				100

The Mahomedans hold the villages along the High bank and nearly all the Bét land ; the Jats, those further south. The cultivation is in the following proportion :—

By proprietors	...	...	...	79 per cent.
Cultivated with rights of occupaney	...	...	...	8 „
Do. by proprietors or occupaney tenants of other land	...	...	...	8 „
By tenants with no proprietary or occupaney rights	...	...	...	5 „

296. The Circle has not many natural advantages, for the soil is mostly poor and incapable of yielding very much: but some of the Jat villages adjoining the Upper Dháia are more favourably situated, and have good (irrigated and unirrigated) as well as poor lands. These are the best villages in the Circle; and in them the people are very well-to-do. In a few the proprietors are able to go in for a little trade; and the village sites present an appearance of prosperity, carts, good cattle, and some elaboration of the dwellings being the principal signs. Some few Jat families have taken to money-lending. The villages adjoining the High Bank are not at all well-off, either Jat or Mahomedan; and complaints are very generally made. On the whole the Circle is not in such good condition as would lead us to expect much enhancement of the present assessment: but, on the other hand, there is nothing to show over assessment, for the demand is admittedly light. It is only of the poverty of the soil that the people complain.

Of the total area of the Circle Appendices Va and b. show one per cent. as sold since Regular Settlement and ten per cent. as now held in mortgage. In both cases only about one third of the land has gone into the hands of money-lenders; and most of the sales have been to members of the village community. The price realized is Rs. 40 an acre, or Rs. 39 per rupee of Government demand; and the amount secured per acre on mortgage with possession, Rs. 29, or Rs. 28 per rupee of the demand. These prices are higher than one should have expected from the nature of the soil.