

had previously been denuded of their leaves for fodder) but this was stopped. The poor people are ready to do anything to raise a little money before starting on their journeys. Their ideas as to where they will go to are vague in the extreme. Most of them say they will go to Malwa which they believe to be a paradise on earth. With their cattle getting thinner every day, and with seemingly no possibility of being able to keep them alive here, it is not to be wondered at that they grasp at any chance of being able to save them."

Tuesday, as an auspicious day, was generally fixed upon for the start, and whole bands from neighbouring villages combined and left in a body. Major Cadell notes that it was not those in absolute poverty who were leaving, but those who had sufficient means to keep them for a few months. As the pinch of scarcity became sharper and prices which up to June had been normal, varying from 22 seers per rupee for wheat to 28 for barley, jawar and gram, rose to famine pitch,—10 to 14 seers,—from September to February, grain robberies began, and the grain-dealers aggravated the crisis by removing their stocks to the towns for safety. The poorer people, village menials, etc., who had not the means to emigrate, were now reduced to great straits, living on berries, and digging up ant's nests in search of particles of grain, and the mortality began to increase rapidly.

40. The State authorities, under the able direction of the Political Agent, Major Cadell, who all through the crisis

Remedial measures by the State.

remained constantly on tour, endeavouring to assist and put heart in the people, did a great deal to alleviate the distress. The graindealers at first refused to part with their stocks at all, but a proclamation being issued that there would be no interference with the course of trade or prices, grain began to flow into the market. To meet the difficulty caused by the money-lenders closing their accounts in fear that they would be made to advance the whole revenue for their clients, orders were issued that only so much revenue as was in proportion to the outturn of the crops would be realized during the year, and that advances made would be recoverable through the Courts without the usual fees, while if they closed accounts now without good reason, they would not in future receive aid from the Courts in recovering the debts already on their books. This made them more liberal with their advances. At the same time advances to the extent of Rs. 10,530 were made for sinking kacha wells to enable the people to raise fodder crops, carrots, etc., for themselves and their starving cattle. Relief works and poorhouses were also started at central places in the State, and though in Alwar, as elsewhere, the intensity of the distress was perhaps hardly gauged fully in the beginning, and the relief measures would have been more effectual if more timely, employment and food were thus found for several thousands. The relief works were attended almost exclusively by sweepers and menials. The relief-camp at Alwar was kept open till November 1878. The terrible mortality among the people may be gathered from the fact that in February 1878 out of an average attendance at the Alwar camp (opened on 14th January), of 2,244, 222 deaths were recorded, and in March 510 deaths out of an average attendance of 2,640. Ordinarily Alwar exports a large stock of surplus grain. Thus in 1875-76, 218,418 maunds were exported against 30,501 maunds imported, while in 1877-78, the exports fell to 42,989, while the imports rose to 3,92,992.

41. As showing the enormous loss of cattle even in the earlier stages of the famine, the following figures for the Lach-

Loss of Cattle.

mangarh Tahsil are quoted from a report of Major Cadell's, who says it is a fair sample of the rest of the State :—

Number on 18th August 1877	...	...	...	41,557
Died during August	...	...	...	999
" " September	...	...	...	1,773
Sold	...	...	...	358
Deported to Malwa	...	...	...	7,708
Balance on 1st October	...	...	...	30,724

Of the cattle taken away, few, if any, were ever brought back, so that in this tahsil the loss in the first three months of the famine was 25 per cent.

42. The loss of agricultural hands was almost as serious, as the following figures taken from the annual reports for

1877-78 and 1878-79 show. In the whole State, between 1st July 1877 and 31st December 1878, the number of persons

who left their villages for other States was 43,847 of which only 8,757 retraced their steps, so that by emigration alone the State lost over 35,000 people in eighteen months.

The exodus in these four tahsils was as follows, and the population of 1872, 1881 and 1891 is also given for comparison :—

Tahsil.	Population in 1872.	NUMBER OF PEOPLE WHO EMIGRATED.			NUMBER OF EMIGRANTS WHO RETURNED.			LOSS BY EMIGRATION.			Population of 1881.	Population of 1891.
		Cultivators.	Non-cultivators.	Total.	Cultivators.	Non-cultivators.	Total.	Cultivators.	Non-cultivators.	Total.		
Kishangarh	60,274	1,460	626	2,086	140	38	178	1,320	588	1,808	54,448	61,672
Ramgarh	51,499	1,752	847	2,599	190	110	300	1,562	737	2,300	42,470	47,912
Gobindgarh	39,268	939	3,058	4,097	104	650	844	745	3,308	4,053	19,615	21,624
Lachhmangarh	66,189	7,701	2,118	10,111	1,593	414	1,997	6,210	1,004	8,114	50,982	61,479

By emigration therefore in this period of eighteen months Lachhmangarh lost 12 per cent. of its inhabitants, Gobindgarh over 10 per cent., Ramgarh over 4 per cent. and Kishangarh about 3 per cent., while, if we compare the population of 1872 with that of 1881 (the comparison does not apply in Govindgarh owing to the transfer of several large villages to other tahsils and to Bhartpur), the losses are still more enormous owing to the high mortality the famine year due to scarcity, and of the following year due to malaria making havoc with the emaciated population.

In spite of the ten years of comparative prosperity between 1881 and 1891, no tahsil, except Kishangarh, had made good its losses and worked up to the population of 1872.

The Political Agent, Major Law, writing in May 1879 says :—

" If the number of those who during the last twenty months have died from starvation and sickness be added to those who have emigrated, it is calculated that Alwar may be said to have lost hardly less than a tenth of the population. What I saw during my tour through a good part of the State only served to confirm such an impression, I do not think one came across a single village that from its many roofless houses and tumbling walls did not speak too plainly of the decimation of the rural population, while the many unworked wells, the small area of irrigated lands, and the work look of the animals in harness told how great had been the loss of cattle. The people seem much depressed, and it will take a good deal of time to set them on their legs again."

43. The land revenue collection for the State, which in 1876-77 the first year of the new settlement had been Rs. 19,35,885, fell off as follows :—

			Arrears collected.	Current revenue.
			Rs.	Rs.
1877-78	...	...	250	10,60,410
1878-79	...	...	1,01,915	16,08,558
1879-80	...	...	2,07,457	18,63,230
1880-81	...	...	5,926	18,58,077
1881-82	...	...	7,926	19,02,351

The attempts made to recover the balance of the famine year in the two following years, before the people had recovered from the blow, was very bad policy, and completed the ruin of several estates.

It took nearly ten years for the State as a whole to recover from the effects of this disastrous famine, while numbers of individual estates never recovered from the shock, and, owing to the desertion of owners and tenants and consequent inability to work the land and pay the Government demand, the owners who remained either refused responsibility and voluntarily made over their rights and liabilities to outsiders, or the transfer was made by the State of its own initiative. This was most frequent in Lachhmangarh which suffered most severely. In great numbers of estates, though the old owners held on, the famine broke down the village tenures and organization. In fact the fatal year Sambat 1934 created an economic revolution which shook the agricultural community to its foundations and involved a large portion of it in complete ruin.

44. The rains of 1876-79 were heavy but ill distributed. Their early cessation damaged the kharif and contracted the dry sowings for the rabi. The year was a very unhealthy one, and the zamindars were prostrated with fever at harvest time. Owing to good winter rains the rabi was fairly successful, but not sufficient to recoup stocks, and prices still continued at famine level. The rates in March 1877 were—

Wheat	...	...	...	...	...	10½
Barley	...	...	...	...	...	15
Jawar	...	...	...	...	...	1
Gram	...	...	...	...	...	14

The year 1879-80 was one of heavy, almost excessive rain, which made the season again very unhealthy. The autumn crop would have been a bumper one, but suffered from want of watching and weeding owing to the general sickness. A large rabi was sown, but high winds at ripening time made the outturn rather below average. Prices began to rule easier, the average rates for the year being—

wheat	...	...	...	...	...	14
jawar	...	...	...	...	...	23
barley	...	...	...	...	...	24
gram	...	...	...	...	...	15

There was a long break in the monsoon rains of 1880, but a light fall of rain in September saved the harvests from being an utter failure. Only one-third of the *dahri* lands were sown, while *chahi* sowings contracted. The harvests were poor but the people were encouraged to sow largely by the Maharaja's proclamation that no arrears would be collected during the year. Prices continued to fall—the average for the year being—

wheat	...	...	...	...	...	16½
jawar	...	...	...	...	...	24
barley	...	...	...	...	...	24
gram	...	...	...	...	...	21

From 1881-82 the harvests took a turn for the better, and, though those of the year 1883-84 were rather disastrous, this was only a temporary check to the returning tide of prosperity. Nothing calls for special mention till we came to the harvests of the last five years, 1893-94—1897-98.

45. The year 1893-94 was one of exceptionally heavy rainfall. The kharif crop though damaged in places by floods was very abundant. The rabi suffered from hail, high winds, etc., but was on the whole a fair crop. The revenue was collected in full and some arrears also realized. Prices were very low in 1894, viz.—

wheat	...	...	...	...	...	20½
barley	...	...	...	...	...	33
gram	...	...	...	...	...	34
jawar	...	...	...	...	...	33
bajra	...	...	...	...	...	23½

1894-95 = Sambat 1951.

The monsoon rains of 1894-95, though late, were very heavy.

The kharif sowings fell off largely, and *moth*, *masina*, suffered considerably from excessive rains. The winter rains were favourable and a large rabi was sown, but it was again damaged by hail and frost, and the produce, except oilseeds, was much below average. Prices began to rise sharply, the average for the year 1895 being —

wheat	...	...	17
barley	...	...	21½
gram	...	...	24
jawar	...	.	23
bajra	...	...	20

The revenue was collected in full with little difficulty.

The monsoon rains of 1895 were very deficient, and kharif sowings were very short and the outturn poor. The scarcity of fodder began to make itself felt. The rabi sowings in dabri and barani land fell off, and for want of winter rains the crop failed largely. The produce on well lands was very good, and this combined with high prices in 1896, *viz.*—

wheat	...	...	12
barley	...	...	15
gram	...	...	15
jawar	...	...	14½
bajra	...	...	13½

helped to lighten the strain on the agriculturists, and there was no serious difficulty in collections except in Lachhmangarh, 98·66 per cent. of the whole land revenue being realized.

The monsoon of 1896 was even more unfavourable than that of 1895. Though late in setting in, the people took advantage of the heavy rains at the end of July to sow a very large area to cover the deficiency of the previous year. A long break in August however caused a wide failure of crop. Rabi sowings were restricted mainly to *chahi* and *dahri* lands and wherever possible the zamindars sunk great numbers of *dhers* and *dhenklis*. Aided by timely winter rains, the crop, though small in area, gave an excellent yield, and the high prices still prevailing kept the zamindars from feeling appreciably the effects of two years of scarcity. Though in these two years the deficiency of the rainfall was almost as great and prices higher than in the famine year 1877-78, there was no panic, no desertions. The people kept their heads and paid up the revenue in full, thus proving how much their staying power had improved in the interval. The scarcity of fodder for cattle was the most serious result of the drought and large numbers died of starvation.

The drought was brought to an end by the monsoon rains of 1897, which, though not very heavy, were timely and well distributed. A long break in September caused anxiety as to the jawar and cotton, but an opportune fall at the close of the month saved the kharif and enabled large sowings to be made for the rabi. The *bajra*, fodder and *masina* crops were very good, but the jawar was much damaged by locusts. The long delay in the winter rains was very unfavourable for the rabi and the heavy fall about the middle of February, though most beneficial for *chahi* lands, was rather late for the *dahri* and *barani*. High winds in March reduced the outturn, but the harvest was on the whole a bountiful one, and the combined results of both harvests have almost obliterated all traces of the previous scarcity.

Prices which in 1897 averaged—

Wheat	...	...	...	...	...	10
Barley	...	...	...	...	...	14
Gram	...	...	...	...	...	10
Jawar	...	...	...	...	...	12½
Bajra	...	...	...	...	...	12
have now fallen to—						
Wheat	...	...	...	...	...	17
Barley	...	...	...	...	...	27
Gram	...	...	...	...	...	21
Jawar	...	...	...	...	...	27
Bajra	...	...	...	...	...	24

46. Details of the realizations and balances of each year from 1876-77 to 1896-97 are shown in statement III. The result is summarised in the following

table :—

Tahsil.	Total balance from 1876-77.	Total amount recorded up to kharif 1897	Remitted on birth of present Maharaja in 1881.	For dilution.	For over-assessments	Balance at beginning of rabi 1898.	REMARKS
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Kishangarh ..	2,55,579	1,04,478	85,651	3,426	806	61,216	Of which Rs 845 since realized.
Ramgarh ..	3,44,850	81,087	78,694	59,041	...	1,25,028	Rs 740 balance of realized maffa.
Gobindgarh ..	52,636	37,107	29,354	...	...	16,175	Rs 3½
Lachhmangarh ..	4,10,318	1,00,205	57,442	...	13,659	2,19,012	Rs 747, of which Rs 21,708 paid, 1880.
Total ..	11,03,383	3,27,877	2,61,143	62,467	14,465	4,41,431	

The remissions shown in column 4 were made by the late Maharaja Mangal Singh in 1881 on the birth of the present Maharaja. The balance of the famine year and of all years previous to it (which were only nominal) were wiped out, so the present balance in no case dates further back than 1878-79.

The relative proportions of realization balances, remissions, etc., since last settlement are shown more clearly in the forms of percentages in the following table :—

Total demand		Kishangarh Do.	Ramgarh Do.	Gobindgarh Do.	Lachhmangarh Do.
		%	%	%	%
Realized	during the year ...	94	92	94	89
	in subsequent years...	2½	2	2½	2
Remitted	...	1½	2	2½	2
Reduced	...	½	1	...	1
Existing balance	...	1½	3	1	6

These figures show that in Kishangarh and Gobindgarh 96½ per cent. of the total demand since settlement has been realized, in Ramgarh 94 per cent., and in Lachhmangarh only 91 per cent., and confirm my opinion as to the relative pitch of the assessment.

Lachhmangarh, where no less than 6 per cent. of the total demand is still in balance, seems to have deserved more, and been treated with less consideration than the other tahsils in the famine year.

Though it was hardest hit by the famine, nearly half the revenue was realized in 1877-78. Of the balance, Rs. 88,733, Rs. 31,291 was recovered in the following three years, and the arrears remitted in 1881 were only Rs. 57,442.

47. In Kishangarh the present balance Rs. 60,371 is due from only 33 villages out of 150, of this Rs. 11,417 is due from the single estate of Pur held by indolent Thakurs. Since 1891 no village has been in arrears except Pur—Rs. 3,092, and even this has a clear balance sheet since 1893. On the other hand, within the last five years arrears on account of past years to the amount of Rs. 19,040 have been realized.

In Ramgarh within the last 5 years the arrears amount to only Rs. 1,020 in six estates, while Rs. 27,685 have been realized on account of old balance.

In Gobindgarh within the same period there have been no arrears at all, while Rs. 8,866 have been collected on account of old balances.

In Lachmangarh balances of Rs. 9,629 have accrued in fourteen estates, but these are partly due to bad revenue administration under a feeble Tahsildar, while Rs. 16,831 have been realized out of the old arrears.

These facts prove that within the last five years, embracing two of stress and difficulty, all tahsils have been able not only to pay their way but to clear off some of the old arrears.

48. The occurrence of an exceptionally severe famine so soon after the introduction of Major Powlett's assessment makes it difficult to determine how it would have worked under normal conditions, but the fact that the revenue was realized in full in the first year, 1876-77, and that, though no permanent or temporary remissions were given after the famine year, the total arrears for a period of twenty-one years (excluding the amount struck off for the abnormal famine year) do not exceed two-thirds of one year's demand, tend to show that the assessment, though a full one at the time was not excessive.

I may here mention that the State Council has decided to commemorate the Jubilee year 1897 by remitting 3 lakhs of arrears of land revenue out of 9 lakhs due in the 12 tahsils, and has arranged to have this apportioned at the time of re-assessment. This point and the striking off of irrecoverable arrears will be considered in Chapter IX.

49. The desertion of owners in the famine year has already been referred to. Their lot was much more than that of those who remained and of those who migrated to the Malwa only a small fraction ever returned.

The extent to which holdings were deserted will appear from the following table:—

Tahsil.	Number of estates in which desertion took place.	Number of holdings abandoned.	Number of owners.	Cultivated area.	Jama.	Area restored to owners.	Area made over to relations, etc.	Otherwise dealt with.
Kishangarh	101	479	617	3,190	3,453	...	...	...
Ramgarh	59	323	385	3,812	4,408	147	3,665	...
Gobindgarh	20	53	94	2,587	4,507	185	3,403	...
Lachmangarh	75	350	438	16,031	18,689	871	12,771	3,260

Thus desertions of owners took place in more than half the estates in the tract. In Lachmangarh they were most numerous, one-sixth of the cultivated area being abandoned, and in Gobindgarh one-tenth. The State attempted to meet the difficulty by—

- (1) encouraging the next heirs or other relations to take up the land, helping them with takavi,
- (2) transferring it to other shareholders in the village?
- (3) introducing cultivators from outside—Mallis, Ahirs, etc.,
- (4) taking the deserted holdings of the whole or one *patti* in a village under kham management.

In many cases the owners finding themselves unable to meet their liabilities, associated non-owning relations or outsiders with them giving them a share in the property without any consideration or subject to payment of the arrears. This was known as bai-bhai and was very frequent in Lachmangarh.

Estates managed kham.

50. In Kishangarh four estates, viz.—

					Jama. Rs.
Bas Kirpal-Nagar (Banias) two-third	...	...	...	...	2,450
Khaithal (Sayads)	...	...	...	...	8,250
Jharjila (Khanzadas)	...	...	...	...	440
Sarpur (Meos)	...	...	...	...	250

owing to the break down of the owners, who in all but the last were non-cultivating or bad cultivators, came under *kham* management or were leased out to contractors. The old owners, however, in most cases went on cultivating, and I am now arranging as far as possible for their re-instatement in the ownership.

In Ramgarh tahsil, the large estate of Naugaun Rs. 7,000, Chaoki 700, and a half share in Naharpur Khurd came under *kham* management and are still so held. I have now re-instated the old owners in all cases.

In Gobindgarh a $\frac{1}{10}$ share of the kasba was similarly taken under *kham* management, but the owners are now being re-instated. The estate of Intka was, owing to the desertion of the owners, transferred to the owners of an adjoining estate for term of settlement. The question of its restoration is pending.

In Lachmangarh there is now no estate held kham or formed out. A great number of new cultivators were settled at the time in the deserted lands by the Tahsildar, and these were given the ownership in perpetuity or cultivating rights for the term of settlement.

51. The advent of the settlement was the signal for all the dispossessed owners who had voluntarily abandoned their lands in the famine year, or whose lands were transferred temporarily or in perpetuity by the State at the time, owing to their inability to be responsible for the revenue, to come forward with their claims to recover possession. These cases have been most troublesome to decide, as one has to hold the balance between the conflicting claims of the old owners, who threw up their lands in a panic, and of the transferees who came forward at a critical time and have since maintained the cultivation and paid the State revenue. It has been impossible to lay down any general rule, each case has to be disposed of on its own merits, and efforts are made to bring the parties to a compromise whenever possible.

The great number of such claims, and the persistence with which they are pressed, are proofs of the value now attaching to rights in land, and of the confidence of the people in the revenue administration of the State.

CHAPTER III.

GENERAL STATISTICS.

52. The forms of tenures prevalent are those commonly found in the Punjab and North-West Provinces, though the terms used to describe them are sometimes different, *viz.* :—

1. *Zamindari Khalis* held by a single owner.
2. *Zamindari Bilijmal (Gol Ijmal)* held jointly by a body of owners.
3. *Pattidari* held by shares ancestral or customary.
4. *Bhayachara (Gol Kabzawar)* held by possession without reference to shares.
5. A combination of two or more of the above.

The *Pattidari* and *Bhayachara* forms are again subdivided into complete and incomplete according as the whole area is held in severalty, or some is still kept joint (*shamilat*). Great confusion has been caused in both Alwar and Bharthpur by the fact that the owners use the same vague expression "*gol*" to explain the joint *Zamindari* and *Bhayachara* tenures. This springs from the fact that their primary division is one of all estates into "*gol*" *i.e.*, never regularly partitioned, and *Pattidari* in which a more or less formal partition has been made by the State or the owners. The question is further complicated by the fact that in joint *Zamindari* estates as in pure *Bhayachara*, the revenue liability is generally in the first instance distributed by possession, *i.e.* on the land actually cultivated by each of the joint owners. The deficiency is however made good, and the profits divided according to ancestral shares, and it is in this that the distinction from *Bhayachara* lies. Hence the loose expression "*gol*" covers all estates which have not been partitioned and it has therefore been necessary to distinguish these as (1) *gol ijmal*, *i.e.*, joint *Zamindari* and (2) *gol kabzawar* or *Bhayachara*. Only the sharper *Zamindars* however recognise this distinction, and it is frequent to have applications made for partition in *gol kabzawar* or *Bhayachara* estates held in separate possession for generations, simply on the ground that, as no partition had hitherto been made, a partition must lie. This tendency was often encouraged by the Hindustani *amla* at last settlement, who, under the impression that in every estate a man's property must be definable as some definite share of the whole (*ao biswas*), when they came upon an estate held purely by possession irrespective of shares, at once set themselves to work out and to record the shares real or imaginary by ancestral descent, and to show the owners though really holding in severalty by possession, as holding jointly by shares. I will not say that this was always done, but in every case of doubt, where a Punjab settlement official would be inclined to turn the scale in favour of possession as something actual and tangible, the Hindustani officials on the contrary decided in favour of joint ownership by shares as the normal form of tenure, the separate possession being recorded as cultivating occupancy which was not to be disturbed on partition.

53. The action taken though it has led to subsequent complications, is interesting as showing that the *Bhayachara* tenure is generally a development—often without any intermediate phase—of the joint *Zamindari*; but the difficulty is to decide at what stage the separate occupancy under the joint ownership or *Zamindari* tenure has become so stereotyped as to alter the tenure into *Bhayachara* or separate ownership by possession.

54. Where the owners agree as to the tenure it has been recorded accordingly, but where they differ, as happens when some hold less and others more than they would be entitled to if a partition were made accordingly to shares, the difficulty arises, and this has been decided generally by reference to the number of generations from the common ancestor, the number of years they had been holding separately, &c. A compromise has often been arrived at on the lines that separate occupancy of owners, if of considerable duration, should be recognised as separate ownership

while all other land, held by tenants, etc., was recorded as *shamilat* held according to shares. Considerable pains have now been taken to ascertain and record correctly the form of tenure, and define the circumstances—if any under which partition can be claimed.

Statistics as to tenures.

55. The resulting classification of estates is as follows :—

Tahsil.	Pure Zamin-dari.	Joint Zamin-dari.	Pattidari.	Bhayachara.	Total.
Kishengarh ...	1	15	39	94½	149½
Ramgarh ...	3	14	10	84	111
Govindgarh ...	1	13	11	23	48
Lachmangarh ...	1	41	53	23	118
Total ...	6	83	113	224½	426½

The Bhayachara form is most common among the purely agricultural tribes and castes—Meos, Jats, Ahirs ; while the estates of Thakurs, Brahmins, Saiyids, Gujars are more frequently held in common or by shares. The famine of 1877-78 in many estates played havoc with the old tenures, and one curious result of it was that estates where separate ownership had developed, in the face of the common danger abandoned their severalty and fell back on joint ownership and joint liability. As a corollary to this, the old distribution of the revenue according to possession, and even by shares, was abandoned, and a new and pernicious system introduced of distributing the demand of each year on the cropped area (*challu*) of that year. This may seem reasonable in theory, but in practice its effect was to encourage lazy co-sharers to abandon their cultivation and put the land under pasture, knowing that they would not be made responsible for the revenue of more than they actually cultivated. The feeling of revenue responsibility is, in a backward state of agriculture, one of the greatest spurs to industry and this was therefore a distinctly retrograde measure, and is responsible in Lachmangarh, where it was most freely resorted to, for the subsequent stagnation of agriculture. The revival of agricultural prosperity naturally tended to the development of separate ownership, and the result of settlement operations has been to give it an enormous stimulus. No doubt common ownership with joint liability is the most natural and workable form during an early or backward stage of agriculture, or in a violent or unsettled state of society ; it facilitates combination for offence or defence, maintains a rude equality and is not creative of discontent. Separate ownership is however not only the inevitable outcome of agricultural development but also largely its cause ; and though it must lead to inequality, and with it to discontent, litigation and the frequent overreaching of the weak by the strong, its development could not be discouraged without seriously arresting agricultural progress. One finds almost invariably that the most prosperous estates are those in which separate ownership is most developed, and the owners have the spur of individual gain as an incentive to industry, while in the joint estates of Thakurs, Saiyids, etc., the standard of industry and comfort is immensely lower.

Statistics as to present system of distributing the revenue.

56. The methods of distributing the jama at present are in each tahsil.

	Kishengarh.	Ramgarh.	Govindgarh.	Lachmangarh.
1. By shares ancestral, customary, etc. ...	89	6	3	61
2. By the settlement distribution or fixed <i>khewat</i> .	27	50	11	6
3. On the settlement area lent not by fixed <i>khewat</i>	28	...	...	...
4. Soil rates on different classes of land	1	23	6	...
5. Summary rate on all cultivation ...	5	23	28	37
6. Unknown ...	...	...	...	11

The present system is a very haphazard one, as in three-fourths of the estates the distribution varies from year to year and from harvest to harvest. The shareholders are left quite in ignorance of what they will have to pay until the demand is formulated. The method of distribution is determined every harvest by the Tahsildar in consultation with the Lambardars and the Patwari, and this opens the door to irregularities. The people are now generally willing to have the distribution over holdings fixed—by shares, possession, etc., as the case may be, for the term of the coming settlement, and this, which will save them from dishonest Lambardars and Tahsil officials, will be carried out as far as possible.

Size of estates.

57. The average land revenue per estate is in round numbers.

Kishengarh	...	...	...	...	...	1,400
Ramgarh	...	...	...	...	...	1,800
Govindgarh	...	...	...	...	...	1,600
Lachmangarh	...	...	...	...	...	1,450

In Kishengarh one estate—Harsoli—pays over Rs. 10,000 (it has now been made over to the present Maharani), three Rs. 4,000 to Rs. 10,000.

In Ramgarh 2 estates, Alaora and Mobarikpur, pay over Rs. 8,000, and two—Naugaun and Milkpur—between Rs. 5,000 and 8,000. In Govindgarh only one estate—Rambas—pays over Rs. 5,000; while in Lachmangarh, Manjpur—the largest estate in the State—pays Rs. 12,000, and Ghat and Harsana pay over Rs. 5,000.

58. The increase and decrease of the population, and its incidence have been referred to in paragraphs 3 and 42.

Population (statement VII.)

For agricultural purposes it is dense in Govindgarh—541 per cultivated square mile—and thin—344 per cultivated square mile—in Lachmangarh, where several estates, especially those held by Thakurs suffer from an insufficiency of hands.

59. The following statement summarised from statement V, shows the cultivating occupancy, and size of holdings (statement V.) in the form of percentages.

	Kishengarh.	Ramgarh.	Govindgarh.	Lachmangarh.
1. Cultivated by owners ...	63	60	49	48
2. Occupancy tenants ...	5	4	1	5
3. Tenants-at-will { Batai ...	5	3	...	...
{ Cash ...	34.5	31.7	38	32
4. Tenants holding on favourable terms.	3	2	10	13
5. Tenants free of rent ...	1.5	2	2	2
Total ...	100	100	100	100

	Kishengarh.	Ramgarh.	Govindgarh.	Lachmangarh.
Average cultivated area per proprietary holding.	14	17	32	81
Average cultivated area per proprietor.	16	19	22	36
Average cultivated area per tenancy holding.	5	5	7	9
Average cultivated area per tenant.	5.5	5	5	7

In Kishengarh and Ramgarh therefore about three fifths of the cultivation is in the hands of owners, in Govindgarh and Lachmangarh about one half. Tenants-at-will hold nearly two-fifths in Govindgarh and about one-third in the other tahsils. The area held by occupancy tenants is unimportant, except in Ramgarh—4 per cent, and Lachmangarh—5 per cent., but this does not include the considerable area in which occupancy rights have been established during last year's settlement operations. In Govindgarh and Lachmangarh a large area is held by tenants on favourable terms or at less than the village *bacih* rates. These are either village menials to whom the owners make this concession in return for their services, or tenants holding the worst land in villages where there is nominally an all round rate for the worst and the best alike.

The areas per holding and per owner are fairly large in Kishengarh and Ramgarh, large in Govindgarh, and extremely large in Lachmangarh where (a) large joint holdings are common, and (b) owners are comparatively few.

60. A noticeable feature of the cultivation is the almost complete absence of rents in kind (*batai*). The total area so held is 639 bigahs in Kishengarh, 352 in Ramgarh, 10 in Govindgarh, and 89 in Lachmangarh. The owner's share varies from one-third on well lands and inferior barani to one-half on good *dahri*.

A very large proportion of the cash paying tenants-at-will, varying from one-fourth in Kishengarh to two-thirds in Ramgarh, are recorded as paying only at owner's rates. The entries on this point are however, owing to the general conspiracy to conceal rents (which will be more fully referred to in chapter VII) very doubtful. Where such is the case the tenants often pay a profit rent—kept outside the records—per bigah to the owner when the *palta* is written, or they pay for the worst land at the same rate as the owners pay for the best.

61. (a) In Tahsils Kishengarh and Govindgarh no estate is held on permanent settlement. In Kishengarh the Saiyids of Khairthal are allowed under an old *sanad* of the emperors to hold an area of 387 bigahs at the favourable rates of 8 annas per *kacha bigah* on *kharif* crops and one-fourth *batai* for rabi.

(b) In Ramgarh the village of Manglishpura (1,137 bigahs founded since last settlement in Rund Jadoli), pays a fixed assessment of Rs. 500, which is very lenient. In Bamani Thera, Thakur cultivators, who were formerly owners but whose property was confiscated 40 years ago, for allowing a case of *sati* in the village, hold 84 bigahs at a fixed rental of Rs. 275 while in Ramgarh and Deoli the local kanungos hold 32 and 12½ bigahs on jamas reduced by 15 per cent. in the former and 50 per cent. in the latter.

(c) In Lachmangarh the three Thakur estates of Jaoli, Deothana and Ranija Jat are held subject to fixed commutation dues (*abwab*) of Rs. 1,038, Rs. 1,010 and 41 respectively, and the village of Khonkar in Istamrari at a fixed assessment of Rs. 1,001. The area, revenue, &c., of these four estates have not been included in the statistics. In Lachmangarh, Khadiana and Bichgaun, areas of 53.19 and 30 bigahs respectively, are held in *chauthbat*, i.e., a reduction of one-fourth on the ordinary assessment. These remissions on individual holdings are in most cases given at the expense of the rest of the village, which is clearly unfair. Where continued in this settlement they will be at the expense of the grantor, i.e., of the State.

Thus the area held on fixed assessments or at favourable rates is trifling, and its influence on the total assessments will be inconsiderable.

In the absence of any special sanction or deed of gift, Thakur estates will now, as at last settlement in these tahsils, be assessed in the ordinary way, consideration of course being given to the fact that they are inferior in industry to other castes and are not assisted by their women.

Full details of sales and mortgages (a) existing at last settlement (b), from 1876 to 1886 (c), from 1887 up to date are given in statement IV.

Alienations by sale and mortgage (statement IV).

The result is summarised as follows :—

Tahsil.	At and since last settlement.	MORTGAGES.						SALES.			
		To ZAMINDARS.			To MONEY-LENDERS.			To ZAMINDARS.			To money lenders.
		Total area.	Amount.	Rate per bigah.	Total area.	Amount.	Rate per bigah.	Total area.	Amount.	Rate per bigah.	
Kishengarh	At last settlement ...	113	1,793	16	45	1,930	43	...	...	...	...
	Since last settlement...	5,074	81,653	16	1,351	30,054	15	168	380	2	...
Total	...	5,186	83,473	16	1,400	31,984	16	168	380	2	...
Ramgarh	At last settlement ...	1,457	15,027	16	660	5,405	8	...	...	...	...
	Since last settlement...	6,051	82,017	14	1,943	30,458	16	17	445	26	...
Total	...	7,508	97,044	13	2,603	35,863	14	17	445	26	...
Govindgarh	At last settlement ...	834	3,195	3	2	...	...	...	...	...	...
	Since last settlement ...	6,156	23,185	4	412	3,234	8	3	33	16	...
Total	...	6,990	25,381	4	414	3,234	8	3	33	16	...
Lachmangarh	At last settlement ...	505	631	1	28	135	5	...	...	...	...
	Since last settlement...	1,156	3,551	3	244	1,304	6	5,718	8,238	4	...
Total	...	1,721	4,182	2	272	1,439	5	5,758	8,238	1	...

Special efforts have been made to bring on record and attest all cases of alienation by mortgage, sale, gift, &c., which have occurred since last settlement. Thus in Ramgarh 2,607 alienations by sale and mortgage have been attested during operations, in Govindgarh 803, and in Lachmangarh 72, while the fees realised for the State—at the rate of 5 per cent. on the sale or mortgage money, have amounted to Rs. 6,833, 1,837 and 314 respectively. The statistics are therefore as complete and up to date as is possible.

The figures show (1) as regards sales—that up to last settlement when the Zamindars' right to transfer, with certain restrictions, was for the first time recognised, no land had been transferred by sale, and even since then the areas sold have been inconsiderable—almost nominal—in Kishengarh 68 bigahs, Ramgarh 17 bigahs Govindgarh 2 bigahs ; while between 5 and 6 per cent. of the area has been sold in Lachmangarh—owing chiefly to transfers after the famine year—but all of this has gone to Zamindars.

In fact up to date no land has been sold to money-lenders.

(2) As regards mortgages, the area so held at last settlement was only .2 per cent. in Kishengarh, and .15 per cent. in Lachmangarh, and about 1.5 per cent. in Ramgarh and Govindgarh, and excepting Ramgarh, the area mortgaged to money-lenders in the rest of the tract was under 100 bigahs ; but since last settlement mortgages both to Zamindars and money-lenders have proceeded freely, and with increasing rapidity for the last 10 years, and at present the proportion of the cultivated area held under mortgage is :—

Kishengarh	4.5 per cent., of which 22 per cent. to money-lenders.
Ramgarh	9 " " " " 24 " "
Govindgarh	18 " " " " 6 " "
Lachmangarh	1.5 " " " " 13 " "

63. The proportion of the area mortgaged is highest in Govindgarh, but nearly all has been to Zamindars, and the mortgages are usually for short periods

Analysis of alienation by tahsils.

and for small sums to meet temporary emergencies. In Lachmangarh where, owing to economic difficulties, sales have been highest, mortgages are lowest, and the mortgage money per bigah—Rs. 3 or 2 years' land-revenue—least. This is due to the absence of competition for land, and the prevalence of joint ownership which always acts as a bar to mortgage. In Kishengarh which is the most lightly assessed and prosperous tahsil, the mortgage money is 10 years' purchase of the land revenue. The burden of mortgage debt Rs. 1,33,000 is highest in Ramgarh, but even here it is little more than one-half of one year's revenue demand, and equivalent to about 7 years' purchase of the land revenue of the mortgaged land.

64. Taken as a whole, therefore alienations of land by sale are almost unknown ; those in Lachmangarh having been due to purely temporary and exceptional causes ;

Rareness of alienations and its causes.

while, though about 6 per cent. of the cultivated area has been mortgaged, only about one-sixth of this or one per cent. of the whole is in the hands of money-lenders, the rest having been taken up by brother zamindars, generally of the same village and almost invariably of the same tribe. The state custom while conferring a power to alienate on the zamindars requires, (i) that this should be carried out by a registered deed, which has to be sanctioned by the chief revenue authority before effect can be given to it, (2) that any owner wishing to alienate should offer the land in the first place to his brothers or other joint owners, then to the next agnates ; and in case of their refusal to take it up, he may sell or mortgage to outsiders, but non-residents of the state can only acquire with the sanction of the Political Agent. These rules though not uniformly worked have undoubtedly acted as a check on alienations, and as the moneylending classes have so far obtained little foothold on the land, being rarely anxious to acquire it outside their own villages, the zamindar *versus* moneylender question, so troublesome in Punjab settlements where it is not uncommon to find 10 to 20 per cent. of the cultivation held by money-lenders, does not arise. The main reason is that the State takes so large a share of the profits of land, that it offers few inducements to the non-cultivating speculator. The result is a salutary—in my opinion—restriction of the zamindars credit which drives them to borrow from one another by temporary mortgages for small sums to meet ordinary emergencies, and in case of money required for agricultural improvements, to borrow from the State which makes advances freely without interest. That the zamindars are able to finance one another the figures quoted, according to which all the sales and five-sixths of the mortgages are to this class clearly prove. We are, I think, rather overapt to exaggerate the

necessities which lead a zamindar to borrow. At the very most, in a disastrous season he requires plough-oxen, seed, and food for himself and his family till the next harvest. The State should always be willing to make him advances for the first two, and for the last he can borrow from his brother zamindar, or from the family money-lender till the next harvest, or in the rare case of a failure of two successive harvests, till the next year, without seriously embarrassing himself. This is the usual system followed in Alwar, where the money-lenders advance only on the security of the standing or the coming crop, and make up their accounts each harvest, while the State rule according to which the interest decreed by a court should never exceed the principal, though not uniformly enforced, is a deterrent to excessive credit and extortionate claims.

65. It is clear from the revenue history of these tahsils, that in a tract of very moderate and not very certain rainfall, with a very small irrigated area, and which has had one disastrous famine, and at least one serious scarcity within the last 20 years, a fixed and (judged by the Punjab standard) extremely high assessment can be collected with reasonable punctuality from peasant proprietors with small holdings, without impoverishing them or driving them into the clutches of the money-lender. In fact the high pitch of the assessment is one of their chief safeguards against the latter. Another is the comparative solidarity and joint responsibility of the village communities.

Where a high assessment has to be paid, the break down or desertion of any shareholder affects the whole body, as his liability is thrust on to them. Hence the Lambardars and well-to-do shareholders generally endeavour to keep a weak co-sharer on his legs, and the best way to do this is to keep him out of the money-lender's hands by helping him themselves.

In British territory, on the other hand, the disintegration of the village community has gone so far that a well-to-do co-sharer, so far from offering a helping hand to his weaker neighbour, will rather give him a push downwards, hoping to profit by his fall; and for the same reason a broken down zamindar, will prefer to see his land pass into the hands of outsiders than to one of his own brotherhood.

66. Though high assessments, uncertain seasons, and the rules of the State have hitherto deterred the money-lending classes from seeking a hold upon the land, there are many indications that they are now merely awaiting (as they waited 40 years ago at the first regular settlements in the Punjab), the results of the new assessment, and if they find this moderate, they will endeavour to work themselves into the village communities, and secure for themselves the share of the profits of the land which the State foregoes, as they have done with such success in the Punjab. To prevent this, I intend to propose to the Alwar Darbar what has been already accepted at my suggestion in Bhartpur, that agricultural land shall be made inalienable except to Jaddis or members of the village community, or in extreme cases to agriculturist members of the same tribe. This is in close accordance with past custom and practice, and desirable in the interest of the State revenue as well as of the Zamindars, as the chief want is self-cultivating proprietors. The non-cultivating Mahajans of these parts are very inferior Zamindars, and their villages are generally in difficulties.

To make the rule really effective it should be further provided, as I have proposed in Bhartpur, that any outsider acquiring land by sale or mortgage in contravention of it, should be made to pay the full assets, as he has no valid claim to the one-third share which the State ordinarily foregoes in favour of the old proprietors.

67. As already mentioned (para. 1) the Kishangarh and Lachmangarh Tahsils are traversed by the Rajputana-Malwa Railway. The towns of Ramgarh and Govindgarh are 15 and 25 miles respectively from Alwar railway station, with which they are connected for distances of 10 and 22 miles respectively, by the metalled road from Alwar to Nagar, Dig, and on to Bhartpur and Agra.

This road except for the first few miles from Alwar, is, however, in a grievous state of disrepair; nothing having been apparently done in the way of repairs since its construction over 20 years ago.

There is also a metalled road from the Khairthal railway station to Ramgarh (5 miles) and on to Tijara (12 miles), which is much used for cart traffic, but this too sadly wants repairs. Another metalled road runs from Kishengarh to Alwar over the Bambora Ghât, but since the construction of the railway, this road, though much used, has been shamefully neglected, and is now badly cut up by *nalas*, only the masonry bridges having been left standing in parts. From Ghasaoli, 14 miles north-east of Alwar, one branch of this road—unmetalled—runs north-east to Tijara and though the 18 estates in Alwar, 10 in Kishengarh and 8 in Tijara through which it passes, pay respectively (at the rate of 3 pies per rupee of land-revenue) Rs. 728 Rs. 329, and 133 towards its up-keep and the maintenance of road-posts, this road too has been much neglected. From Ramgarh a metalled road goes on to Naugaun and Ferozpur in Gurgaon. This passes chiefly through low-lying flooded lands, and is in the usual state of disrepair. Govindgarh and Lachmangarh have no metalled roads of their own, though the northern side of the former is intersected for 5 or 6 miles by the Alwar-Dig road. They possess the usual fair weather unmetalled roads, and a new one has lately been made from Lachmangarh to Kathumbar, which is however little used. Altogether the state of the roads is a disgrace to such an advanced and well organized State as Alwar, and it is a common complaint of the Zamindars that while the State exacts from them the last farthing, it does nothing to help them to dispose of their produce advantageously either by improving the existing communications or opening up new lines.

68. A project for extending railway communications (1) by running a line from Alwar through Ramgarh (from which a branch would run to Ferozpur) and Govindgarh to Nagar in Bharatpur (a length of 29½ miles in Alwar), and on to Mattara; (2) connecting the above at Bahala on the Alwar Dig road, 7 miles from Alwar, with a line running south-east to Lachmangarh (14 miles) thence to Kathumbar (14), and on to join the existing Bandikui-Agra branch at the Kherli station in the south of the Kathumbar Tahsil, 8 miles from the head-quarters. These lines which would have a length of about 70 miles in Alwar, would open out and immensely benefit the eastern tahsils. Alwar could no doubt easily find the funds for her own 70 miles, or for the whole line. The scheme is I believe at present in abeyance, but meantime more attention should be paid to the humdrum but necessary work of repairing the existing roads.

69. *Trade*—Alwar usually exports by rail to Delhi, Agra, Cawnpore, Ahmedabad, Bombay, and by carts to Mattara and Hathras, grain of various kinds but chiefly bajra, jawar, barley, cotton, oilseeds, indigo, ghi, and imports *gur*, raw and refined sugar, rice, country cloth, utensils, &c.

The chief centres of trade are (1) in Kishengarh, Khairthal (population in 1891—3,335) Harsouli (2,803), Kishengarh (2,441) and Bas Kirpaluagar (1,669), and Ismailpur (2,885).

(2) In Ramgarh, Ramgarh (5,071), Mobarikpur (2,342), Naugaun (1,926).

(3) In Govindgarh, Govindgarh (5,243).

(4) In Lachmangarh, Manjpur (3,084), Lachmangarh (2,538).

Ramgarh and Govindgarh being towns with a population exceeding 5,000, have Municipal Committees nominated by the State. The income in the former from Chungi &c., averages Rs. 3,700 in the latter Rs. 3,000. Both these towns have well-paved bazars, with schools, dispensaries, &c. Trade on the whole is improving and the abolition of all transit duties, and duties on import and export, carried out under Major Cadell's administration, has been favourable to its progress.

70. The following table extracted from the Milan Rakhba (Statement I) compares for each tahsil, the total area and its classification into cultivated and uncultivated at last settlement and in the last year 1897-98:—

Tahsil.		Total area.	Mafi.	Government property.	Khalsa	UNCULTURABLE.		Culturable.	Old fallow.	Cultivated.	REMARKS.
						Hill.	Other.				
Kishengarh	Former ...	204,197	1,183	953	201,062	2,717	20,450	12,231	4,746	141,796	In Kishengarh State land has been excluded, in other tahsils included in Khalsa area.
	Present ...	216,818	1,807	10,417	204,598	10,869	15,656	12,111	293	145,435	
											+ 3,639
Ramgarh	Former ...	150,961	3,080	1,300	146,580	10,708	19,794	8,216	...	101,919	
	Present ...	156,805	2,397	1,266	153,142	17,168	15,575	14,953	685	106,407	
											+ 4,488
Govindgarh	Former ...	45,203	990	...	44,213	124	3,040	1,289	...	19,760	
	Present ...	44,756	874	85	43,997	85	2,911	1,241	77	39,676	
											- 84
Lachmangarh	Former ...	173,643	11,442	1,575	160,619	11,074	20,428	16,390	...	112,514	
	Present ...	170,868	9,768	2,494	158,616	10,558	14,704	18,493	896	113,957	
											+ 1,443

The large increase in total area in Kishengarh is owing to the fact that the State Rund of Ismailpur was not surveyed at last settlement. The considerable changes in Ramgarh and Lachmangarh are explained by the former incorrect measurements of the unculturable hills. Taking the Khalsa area alone, the percentages of cultivated and culturable and unculturable in each tahsil are:—

				Cultivated.	Culturable.	Unculturable.
Kishengarh	...	...	...	71	6	23
Ramgarh	...	...	...	70	10	20
Govindgarh	...	...	...	91	3	6
Lachmangarh	...	...	...	71.5	12.5	16

This shows that the culturable area is extremely limited in every tahsil, and that there is hardly any room for future extension, except in Lachmangarh. Indeed the expansion of cultivation since last settlement has been very limited, viz.:—

Kishengarh, 2.5 per cent.

Ramgarh, 4.5 per cent. or deducting resumed mafis under 4 per cent.

Gobindgarh, a nominal decrease.

Lachmangarh, 1.25 per cent. due entirely to resumption of mafis.

Details of the cultivated area.

71. The details of the cultivated area at last settlement and now are shown in the table below :—

Tahsil.	—	Total cultivated area	CHAHÍ.				DAHRI.				Barani.	REMARKS.
			Permanent Chahi or masonry wells	Permanent Chahi otherwise irrigated	Temporary Chahi	Total Chahi.	Present (Mansudra).	Former (Sabika).	Barani.	Total Dahri.		
Kishengarh ...	Former ..	241,796	...	...	...	23,598	...	...	...	12,631	105,597	
	Present ...	145,455	25,745	226	1,321	27,292	12,512	1,596	1,706	15,814	101,148	(1) Of this 715 also dahri.
		+ 3,659	...	...	...	+ 4,725	...	...	...	+ 3,183	- 4,449	
Ramgarh ...	Former ..	101,911	...	...	...	10,521	...	...	...	29,621	62,762	
	Present ...	106,407	12,184	733	6,858	19,775	17,023	8,222	3,667	28,912	57,020	(2) 4,174 of this is dahri.
		+ 4,496	...	...	...	+ 9,046	...	...	...	+ 290	- 4,742	
Govindgarh ...	Former ...	39,760	...	...	...	4,628	...	...	...	1,343	33,709	
	Present ..	30,606	5,148	1,243	3,160	9,540	1,420	70	115	1,605	28,522	(3) 159 of this is dahri.
		- 854	...	...	...	+ 4,901	...	...	...	+ 262	- 5,217	
Lachmangarh ...	Former	112,534	...	...	...	16,442	...	...	...	21,967	74,223	
	Present ..	113,950	17,864	741	335	21,921	2,002	2,957	7,394	22,371	60,718	(4) 1,757 of this is dahri.
		+ 1,416	...	...	...	+ 5,479	4,058 Nahri.	...	...	+ 448	- 4,505	

It will be seen that in every tahsil there has been a great increase in the Chahi area. This increase is partly due to the inclusion of land temporarily irrigated in the year of drought 1896-97, from *dheris dhenklis*, which has no permanent source of irrigation. The *chahi* of last settlement includes only land permanently irrigated, and if therefore to make the comparison accurate, we eliminate this temporary irrigation, we get the increase of permanent *chahi* whether from masonry or kacha wells as follows, and the result agrees pretty closely with the increase in wells shown in paragraphs 10.

Kishengarh 3,404 bighas or 15 per cent.
 Ramgarh 2,383 bighas or 23 per cent.
 Govindgarh 1,741 bighas or 37 per cent.
 Lachmangarh 2,163 bighas or 13 per cent.

A comparison of the area of land classified as *chahi* with the area of crops actually raised with the aid of well water would be instructive as showing the extent to which irrigation is applied. Unfortunately owing to the absence of statistics such a comparison cannot be made for a series of years. I am able, however, to give the figures for the last year 1897-98, which was one of normal rainfall.

	2.	3.	4.
	Area classified as chahi.	Area of chahi crops.	Per cent. of 3 to 2.
Kishengarh	28,293	17,381	61
Ramgarh	19,575	9,600	50
Govindgarh	9,549	5,311	56
Lachmangarh	21,921	15,005	68

The reasons for these large variations are :—

(1) Owing to late autumn rains a good deal of *chahi* land was sown with *barani* crops for the *rabi*, (2) the *dheris* and *dhenklis* to which the temporary *chahi* recorded in the year 1896-97 is attached were worked very little, (3) a large proportion of the *chahi* area is also *dahri*, and is worked as such when floods are favourable, (4) the *chahi* area attached even to masonry wells is hardly ever all irrigated in one year though attempts are made to carry the water over the whole area in years, of drought. The conclusion to be drawn from a consideration of the whole facts is that the temporary *chahi* is, where not also

dahri, really only a superior kind of *barani*, and must, therefore, be assessed, much below the permanent *chahi*, but above the *barani*, as the fact that dhrs and dhenklis can be sunk to irrigate it in dry years, renders it more secure.

Increase in *dahri*.

72. The increase in *dahri* is as follows :—

Kishengarh	...	...	...	3,183	bigahs	or	25	per cent.
Ramgarh	...	...	...	290	"	"	1	"
Govindgarh	...	...	...	262	"	"	20	"
Lachmangarh	...	...	...	442	"	"	2	"

The increase, however, in spite of the fact that the state has since last settlement spent the following sums on the construction or repair of irrigation bunds (see paragraph 8).

Rs.

Kishengarh	...	...	...	...	43,106
Ramgarh	...	...	...	...	88,162
Lachmangarh	...	...	...	...	22,626

is largely nominal. There has, no doubt, been some improvement in Kishengarh, but in Ramgarh and Lachmangarh owing partly to construction of dams higher up which intercept the supply, and partly to the poor rains of late years (which may of course be only temporary), the *dahri* irrigation is at present probably less extensive and less effective than at last settlement. No attempt was made then to classify *dahri* into *present*, *former* and *barishi* (paragraph 13) as has now been done, so a full comparison is impossible; but I am inclined to think we have spread the net wider than at last settlement, and the large areas of 'former' *dahri* in Ramgarh—8,222 bigahs, and in Lachmangarh—2,957 bigahs, show how uncertain much of the *dahri* has now become. Again in many villages between the hills land has now been classed as *dahri barishi*, which was formerly shown as *barani*, and though this is quite legitimate, and such lands are often superior to the *dahri* of irrigation bands, they help to make up for the deficiency in the area of the latter which would otherwise be more marked.

This is particularly the case in Lachmangarh where the *dahri* area irrigated from the ghât canal was returned as 5,928 bigahs at last settlement, but has now been reduced to 4,058, while of this only 2,164 bigahs were actually irrigated in 1895-96 and only 783 in 1896-97.

73. The chief irrigation bands in each talasil, the amount spent on repairing and improving them since last settlement, and the area irrigated then and now, are shown in the following table :—

Tahsil.	Name of band.	Amount spent on repairs, etc.	DAHRI AREA.	
			At last settlement.	Now.
		Rs.		
KISHENGARH	Bagheri Khurd	...	2,344	2,364
	" Kalan	...	573	764
	Machraoli	...	247	349
	Hushipur	...	215	356
	Baghthala	...	516	517
	Alamdika	...	16	374
	Kishengarh	...	...	173
	Jatka	...	135	447
	Karwar	...	324	454
	Baghaur	...	...	116
	Tohri	...	163	74
	Total	43,106	4,533	5,988
	Carried over	43,106	4,533	5,988

Tahsil.	Name of band.	Amount spent on repairs, etc.	DAHRI AREA.	
			At last settlement.	Now.
		Rs.		
	Brought forward	43,106	4,513	5,988
	Other sources	...	8,098	6,524
	GRAND TOTAL	43,106	12,631	12,512 + 1,506 former and 1,706 barishki.
RAMGARH	Landoa	76,354	7,725	9,339 includes present and former.
	Chuhar Sidh	3,449	10,057	6,430
	Landoa and Chuhar Sidh	...	2,690	3,180
	Sotka Nala	2,903	875	734
	Sotka Nala and Chuhar Sidh	...	5,151	4,317
	Thaik band in Naugaun	5,406	440	206
	Miscellaneous hill torrents	...	1,683	1,039
	Total	88,162	28,611	25,245 of which 8,222 sabika. + 3,667 barishki.
GOVINDGARH	Ruparel	...	1,323	1,490
	Hill torrents	...	...	115
	Total	...	1,323	1,490 + 115 barishki.
LACHMANGARH	Ghat Canal	...	5,918	4,058
	Band Lachmangarh	12,250	5,766	4,969
	„ Jatwara	4,529	309	850
	„ Pahari	5,847	738	555
	„ Pinain	...	2,125	1,472 and 812 barishki.
	„ Taliwala	...	3,666	1,590 and 3,451 barishki.
	„ Nahera Nala	...	944	438 and 15 barishki.
	„ Ghat	...	497	458
	Bantoli	...	850	421 and 320 barishki.
	Other sources	...	827	706 and 2,796 barishki.
	Total	22,626	81,050	14,017 of which 2,957 sabika x 7,394 barishki.
	GRAND TOTAL	1,53,894	63,685	55,760 of which 12,773 sabika + 19,822 barishki.

If the figures quoted represented the total area advantaged by floods and irrigation dams, they would show a great deterioration in Ramgarh and Lachmangarh. They do not however include the land classified as *chahi* (permanent or temporary)—as being the superior class, but which also is benefitted by the *dahri* irrigation. This land is really *chahi-dahri*, but it has not been shown as a separate class in the returns, though it has been noted in the village assessment papers.

The area in each tahsil is:—

Tahsils.	CHAHI DAHRI AREA RECORDED AS.—		Total.
	Permanent chahi.	Temporary chahi.	
Kishengarh	3,884	715	4,599
Ramgarh	2,528	4,174	6,702
Govindgarh	57	102	159
Lachmangarh	5,177	2,667	7,844
Total	11,646	7,658	19,304

It must not, however, be assumed that all this area can be credited as so much increase of *dahri*, for at last settlement the same system was followed of showing the *chahi* area so benefitted in the superior and more highly assessed class, viz., *chahi*. The area, however, now recorded as temporary *chahi*, which is also benefitted as *dahri*, may be claimed almost in full for the latter, and if we include this area it brings out a great increase of *dahri* in Kishengarh and goes far to redeem the decrease in Ramgarh and Lachmangarh.

74. The only new irrigation *bands* constructed by the State since last settlement are too small ones at a cost of Rs. 4,529 at Jatwara in Lachmangarh. A good deal of money, roughly 1½ lakhs, according to figures supplied by the State Engineer—has been spent in improvements and repairs as shown in the foregoing table.

Several minor *bands* have also been constructed or repaired by Zamindars at their own expenses or with Takavi advances. The latter have been very trifling, viz. :—

	Rs					
Kishengarh	1,842
Ramgarh	647
Lachmangarh	1,600
Total	4,089

and as these village *bands* are often very effective, and the area irrigated from them, however small, means a great deal to the prosperity of the village, a more liberal policy in the way of encouraging the Zamindars to construct them by Takavi advances might well be adopted.

It seems to me also that more might be done to develop *dahri* irrigation by—

- (1) intercepting the drainage from the Kala Pahar hills, which now comes down in two deep "nalas" meeting at Mobarikpur and passes on to Naugaun and British territory without benefiting Alwar,
- (2) holding up the waters of the soth *nala* from Alwar which now runs waste in the *kallar* of M. Bagar, and uniting it with the *Chuhar Sidh* in Ramgarh ;

- (3) improving the *band* at Deoli on the Bahadarpur *nala* which formerly irrigated Nibhali, Ramgarh and Khilaora, etc. ;
 (4) repairing the *band* at Khera Kalianpur in the south of Lachmangarh, etc., etc.

These however are matters for expert opinion, and some of them are under the consideration of the State Engineer.

Considering the importance of the interests involved, the State has not think, done all it should for the maintenance and extension of *dahri* irrigation—at least in these tahsils.

Before closing the remarks on *dahri* it may be useful to note, as in the case of *chahi*, the extent to which crops have actually been aided by *dahri* irrigation within the last year 1897-98. This is done in the following table :—

Tahsil	AREA OF LAND.			Area of dahri crops.
	Dahri.	Chahi dahri.	Total.	
Kishengarh	15,814	4,599	20,413	20,682
Ramgarh	28,972	6,702	35,624	40,429
Govindgarh	1,490	159	1,649	2,427
Lachmangarh	22,311	7,844	30,155	17,926

The figures brings out the inferiority of the *dahri* in Lachmangarh as compared with the other tahsils, the fact being that a large proportion was not flooded and only *barani* crops were grown. In the other tahsils the high proportion of *dahri* crops to *dahri* area is owing to—

- (1) the *chahi dahri* lands owing to favourable rains not having been irrigated from wells, so the crops were shown as *dahri* not *chahi* ;
 (2) to the prevalence of double cropping on superior lands.

75. The *barani* cultivation shows not only a relative but an absolute decrease of area in each tahsil, owing chiefly to the extension of *chahi* and in Kishengarh of *dahri* irrigation to lands formerly *barani*.

The area of *barani land* is compared with the area of *barani* crops for the year 1897-98 in the following table :—

Tahsil.	Total barani area.	Area of barani crops.
Kishengarh	101,348	119,452
Ramgarh	57,920	67,559
Govindgarh	28,522	39,458
Lachmangarh	69,718	80,347

The cause of the area of crops exceeding the area of land so largely is due partly to double cropping, but chiefly to the fact that a large proportion of the crops returned as *barani* were grown on land classed as *chahi* or *dahri*, but which did not receive *chahi* or *dahri* irrigation during the year. The drier the year the greater the area of the *chahi* crops, the wetter the year the greater the area of *barani*, not only because more *barani* land is sown, but because the favourable rains enable dry crops to be grown on *chahi* lands.

Methods of agriculture and food of the people.

76. The methods of agriculture are described in chapter V of the Alwar Gazetteer and are similar to those of Gurgaon.

The people are much more frugal and thrifty than those of the Punjab. Their standard of living is lower and their expenses on food, dress and hospitality much less. The common food staples are in order of importance, bajra, barley, bejar (gram and barley) gram and moth. The ordinary agriculturist indulges in only one hot meal a day, *viz.*, the midday one, when he eats freshly cooked *chapattis* washed down with butter milk or water. The ordinary morning and evening meal is *rabari*, *i.e.*, barley, moth or maize, ground coarse, cooked in milk and left to cool. This, if not very nourishing, is cheap and digestible.

Meat is rarely eaten, except by Thakurs, Khanzadas, Meos, and by these on special occasions only. Jats, Gujars, Ahirs, Minas and other Hindus rarely touch it.

77. Details of the ploughs cattle, carts returned at last settlement and now are given in statement VII. The method of ascertaining the number of cattle at any given time has hitherto been by reference to the Patwaris cattle register in which all increase or decrease due to purchase, births, deaths, etc., were supposed to be recorded. This register was usually incomplete, so a special enumeration has now been made on 20th and 21st April, the results of which are compared with the figures of last settlement in the table below:—

Tahsil	Last settlement or now	Ploughs	Carts	Oxen	Cows	Buffaloes	Sheep and goats	Horses and ponies	Deer and mules	Camels	Others	Total
Kishengarh	Last settlement ...	4,751	493	13,503	18,635	6,028	10,247	525	500	64	1	40,803
	Now ...	6,780	1,186	22,710	18,592	10,603	27,234	805	1,409	108	12	81,523
	Increase per cent. ...	43	...	...	...	...	...	...	...	...	...	6
Rangarh	Last settlement ...	4,572	Not known	10,235	2,894	763	...	...	...	...	25,271	38,563
	Now ...	5,216	713	15,779	14,125	8,007	17,776	810	1,242	61	...	57,898
	Increase per cent. ...	10	...	...	...	...	...	...	...	...	...	30
Goswami	Last settlement ...	1,554	70	3,818	5,133	1,566	...	...	...	...	2,060	13,506
	Now ...	2,029	254	6,459	6,083	3,166	4,452	383	306	21	...	20,880
	Increase per cent. ...	22	...	...	...	...	...	...	...	...	...	54
Lachman	Last settlement ...	4,184	Not known	10,071	1,246	4,692	...	...	...	...	14,468	41,477
	Now ...	4,751	610	14,232	15,799	12,014	16,777	619	1,036	292	...	63,669
	Increase per cent. ...	14	...	...	...	...	...	...	...	...	...	52
Total	Last settlement ...	15,161	...	37,947	27,308	13,949	...	...	...	...	42,709	143,349
	Now ...	18,784	2,533	52,180	57,592	31,810	66,239	2,617	4,054	439	...	202,970

If the figures of last settlement are correct, then there has been an increase in ploughs varying from 10 per cent. in Rangarh to 43 per cent. in Kishengarh, and an increase in cattle of all kinds amounting to 63 per cent. in Kishengarh and over 50 per cent. in other tahsils. In any case we may assume that there has been a solid increase in ploughs, plough cattle and cattle generally, and that at present notwithstanding the fodder famine of the last few years, there is a sufficiency of cattle for agricultural purposes. Great numbers of goats are kept in the hill villages, and these find a living in the rough scrub on the hillsides.

The plough oxen are generally of very good quality, and often imported from Hissar, Rohtak, etc. They are very carefully looked after—especially by the Meo house-wives—and as the scarcity of grazing land renders pasture very limited, except for a few months during and after the rains, the raising of fodder crops—gawar, charri, etc., for them is one of the Zamindars' first cares. They are generally kept stalled except for the few months when there is green fodder, and after the harvest has been reaped, when they are turned loose on the stubble. The prohibition which formerly existed against castration of oxen is now no longer enforced, in fact the State cattle are castrated, and as the prohibition is still maintained in Bhartpur, oxen from there are often brought secretly to Alwar villages for castration.

Milch cows and buffaloes are also partly stalled, and other cattle are left to shift for themselves on the waste land, and in years of drought numbers die of starvation.

78. The culturable area is, as shown in paragraph 70, very limited in all tahsils, but especially in Kishengarh and Govindgarh (in which not a single village has 100 bigahs of culturable), while the unculturable is for the most part sandy *nalas* or barren hillsides, where only sheep and goats find a precarious subsistence. In Kishengarh and Lachmangarh some facilities for grazing are given in the State Runds from November to June, after the best grass has been cut and made into hay for State horses and cattle, and grazing dues averaging 12 annas to one rupee for buffaloes and oxen, 4 to 8 annas for cows, 2 annas for sheep and goats are charged. Many Lachmangarh villages have also large areas of excellent pasture land. These sometimes levy grazing dues from their neighbours, and in some cases grazing land is leased for as much as one rupee per bigah. Non-owners, too, are often made to pay for the right to graze sheep and goats on the hillsides. The small Runds in Ramgarh and Govindgarh are reserved exclusively for State use. The villages in the vicinity of the Runds in Kishengarh, to the number of 50 are impressed annually in October to cut the grass and make it into hay, being remunerated at the rate of one rupee per 25 maunds. This gives rise to much complaint, as they are taken away from their fields just when their labour is most required to reap the *kharif* and sow the *rabi*. The total remuneration paid according to the scale fixed is Rs. 66, and this is a poor return for the inconvenience caused. It would be a better arrangement to have the work done here as elsewhere by contract, making the Zamindars, if such is thought necessary, pay for the cost by an addition to the jama as has I believe been done in Tijara.

79. The scarcity of natural pasture is, however, partly supplemented by the spontaneous growth of *pala*—the dwarf *ber*—on both cultivated and uncultivated land, the leaves of which are a most nutritious form of fodder. This grows on all, but the stiffer soils, and thrives best in the *Bhur* or light *Mattiyar* soils of reddish colour under the hills. It yields two crops of leaves in the year, one in April—which is light but very nutritious for milch cattle, the other and heavier crop in October. The bushes are dug up and the leaves detached by beating, the twig used as fuel. The yield varies from 1 to 3 *mans* per bigah, and sells at about 2 *mans* per rupee, though in the drought of 1896-97 they sold as high as 30 seers. The *pala* on cultivated land generally goes to the tenant, but the *rabi pala* is sometimes retained by the landlord. The leaves are mixed with wheat or barley *bhusa* or with chopped jowar or bajra stalks. Another spontaneous growth in sandy waste lands, especially those which are flooded, is *pula*—the high jungle grass, which when green is grazed by cattle, and when it ripens and dries is cut and made up into sheaves (*pula*) which are much used for thatching, matting, etc., being sold at the rate of 200 to 300 sheaves per rupee. The houses of the poorer classes are usually thatched with this.

80. The natural pasture, even when supplemented by *pala* and *pula* does not, however, supply sufficient fodder, and hence a very large area of purely fodder crops (gawar and charri) has to be sown, while such crops as jawar, masina

(moth or mung mixed with jowar, bajra, til, etc.,) sarson, barley and rabi vegetables are largely indented on as fodder, being cut while still green for this purpose. The stalks of the harvested jowar and bajra are also generally preserved for fodder; while villages where grass grows in profusion with the aid of flood water, etc., save it carefully and stock the hay for future emergencies. In this respect the husbandry compares very favourably with that of the Punjab, where in a good year the jowar and maize stalks are left to rot, and the grass to wither on the stem, with the result that if the next year is a dry one, the cattle die of starvation. After careful enquiry and comparison with similar tracts in Bhartpur and Gurgaon, I have come to the conclusion that on an average of years, the following crops are given up, in the proportions noted, for fodder.

All the *gawar* and *charri* which are primarily fodder crops, one-fourth of the *masind* and rabi oilseeds (sarson and tara mira) and half of the rabi vegetable crop—carrots, etc.; of the jowar 12 per cent. in Govindgarh, and 10 per cent. in other tahsils, and of barley 10 per cent. in Govindgarh and 5 per cent. in the other tahsils. In a year of drought like 1896-97, no doubt the fodder deductions considerably exceed the above, while in a year of abundant fodder like 1897-98, they fall far short of it. In calculating the value of the produce therefore the above deductions have been made for fodder.

CHAPTER IV.

PRICES.

81. The prices assumed by Major Powlett, at last settlement for calculating the value of the produce in certain tahsils (see paragraph 36) were the average of the ten years Sambat 1915-1928, excluding two years of famine.

These are shown for a few crops at page 98, Alwar Gazetteer—

Wheat	...	...	...	27
Barley	...	...	...	39
Gur	...	...	...	9
Bajra	...	...	...	32
Jowar	...	...	...	38
Gram	...	...	...	31

82. To calculate the increase of prices which may be taken account of as a reason for enhancement, and the scale of prices to be assumed for determining the value of the produce, I have now made an enquiry, the results of which show (a) the harvest rates paid to Zamindars by the grain dealers at harvest time, and (b) the average retail prices for the year, based on the weekly statements for each tahsil recorded at Alwar, for—

- (1) the 6 years preceding last settlement ;
- (2) the 11 years 1876-77 to 1886-87 next following the settlement omitting the famine year 1877-78 ;
- (3) the 10 years 1887-88 to 1896-97 preceding the present settlement ;
- (4) the average harvest and bazar prices since last settlement, *i.e.*, for (2) and (3) combined and for the whole 26 years, *i.e.*, (1), (2) and (3) combined.

The result is shown in the following table:—

Years.	Tahsils.	Harvest prices and bazar rates.	Kharif.														Rabi.					
			Cotton.	Sugar or gur.	Do. aco.	Ti.	Bara.	Maize.	Rice.	Gawar.	Ce. rad.	Mung.	Moth.	J war.	Hemp.	Ind. g.	O. seeds.	Jirah.	Wheat.	Gram.	Barley.	Bazar, (Gram and barley.)
Sambat 1937-1938.	Kishengarh ...	Harvest	11	16	...	12	28	31	...	37	23	29	30	31	11	...	18	27	23	29	31	29
		Bazar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ramgarh ...	Harvest	11	11	11	12	30	35	40	31	21	26	31	42	11	1	18	25	25	2	31	30
		Bazar	...	8	5	9	30	20	...	19	15	22	22	...	11	...	14	...	16	18	22	...
	Govindgarh ...	Harvest	10	9	13	12	28	...	...	31	22	30	31	52	15	...	21	34	25	12	32	32
		Bazar	...	7	6	9	22	20	...	21	16	25	24	...	10	...	11	...	16	21	24	...
	Lachmangarh	Harvest	13	...	...	13	3	...	...	33	24	30	35	47	...	...	19	...	21	36	37	...
		Bazar	...	7	5	10	20	23	...	21	24	21	21	...	14	...	12	...	17	19	22	...
	Kishengarh ...	Harvest	10	13	...	12	28	31	...	46	23	30	31	32	10	...	16	21	22	28	28	28
		Bazar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sambat 1939-1943.	Ramgarh ...	Harvest	8	10	12	13	29	34	31	32	24	28	31	41	11	...	16	24	24	30	33	34
		Bazar	...	9	6	10	21	21	...	23	19	21	24	...	8	...	14	...	15	22	26	...
	Govindgarh ...	Harvest	12	10	15	12	28	...	...	34	21	31	35	49	10	...	16	24	25	31	31	30
		Bazar	...	9	7	10	22	21	...	25	20	24	26	...	9	...	11	...	20	2	26	...
	Lachmangarh	Harvest	12	...	...	13	32	...	...	36	27	34	37	50	...	...	16	...	24	31	34	...
		Bazar	...	10	7	11	22	22	...	23	19	20	21	...	10	...	12	...	17	21	24	...
	Kishengarh ...	Harvest	9	10	...	9	22	23	...	31	17	22	30	27	9	...	11	16	19	25	26	27
		Bazar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ramgarh ...	Harvest	9	11	10	10	23	...	29	25	20	22	26	47	10	...	14	21	20	29	28	29
		Bazar	...	10	6	8	21	23	...	24	19	18	22	...	7	...	11	...	16	24	24	...
	Govindgarh ...	Harvest	10	11	12	11	24	...	...	29	19	26	31	43	10	...	15	21	22	30	30	30
		Bazar	...	10	6	9	23	26	...	26	15	21	26	...	9	...	13	...	18	27	25	...
	Lachmangarh	Harvest	10	...	...	11	26	...	...	30	21	16	30	44	...	...	13	...	22	31	31	...
		Bazar	...	9	5	9	21	25	...	23	19	20	21	...	10	...	12	...	18	25	24	...
Total.	Kishengarh ...	Harvest	19	23	...	21	51	54	...	79	41	52	61	59	19	...	27	36	40	53	53	55
		Bazar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ramgarh ...	Harvest	21	21	22	23	52	44	60	57	41	50	57	85	21	...	30	45	44	59	61	63
		Bazar	...	19	12	18	42	34	...	47	37	39	46	...	15	...	25	...	34	46	50	...
	Govindgarh ...	Harvest	22	21	27	23	52	...	...	63	40	57	66	91	20	...	31	45	45	60	61	60
		Bazar	...	19	13	19	45	47	...	51	35	53	52	...	15	...	22	...	38	52	51	...
	Lachmangarh	Harvest	21	...	...	24	54	...	...	66	44	60	61	94	...	...	29	...	46	61	65	...
		Bazar	...	19	12	20	43	47	...	46	37	40	46	...	20	...	24	...	35	48	48	...
	Kishengarh ...	Harvest	10	12	...	11	25	27	...	39	20	26	30	32	9	...	14	18	20	26	27	28
		Bazar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ramgarh ...	Harvest	11	11	11	11	26	34	30	28	22	25	29	44	11	...	15	23	22	30	31	32
		Bazar	...	10	6	9	21	22	...	24	18	20	23	...	8	...	13	...	17	23	25	...
	Govindgarh ...	Harvest	11	10	14	11	26	...	...	32	20	28	33	46	10	...	16	22	23	30	31	30
		Bazar	...	9	7	9	23	23	...	26	19	27	26	...	9	...	11	...	19	26	26	...
	Lachmangarh	Harvest	10	...	...	12	29	...	...	31	24	30	34	47	...	...	15	...	23	30	33	...
		Bazar	...	10	6	10	22	23	...	23	18	20	23	...	10	...	12	...	18	24	24	...
Average of 26 years.	Kishengarh ...	Harvest	10	14	...	11	27	...	...	48	22	28	30	30	10	...	14	23	24	23	29	29
		Bazar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ramgarh ...	Harvest	11	11	11	12	27	35	33	29	22	25	29	43	11	1	16	23	23	29	31	31
		Bazar	...	9	6	9	24	21	...	22	18	20	23	...	9	...	13	...	17	21	24	...
	Govindgarh ...	Harvest	11	10	13	12	27	...	...	32	21	29	33	48	11	...	17	26	23	31	31	31
		Bazar	...	9	6	9	22	22	...	24	18	26	25	...	9	...	11	...	18	24	25	...
	Lachmangarh	Harvest	11	...	...	12	30	...	...	33	24	30	34	67	...	...	16	...	24	30	34	...
		Bazar	...	9	6	10	27	23	...	22	20	21	23	...	11	...	12	...	17	22	23	...
	Kishengarh ...	...	11	...	...	...	25	25	...	...	29	29	29	30	...	...	14	26	20	27	28	29
		...	11	...	11	11	25	25	...	...	29	29	29	30	11	...	15	25	20	27	28	29
New settlement.	Ramgarh ...	...	11	...	11	11	25	25	...	...	29	29	29	30	11	...	15	25	20	27	28	29
	Govindgarh ...	...	11	...	11	11	25	25	...	...	29	29	29	30	11	...	15	25	20	27	28	29
	Lachmangarh	...	11	...	11	11	25	25	...	...	29	29	29	30	11	...	15	25	20	27	28	29
	Lachmangarh	...	11	...	11	11	25	25	...	...	29	29	29	30	11	...	15	25	20	27	28	29

83. From an assessment point of view the harvest prices paid to Zamindars are more important than the average retail prices of the year paid in the bazar. It is the usual custom in Alwar for the grain dealers to strike prices with their clients in Baisakh (April, May) for the spring, and in Maghar (November, December) for the autumn crops, and the surplus stock of the Zamindar is taken over at these prices. Being struck at harvest time when stocks are at their fullest, these prices are naturally a good deal lower than the average retail prices of the year, which rarely affect the agriculturist as a producer, though a rise in them may seriously affect him as a consumer or purchaser of seed. For example last kharif the Zamindars disposed of their bajra in November at 25 to 28 seers and though the retail price subsequently rose to 18 to 20 seers it was the grain dealers who profited by the rise. The harvest prices have been ascertained by reference to the books of large grain dealers in two or three important centres in each tahsil and where they vary the mean has been taken.

84. The above statement shows that there are variations—sometimes considerable—between the different tahsils, but that these are much less for the last 10 years than for the former periods. The result of the opening of the railway has been to bring prices in the different parts of the tract—none of which is more than 25 miles from the railway—towards an equality, and I have therefore thought it advisable to adopt a uniform scale for all four tahsils. In calculating the scale of prices to be now assumed, *i.e.*, below which on an average of years prices are not likely to fall during the term of the new assessment, I have been guided mainly by the harvest prices of the last 10 and 20 years, which in Kishengarh, the tahsil most influenced by the railway, and where prices have consequently been steadiest, were as follows:—

Produce.	AVERAGE HARVEST PRICES.		Scale of prices now assumed.
	Of 20 years.	Of last 10 years.	
Cotton	10	9	11
Bajra	25	22	25
Jowar	29	27	30
Mung, moth, masina	27	22	29
Wheat	20	19	20
Barley	27	26	28
Gram	26	25	27
Bejar, gojra, gochni	28	28	27
Oilseeds	16	14	15

and after careful consideration and comparison with the data afforded by Bharthpur, I decided to adopt the rates shown in the last column, which it will be seen agree very closely with the average harvest prices since last settlement—excluding the famine year 1877-78.

85. As a very rough comparison with the prices now assumed, I quote from "prices and wages in India, 1897," the average retail prices in Alwar for quinquennial periods from 1861 to 1896.

Grain.	AVERAGE NUMBER OF SEES PER RUPEE.							
	1861-65.	1866-70.	1871-75.	1876-80.	1881-85.	1886-90.	1891-95.	1896.
Bajra	Not available.		23'59	21'19	22'06	19'	21'81	13'36
Jowar			25'47	24'11	25'8	21'84	25'52	14'33
Wheat			18'73	16'79	19'	16'87	16'69	11'79
Barley			26'78	23'75	26'2	23'35	24'49	14'77
Gram			24'23	21'96	24'92	23'57	25'3	15'17

Bearing in mind the fact that these represent *retail* prices in a large town on the railway, I do not think I have allowed too wide a margin to represent the difference between them, and the prices paid to Zamindars in their villages at harvest time. For *mung*, *moth*, *masina* though their relative value vary, I have fixed one all round price, as they are generally grown together, and have not been separated out in the crop abstracts. For the same reason I have fixed one all round rate for the various combinations of wheat, barley and gram.

86. Having now arrived at a scale of prices, by means of which the value of the produce can be estimated, we have also to determine to what extent prices have risen and how far that rise can be taken account of to justify enhancement. How this calculation is to be worked out is a point which I believe has never been authoritatively settled, at least in Punjab settlements.

If we compare the harvest prices for the 6 years *before* settlement—with those of the 20 years since settlement in the Kishengarh tahsil, we find that kharif crops have risen all round by about 10 per cent., rabi crops by about 15 per cent. If we compare the 10 years preceding this settlement with the 6 years preceding the last, kharif crops show an increase of about 20 per cent. in value, rabi crops of about 17 per cent. Comparing the prices now assumed, with the actual harvest prices in each tahsil for the 6 years preceding last settlement and assuming a constant outturn, we find by applying both scales to the harvest of 1897-98—(1) in Kishengarh the *kharif* crops have risen in value by 18 per cent. *rabi* crops by 17 per cent.; (2) in Ramgarh the all round rise is 15 per cent.; (3) in Govindgarh 20 per cent.; (4) in Lachmangarh where the harvest prices before last settlement were considerably lower than elsewhere, by nearly 25 per cent.

Taken all round I think it is safe to say that the agriculturist gets now from 15 to 25 per cent. more for the produce than he did at last settlement. Major Jennings in his preliminary report estimated the increase at 30 per cent., but he informs me, that he subsequently saw reasons to modify that as too high, and he was of opinion that the enhancement on account of increase of prices and improvement in agriculture should not exceed 15 per cent. It must, however, be borne in mind as a partial set off against this that the expenses of production—prices of cattle, wages, etc.,—have also increased in an equal, if not a greater proportion, and though this is not a reason for foregoing an enhancement on account of rise in prices—the cost of production among a peasant proprietary being a comparatively small item—still it is a reason for moderation.

As illustrating the enormous fluctuation of prices I quote below the average retail prices in Alwar (1) during the year 1897-98 (*i.e.*, from April 1897 to 31st March 1898, and (2) on 20th June.

			Average price for 1897-98.		Price on 20th June.
Wheat	...	...	11		17
Barley	...	...	16½	...	27
Gram	...	...	10½	...	21
Jowar	...	...	13½	...	27
Bajra	...	...	15½	...	24
Maize	...	...	16½		...

.. Allowance is made for the difference between retail bazar prices, and village prices for Zamindars, it will be seen that the actual prices now prevailing agree pretty closely with the scale of prices assumed.

CHAPTER V.

CROPS AND OUTTURN.

Statistics showing the crops grown (1) at last settlement, (2) during the 5 years 1892-93—1896-97, (3) in the last year 1897-98 are given in statement II.

Comparison of crops 87, grown at last settlement and now.

The following statement shows in the same detail, the area of the chief crops grown in each tahsil on 100 bigahs of cultivation, the total for kharif and rabi, and the proportion returned as *chahi*, *dahri* and *barani*.

Name of Tahsil.	Particulars.	Cotton.	Bajra.	Jowar.	M. rice.	Masina.	Indigo.	Guar charri.	Vegetables.	Other food crops, rice, etc.	Non-food crops, tili, tobacco.	Total Kharif.	Wheat.	Barley.	Gram.	Dejar guhani.	Oil seeds.	Vegetables.	Tobacco.	Total Rabi.	Chahi.	Dahl.	Barani.	Total.
Kibhengarh	16 years' settlement ...	7	52	7	...	1	...	4	...	...	...	77	3	13	7	6	2	1	...	31	17	...	91	108
	Average of 5 years ...	7	52	9	...	8	...	9	...	...	...	65	4	10	8	10	6	1	...	39	20	10	74	104
	Sambat 1954 = 1897-98	7	30	7	...	8	...	9	...	...	...	66	4	11	10	8	9	...	...	43	11	15	83	108
Rangarh	16 years' settlement ...	19	58	6	...	10	...	7	...	...	...	80	5	16	3	3	...	1	1	29	23	2	94	109
	Average of 5 years ...	11	26	9	...	2	...	12	...	3	...	61	6	7	4	9	5	...	...	31	11	28	54	93
	Sambat 1954 = 1897-98	9	42	7	...	4	...	11	...	...	2	74	7	14	10	3	3	...	...	37	9	38	64	111
Gorindgarh	16 years' settlement ...	23	56	11	...	8	...	6	...	2	...	86	2	10	5	1	...	1	...	19	14	3	88	105
	Average of 5 years ...	8	24	23	...	4	...	10	1	...	2	72	4	11	18	6	3	1	...	43	19	5	91	115
	Sambat 1954 = 1897-98	5	35	21	...	5	...	11	...	...	2	70	3	11	22	2	2	...	...	40	13	7	99	119
Lachmangarh	16 years' settlement ...	5	33	16	...	16	...	4	...	...	...	79	2	12	6	2	...	...	...	22	16	2	83	101
	Average of 5 years ...	5	19	17	...	10	...	9	...	1	...	61	3	9	12	3	1	...	...	28	18	16	55	89
	Sambat 1954 = 1897-98	4	28	16	...	13	...	8	...	3	...	72	2	9	10	2	2	...	...	26	13	15	70	96

88. It will be seen from the last column that comparing 1897-98 with last settlement, except in Kishengarh there has been little change in the efficiency of cultivation, but in the 5 years 1892-93—1896-97 the cropping except in Govindgarh, was owing to unfavorable seasons very much below that of last settlement or of 1897-98. In Govindgarh the density of the population, and the fertility of the soil, which is very productive even with a slight rainfall, makes the cultivation intense, so that the area of crops per 100 bigahs of cultivation which was 105 at last settlement was 115 in the 5 years 1892-93—1896-97, and last year rose to 119. In ordinary years like 1897-98, there is also a good deal of double cropping in Kishengarh—8 per cent. and Ramgarh—11 per cent., but these figures are almost the same as at last settlement. In Lachmangarh there has been a falling off. Last settlement 100 bigahs of cultivation gave 101 of crops, while for the 5 years 1892-93—1896-97, the area was only 89 bigahs and last year only 98 bigahs. It must be borne in mind that 'crops' means only crops sown not 'crops harvested' as no deductions have been made in any of the returns for failure of crops; all lands sown, whatever the result, has been brought into the returns.

89. The next point to be noted is that in all tahsils rabi crops show a great increase at the expense of kharif. Taking 1897-98 as an average year, the rabi crop was one-third of the whole in Ramgarh and Govindgarh, slightly over one-fourth in Lachmangarh, and nearly two-fifths in Kishengarh, while at last settlement it was only 29 per cent. in Kishengarh, 27 per cent. in Ramgarh, 22 per cent. in Lachmangarh, and 18 per cent. in Govindgarh. This substitution of rabi for kharif crops here, as elsewhere, marks an advance in agriculture, due to improved methods of cultivation, increase in *chahi* land and the wider market and higher prices which rabi crops command.

90. For assessment purposes I have taken not the average of the 5 years 1892-93—1896-97, which included only one good year and two of severe drought, but the crop areas of 1897-98 as the basis of the calculation, because it was a normal year, and the crop inspections have been carefully made and checked with reference to soils, and also to irrigation. The figures are given in detail in the table below :—

Kind of soil.	Name of taluk.	Cotton.	Bayla.	Jowar.	Maize.	Mung, moth, masina, mash.	Low 17, charli.	Vegetables, sugarcane.	Other food crops rice, china, etc.	Non-food crops, oil, tobacco.	Indigo.	Total Kharif.	Wheat.	Barley.	Gram.	Bajra, Roohi Roaj.	Oil-seeds.	Vegetables, etc.	Non-food crops, tobacco, etc.	Total Rabi.	(Grand total for the two crops.	Percentage in comparison with the cultivated area.	Remarks.
Chahi.	Kishengarh	550	231	61	35	17	22	375	131	43	...	1,448	3,501	10,644	157	453	485	560	341	15,933	17,381	12	
	Ramgarh	243	159	39	44	...	2	131	...	4	...	651	1,055	6,309	109	195	243	111	335	8,016	9,060	9	
	Gorindgarh	110	...	...	19	3	4	107	8	9	...	359	773	3,022	4	92	95	90	74	5,932	5,211	13	
	Lachmangarh	1,155	20	12	54	12	...	168	12	57	5	1,518	2,517	9,754	69	263	273	262	355	13,487	15,005	13	
Dahli.	Kishengarh	613	4,862	1,600	5	157	1,642	7	45	46	...	9,214	2,114	1,766	2,433	4,836	917	12	...	11,463	20,682	14	
	Ramgarh	3,886	6,266	2,042	13	331	1,033	4	363	1,490	...	11,134	4,316	5,841	4,940	1,026	1,011	...	...	18,705	40,489	38	
	Gorindgarh	22	575	383	...	24	91	3	26	20	...	1,074	537	279	358	71	85	1	1	1,333	2,427	7	
	Lachmangarh	1,033	8,610	4,051	71	7-8	1,572	...	129	733	103	11,065	222	816	3,735	1,052	63	...	...	6,58	17,026	15	
Baran.	Kishengarh	3,393	51,793	8,476	18	10,125	11,652	26	96	282	...	85,957	314	2,339	12,908	7,513	10,400	10	1	33,495	119,452	82	
	Ramgarh	4,577	36,112	3,550	4	3,167	8,944	20	89	864	...	96,452	504	2,178	5,815	793	1,779	33	...	11,107	97,559	64	
	Gorindgarh	1,566	14,081	7,895	13	1,166	4,082	17	89	923	...	20,722	5	192	8,370	511	574	3	1	9,756	30,483	97	
	Lachmangarh	1,796	20,074	14,877	100	13,823	7,916	3	181	2,040	6	76,716	17	175	8,192	507	740	...	...	9,511	80,217	70	
Muzir.	Kishengarh	4,586	50,806	10,145	51	10,594	12,330	402	261	273	...	96,619	5,039	14,779	15,488	12,201	11,862	37	345	60,896	157,515	108	8 per cent. de-fact.
	Percentage	3	36	7	...	7	0	...	...	...	...	62	4	9	10	8	7	...	...	38	100	...	
	Ramgarh	2,985	44,540	7,611	203	3,579	11,975	155	435	2,263	...	76,238	7,145	14,383	10,864	2,914	3,031	149	326	38,360	117,588	111	11 per cent. de-fact.
	Percentage	7	89	7	...	3	14	...	...	3	...	67	6	18	9	3	3	...	...	33	100	...	
	Gorindgarh	1,898	13,507	8,248	33	2,202	4,177	126	122	952	...	31,075	1,315	4,394	8,732	754	755	94	76	16,121	47,108	119	19 per cent. de-fact.
	Percentage	4	26	17	...	5	9	...	...	3	...	65	3	9	18	2	2	...	...	34	100	...	
Lachmangarh	Lachmangarh	3,005	21,704	18,970	227	14,534	9,465	191	328	3,750	130	81,379	2,556	10,742	11,466	2,723	1,640	262	352	22,079	113,278	96	
	Percentage	4	26	17	...	13	8	...	...	3	...	73	1	10	10	3	1	...	...	27	100	...	

91. Of the kharif crops, the cultivation of cotton has fallen off enormously.

Chief kharif crops, cotton.

It now comes to only 3 per cent., of the total crops in Kishengarh, 7 per cent. in Ramgarh, and 4 per cent. in the remaining tahsils. The decrease is due chiefly to want of early rains in May and June for barani sowings. Except in Lachmangarh, little of the cotton is grown on wells, but it is generally sown on the best soils, and well-water is given in case of drought. There is a hydraulic cotton press at Alwar, which purchases most of the local supply.

Bajra, though not so extensively cultivated as at last settlement, is still by

Bajra.

far the most important crop in either harvest, covering 36 per cent. of the cultivation in Kishengarh, 33 per cent. in Ramgarh, 29 per cent. in Govindgarh, and 28 per cent. in Lachmangarh. In ordinary years it is never irrigated; but it can be grown on all soils with a preference however for the lighter. In the sandy lands along the hills where no other crop but *moth* would grow, it thrives with a slight rainfall. It is sown with the first rains after the land has been ploughed twice, generally receives one weeding, and ripens in September, so that it is not so liable to failure as jowar and other crops which require the September rains.

The cultivation of jowar has doubled since last settlement in Govindgarh,

Jowar.

the superior soil of which is very suitable for this crop. It now amounts to 7 per cent. of the cropping in Kishengarh and Ramgarh, where the light sandy soils are more suited for bajra, and to 17 per cent. in Lachmangarh and Govindgarh which have a larger proportion of the stiffer clayey soils. It is hardly ever except in years of extreme drought irrigated, but thrives in the low laying *dehri* and the better kinds of *barani*. It is sown later and ripens later than bajra, requires a heavier rainfall, and is more precarious as to outturn. For instance last kharif everything seemed to promise a bumper yield, but hot winds early in October prevented the ear from filling, and locusts at the same time attacked it, so that the crop yielded little grain but excellent fodder.

The kharif pulses, mung, moth, mash are grown generally in combination

Masina, mung, moth, mash.

with one another or with jowar or bajra which shelter them from hot winds and storms, and in both cases are classed under the general name *masina*. Except in Kishengarh the cultivation of this crop has fallen off considerably, jowar or gram taking its place, but it still comes to 7 per cent. in Kishengarh, 3 per cent. in Ramgarh, 5 per cent. in Govindgarh, 13 per cent. in Lachmangarh. It is grown on all soils from the best to the worst, for even if one of the combined crops fails the chances are that some of the others will succeed. Generally speaking the lighter soils suited for bajra are also most suitable for masina. The crop is exclusively a high and dry one, being rarely sown even on the low lying *dahri* land.

Gawar and charri which are grown exclusively for fodder, come to 9 per cent.

Gawar and charri.

in Kishengarh and Govindgarh, 10 per cent. in Ramgarh, 8 per cent. in Lachmangarh. The charri (jowar sown close) is sown sometimes in *dahri* lands, generally, in *barani* and is cut when still green for fodder. The *gawar* is generally sown on the worst *barani*; and is allowed to ripen, the hard grain softened by boiling being used for feeding cattle.

The superior kharif crops sugarcane, maize, rice, which require irrigation are

Miscellaneous crops.

very rarely grown now. A certain amount of cane was grown at last settlement, but its cultivation has now been abandoned, not, as the Zamindars say, owing to scarcity of water or deterioration of soil, but because it did not repay the cost of cultivation so well as food crops, wheat, barley, etc. Indigo is grown in half a dozen canal irrigated villages in Lachmangarh, but owing to scarcity of water the area has been much reduced of late years.

92. Of rabi crops the area under wheat though still relatively small—4 per cent.

Chief crops in rabi wheat.

in Kishengarh, 6 per cent. in Ramgarh, 3 per cent. in the remaining tahsils—has increased by from 30 to 40 per cent. since last settlement, the cause being extension of irrigation and high prices. Excepting Ramgarh, where a small area of wheat is grown on the best barani lands, it is confined almost exclusively to *chahi* and *dahri* lands. The finest *chahi* crops are to be found in the Jat and Ahir villages in the north of Kishengarh, the best *dahri* crops in Ramgarh. Wheat is

generally manured in *chahi* lands, and requires 4 to 5 waterings according to season, while barley can do with two less,

Barley.

and give as great or a greater yield. Hence its cultivation is more popular. Except in Govindgarh, however, the area under barley shows a falling off compared with last settlement. It now amounts to 9 per cent. of the whole in Kishengarh and Govindgarh, 12 per cent. in Ramgarh, 10 per cent. in Lachmangarh. In Ramgarh and Kishengarh about 15 per cent. of the barley is grown as a barani crop but elsewhere it is, like wheat, confined to *chahi* and *dahri* land.

Gram is yearly becoming a more popular crop. In Ramgarh the area under it has trebled, in Govindgarh quadrupled, and in the other tahsils increased by about 50 per cent. since last settlement, and it now comes to 18 per cent. of the crops in Govindgarh, 9 per cent. in Ramgarh and 10 per cent. in the remaining tahsils. It is hardly ever irrigated though often sown as a second crop on well lands after the kharif has been cut. It is also often sown after bajra in barani lands if autumn rains have been favourable.

Gram.

Bejar (barley and gram) *gochni* (wheat and gram) *gojra* (wheat and barley) have increased in area in Kishengarh and Govindgarh where they now come to 8 and 2 per cent. of the cultivation respectively, in Ramgarh and Lachmangarh they have remained stationary at 3 and 2 per cent. respectively. Though varying in value, *gojra* being of course more valuable than either of the others, they are classed together. They are sown usually in the best *dahri* or *barani* lands, very rarely in *chahi*, and in Kishengarh and Ramgarh the yield is very good.

Bejar, gochni, gojra.

The cultivation of rabi oilseeds (sarson and taramira or tara), stimulated by high prices owing to the demand for export, has increased enormously since last settlement, when they covered only one per cent. of the area in Kishengarh and an inconsiderable area in the other tahsils. They have now risen to 7 per cent. in Kishengarh, the clean cool sandy soil of which takes very kindly to this crop, and to 3 per cent. in Ramgarh, 2 per cent. in Govindgarh, and one per cent. in Lachmangarh. In Ramgarh and Lachmangarh a fairly large proportion of the crops is grown on *dahri* land; in Kishengarh, it is nearly all *barani*. It is never watered, except where sarson is grown as fodder for cattle. Oilseeds are grown almost entirely for export and are among the most paying of crops as the price is steady and remunerative.

Oilseeds.

Miscellaneous rabi crops such as vegetables, melons, tobacco &c, cover only a small area. They are grown chiefly by malis, with the aid of *dhers* and *dhenklis* in the vicinity of towns or large villages.

Miscellaneous rabi crops.

On the whole if we regard only the quality of the crops raised we find a steady improvement as compared with last settlement. Excepting cotton and indigo, the falling off of which may be due to causes purely temporary, the more valuable crops—jowar, wheat, gram and oilseeds, have increased considerably in area. The methods of cultivation too have improved, and agriculture has been stimulated by the wider market and higher prices.

93. The next question is to arrive at an estimate of the outturn, which is the more necessary as the absence or concealment of true competitive cash rents deprives us of one of the chief aids to assessment.

Outturn.

Major Powlett at last settlement appears to have made little enquiry on this point, for in a letter (No. 73, dated 18th October 1873) to the Political Agent, he writes "I have scarcely taken into consideration the reputed yield of soils. I believe that all settlement officers now agree in rejecting this mode of computation as fallacious." At page 87 of the *Gazetteer* he gives a few figures as to average yield per Raj bigah ($\frac{2}{3}$ of an acre) which converted into standard bigahs ($\frac{3}{4}$ of an acre) work out as follows:—

Bajra, barani	...	...	55 seers to 275 seers.
Barley, irrigated	...	...	5½ " to 19 mans.
Gram, barani	...	...	5½ " to 16½ "
Cotton, irrigated	...	...	2 " to " " "

and though in some tahsils he took a standard based on one-fourth of the gross produce as a means of testing his assessment, the process by which this calculation was worked out cannot be traced.

It would no doubt be a great saving of time and trouble, if the cumbrous and complicated process of working out a produce estimate, and from it deducing the net assets could be dispensed with, but for the reasons given it cannot be dispensed with here no more than in the Punjab.

It has therefore been found necessary by means of crop experiments, personal enquiry, comparison with adjoining tracts, to arrive at an estimate of the yield of each crop on each of the different classes of soil (paragraph 16) on which it is grown, and thus by applying the scale of prices adopted in chapter IV—after making the necessary deductions for fodder and failed crops—to the area of crop grown in the year 1897-98, to determine the total value of the produce.

94. For this purpose great numbers of crop experiments have been made in the four harvests of the last two years, one of which was poor, the other average as

Crop experiments.

regards outturn, by the Settlement Superintendents, tahsildars and naib tahsildars, sadar munsarims and in the last *rabi* by the munsarims as well. For soils in which no experiments were made, the outturn has been calculated with reference to the most nearly similar soil for which experiments were made, after taking the opinions of local revenue officials and leading Zamindars. For certain miscellaneous crops, *viz.*, vegetables, melons, tobacco, other food and non-food crops, for which it would have been difficult to carry out experiments, cash values varying from Rs. 16 to Rs. 4 per bigah, according to nature of soil and kind of crop have been assumed. Such crops do not amount to more than 4 per cent. of the whole.

Rates of yield assumed.

95. Appendix D shows for each crop in each tahsil—

- (1) the number of experiments made in each class of soil in each harvest,
- (2) the average result ;
- (3) the outturn now assumed.

It will be seen that tested by the result of experiments, the assumed average outturn is in all cases moderate, the reason being that the plots selected for experiment especially by the State officials, were often above the average.

To illustrate the outturn assumed I here give the figures in *mans* per bigah in detail for barley and bajra, the most important irrigated and unirrigated crops ; where the figures are blank, it means that the crop was not grown on that soil.

Soil,	Tahsil,	BARLEY.					BAJRA.			
		CHHAI.		DAHRI.		BARANI.	DAHRI.		BARANI.	
		Of pulka wells.	Other.	Present.	Former.	Barishi.	Present.	Former.	Barishi.	Barani.
Chiknot and Mattyat I. ...	Kishengarh ...	14	12	9	8	6	5½	7	5½	5
	Ramgarh ...	16	15	12	9	7	6	8	6	5½
	Govindgarh ...	18	17	14	...	9	8	9	...	7
	Lachmangarh ...	16	14	10	7	...	5	7	5	...
Mattyat II. and Bhur I. ...	Kishengarh ...	12	10	7	...	4½	4	5½	3½	3½
	Ramgarh ...	13	12	10	7	6	5	6	5	4
	Govindgarh ...	15	13	...	...	...	7	...	4	...
	Lachmangarh ...	12	11	...	...	...	4	...	4	...
Bhur II. ...	Kishengarh ...	8	...	5	4	...	2½	5	2½	...
	Ramgarh ...	10	8	7	5	...	4	...	4	...
	Govindgarh ...	...	8	...	...	...	4	...	...	...
	Lachmangarh ...	9	...	...	...	...	3	...	...	...

It is unnecessary to enter into such elaborate detail for all crops. The average assumed yield of the leading crops grown as *chahi*, *dahri* and *barani* is shown below in round numbers in *mans*.

	Crop.	KISHENGARH.			RAMGARH.			GOVINDGARH.			LACHMANGARH.		
		Chahi.	Dahri.	Barani.	Chahi.	Dahri.	Barani.	Chahi.	Dahri.	Barani.	Chahi.	Dahri.	Barani.
Kharif	Cotton	4½	3½	1½	5	4½	2½	6	6	4½	5½	3½	2
	Bajra	8	7½	3½	8	6	4	...	8	5½	7	5	4½
	Jowar	8½	5½	3½	10	7½	5	...	13	9	8	6	4½
	Masina	6½	4½	2	...	5	3½	...	8	4½	...	4	3½
	Wheat	9½	5½	3½	9½	8½	4	11½	10	3	9	6	3½
Rabi	Barley	13½	7	4½	15½	10	6	17½	14	7	15	8	4½
	Gram	7½	5½	3½	6	5½	4	...	7½	5	5	4½	4½
	Bejar	...	...	...	...	...	...	...	...	...	...	...	...
	Gochni	10½	7½	3½	11½	9½	5	13	12	7	10½	6½	5
	Goyra	...	...	...	...	...	...	...	...	...	...	...	...

In the above allowance is made for seed, the average amount of which in sers per bigah is :—

Cotton	5	Wheat	} 25 to 30
Bajra	1	Barley	
Jowar	3 to 5	Gram	15 to 20
Charri	15 to 25	Bejar, etc.	20
Gawar	3	Sarson	1
Moth	3		

These rates of yield are I think moderate and reasonable. The only points that seem to require explanation are the high yield of irrigated barley and the poor yield of gram. But barley is *par excellence* the rabi staple, which is sown in the best land and on which labour, manure and irrigation are concentrated; gram, on the other hand, yields a poor outturn, partly because the soil has not the same power of retaining moisture that the gram lands of the Punjab have, and the winter rains here are very light, partly because it is often sown as a second crop after bajra, masina, etc.

96. For purposes of comparison I quote the rates of yield,—reducing the rates per acre to rates per bigah to make the comparison clearer—adopted by Mr. Channing in the Gurgaon Settlement which (see page 82 of Mr. Wilson's revision) were considered very moderate.

Crops.				Chahi.	Dahri.	Barani.
Cotton	...	...	...	.....	.....	3½
Bajra	...	...	...	.....	.....	4
Jowar	...	...	...	.....	.....	5½
Moth	...	...	...	} .....	.....	3
Masina	...	...	...
Wheat	...	...	...	...	7½	5
Barley	...	...	...	11	8½	5½
Gram	...	...	...	.....	.....	5½

As regards kharif crops—excepting the unusually fertile Govindgarh tahsil—my estimate for cotton is much lower than Mr. Channing's, for bajra it is practically the same, for jowar the Alwar estimate is lower and for masina slightly higher. Coming to rabi crops my estimate for *chahi* wheat is the same as his, for *barani* mine is lower, for *dahri* my figures in Ramgarh which adjoins Gurgaon is a little higher, and in Kishengarh and Lachmangarh a good deal lower. For barley my *chahi* and *dahri* outturn is much higher than his while for *barani* mine is lower; my estimate for *barani* gram is much lower than his. I had not seen the Gurgaon rates of yield till I had worked out my own, and they confirm me in the belief that mine are moderate.

97. Having now fixed a scale of commutation prices, and also estimated the rates of yield, the money value of the produce of the year 1897-98 can be ascertained. Certain deductions have however to be made before this can be done on account of (1) the share of the crops to be allowed for fodder, *vis.*, all the *gawar* and *charri*, one-fourth of the *moth*, *masina* and of the rabi oilseeds, and one-half of the vegetable or rather root crop in all tahsils, 10 per cent. of the jowar and 5 per cent. of the barley crop in all tahsils except Govindgarh where the allowances are 10 and 12 per cent. respectively, (2) failed crops. These latter require further discussion.

98. The statistics as already remarked deal only with *sown* crops, no attempt having been made hitherto in the State to distinguish *failed* from *harvested* crops. I did not think it advisable even to attempt to make the distinction in the harvest of 1897-98, as I could not trust the Patwari Agency to carry it out honestly or intelligently. I have therefore now to endeavour to roughly estimate the proportion of crops sown that fail.

To obtain some basis on which to start I ascertained the proportion of harvested and failed crops to total area sown in the adjoining Firozpur tahsil of Gurgaon district for the five years 1892-93-1896-97. The result showed that 40 per cent. of the kharif sowings and 28 per cent. of the rabi failed completely. I find it impossible not to think that these figures exaggerate the proportion of failure even in a cycle of years below the average.

At all events I am convinced that in these tahsils the failure of crops during those five years could not have been on anything like the above scale, for as shown in paragraphs 47-48, in this period not only was the revenue realised in full except for small balances in Lachmangarh, but a considerable amount of old arrears were paid up. I think it is possible that in Gurgaon since the warning offered by the crisis of 1877-78 and its results, the tendency may have been to overestimate the effects of a temporary drought. However these tahsils are more secure than Firozpur which has only 6 per cent. of its area *chahi*, 20 per cent. *nahri* and *dahri*, and 74 per cent. *barani*.

In the Gujranwala district in the Punjab, where I was able to study the harvests of six consecutive years, and which has a rainfall considerably less and more uncertain than this tract, but where 70 per cent. of the area is protected by irrigation, I estimated the failed area to vary from 5 to 7.5 per cent. of the sowings in the various tahsils. The Alwar soil though lighter in texture is better able to stand a drought than the alluvial clay or loam of the central Punjab often impregnated with *Kallar*, so other things being the same one would expect less failure in Alwar, especially as the lighter crops are chiefly grown. Of course the higher proportion of irrigation in Gujranwala, though much of it only supplements the rainfall, turns the scale in its favour. After a good deal of enquiry and discussion of the subject with the Superintendents, Tahsildars and agriculturists, I have come to the conclusion that the following are reasonable deductions for each harvest in each tahsil.

Tahsil.				Kharif.	Rabi.	On total crops of the year.
Kishengarh	...	...	...	8	4	6½
Ramgarh	...	...	...	10	5	8½
Gavindgarh	...	...	...	5	3	4½
Lachmangarh	...	...	...	12	5	10

The variations in the different tahsils will be understood from what has been said as to variations in rainfall, natural fertility, irrigation, etc.

99. In Punjab settlements allowances varying from 5 to 15 per cent. are made from the total produce to represent the share that goes to the village menials who assist in the cultivation. Here the allowances to menials are on a small scale, as except among a few higher castes, most of the harvest work is done by the women. The only menials who usually are paid out of the crop are the *khat* or carpenter and the *lohar* or blacksmith, both of whom usually receive 15 to 30 sers per plough in the kharif and from 20 sers to one *man* per *lao* in the rabi. The *chamar* who does most of the rough work receives no fixed allowance, but his share is said to amount to 4 or 5 per cent. of the crops. These deductions which represent 7½ to 8 per cent of the total crop are not however paid from the common heap, but from the cultivator's share, and for this reason, and also because I have not taken accounts of the value of the fodder or *bhusa*—in which the landlord rarely receives a share—it is unnecessary to make any deductions for this in estimating the total value of the produce.

100. After applying the commutation prices to the crop areas of the year Total value of the crops of 1897-98 and or (para 90) multiplied by the average output shown in appendix D, and making the above deductions for fodder and failed crops, the value of the produce (excluding straw) in each tahsil works out as follows (the detailed statements are too cumbersome to be inserted).

Tahsil.				VALUE IN RUPEES OF		Total.
				Kharif.	Rabi.	
Kishengarh	...	...	...	439,573	65,801	1,005,374
Ramgarh	...	...	...	464,839	465,697	930,536
Govindgarh	...	...	...	223,787	189,663	413,458
Lachmangarh	...	...	...	414,774	359,718	774,492

Taking one-fourth of the gross produce, as at last settlement, as rough estimate of the State share, its money value comes to.—

Rs.					
Kishengarh	...	...	...	...	2,51,343
Ramgarh	...	...	...	...	2,32,634
Govindgarh	...	...	...	...	1,03,362
Lachmangarh	...	...	...	...	1,93,623

CHAPTER VI.

VALUE OF OWNER'S SHARE OF THE PRODUCE STATEMENTS V AND VI.

101. So far the produce as a whole has been considered. We have now to determine the owner's net share and the value of it (*i. e.*, total net assets).

Unfortunately here too the data are very meagre as rents in kind (see para. 60) are extremely rare. The following table gives details by tahsils:—

Tahsil.	TOTAL AREA.		ONE-HALF.		TWO-FIFTH.		ONE-THIRD.		ONE-FOURTH.	
	Irrigated.	Unirrigated.	Irrigated.	Unirrigated.	Irrigated.	Unirrigated.	Irrigated.	Unirrigated.	Irrigated.	Unirrigated.
Kishangarh	238	429	5	3	50	99	183	322	...	...
Ramgarh	84	259	15	203	4	...	53	48	12	8
Govindgarh	10	...	10	...	79	...	...	...	...	...
Lachmangarh	79	...	...	...	...	...	...	...	...	...

Major Powlett (page 93 of the Gazetteer) writes: "where a share is taken by the Jagirdar or proprietor (for there is practically little difference between them) it is either a half, two-fifths, a third, or a fourth plus a cess, but a third is sometimes regarded as a favourable rate and a fourth always is. These too were the shares which the Darbar when it took a share of the crop claimed and collected."

Elsewhere (see paragraph 29) it has been stated on the authority of Major Cadell's report for the year 1871-72, that the State claimed one-half of the gross produce, plus one-thirteenth of the balance for expenses of collection.

Probably this however applied only to the best lands, and in inferior soils either a lower share, two-fifths or one-third, was taken or a bigha rate on crops charged.

In jagir villagers or mafi holdings the ordinary rates now are one-third on *chahi* (the cost of production being heavy) and two-fifths on *dahri* and *barani*. One-fourth is hardly ever taken even on the worst soils. The State having formerly taken the place of landlord, the old State share may be regarded as the limit of the owner's share at present. Here, as elsewhere, the rent whether in cash or in kind does not so much depend on the returns from the land, as on the pressure of the State demand, and the competition of tenants for land.

Thus in the central Punjab where the State demand is very lenient, the share which the owner takes from his tenants whether in cash or kind is as a rule proportionately low, and well lands which let for Rs. 4 to 5 per acre in Gujranwala would command double that rent in Alwar.

102. In Gurgaon (page 71 Settlement report) the prevailing kind rents at last settlement were—
Comparison with Gurgaon district.

"for ordinary barani and well lands one-third or if conditions of production are more than ordinary favourable two-fifths. On naturally irrigated dahri lands, where the outturn is good in proportion to the labour of cultivation, one-half the produce is sometimes given, while on the other hand on salt wells, and on very poor sandy soils the proportion falls to one-fourth. The straw is ordinarily kept by the tenant."

These remarks apply fairly accurately to Alwar, but owing to the standard of the State demand being higher, the standard of rent is higher too.

103. I have therefore taken the owner's share as one-third in *chahi* land, two-fifths in *dahri* and *barani*, and applying these proportions to the value of the produce on each class of soil as already ascertained (chapter V), the owners net share or the net

assets, and the State share at two-thirds of this, according to rents in kind work out as follows :—

					Total net assets.	State share at two-thirds.
Kishengarh	...	...	...	...	382,174	254,782
Ramgarh	...	...	...	...	360,027	240,018
Govindgarh	{ Chak I " II "	...	...	...	98,294	65,529
		...	...	...	59,926	39,951
Total				...	158,220	105,480
Lachmangarh	...	...	...	...	291,201	194,133

By further developing this method, it gives us a series of soil rates which bring out the net assets per bigha on each kind of soil, and two-thirds of these rates represent the assessment rates based on the produce estimate and the owner's share.

The arithmetical process is too lengthy to be worked out in detail even in an appendix but it may be explained here.

104. Taking any particular class of soil, *e.g.*, *chiknot chahi*, the total area of crops grown on it during the last year, whether *chahi*, *dahri* or *barani* have been ascertained, their money values worked out, according to the preceding paras. The total money value divided by the total area (fodder and failed areas being deducted) gives the value of the crops per bigha. One-third of this in the case of *chahi* and two-fifths in the case of *dahri* and *barani*, represents the value of owner's net share per bigha. Two-thirds of this represents the State share per bigha according to the produce estimate. The value of the owner's share and of the State share, at two-thirds, for each class of soil in each tahsil, by this method of cultivation is given in the table attached :—

Tahsil.	Value per bigha of	CHERNY I AND II.			MATTYAR I.			MATTYAR II.			BHUR I.			BHUR II.			All-round rate.
		Chahi.	Dahri.	Barani.	Chahi.	Dahri.	Barani.	Chahi.	Dahri.	Barani.	Chahi.	Dahri.	Barani.	Chahi.	Dahri.	Barani.	
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Kishengarh.	Owner's net share.	5 14 6	3 4 6	2 5 6	5 14 6	3 10 6	2 2 6	4 14 0	3 1 6	1 6 6	4 5 6	3 4 6	1 3 6	3 0 0	1 15 6	0 15 0	2 6 9
	State share at $\frac{1}{2}$	3 15 0	2 3 0	1 9 0	3 15 0	2 7 0	1 7 0	3 4 0	2 1 0	0 15 0	3 1 0	2 3 0	0 13 0	2 0 0	1 5 0	0 10 0	1 9 10
Ramgarh.	Owner's net share.	6 5 0	4 1 0	2 3 0	6 9 0	3 15 0	2 6 0	5 8 0	3 1 0	1 11 0	4 12 0	3 14 0	1 8 0	3 13 0	2 7 0	1 2 0	3 1 0
	State share at $\frac{1}{2}$	4 8 8	2 11 4	1 7 4	4 6 0	2 10 0	1 9 4	3 10 8	2 0 8	1 2 0	3 2 8	2 9 4	1 0 0	2 8 8	1 10 0	0 12 0	2 0 8
Govindgarh.	Owner's net share.	7 5 0	5 12 0	3 5 0	6 13 0	5 12 0	2 14 0	4 15 0	...	2 1 0	4 12 0	...	2 3 0	2 14 0	...	1 5 0	3 6 0
	State share at $\frac{1}{2}$	4 14 0	3 14 8	2 3 4	4 8 8	3 14 8	1 14 8	3 4 8	...	1 6 0	3 2 8	...	1 7 4	1 14 8	...	0 14 0	2 4 0
Lachmangarh.	Owner's net share.	6 2 0	2 10 0	2 0 0	6 7 0	2 12 0	2 1 0	5 0 0	...	1 11 0	4 14 0	...	1 5 0	3 11 0	...	1 11 0	2 9 0
	State share at $\frac{1}{2}$	4 1 4	1 14 0	1 5 4	4 4 8	1 13 4	1 6 0	3 5 4	...	1 3 0	3 4 0	...	0 14 0	2 7 4	...	1 2 0	1 11 4
		...	...	...	...	...	Khatli	2 12 0	...	...	...	...	...	...	...	...	...
		...	...	...	...	...	...	1 13 4	...	...	...	...	...	...	...	...	...

The important point in this process is to base the calculation for each class of soil on the total area of crops, however grown, raised upon it within the last year, *e.g.*, in the case of *chiknot chahi* soil, not only to take the crops grown on it as *chahi*, but also the crops grown on it without the aid of irrigation. If the former alone were taken the result would be very erroneous, as the *barani* crops grown on *chahi* or *dahri* lands, which are generally considerable, would be credited to *barani* lands, and thus artificially inflate their value at the expense of *chahi* and *dahri* lands.

The converse case in which *chahi* or *dahri* crops are raised on *barani* soils, is a rare one in a normal year, but by the method described, the risk of error from this course too is eliminated.

CHAPTER VII.

CASH RENTS.

105. From statements V and VI and paragraph 59 it appears that after excluding—
Total area held by cash paying tenants at will.

- (1) occupancy tenants who pay almost invariably at owner's rates with no addition for *malikana*; and
 - (2) tenants-at-will paying in kind or free of rent or at favourable rates.
- The area held by cash paying tenants-at-will is in proportion to the total cultivation as follows;—

Kishengarh	...	...	...	...	...	34.5
Ramgarh	...	...	...	...	...	31.7
Govindgarh	...	...	...	...	...	38
Lachmangarh	...	...	...	...	...	32

The rent paid by these tenants according to the attestation papers of 1896-97 were as follows:—

Tahsil.	PAYING RENT AT OWNER'S RATES.				PAYING RENT AT OTHER RATES.			
	Area.	Per cent. of total area.	Total rent.	Rate per	Area.	Per cent. of total area.	Total rent.	Rate per bigah.
				Rs. A. P.				Rs. A. P.
Kishengarh	12,320	8.5	15,491	1 4 0	37,435	26	51,560	1 6 1
Ramgarh	23,284	22	45,090	1 15 0	11,018	60	25,398	2 8 3
Govindgarh	12,407	3.1	25,477	2 1 0	2,426	6	7,261	3 0 0
Lachmangarh	11,726	16	28,611	1 9 9	18,065	20	31,130	1 11 9

106. From these figures it will be seen that cash paying tenants fall into two main groups—
Sub-divisions of such tenants.

- (a) those who pay at the same rate as the owners,
- (b) those who pay at other rates.

All authorities, *i.e.*, the State officials as well as the settlement establishment however concur in the opinion, that the recorded rents on which the above figures are based are quite unreliable, that there has been a general conspiracy among owners and tenants aided by the Patwaris to suppress or understate rents, in consequence of which the area held at owner's rates has been immensely exaggerated, while the rents paid by other tenants have been understated.

107. This difficulty, common, I believe in Native States, and not unknown in British districts where the cash rents are taken as the main basis for assessment—is no new one in Alwar.

Concealment of true rents.

It was one of Major Powlett's chief obstacles at last settlement and his reports show the various methods by which he endeavoured to overcome it and ascertain the true rents—

- (1) "from intercourse with tenants uninterested in concealing the truth ;
- (2) from the very few (rent) disputes between proprietors and tenants ;
- (3) from tahsil records and official information ;
- (4) from the prevailing revenue rates of the pargana."

He adds "information worth anything can only be obtained from tenants at the cost of considerable personal exertion. It is useless to send for the cultivators and question them, they answer as tutored by their landlords, and equally useless to seek them in their villages where the proprietors are watching them. They must be sought for when alone in their fields well away from landlord influence, and then they are often, though by no means always, communicative enough, and such information regarding rents is the most satisfactory procurable"

108. These remarks apply with equal force at present and vividly express the difficulty with which we have to contend. Even when land is let out on a written lease (*patta*), the profit rent is taken separately and not entered in the *patta* which will generally show the tenant as paying a lump sum about equivalent to the *jama*, or at owner's rates. The State itself is largely to blame for the present state of things as the tradition based on the old system (by which the State took the whole assets, owners and tenants contributing equally, while the owners received their remuneration in the form of 2 or 3 per cent. on the collections) still prevails, that any rent realised by owners in excess of the State demand, will, if the State gets wind of the fact, be forfeit to it. Further colour is lent to this theory by the system of filing for each village a profit and loss (*jama khar- ch*) account every year, and if the owners are shown to make a profit out of the estate this is liable to be resumed in payment of old balances, etc. Furthermore, claims by tenants-at-will against owners for realising at rates in excess of the Government demand, are freely listened to by the Revenue Courts, and the owners are often prohibited from enhancing the rent. These practices which are inconsistent with the theory on which the Settlements have been and are being made, and which tend to obliterate one of the main privileges of ownership, should be abolished, and by taking the Zamindars into our confidence they may admit us into theirs. So far the only Zamindars who have stated their rents voluntarily and honestly before me have been men from British territory who had no such bogey to fear. The fact however remains, that the rents as disclosed are of little use as a basis for assessment. In fact if we strike an arithmetical average of the cash rents of tenants paying at "other rates" than owners in each tahsil, take two-thirds as the State share, and apply this to the present cultivated area, we should get an enormous reduction of revenue in all tahsils but Govindgarh. The total new assessment would work out in round numbers as against the existing one—

Tahsil.				Existing demand.	Demand by $\frac{2}{3}$ of the cash rents
Kishengarh	...	...	...	213,181	158,360
Ramgarh	...	...	...	202,512	180,045
Govindgarh	...	...	...	76,411	78,623
Lachmangarh	...	...	...	173,754	136,833

and this fact alone sufficiently discredits the recorded rents.

109. It was therefore found necessary to endeavour to ascertain the true cash rents by reference to—
Attempts to ascertain the competitive rents.

(1) the rents realised on *jagir and mafi* villages, but in these there were no reliable records and the jagirdars were generally both to disclose their profits;

(2) individual enquiry in representative khalsa villages or holdings.

110. Thus in Kishengarh a very patient and careful enquiry was made into rents by the Superintendent at the *Rabi Girdawari*, and the results of this, which are most instructive as a comparison of what were probably near the true rents, with the fictitious rents recorded in the *khataunis* at the attestations of 1896-97, are shown by soils in the following table and for facility of reference I have also shown the rent rates finally adopted.

—————

Class of Soil.				RENTS BY KHATAUNIS OF 1896-97.			RENTS ASCERTAINED IN RABI, 1898.			RENT RATES FINALLY ADOPTED.				
				Area.	Amount in Rupees.	Rate per bigah.	Area.	Amount in Rupees.	Rate per bigah.	Permanent chahi of		Temporary chahi attached to dhera dhenklis.	Average chahi.	
										Masonry wells.	Others.			
						Rs. A. P.			Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
Chahi	{	Chiknot	...	562	1,737	3 1 0	611	3,385	5 9 0	5 8 0	4 0 0	3 4 0	5 6 8	
		Mattiyar I	...	2,916	7,181	3 0 0	1,261	5,632	4 7 0	...	...	...	5 6 1
		" II	...	630	1,045	1 11 0	103	306	3 0 0	4 4 0	3 8 0	2 0 0	4 0 9	
		Bhur I	...	187	441	2 6 0	55	223	4 1 0	4 0 0	3 8 0	2 0 0	3 13 5	
		" II	...	120	340	2 13 0	...	...	...	3 4 0	...	1 8 0	3 13 7
Total Chahi				...	3,915	10,744	2 12 0	2,030	8,586	4 4 0	5 5 6	3 14 0	3 0 0	5 13 3
Dabri	{	Chiknot	...	1,029	2,640	2 9 0	689	2,334	3 6 0	Present. 4 0 0	Former. 3 4 0	Barishi. 2 12 0	3 11 4	
		Mattiyar I	...	712	1,177	1 10 0	306	848	2 12 0	...	...	...	3 12 8
		" II	...	164	639	2 4 0	39	99	2 9 0	3 0 0	...	1 12 0	2 12 6	
		Bhur I	...	140	292	2 1 0	45	101	2 4 0	3 0 0	...	...	3 0 0
		" II	...	128	65	0 8 0	...	...	...	2 0 0	...	...	3 0 0
Total Dabri				...	2,173	4,543	2 1 0	1,079	3,382	3 2 0	3 12 0	3 4 0	2 10 0	3 9 3
Barani	{	Chiknot	...	1,083	1,527	1 7 0	373	825	2 3 0	2 8 0	...	...	...
		Mattiyar I	...	10,886	16,871	1 9 0	3,749	9,960	2 11 0	2 0 0	...	...	...
		" II	...	9,509	9,313	1 0 0	1,324	2,415	1 13 0	1 8 0	...	...	...
		Bhur I	...	6,691	6,178	0 15 0	1,952	3,083	1 9 0	1 0 0	...	...	...
		" II	...	3,173	2,304	0 12 0	245	329	1 1 0	0 12 0	...	...	...
Total Barani				...	31,347	36,273	1 3 0	7,643	16,612	2 3 0	1 10 0

These figures prove how erroneous were the figures of 1896-97. If the average rent rates of that year for each class of soil were applied to the present cultivated area, the total assets would come to only Rs. 2,37,541, and the State share to only Rs. 1,58,360. Whereas if we apply the rent rates ascertained in 1898 after careful personal enquiry in a number of representative villages, the total assets come to Rs. 3,67,239, and the State share to Rs. 2,44,826, or more than 50 per cent. above the 1896-97 figures.

In individual villages extraordinarily high rents were found for fancy plots, *e.g.*, in Bambora Rs. 21 per *bigah*, while in Harsoli, Nurnagar, Baskirpalnagar, Bedaka and Bambora, *chahi* rents were found to range from Rs. 5-8-0 to Rs. 10 per *bigah*, in Alamdika a considerable area of *dahri* was based for Rs. 6-8-0 per *bigah*, while in Pur, Nangal, Harsoli, &c., *barani* rents ranged from Rs. 2-2-0 to Rs. 4-8-0. In the jagir villages of Girwas, Khodina and Kherla *chahi* rents were found to be Rs. 4, Rs. 4-8-0, and Rs. 6 per *bigah* respectively, and *barani* rents in the latter Rs. 3 per *bigah*. During my village inspections I took particular pains to ascertain and verify the actual rents, and am satisfied that the average rents deduced from selected villages are fairly representative of the whole. To extend the special enquiry to all estates would with the inadequate staff at my command, have been impossible. Taking these rent rates as a guide to the total net assets, after comparison with the rent rates deduced from the produce estimate, I made considerable changes in some of them, raising the *chahi* and *dahri* rates and considerably lowering the rates for the poorer *barani* soils, according to my estimate of their relative values. So that while the final result remains almost the same, the rates by which it is arrived at, are placed in their proper gradation. The total cash rent net assets according to the assumed rents shown in the last four columns of the statement is Rs. 3,68,706, and the State share by this standard comes to Rs. 2,45,804. This corresponds fairly closely with the estimate deduced from the rents in kind, *viz.*, Rs. 2,54,782.

111. In the remaining three tahsils the rent rates deduced from the khataunis of 1896-97, *i.e.*, the rents as stated by the Zamindars and not specially verified work out as—

Class of soil.		Ramgarh.	GOVINDGARH.		Lachmangarh.
			Chak I.	Ghak II.	
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Chahi	Chiknot	3 10 0	5 12 0	...	3 3 0
	Mattyar I	3 13 0	4 4 2	3 13 4	3 8 0
	" II	2 13 0	...	3 8 0	2 2 0
	Bhur I	2 7 0	2 8 0	2 0 0	6 8 0
	" II	2 0 0	2 0 0	...	1 6 0
	Average Chahi	3 9 10	4 6 1	3 12 6	3 4 6
Dahri	Chiknot	3 10 0	4 4 0	...	2 3 0
	Mattyar I	2 15 0	4 4 0	...	2 0 0
	" II	3 0 0	...	...	...
	Bhur I	3 1 0	...	...	...
	" II	2 0 0	...	...	...
	Average Dahri	3 5 8	4 4 0	...	2 2 4
Barani	Chiknot	2 5 0	3 2 4	...	1 11 0
	Mattyar I	2 11 0	3 1 9	2 2 2	1 5 0
	" II	1 9 0	2 7 10	1 8 0	1 2 0
	Bhur I	1 8 0	1 4 0	2 5 0	1 2 0
	" II	1 3 0	0 15 0	...	1 0 0
	Average Barani	1 12 11	3 8 6	1 15 0	1 4 0

and the total net assets obtained by applying these rates to the total cultivated area and the State share deduced from this for each tahsil—

Tahsil.			Total net assets.	State share.
			Rs.	Rs.
Ramgarh	...	...	2,70,068	1,80,045
Govindgarh	...	...	1,17,934	78,623
Lachmangarh	...	...	2,08,255	1,38,837

As already stated the data are erroneous and the result untrustworthy. So, as in Kishengarh, both have to be corrected.

No special enquiry as to rents was made last *rabi*, but in the course of village inspection, both the Superintendent and myself endeavoured as far as possible to ascertain the competitive cash rents by comparison with rents in *mafi*, *jagir* or *istamrar* villages, estates managed *kham*, rents of State lands, &c.

112. Taking Ramgarh first, the *istamrar* village of Manglishpura, which is perhaps a little above the average, is held entirely by cash paying tenants-at-well.

Rent rates in Ramgarh.

The rents average—

			Rs. A. P.	Rs. A. P.
Mattyar I—Chahi	...	...	5 11 0	...
Barani	...	...	2 8 0 to	3 4 0

or about 50 per cent. above the average *chahi* and *barani* rents for the tahsil as recorded in the khataunis.

Taking representative villages where the rents have been specially attested by the Superintendent. We find the average rents rates to be—

			Rs. A. P.	Rs. A. P.
Chahi—	{ Chiknot ...	{ Tikri ...	4 8 0	
	{ Mattyar I ...			
Nangla—Balya	... 4 12 0	Ramgarh	... 6 8 0	
Bandoli	... 5 0 0	Rasulpur	... 5 8 0	
Alawalpur	5 4 0	Mobarikpur	... 7 0 0	
Bamani Khera	5 0 0	Kotah Kalan	... 6 12 0	
Chahi—	{ Bhur I ...	{ Ramgarh ...	3 2 0	Naugaun Rs. 3
	{ Bhur II ...			
Kherh	... 6 0 0			
Chiknot dahri—Khilora	...	Mundpur	... 3 8 0	
Barodh	} 4 0 0	{ Rasulpur ...	} 5 0 0	
Bandoli		{ Baramda ...		
Mobarakpur				
Dahri barishi—Baghori	... 4 0 0	Sareta	... 4 8 0	Nangal Bahya, Rs. 5.

Barani Chiknot and Mattyar, in 18 estates the rents average from Rs. 2-14-0 to Rs. 4.

Barani Mattyar II, in 15 estates the rents vary from Rs. 1-8-0 to Rs. 3-12-0.

Barani Bhur I, in 7 estates the rent ranges from Rs. 2-0-0 to Rs. 3-2-0.

Barani Bhur II, in 7 estates the rent averages from Rs. 1-1-0 to Rs. 2-4-0.

After considering all the data available, the following rent rates were found to fairly represent the letting values of the different classes of soil—

Class of soil.	CHAHÍ.				DAHRI.				Barani.
	Permanent.		Tempo- rary.	Average.	Present.	Former.	Barishi.	Average.	
	Masonry wells	Others							
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Chiknot	6 0 0	4 12 0	4 0 0	...	4 4 0	3 8 0	2 8 0	...	3 0 0
Mattyar I	...	...	3 4 0	...	...	...	...	...	2 10 0
„ II	4 8 0	3 6 0	2 12 0	...	3 4 0	2 8 0	2 0 0	...	1 11 0
Bbur I	...	...	...	...	...	...	...	...	1 8 0
„ II	3 8 0	2 12 0	1 4 0	...	...	1 12 0	...	...	0 12 0
Average Chahi	5 13 10	4 9 5	3 9 10	5 0 6	4 2 4	3 5 11	2 7 10	3 11 5	2 1 10

The rates assumed agree pretty closely with the average rent in standard villages except in the case of the inferior *barani* soils, *viz.*, *Mattyar II* and *Bhur*, which being very precarious and often unsown in bad years, I have kept purposely low and in the case of *Bhur II* much lower than even the *Khatauni* averages for the whole tahsil seem to justify. The net assets obtained by applying these rent rates to the areas of 1897-98 come to Rs. 3,25,588, and the State share at two-thirds to Rs. 2,17,059, which is considerably less than the estimate derived from kind rents Rs. 2,40,018.

113. In Govindgarh competitive cash rents are more common than elsewhere

Rent rates in Govindgarh.

owing to the density of the population, and could not be so easily concealed, so the net assets based even on the *Khatauni* rents come out comparatively high, and the State share calculated from them would give an increase of about Rs. 2,000 on the present demand. This however does not fairly represent the enhancement, which the State can claim. In three representative villages taken in Chak I, *viz.*, Barbara, Dhabri and Rambas, the average *chahi* rents were Rs. 4-8-0, 6-0-0, and Rs. 8-8-0 respectively, and temporary *chahi* usually rents for Rs. 3 to 4. *Chiknot* barani Rs. 3-8-0, *Mattyar I*, Rs. 2-9-0, to 4-0-0, *Mattyar II*, Rs. 1-10-0 to Rs. 3-2-0, while there is practically no *Bhur* in this circle.

In mafi villages and holdings *chahi* rents vary from Rs. 4-13-0 to Rs. 8 2-0, barani from Rs. 2-2-0 to Rs. 2-14-0, and on lands owned by the State. *Chahi* rents run from Rs. 4-8-0 to Rs. 5-12-0, and barani from Rs. 2-8-0 to Rs. 2-13-0. In Circle II rents are appreciably lower. At last settlement the standard rent rates assumed in the three circles then formed were—

Soil				Bara chahi.	Bara barani.	Chiknot.	Mattyar.	Bhur—I.	Bhur—II.
				Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Dabri.	Chak—I	...	...	4 8 0	3 8 0	2 8 0	3 0 0	2 8 0	1 4 0
	Chak—II	...	...	4 4 0	3 0 0	2 8 0	3 0 0	1 8 0	1 2 0
	Chak—III	...	...	3 8 0	2 8 0	2 0 0	1 12 0	2 4 0	1 0 0

Land in this tahsil is always in demand, and rarely remains fallow. The following rates appear to be justified by actual rents—

Class of soil.		CHAHIL.				DAHRI.				Barani.
		PERMANENT OF		Tempo- rary.	Average.	Present.	Former.	Barishi.	Average.	
		Masonry wells.	Others.							
		Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.
Chiknot	Circle-I ...	6 8 0	4 12 0	4 0 0	...	5 0 0	4 0 0	3 0 0	...	3 0 0
	" II ...	...	...	...	...	...	...	...	...	...
Mattiyar-I	" I ...	4 8 0	4 12 0	3 8 0	...	5 0 0	4 0 0	...	...	3 0 0
	" II ...	5 4 0	3 12 0	3 8 0	...	...	...	...	...	2 8 0
Mattiyar-II	" I ...	5 0 0	4 0 0	2 12 0	...	...	...	...	...	2 0 0
	" II ...	4 4 0	3 0 0	2 8 0	...	...	...	...	...	1 14 0
Bhur-I	" I ...	...	3 12 0	2 0 0	...	...	...	...	...	1 4 0
	" II ...	4 4 0	3 0 0	2 0 0	...	...	...	...	...	1 4 0
Bhur-II	" I ...	4 4 0	...	1 8 0	...	...	...	...	...	1 0 0
	" II ...	...	...	...	...	...	...	...	...	...
Average	Circle-I ...	6 7 8	4 11 3	3 6 11	5 7 0	5 0 0	4 0 0	3 0 0	4 13 0	2 13 5
	" II ...	5 3 3	3 11 5	2 11 0	3 14 7	...	...	...	...	2 4 5
	Circle-I and II.	6 0 0	4 2 7	3 0 10	4 12 9	...	...	...	...	2 8 11

The net assets arrived at by these rents rates come to Rs. 1,26,518 as compared with Rs. 1,17,934 by the Khatauni rents of 1896-97, and the State share by this standard to Rs. 84,346.

As compared with the Khatauni rents which are less unreliable here than in other tahsils, the *chahi* and *dahri* rents now assumed are somewhat higher, and the barani rents lower in Circle I and higher in Circle II, but all round the difference in this tahsil—about 7 per cent.—between the two sets of rent rates is not considerable.

The cash rent estimate is however very much lower than that based on the produce, estimate, *viz.*, Rs. 1,05,480.

114. In Lachmangarh the Khatauni rents work out very low, partly because here, as elsewhere, they were not correctly stated, partly because owing to paucity of hands there is little competition for land and rents are consequently low in comparison with other tahsils; lower in fact than the difference in soil, rainfall, etc., would seem to justify. There was also more difficulty here in getting data for estimating the true competitive rent. There are many jagir villages but the Thakur Jagirdars were reluctant to produce their accounts, and their records too were inaccurate. We have therefore to fall back upon the specially verified rents of specimen villages which yield the following results.

Chiknot chahi, cash rents in 11 selected estates vary from Rs. 2-15-0 in Harsana to Rs. 6 in Laili; *Mattiyar I chahi*, in 16 estates the rent runs from Rs. 2-2-0 in Jarla to Rs. 6-14-0 in Baroda Meo.

Chiknot dahri in 3 estates averaged Rs. 2-0-0, Rs. 2-3-0 and Rs. 2-12-6 respectively; *Mattiyar dahri* the same, and up to Rs. 2-15-0 in Bichgaun.

Chiknot barani in three villages has an average of slightly over Rs. 2-0, and *Mattiyar* in 15 estates varied from Re. 1-4-0 in Gaunri to Rs. 3-8-0 in Saidka. *Bhur I* in 8 villages averages from Re. 1-0-0 to 1-12-0 and *Bhur II* about Re. 1-0-0.

*In the mafi estate of Napa Para the average rent for *Mattiyar I chahi* (161 bighas) is Rs. 5-6-6, while the barani land was let as low as one rupee per bigah.

The rent rates finally fixed upon as representing the average letting value of each class of soil were—

Kind of land.	CHAHIL.				DAHRI.			Barabli.	Average.	Barani.
	PERMANENT CHAHIL OF		Tempo- rary.	Average.	Present.	Nahri.	Former.			
	Masonry wells.	Others.								
Rs. A.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
Chiknot ...	4 12 0	3 12 0	3 6 0	...	3 8 0	2 12 0	2 12 0	3 4 0	...	3 0 0
Mattiyar—I ...	5 0 0	4 0 0	3 4 0	...	...	...	...	...	...	3 0 0
“ II ...	4 4 0	3 4 0	2 0 0	...	...	...	...	...	...	1 6 0
Bhur—I ...	4 0 0	3 0 0	1 14 0	...	...	...	...	...	...	1 2 0
“ II ...	3 8 0	...	...	...	...	...	...	...	...	0 12 0
Average ...	4 13 6	3 12 10	3 5 1	4 0 1	3 8 0	2 12 0	2 12 0	3 4 0	3 13 7	1 10 8

A separate rate has been fixed for the *nahri* area attached to the Ghât canal. As it pays Re. 1-0-0 per bigah per watering, the rate must of course be below that for present *dahri* in which the water charge is included in the assessment. The rent rate fixed Rs. 2-12-0 is therefore the same as for former *dahri*. Comparing the rates now assumed with the averages struck from the Khatauni rents, it will be seen that for all but the poorest class of barani—Bhur II—they are considerably higher.

Compared with the adjoining tahsils of Govindgarh and Ramgarh they are however very moderate, and they are I think justified by the rents of selected specimen villages, though the data available are not as full as might be desired. The net assets by the assumed rent rates came to Rs. 2,79,756 against Rs. 2,08,255 by the Khatauni and rents, and the State share by the standard to Rs. 1,86,504, which is fairly close to the net assets worked by kind rents Rs. 1,94,133.

115. In working out the net assets according to cash rents, I have left out of consideration the large proportion of the Lands held at owner's rates or free or at favourable rate. cultivated area (paragraph 105) ranging from 8·5 per cent. in Kishengarh to 32 per cent. in Govindgarh held at owner's rates, as well as the land held on still more favourable terms, *i.e.*, free of rent or at rents less than the village rates. Much of the land held at owner's rates is in the occupancy either (1) of shareholders cultivating one another's holdings, *e.g.*, where owners hold in several estates, as often happens in the Mewat, one owner makes over his land in the estate in which he is non-resident to a resident co-sharer, and *vice versa*, each paying only the revenue; or of (2) old tenants (Kashtkar Kadim) who either have rights of occupancy, or are allowed to go on cultivating as at settlement paying only the Government demand or of (3) tenants holding the inferior lands and paying for them at the same rate as owners do for the superior.

I think it may be assumed that as the feeling that the State takes only a two-thirds share of the rental gains ground, and the distinction between owner and tenant becomes more marked, the owners will, as they have done within the last 30 years in most Punjab districts, more and more assert their claims to receive a profit rent from all but occupancy or specially privileged tenants such as village menials holding on favourable terms in return for their services.

This tendency would no doubt have proceeded more rapidly since Major Powlett's settlement, had it not been arrested by the famine of 1877-78, one result of which was to create a great competition for tenants to work the land, and to allow them to hold on lenient terms.

What Mr. Channing wrote 20 years ago of Gurgaon (page 71, Settlement Report) applies now almost exactly in Alwar.

“Hitherto the great majority of the tenants paying at cash rents have been holding at customary privileged rents, which had their origin in the days when land was plenty and cultivators were few (I would rather derive its origin from the time when the State absorbed all the profits of cultivation leaving no margin for the non-cultivating owner.)

During the last few years however and especially since the announcement of the new assessments, there has been a marked tendency on the part of the owners to insist on their right to receive larger rents."

I have little doubt that in Alwar the same results will follow, and indications of it are already appearing in the form of applications to eject tenants who refuse to pay an enhanced rent. Hitherto occupancy tenants in Alwar have rarely paid any *malikana* or profit rent to the owners over and above the Government demand. In deciding claims for occupancy rights, I have frequently, where they are now being established for the first time, directed that the occupancy tenants shall pay *malikana* at the rate of 1 to 3 annas per rupee. This is not a very heavy burden on the tenants compared with the increased security they will enjoy, while it makes the grant of such rights less obnoxious to the owners, and it marks the fact that the share of the produce taken by the State leaves a margin of profit to the non-cultivating owner.

Finally before leaving this question of rent, it has to be borne in mind that in these tahsils where there is a strong peasant proprietary, they naturally retain the most fertile and best cultivated lands in their own hands, and the tenant cultivation, from which the cash rents have been worked out, is often on the poorer soils.

CHAPTER VIII.

RATES OF PREVIOUS SETTLEMENT AND REASONS FOR INCREASING PRESENT DEMAND.

116. The total assessment and the incidence of previous settlements has been shown in paragraph 31. The incidence per cultivated bigah of the successive assessments is reproduced here, but the figures for the 3 and 10 years, settlements cannot be vouched for.

Tahsil.				INCIDENCE OF.												
				3 years' settle- ment 1809- 1861.			10 years' settle- ment 1802- 1872.			Summary settlement, 1872-1876.		Regular settle- ment, Final assessment.		1896-97.		
				Rs.	A.	P.	Rs.	A.	P.		Rs.	A.	P.	Rs.	A.	P.
Kishengarh	...	...	...	1	1	9	1	4	4	...	1	7	2	1	7	5
Ramgarh	...	...	...	2	5	1	2	8	10	...	1	14	4	1	14	6
Govindgarh	...	...	...	2	3	2	2	7	6	..	1	15	7	1	14	10
Lachmangarh	...	...	...	1	5	0	1	10	6	...	1	8	10	1	8	5

For the 3 years, 10 years and summary settlements no rates were worked out and even at last settlements, though rent rates were framed for each village, no general rates were framed for any tahsil except Govindgarh and these have been quoted in paragraph 113.

To arrive at the actual rates of last settlement I have taken from the assessment note books the area and net assets shown in each estate for each class of soil (according to the rent rates adopted), totalled these for each tahsil, so obtaining the net assets for the whole tahsil and for each class of soil, divided the total *nikasi* for each class of soil by the total area of that soil, to find the average *nikasi* or rent rate for that soil, and then comparing the total *nikasi* for the tahsil with the total assessment imposed (see paragraph 37) reduced the *rent* rates in the same proportion to ascertain the actual *revenue* rates for each class of soil. Thus if the average rent rate for *chahi chiknot* was Rs. 5, and the share of the *nikasi* taken in the whole tahsil was 75 per cent., the revenue rate for *chahi chiknot* is taken as $\frac{3}{4}$ of Rs. 5 or 3-12-0. The revenue rates thus deduced for each tahsil are shown in the following table. The average incidence differs slightly from that shown in paragraph 37 owing to transfer of estates, etc.