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D. (Punjab)

PUNJAB VILLAGE SURVEYS.—NO. 1.

(General Editor: W. H. MYLES M.A).

GAGGAR BHANA

IN

AMRITSAR DISTRICT.

PUNJAB VILLAGE SURVEYS—(*Forthcoming*).

GIJHI in Rohtak District. (*In Press*).

TEHONG in Jullundur District. (*In Press*).

CHANGA BANGIAL in Rawalpindi District. (*In preparation*).

DALOWALI in Sialkote District. (*In preparation*).

KALA GADDI THAMAN in Lyallpur District. (*In preparation*).

DURANA LANGANA in Multan District. (*In preparation*).

JAMALPUR SHEIKHAN in Hissar District. (*In preparation*).

GAJJU CHAK in Gujranwala District. (*In preparation*).

BHADAS in Gurgaon District. (*In preparation*).

MUKHIAL in Jhelum District. (*In preparation*).

The Board of Economic Inquiry, Punjab.

PUNJAB VILLAGE SURVEYS.—1.

[General Editor: W. H. MYLES, M.A.].

AN ECONOMIC SURVEY

OF

GAGGAR BHANA,

A VILLAGE IN THE AMRITSAR DISTRICT

OF THE

PUNJAB.

INQUIRY

CONDUCTED BY

S. GIAN SINGH, B. Sc. (Agri.),

UNDER THE SUPERVISION OF

C. M. KING, C.S.I., C.I.E., I.C.S.,

Financial Commissioner, Punjab.

The Board of Economic Inquiry, Punjab, does not hold itself responsible for any opinions expressed or conclusions reached by the writers.]

1928.

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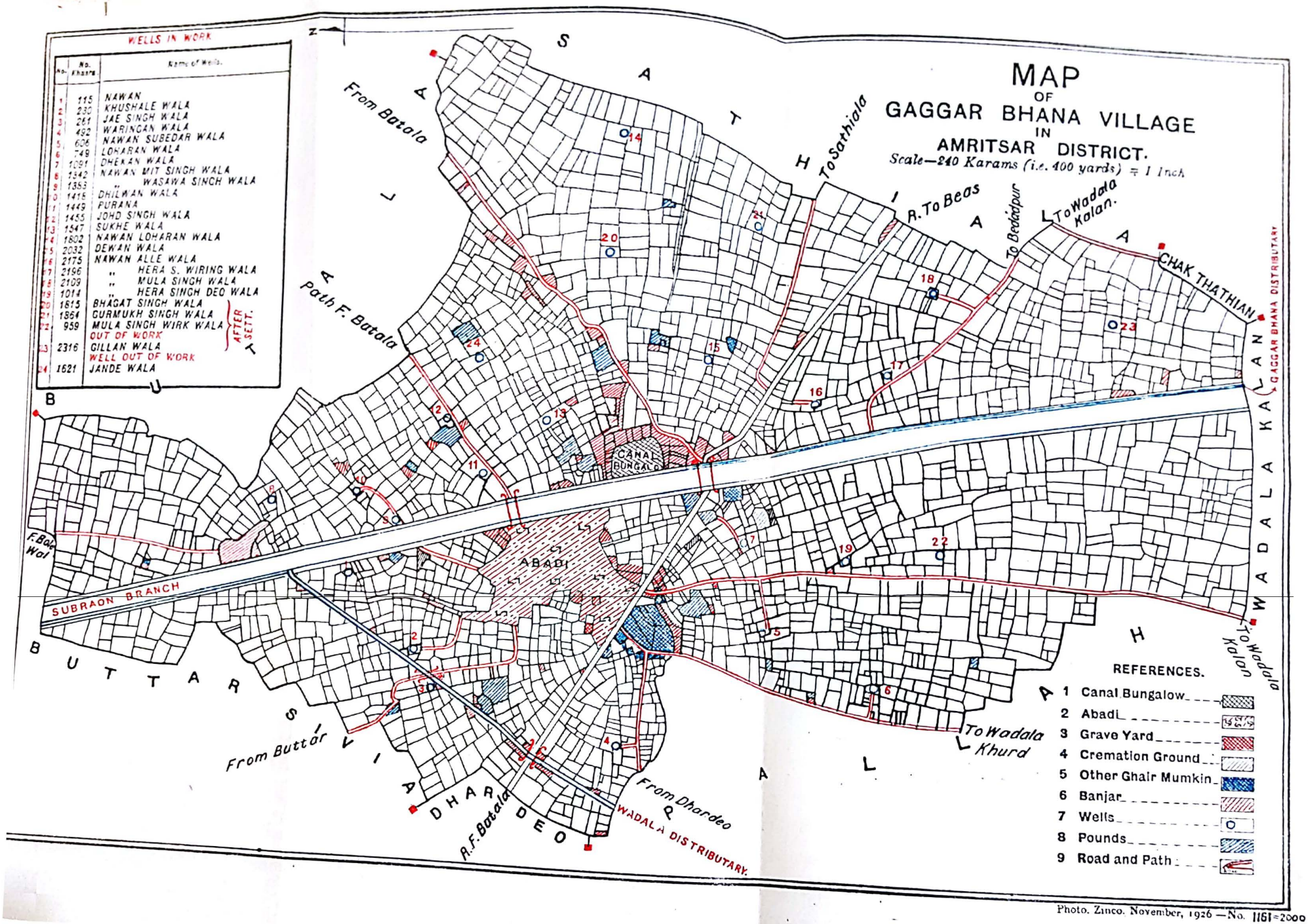


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PREFACE.

This is one of a series of inquiries made under the auspices of the Board of Economic Inquiry, Punjab, (Rural Section). The village of Gaggar Bhana was selected by me as being a typical *Jat* Sikh village of the central part of the Province. I had previously been Deputy Commissioner of the Amritsar District in which Gaggar Bhana is situated, and consequently had some aquaintance with local conditions.

The Investigator, Sardar Gian Singh, B.Sc. (Agriculture) is a Graduate of the Punjab University and received his training at the Lyallpur Agricultural College. He was selected for the appointment of Investigator by a Committee of three members of the Board of Economic Inquiry (Rural Section) and his appointment was intended to last for one year. Owing however to the fact that certain orders were misunderstood and to the delay due to my being on leave in England, Sardar Gian Singh's term of inquiry was extended by about 3 months. Sardar Gian Singh, although trained in agriculture, had not a very good knowledge of English, and as a consequence the whole of his report on Gaggar Bhana has had to be rewritten by me. For most of the actual facts ascertained on the spot Sardar Gian Singh must be held responsible, with the exception of the facts given in Chapter VIII. On going through this chapter as originally drafted by Sardar Gian Singh, I found some serious mistakes due not always to Sardar Gian Singh but sometimes to errors in the Village Note Book. These have had to be corrected by me and as a consequence the responsibility for the facts in Chapter VIII must be laid on me and not on Sardar Gian Singh.

In framing the report on the Inquiry an endeavour has been made to keep as closely as possible to the terms of the Questionnaire. It will be found that the numbers of the paragraphs of each chapter of the report are answers to the questions with corresponding numbers in the Questionnaire, which has been given as an appendix at the end of the book.

I take this opportunity to thank Professor W. H. Myles of the Punjab University, the Honorary Secretary of the Board of Economic Inquiry (Rural Section), for the great care with which he has scrutinized the type-script of the Report and for his assistance in correcting the many errors (not all of which were clerical) his scrutiny brought to light. I must also thank him for the time and labour he has spent in seeing the report through the Press.

10*th August*, 1926. C. M. KING.

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CHAPTER I.

GENERAL.

The village of Gaggar Bhana is situated in the Amritsar *tahsil* of the Amritsar District close to its eastern border. It lies at a distance of about 25 miles east of the famous Sikh city of Amritsar. On a clear day a good view can be obtained from the village of the snowy range of the Himalayas to the north. The nearest railway station is Butari, some 7 miles distant on the main railway line from Delhi to Lahore. The village site is adjacent to the Subraon Branch of the Upper Bari Doab Canal. This branch separates from the Kasur Branch of the main canal at Sathiali in the Gurdaspur District and discharges nearly 1,000 cusecs during the summer months. It was dug between the years 1870 and 1877. On the canal bank almost opposite the village site there is a Canal Rest House. Unmetalled roads run along both sides of the Branch northwards and southwards ; in the latter direction they join the metalled Grand Trunk Road at a distance of some 5 miles from the village site. An unmetalled road from the town of Batala in the Gurdaspur District to the large village of Beas, which is close to the banks of the river of that name, also passes by the village. Besides these main communications there are village paths leading to surrounding villages. The largest and the most important of these are Sathiala and Butala to the east and Wadala Kalan to the south. I. 1.*

The earliest revenue records of the village made by the British Government in 1851 narrate that the village was founded about 400 years before that year in an area which was waste and jungle. The founders are said to have been two men, Gaggar, a *Jat* of the Jhander clan, and Bhana, a *Jat* of the Randhawa clan. These people are said to have come from the village of Laungowal and to have been helped to settle at this place by the Governors of that time. The village name is derived from these founders. For some reason which is not apparent, Gaggar got only one share while Bhana got two shares. Subsequently, Gaggar associated with himself one Sant, a *Jat* of the Deo clan, who came from the village of Mand in the Batala Pargana, Naurang, a *Jat* of the Waring clan, who came from Kot Rai in the Malwa tract, and Bahga, a *Jat* of the Virk clan, who came from Chuharkhana, giving them a share of his rights in land. From the date of its foundation the village seems to have prospered. There is at any rate no record of its having been abandoned.

* The figures in the margin refer to corresponding numbers in the questionnaire used by the Investigator and reproduced at the end of the book as Appendix A.

I. 1. Near the present site there is a mound, which is the relic of a very old habitation. Next to this mound there are also the remains of a moat and mud walls. These fortifications must have been erected and used in Sikh times when the village was included in the Ramgarhia *misal* of Batala, while Sathiala and Butala to the east were in the Ahluwalia *misal* of Kapurthala. The village must have been subjected to considerable disturbances during the dissensions, which took place between these *misals*.

Some of the descendants of Gaggar appear to have been converted to Islam and to have taken up the occupation of astrology combined with mendicancy. Almost all these are said to have refused to be responsible for the land revenue at the time of the Summary Settlement, and as a consequence their share of the land, after first being taken up by the Waring headman, was subsequently treated as the common property of the village and was later divided up among the shareholders. There is only a small share now held by *Jhanders*, who retained their land: four of these are Muslims and three Sikhs. The Muslim descendants of the expropriated *Jhanders* live in the village and are known as *Jogi-Rawals*. They wander over the country practising their profession of astrologers, and begging, and they remit considerable sums in cash to their home village.

The village consists of mud built houses with flat roofs. Occasionally one of the more wealthy peasants has had a room or verandah inside the outer court-yard of his house built of burnt bricks. The inner houses of the village are mostly owned and occupied by peasant proprietors of the village lands, while the outer houses belong to labourers, menials and artisans, or are the bullock sheds of the landowners. Round the village are large heaps of farmyard manure, each cultivator having his heap carefully separated from those belonging to others. Near the village are two or three ponds filled with muddy water. These are used by village washermen, and from the banks clay is excavated for repairing houses.

To a stranger the most striking points about the village are common to almost all the Punjab villages—the complete absence of glass from all the houses, and the very insanitary surroundings. There are no windows to the living rooms, and such light and air as penetrate into them come through the doors, which are kept closed in extreme heat and extreme cold, and frequently at other times also to keep out the flies which swarm everywhere. The rooms themselves are small, and would be intolerably airless, if they were much occupied. Fortunately, however, the climate permits the people to spend most of the time in the open air, so that they are saved from the dangers of asphyxiation. For sick persons and infants, however,

conditions could hardly be worse. Every possible circumstance seems to be present to hinder recovery or to shorten life. If the patient is suffering from wounds, the chances of septic poisoning are very great. For a woman recovering from childbirth, the chances of her getting puerperal fever must be much greater than they are even in Indian cities, and they are great enough there. In the circumstances it is not to be wondered at that the mortality among women is much higher than it is among men, or that the mortality among children under one year can only be described as appalling. The desire of the young married pair is to have a male child. A child is born, and, even if it is a male, its chances of surviving the first year are only three to one ; it dies and the woman has to suffer the pangs of maternity a second and a third and a fourth time. Each time the results may be equally disappointing, and each time the woman has to run dreadful risks. There is a vicious circle of events. The insanitary conditions necessitate a heavy birth-rate, and the heavy birth-rate, owing to the risks run at each birth, causes a heavy death-rate among women. It must not be supposed that this state of affairs applies only to Gaggar Bhana. There is hardly a village of the Central Punjab of which this description is not true. I. 1.

The village area is about 3 miles long by 1 broad. It is divided down the centre lengthwise by the Subraon Branch, which can be distinguished at a distance owing to its thick avenues of *shisham* trees. Except for these, there are very few trees in the whole area. These are mostly clumps of *kikars* round the wells where they provide a scanty shade for cattle. There are also a few single trees, mostly wild plums in the fields, and some also on small areas of waste land. Near the village site and also on some of the wells there are a few *pipals*. The Subraon Branch is crossed by two bridges, one just above and the other below the village site.

The total area of the village is 1,644 acres made up as follows :—

		Acres.
(*a*) Cultivated area	.. ..	1,386
(*b*) Culturable waste	New waste ..	1
	Old waste ..	26
(*c*) Unculturable area	.. ..	231

Most of the old culturable waste consists of small depressions, where water stands too long to enable them to be cultivated. They yield a very small amount of indifferent grazing and for that reason are not classed as unculturable. 132 acres of the unculturable land consist of the Subraon Branch canal and the Wadala distributary, which has its head near the northern border of the village area. A portion is also attached to the Canal

I. 1. Rest House. 38 acres are occupied by the village site, 16 acres are under the District Board and other roads and 45 acres consist of the old village mound and the sites of the graveyard, cremation grounds and village paths.

The Subraon Branch has cut across the old waterways with the result that the village site is subject to floods in heavy rains. An outlet for these floods has been found by digging a small channel along the District Board road into the canal.

The soil is a rich loam free from harmful saline components. Below the first 8 or 9 inches there lies a depth of 3 to 4 feet of fine reddish clay. Beneath this there is a layer of clay with nodules of limestone (*kankar*), below which again there is fine sand changing to coarse sand down to the level of sub-soil water, which is now from 24 to 25 feet below the surface of the soil. The water-bearing stratum does not appear to have great depth. Below it is a very stiff clay known as *jillan*, which is quite impervious to water. Attempts to penetrate this stiff clay stratum with a tube have not been successful hitherto, probably because of the primitive means used. The surface of the soil is level, and well adapted to irrigation. The quality of the soil is homogeneous throughout the village area, productivity varying only according to the water and manure applied.

I. 2. 2. The following table shows the population of the village at different times. The figures for 1851 have been taken from the record of rights prepared about that time. The others are the census figures.

Population of the Village in different Years.

Year.	Total population.	Percentage of increase (+) or decrease (—) on the previous figures.
1851	991	..
1881	1,137	+ 15
1891	1,523	+ 35
1901	1,776	+ 17
1911	1,436	— 14
1921	1,468	+ 2

The fall in 1911 is due to plague which devastated this part of the country in the early years of the century. Later, at the end of 1918 influenza took a heavy toll of human life. This is the cause of the comparatively small increase in 1921. An inquiry into the actual numbers of the inhabitants was made in March 1925 in the course of the present investigation. The total number was found to be 1,795. Much of the increase since 1921 is due to the fact that the number includes some 231 persons who were believed to be only temporarily absent from the village. Persons absent for more than eight years were not included. I, 2.

The figures showing the distribution by sex and the main castes are given below for 1911 and 1921. Further details are not available for these years.

Distribution of Population by Sex and Caste in the last two Censuses.

Year.	Sikh Jats.		Hindus.		Mohammedans.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1911 ..	275	237	181	128	346	269	*802*	*634*
1921 ..	334	264	149	130	314	277	*797*	*671*

The figures of distribution by sex, age and caste were obtained as accurately as possible during the inquiry of March, 1925. There are also figures showing the distribution by sex, and roughly the distribution by sex, age and caste, which have been excerpted from the record of rights of 1851. These figures are given in the tables on the following two pages.

The striking fact about these four sets of figures is the great disproportion between the sexes. In 1851 the number of adult females was only 272 against 416 adult males, and among *Jats* there were actually more than twice as many males as females (121 to 59). In 1911 the total males were 802 against 634 females and in 1921 the figures were 797 to 671. In 1925 the adult males numbered 562 against 447 adult females. Female infanticide can have nothing to do with these figures. It is possible that the discrepancy is due to the dangers of childbirth, which must be abnormally great in the very insanitary houses which the peasants occupy.

Table showing the Distribution of Population by Sex, Age and Caste in March 1925.

Caste.	Males.							Females.							*Grand Total.*
	Below 5 years of age.	5 to 10 years of age.	10 to 15 years of age.	15 to 25 years of age.	25 to 55 years of age.	Over 55 years of age.	Total Males.	Below 5 years of age.	5 to 10 years of age.	10 to 15 years of age.	15 to 25 years of age.	25 to 55 years of age.	Over 55 years of age.	Total Females.	
Sikh Jats	43	32	33	48	84	28	268	34	24	20	43	59	12	192	*460*
Jhiwars	11	4	7	5	19	1	47	10	12	6	8	12	3	51	*98*
Carpenters	11	7	7	11	20	4	60	9	6	11	9	17	6	58	*118*
Other Hindus	15	12	15	8	22	6	78	7	7	4	9	16	5	48	*126*
Sweepers	40	22	17	14	47	16	156	35	22	4	28	28	4	121	*277*
Jogi-Rawals	15	13	9	25	37	5	104	13	6	13	18	28	5	83	*187*
Bharais	6	4	3	8	8	2	31	8	3	1	8	7	1	28	*59*
Mochis	9	12	6	19	21	7	74	11	9	7	19	14	3	63	*137*
Weavers and Barwalas ..	9	5	5	11	15	5	50	14	8	3	13	11	3	52	*102*
Telis (Oil-pressers) ..	4	6	2	7	7	1	27	7	2	3	7	4	2	25	*52*
Saqqas (Water-bearers) ..	6	5	4	4	3	2	24	2	2	..	3	5	1	13	*37*
Dhobis (Washermen) ..	..	1	2	3	2	1	9	1	1	..	3	2	..	7	*16*
Kumhars (Potters) ..	1	..	1	1	1	..	4	2	2	1	..	1	1	7	*11*
Sheikhs	4	4	2	4	4	1	19	4	3	..	5	5	..	17	*36*
Arains	4	4	3	7	6	1	25	1	1	2	6	3	2	15	*40*
Mirasis, Sansis and Faqirs ..	5	1	4	2	7	2	21	4	3	3	4	4	..	18	*39*
Total ..	*183*	*132*	*120*	*177*	*303*	*82*	*997*	*162*	*111*	*78*	*183*	*216*	*48*	*798*	*1,795*
Absentees	..	..	..	..	..	..	153	..	..	..	..	..	..	78	*231*
Total population in March 1925	..	..	..	..	..	..	***844***	..	..	..	..	..	..	***720***	***1,564***

Table showing the Distribution of Population by Sex and roughly by Age and Caste in 1851.

I. 2.

Communities.	Men.	Women.	Boys.	Girls.	Total.		*Grand Total.*
					Males.	Females.	
Jat	121	59	44	41	165	100	*265*
Jhiwars	17	13	8	5	25	18	*43*
Carpenters	28	24	14	7	42	31	*73*
Other Hindus ..	26	18	7	2	33	20	*53*
Sweepers	52	38	29	23	81	61	*142*
Total Hindus ..	*244*	*152*	*102*	*78*	*346*	*230*	*576*
Jogi-Rawals ..	70	40	27	9	97	49	*146*
Mochis	31	28	17	16	48	44	*92*
Chaukidars or Barwalas	9	4	5	3	14	7	*21*
Weavers	17	13	7	9	24	22	*46*
Mirasis	8	7	3	2	11	9	*20*
Saqqas	4	4	2	2	6	6	*12*
Dhobis	4	3	..	2	4	5	*9*
Arains	8	5	3	1	11	6	*17*
Telis	10	8	4	2	14	10	*24*
Faqirs, Sayeds and Sansis	11	8	6	3	17	11	*28*
Total Mohammedans ..	*172*	*120*	*74*	*49*	*246*	*169*	*415*
Total for the Village ..	***416***	***272***	***176***	***127***	***592***	***399***	***991***

L 2. Figures for births and deaths have been obtained from the birth and death registers for two years only, and are of little value statistically, but are at the same time remarkable. They are shown in the following tables :—

Table showing Births among Different Castes in the two Years from 1st April 1923 to 31st March 1925.

Communities.	1st April 1923 to 31st March 1924.			1st April 1924 to 31st March 1925.		
	Males.	Females.	Total.	Males.	Females.	Total.
Jat Sikhs	16	8	24	14	8	22
Other Sikhs ..	8	7	15	10	8	18
Hindus ..	..	1	1	2	..	2
Sweepers ..	8	7	15	4	9	13
Mohammedans ..	13	13	26	21	23	44
Total ..	*45*	*36*	*81*	*51*	*48*	*99*

Table showing Deaths among Different Castes in the two Years from 1st April 1923 to 31st March 1925.

Caste.	1st April 1923 to 31st March 1924.										1st April 1924 to 31st March 1925.									
	Below one year.		Below 5 years.		Below 50 years.		Above 50 years.		Total for the year.		Below one year.		Below 5 years.		Below 50 years.		Above 50 years.		Total for the year.	
M.=Male. F.=Female	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Jat Sikhs ..	3	3	..	1	..	..	1	..	4	4	6	1	..	..	2	3	4	5	12	9
Other Hindus ..	2	6	2	1	..	1	2	1	6	9	2	2	1	4	3	7	4	..	10	13
Mohammedans ..	3	2	2	..	5	1	..	1	10	4	5	9	5	2	3	2	2	3	15	16
Total ..	*8*	*11*	*4*	*2*	*5*	*2*	*3*	*2*	*20*	*17*	*13*	*12*	*6*	*6*	*8*	*12*	*10*	*8*	*37*	*38*
Total for the Year ..	*19*		*6*		*7*		*5*		*37*		*25*		*12*		*20*		*18*		*75*	

The birth-rate per mille of the population as ascertained in March, 1925 is 45 in 1923-24 and 55 in 1924-25. The birth-rate for British India is 40 per mille and for England and Wales 24 per mille.

The death-rate for the two years comes to under 21 and under 42 per mille compared with 30 per mille for British India and 14 per mille for England and Wales. The infant mortality shown by the figures is appalling. One hundred and eighty babies were born in the two years and forty-four children under one year of age died in the same two years. By sexes, 96 male children were born and 21 male children under one year died, 84 female children were born and 23 female children under one year died in these two years. The difference between the proportion of deaths to births for males and females is remarkable. I. 2.

Another remarkable fact for which there is no explanation is the disproportion of male and female births. One cause of the high mortality figures would appear to be the superstition and ignorance, which prevent the people from taking advantage of such medical facilities as there are. There is a District Board Dispensary with a Sub-Assistant Surgeon at Mehta about 5 miles away, and a private medical practitioner at Butala only two miles distant, but except for a medico-legal case, or possibly to obtain quinine for fever, these people are rarely consulted till it is too late. Recourse is had to the makers of charms, and to such drugs as the local *pansari* (grocer) can supply, his advice being followed as to the particular kind of drug likely to be useful. It is only when all these means have failed, and probably not till the patient is *in extremis* that real medical advice is sought; consequently the patient (not infrequently) is dead before the doctor can see him, or he can be taken to the doctor.

3. The tables on pages 10 and 11 give for each caste figures showing the marriage state at different ages. I. 3.

The marriage is by custom always preceded by betrothal, and formerly a betrothal was as binding as a marriage. It is said, however, that betrothals now are apt to be broken. The betrothal is followed by marriage, but this is a ceremony which does not ordinarily entail co-habitation. After marriage comes the *muklawa* when the bride visits her husband's home for the second time. Then comes the *tiroja* or third visit after which co-habitation takes place. The time, which elapses between each two of these ceremonies varies from weeks to months and sometimes years. It may be said that, as a general rule, actual wedlock does not take place till a girl is 17 or 18 years of age. By that time she has learnt the duties of a housewife, and can take her place in her husband's household.

Table showing Age and Civil State in Different Castes.

Caste.	MALES.									
	MARRIED.					WIDOWERS.				
	Under 10 years.	Under 15 years.	Under 20 years.	Over 20 years.	Total married.	Under 10 years.	Under 15 years.	Under 20 years.	Over 20 years.	Total widowers.
Sikh Jats	..	1	7	86	94	..	..	..	28	28
Jhiwars (Hindu water-bearers) ..	..	1	..	18	19	..	..	..	3	3
Tarkhans (Carpenters)	..	2	7	20	29	..	..	..	4	4
Other Hindus	..	1	4	19	24	..	..	..	5	5
Chuhras (Sweepers)	..	..	4	55	59	..	..	..	10	10
Jogi-Rawals	..	..	2	36	38	..	..	..	14	14
Bharais (Drum-beaters) ..	..	..	1	13	14	..	..	..	2	2
Mochis (Leather-workers) ..	..	..	10	25	35	..	..	..	6	6
Weavers and Barwalas ..	..	..	1	23	24	..	..	..	3	3
Telis (Oil-pressers)	..	..	1	12	13	..	..	..	2	2
Saqqas (Muslim water-bearers) ..	..	..	1	7	8	..	..	..	..	..
Dhobis (Washermen)	..	..	..	3	3	..	..	..	2	2
Kumhars (Potters)	..	..	..	1	1	..	..	..	..	..
Sheikhs	..	..	2	7	9	..	..	..	..	..
Arains	..	..	1	8	9	..	..	..	2	2
Mirasis, Faqirs and Sansis ..	..	1	..	7	8	..	..	..	1	1
Total ..	..	*6*	*41*	*340*	*387*	..	..	..	*82*	*82*

Table showing Age and Civil State in Different Castes.

Caste.	FEMALES.										Remarks.
	Married.					Widowed.					
	Under 10 years.	Under 15 years.	Under 20 years.	Over 20 years.	Total married.	Under 10 years.	Under 15 years.	Under 20 years.	Over 20 years.	Total widowers.	
Sikh Jats	..	10	24	68	102	..	..	..	22	22	Married daughters 7, one man has 2 wives, widow daughters 3.
Jhiwars (Hindu water-bearers)	..	1	4	14	19	..	..	..	5	5	1 widow daughter.
Tarkhans (Carpenters) ..	1	8	3	20	32	..	..	..	9	9	Married daughters 3, widow daughters 2.
Other Hindus	..	2	8	14	24	..	..	..	8	8	1 widow daughter.
Chuhras (Sweepers) ..	..	..	13	46	59	..	..	..	1	1	
Jogi-Rawals	..	5	12	23	40	..	..	..	14	14	2 married daughters, 1 widow daughter.
Bharais (Drum-beaters) ..	..	..	7	7	14	..	..	..	2	2	
Mochis (Leather-workers) ..	..	3	13	20	36	..	..	..	3	3	1 married daughter.
Weavers and Barwalas ..	..	1	6	17	24	..	..	..	3	3	
Telis (Oil-pressers) ..	..	1	5	8	14	..	..	..	..	..	1 married daughter.
Saqqas (Muslim water-bearers)	..	1	1	6	8	..	..	..	..	..	
Dhobis (Washermen) ..	..	..	2	1	3	..	..	..	2	2	
Kumhars (Potters) ..	..	1	..	1	2	..	..	..	1	1	1 married daughter.
Sheikhs	..	..	4	5	9	..	..	..	1	1	
Arains	..	..	4	5	9	..	..	..	2	2	
Mirasis, Faqirs and Sansis ..	..	1	2	5	8	..	..	..	1	1	
Total ..	*1*	*34*	*108*	*260*	*403*	..	..	..	*74*	*74*	

I. 4. 4. The following table shows the number of persons and the number of families for each caste :—

Communities.	No. of Families.	Percentage of (2) on total No. of Families of the Village.	Total Population.	Percentage of (4) on total Population of the Village.	Average No. of Members per Family.
1	2	3	4	5	6
Jats (Sikh)	86	23·5	460	25·6	5·3
Jhiwars	24	6·6	98	5·5	4·0
Barbers	3	·8	22	1·2	7·3
Kumhars (Hindu) ..	1	·3	3	·2	3·0
Chhimbas (Hindu) ..	3	·8	11	·6	3·7
Brahmans	10	2·7	52	3·0	5·2
Khatris and Goldsmiths ..	6	1·6	38	2·1	6·3
Tarkhans	23	6·3	118	6·6	5·1
Chuhras	58	15·8	277	15·4	4·8
Jogi-Rawals	49	13·3	187	10·4	3·8
Bharais	11	3·0	59	3·3	5·4
Mirasis	4	1·1	29	1·6	7·2
Faqirs	2	·5	7	·4	3·5
Sansis	1	·3	3	·2	3·0
Mochis	29	7·9	137	7·6	4·7
Weavers and Barwalas ..	19	5·2	102	5·7	5·4
Telis	10	2·7	52	2·9	5·2
Dhobis	5	1·3	16	·9	3·2
Saqqas	6	1·6	37	2·1	6·1
Kumhars (Muslim) ..	2	·5	11	·6	5·5
Sheikhs	8	2·2	36	2·0	4·5
Arains	6	1·6	40	2·2	6·7
Total ..	*366*	..	*1,795*	..	*4·9*

By family is meant all persons of one household who have a common kitchen. Thus a household consisting of a grandfather with two married sons, their wives and one grandson would be reckoned as a single family, if they had a common kitchen. The average size of a family is about 5 persons. The difference in size of the families of the important castes is not great. I. 4.

5. The predominating landowning tribe are the *Jats*. Small areas have been acquired by *Tarkhans* and *Jogi-Rawals*, but their connection with agriculture is weak. The *Tarkhans* earn much money in the railway workshops and other places away from the village, and the *Jogi-Rawals* earn their living as astrologers and mendicants all over India. Not only are the *Jats* the principal landowners, but they are also almost the exclusive cultivators. If a *Jat* has not sufficient land of his own, he takes the land of another *Jat*, or of one of the *Tarkhans* or *Jogi-Rawals* on rent. The *Chuhras* are the field labourers of the village. The scavenging work is mainly done by their women, while the men hire themselves out either by the year, the month or the day to the land cultivators. The *Mochis* (leather-workers), *Julahas* (weavers), *Telis* (oil-pressers) and *Tarkhans* (carpenters) are the cottage industrialists. They supply the simple requirements of the villagers in their respective arts. Some of them, especially the *Tarkhans* leave the village for work elsewhere, often getting good pay and having an easier time than if they stayed at home. There is little now for the *Kumhar* (potter) to do. He provides a pipkin occasionally, or does a little carrying trade with the help of his donkeys, dealing chiefly in *gur*. At harvest time all castes except the sedentary *Khatris* and *Sheikhs* are called upon to help in reaping operations. Considering the size of the village it is astonishing that there should be only one family of professional money-lenders (*Khatris*). The principal traders are Muslim *Khojas* (*Sheikhs*). There are also a few of the usual petty village shopkeepers, who provide such of the common requirements of the people as cannot be produced by toil from the land—a trinket for a young bride, sugar for the more luxurious, some iron for ploughshares, finer cloth than the ordinary *khaddar* for wedding presents, some flour for those unlucky persons whose stock has run short and salt for every one. Such are the goods which enable these men to earn a middleman's profits and a somewhat precarious living. I. 5.

I. 5. (1). (a). In the following statements the exact position of every person in the village economy is precisely set forth :—

Statement showing the extent to which each Caste or Tribe is dependent upon Agriculture.

Caste or Tribe.	Number of (a) persons—(b) families						Total.	
	Wholly dependent on agriculture.		Partly dependent on agriculture.		Independent of agriculture.			
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Jats	364	63	92	20	4	3	*460*	*86*
Jhiwars (Hindu water-bearers) ..	..	..	13	3	85	21	*98*	*24*
Tarkhans (Carpenters) ..	8	1	104	20	6	2	*118*	*23*
Other Hindus	6	1	..	..	120	22	*126*	*23*
Chuhras (Sweepers)	97	19	153	31	27	8	*277*	*58*
Jogi-Rawals	..	..	17	6	170	43	*187*	*49*
Bharais (Drum-beaters) ..	..	..	..	..	59	11	*59*	*11*
Mochis (Leather-workers) ..	..	..	..	..	137	29	*137*	*29*
Weavers and Barwalas ..	..	..	..	..	102	19	*102*	*19*
Telis (Oil-pressers)	..	..	8	2	44	8	*52*	*10*
Dhobis (Washermen) ..	..	..	..	..	16	5	*16*	*5*
Kumhars (Potters)	..	..	..	..	11	2	*11*	*2*
Saqqas (Muslim water-bearers) ..	..	..	..	..	37	6	*37*	*6*
Sheikhs	..	..	..	..	36	8	*36*	*8*
Arains	25	4	15	2	..	..	*40*	*6*
Mirasis, Sansis and Faqirs ..	..	..	..	..	39	7	*39*	*7*
Total ..	*500*	*88*	*402*	*84*	*893*	*194*	*1,795*	*366*

Status with respect to Land.

I. 5. (1).(b).

Caste.	Number of persons who are						
	Rent receivers only (non-cultivating owners.)	Actual cultivating owners.	Rent payers only.	Labourers.	Dependents of persons enumerated in columns 2 to 4.	Others (including dependents.)	*Total.*
1	2	3	4	5	6	7	8
Jats ..	13	167	..	..	276	4	*460*
Jhiwars (water-bearers)	..	..	3	..	10	85	*98*
Tarkhans (Carpenters) ..	25	6	..	..	81	6	*118*
Other Hindus ..	..	..	3	..	3	120	*126*
Chuhras (Sweepers) ..	..	..	19	57	174	27	*277*
Jogi-Rawals ..	7	..	..	..	10	170	*187*
Bharais (Drum-beaters)	..	..	..	..	..	59	*59*
Mochis (Leather-workers)	..	..	..	..	..	137	*137*
Weavers and Barwalas ..	..	..	..	..	..	102	*102*
Telis (Oil-pressers) ..	..	..	4	..	4	44	*52*
Dhobis (Washermen) ..	..	..	..	..	..	16	*16*
Kumhars (Potters) ..	..	..	..	..	..	11	*11*
Saqqas (Water-bearers)	..	..	..	..	..	37	*37*
Sheikhs	..	..	..	..	..	36	*36*
Arains	5	8	4	..	23	..	*40*
Mirasis, Sansis and Faqirs ..	..	..	..	..	..	39	*39*
Total ..	*50*	*181*	*33*	*57*	*581*	*893*	*1,795*

Note.—Columns 2 to 5 contain numbers of active workers only. Column 6 contains numbers of dependents of workers shown in columns 2 to 5.
In column 7 dependents as well as active workers are included.

I.5. (2). (2) The number of (*a*) persons, (*b*) families, whose chief means of livelihood is a cottage industry :—

Caste.		(*a*).	(*b*).
(*i*) *Mochis* (shoemakers)	..	128	26
(*ii*) Weavers and *Barwalas*	..	97	18
Total	..	*225*	*44*

I.5.(3). (3) The number of (*a*) persons, (*b*) families, who do not follow any productive calling and live on charity, begging, religion, etc. :—

Caste.			(*a*).	(*b*).
Jogi-Rawals	..	..	163	43
Bharais	..	..	36	7
Mirasis, Sansis and *Faqirs*		..	32	6
Hindu Brahmans	..	..	6	3
Sikh *Sadhus*	..	..	1	1
Sweeper Brahmans	..	..	5	1
„ *Sadhus*	..	..	1	1
Total		..	*244*	*62*

NOTE.—The Jogi-Rawals do all their begging outside the village, and most of them are absent from the village for a large part of the year.

I.5. (4). (4) The number of (*a*) artisans, (*b*) families of artisans in the village, with details :—

Caste.		(*a*).	(*b*).
(*i*) Carpenters who have gone out for service		84	17
(*ii*) Carpenters resident in the village		26	5
Total	..	*110*	*22*

I.5. (5). (5) The number of (*a*) field labourers, (*b*) families of field labourers :—

Caste.		(*a*).	(*b*).
Chuhras (sweeper caste)	..	*191*	*41*

(6) The number of (*a*) persons, (*b*) families, whose principal means of livelihood is agriculture, but who depend upon other occupations, such as field labour, selling grass and wood, *gadda* hire, service, etc., to supplement their income from agriculture :— I.5.(6).

Caste.		(*a*).	(*b*).
Jat	.. ..	74	15
Sweeper	.. ..	8	1
	Total ..	*82*	*16*

(7) The number of (*a*) persons, (*b*) families, whose principal means of livelihood is any occupation other than agriculture, but who follow agriculture as a subsidiary calling :— I.5.(7).

Caste.		(*a*).	(*b*).
Teli	.. ..	8	2
Jogi	.. ..	6	1
Jhiwar	.. ..	13	3
	Total ..	*27*	*6*

(8) The number of persons who live outside the village for a large part of the year and who earn their livelihood in professions such as service :— I.5.(8).

Caste.	*Number.*	*Remarks.*
Jat ..	3	Gone to China. No news of them has been received for the past 4 or 5 years.
Jat ..	2	Gone to Coal Mines near Calcutta.
Jhiwar ..	18	Gone to Coal Mines near Calcutta.
Carpenter ..	24	In Railway Workshops.
Brahman ..	1	Gone to Coal Mines near Calcutta.
Sweeper ..	2	Lyallpur Canal Colony.
Bharai ..	5	In Railway Workshops.
Mochi ..	7	Gone to Coal Mines near Calcutta.
Saqqa ..	4	Gone to Coal Mines near Calcutta.
Teli ..	1	Lyallpur Canal Colony.
Arain ..	1	Gardener at Amritsar.
Mirasi ..	1	In Railway Workshops.
Total ..	*69*	

I.5.(9). (9) The number of pensioners and persons employed by the State or by Local Bodies :—

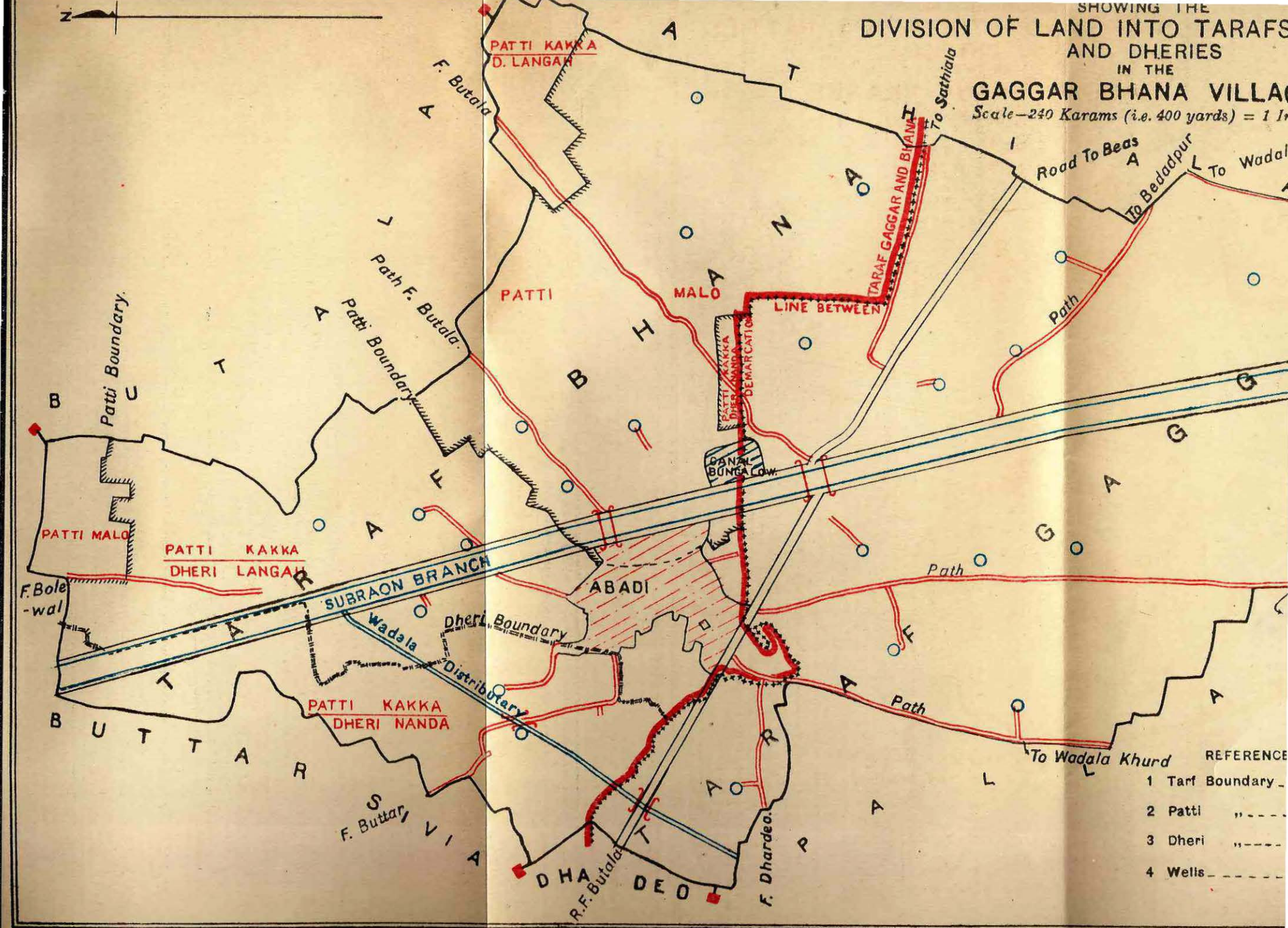
Caste.	Pensioners.	Military Servants.	Teachers.	Civil Servants.	Remarks.
Jats	10	2	..	..	
Jats	..	3	..	..	Military Police.
Jhiwars	..	..	..	1	Chaprasi in Canal Rest House, Gaggar Bhana.
Brahmans ..	..	..	2	1	Sub-Post Master.
				1	Head Constable in Police.
				1	Sanitary Inspector.
Mazhabis (Sikh Chuhras) ..	2	3	..	..	
Mirasis	1	..	1	1	Compounder.
				1	Clerk in a firm.
Saqqas	..	..	..	1	Tree planter on District Board road.
Mochis	1	..	..	2	Patwaris.
Weavers and Barwalas	1	..	1	1	Patwari.
				1	Constable in Police.
Arains	1	..	..	1	Constable in Police.
Chhimbas ..	1	..	..	..	
Bharais	1	..	..	..	
Total ..	*18**	*8*	*4*	*12†*	

* The 18 pensioners draw Rs. 2,469/- per annum in pensions, the amount drawn by the *Jats* being Rs. 1,333/- per annum.

†With the exception of one Brahman, one *Saqqa* and 2 weavers all the persons enumerated spend less than 2 months a year in the village.

I. 5. (10). (10) Number of (*a*) persons, (*b*) families, living on money-lending and trade :—

Occupation.	*Caste.*	(*a*).	(*b*).
(*i*) Money-lending ..	*Khatri* ..	6	1
(*ii*) Trade ..	*Khatri* (*Sud*) ..	5	1
	Goldsmith (*Sunar*)	25	4
	Brahman ..	15	3
	Jogi ..	12	2
	Sheikh ..	36	8
	Total ..	*99*	*19*


SHOWING THE
DIVISION OF LAND INTO TARAFS
AND DHERIES
IN THE
GAGGAR BHANA VILLA
Scale—240 Karams (i.e. 400 yards) = 1 I
PATTI KAKKA
D. LANGAH
F. Butala
To Sathiala
Road To Beas
To Bedadpur
To Wadal
TARAF GAGGAR AND BHANA
LINE BETWEEN
PATTI KAKKA DHERI NANDA DEMARCATION
PATTI MALO
Path F. Butala
Patti Boundary
Patti Boundary
Path
CANAL BUNGALOW
PATTI MALO
PATTI KAKKA
DHERI LANGAH
SUBRAON BRANCH
ABADI
F. Bole-wal
Dheri Boundary
Wadala Distributary
Path
PATTI KAKKA
DHERI NANDA
F. Buttar
To Wadala Khurd
R.F. Butala
F. Dhardeo.
REFERENCE
1 Tarf Boundary
2 Patti ,,
3 Dheri ,,
4 Wells
Photo. Zinco. Nov

6. It will be seen later on that agricultural operations of one kind or another leave the cultivator very little time in which to do anything else. If he has any spare time he uses it in doing necessary repairs to his house and cattle byres, or in altering or enlarging them. Once or twice a month he has to take his grain to the mill and drive his bullocks while it is ground. The very little leisure he has is spent in a jaunt with his family either to the *Gurdwara* of Guru Tegh Bahadur at Baba Bakala, which is about 5 miles away, or on rare occasions he may go to Amritsar. These visits are usually pleasure visits and the opportunity is taken to perform religious obligations and to do some shopping, especially when cloth is required for wedding presents. There is very little litigation in the village, so that it is not necessary to waste time in visits to the law courts. On a day of enforced leisure, when for example owing to heavy rain agricultural operations are impossible and the cultivator cannot move outside his house, he just lies about and gossips with his family or neighbours, taking rest against the time when he will have to work extra hard after the rain. There is very little drinking in this village. The few who have taken to drink have usually " gone to the bad," and lost their land. They are pointed out as awful examples. Some of the older men take rather too much opium, which makes them fuddled. These men are usually past work, and do nothing but sit about, and perhaps take food out to workers in the fields, bringing back small loads of fodder for the cattle on their return. The cultivators' women folk have quite sufficient to do to occupy their time fully. The wives have to prepare the meals for the whole family, and this in itself with a family of three or four demanding full rations takes up a considerable time. There is the bread to be kneaded and baked, the milk to be set for cream, the butter to be churned and subsequently converted into *ghi*, and frequently also the early meal (*lassi-wela* or *chhah-wela*) has to be taken out into the fields for the men folk. There are children requiring attention, and besides all these duties, which are " the daily round, the common task," there is cotton to be ginned, the ginned cotton to be taken to the *teli* to be teased, and the teased cotton to be spun into thread. If any leisure is left after all this work it is occupied in doing silk embroidery on rough cotton home spun cloth, which has been dyed locally. If her husband has any leisure, he may be induced to take his family to pay a visit to her father and mother. Very rarely on some special occasion the family may take a jaunt to Amritsar to enjoy the wonders of the *Darbar Sahib*, and to do a little shopping. The wife of the field labourer, who usually is of the sweeper caste, has a still harder time. Her first duties are to clean out the houses and cattle sheds of the landowners for whom her husband works, and then she has

I. 6.

I. 6. leisure to attend to her own household. She sometimes has less cooking to do than the *Jat's* wife, because part of the labourer's payment is *chapattis* (loaves of unleavened bread ready prepared), but she may have to prepare meals for herself and her children. She has to prepare the cow dung cakes, which are ordinarily used as household fuel, and much of her time appears to be taken up in the performance of duties, which are of a disgusting nature, but which must be done. The wives of the *jhiwars* and *saqqas* (water-bearers) are almost as hard-worked as the wives of the *chuhras* (sweepers), for they have to do much of the work of filling the pipkins of water, which are in every house. Compared with these, the wives of the traders and oil-pressers have an easy time, while the wives of the *Jogi-Rawals* may be said to live at almost luxurious ease, for they do no begging in the village and are to a great extent supported by money received from their men, who are frequently absent on begging expeditions and so have not to be waited on. Along the stream of these tasks there come the occasional obligations of birth, marriage, illness and death.

The day's work which begins before sunrise closes just before sunset. Then the bullocks trailing their ploughs are driven back to their sheds which adjoin and are frequently part of the family dwelling. After the cattle have been tended the evening meal is distributed by the house-wife and eaten by the whole household. On moonlight nights for a brief time after sunset the younger members of the community play games on what corresponds to the village green in England, which is here a perfectly bare piece of ground outside the village. Then all get to bed and are soon asleep with the heavy sleep of complete fatigue. As there is little done after dark the necessity for a good lamp is not felt. The old fashioned *chiragh* consisted of an earthenware saucer with a lip. This was filled with oil and a small piece of cotton placed in the lip to act as a wick. The *chiragh* is now rarely used. It has been displaced by a small tin box. A wick of roughly twisted cotton passes through a tin tube in the top of the box and draws the oil, which is petroleum, from the interior of the box. These lamps usually emit a black smoke and their light is only darkness visible. It suffices for the requirements of the household in the short interval between nightfall and bedtime. A few of those who are better off have the ordinary kerosene oil hurricane lanterns, but these lamps are not popular because the glass globe is breakable and considered to be expensive to replace. The village shopkeeper may be seen making out his accounts by the light of one of these lanterns, but as a rule he is the only person who sits up late, and he also is abed by 10 o'clock. Thereafter till the first glimmer of dawn when the village stirs again, there is complete quiet except for the challenge

of pariah dogs, which may burst into a chorus of all the dogs of the village on the near approach of any stranger who may be a thief. I. 6.

7. Normally the cultivator has two comparatively slack seasons; the first of these lasts for about six weeks from after the spring harvest has been reaped and garnered up to the break of the rains, that is to say, from about the middle of June to the end of July; the second comes after the wheat sowings about the middle of November and lasts to about the middle of January. Three families of *Jats* take advantage of these slack times to get a little money by plying their carts for hire, but most of the *Jats* use their leisure to visit their own or their wives' relatives in other villages. Sometimes they cart their cotton for sale to the market at Amritsar and do a little sight-seeing and shopping there. The only agricultural work that is obligatory during these slack periods is the tending of the cattle. That has to be done every day and some one must be kept to do it, if the husbandman and his family go away. Besides this necessary work, there is manure to be carted to the fields, fences to be put up and repaired, and during the second period cane to be crushed and its juice boiled into *gur*. There is also hemp to be retted out and made into ropes, and odd repairs to be done to the well and dwelling-house. It will thus be seen that although the time is called slack, there is really plenty to be done. For a man who has a holding sufficiently large to provide for himself and his family (as are most of the holdings in this village), a prolonged absence is likely to result in reduced production. If the season is abnormally dry, wells require to be worked as continuously as possible in the winter, and this must also be done if owing to any cause the canal is closed for a length of time in the summer. Happily the latter contingency is not of frequent occurrence. I. 7.

8. The village artisans and menials are those persons who in the past were entitled as a matter of right to certain shares of the produce of land. In return they had certain duties to perform for the benefit of the village community as a whole. The old custom regarding payment seems to be falling somewhat into disuse and the village menial is becoming more and more a person paid for each job that he does, instead of receiving an annual payment for all work, which he may be called upon to do. The principal village artisans and menials are the *Tarkhans* (carpenters), the *Jhiwars* (water-bearers), the *Kumhars* (potters), the *Chhimbas* (washermen), the *Mochis* (leather-workers), the *Nais* (barbers), the *Chuhras* (scavengers and field labourers), the Brahmans (priests), the *Mirasis* (singers or genealogists), and the *Sansis* (genealogists). There are also in the village persons I. 8.

I. 8. necessary for the economy of the village, who are paid by the job and not annually : such are the *Julahas* and *Barwalas* (weavers), the *Telis* (oil-pressers), the *Darzis* (tailors, usually *Chhimbas* by caste), and the *Arains* (market gardeners). The *Kumhars* and the *Jhiwars* belong to both religions, Hindu and Muslim. The Muslim *Jhiwar* is known as *Saqqa*. There is only one set of barbers in the village. They are Hindus, but they work also for Muslims. Each of these artisans and menial castes will be dealt with in detail.

The *Tarkhan* (carpenter) is the most respectable as well as the most educated of the artisans or menial castes. There are 23 families of this caste resident in the village with a total number of 118 persons. 24 male members have emigrated from the village and obtained work outside, mostly in the Railway Workshops. Some of the men are also employed by the Attock Oil Company at Rawalpindi. The average earnings of these persons, who have work outside the village, is Rs. 60/- to Rs. 75/- per mensem. Their families still live in the village. Most of the *tarkhans* are also occupancy tenants of land in the village and some of them have acquired rights of ownership by purchase. One member of the caste has obtained a reward of 7½ squares of land (about 205 acres) in the Lyallpur Colony for military services. There are only 5 persons, heads of 5 families, who live in the village and do the work of village artisans. They work not only as carpenters but as blacksmiths, there being no distinct *lohar* (or blacksmith) caste in the village. The *tarkhans*, who are village artisans, own flour mills, which can be worked by bullock power, which they hire out to persons at a fee of one seer per maund of grain ground, the hirer providing his own bullocks to work the machine. One of them also has a machine for repairing the rollers of a cane-crushing machine. During the harvest season these village artisans go round the fields and sharpen the sickles of the reapers. At all times of the year they have to be ready to repair ploughs and wooden well-gear and so forth. For these miscellaneous duties they receive the following payments. The *tarkhan* who acts as carpenter gets in the *kharif* (autumn harvest) 16 seers of maize per plough and also some portion, which is not specified, of other cereal crops grown. He also gets 2 seers of *guŕ* (sugar) per plough and the last picking of the cotton field. In *rabi* (spring harvest) he gets one bundle of wheat after it is cut per plough, 10 seers of wheat grain per plough and a quarter of a bundle of wheat for every time he visits the fields to repair agricultural implements and sharpen the teeth of sickles. The *tarkhan* who acts as blacksmith gets the same dues as the *tarkhan* who acts as carpenter.

Just as the *tarkhan* is the most respectable of the village artisans so the *Jhiwars* (or *Mehras*) are the most respectable of the village menials. Their duty is to supply water to Hindu families in the village and each *jhiwar* has allotted to him a certain number of families for whom to work. He is supposed to get 16 seers of maize for every vessel of water filled by him daily during the year. He also gets one *chapatti* (loaf of bread) daily from every family for whom he works. In the *rabi* harvest he gets a bundle of wheat from every family in addition to 16 seers of grain for every vessel of water filled daily. If he goes into the fields to supply water to the reapers he gets a quarter of a bundle of wheat daily. There are 24 families of *jhiwars* in the village numbering 98 persons. Most of the adult males have obtained work outside the village, chiefly in the Bengal Coal Mines where they work as fitters and earn from Rs. 50/- to Rs. 75/- per mensem. Their families remain in the village and the women carry on their husbands' work as village menials. One man has obtained work as a watchman at the canal rest house in the village and one man has established a little shop outside the village near the road where he sells sweet stuff. Besides his duties as water-bearer, the *jhiwar* has to perform certain duties as messenger on social occasions. In this respect his duties are similar to those of the *nai* (barber). For these duties he receives small cash payments of about one rupee each time. I. 8.

The *Saqqas* perform the same duties for Muslims as the *jhiwars* perform for Hindus and receive the same dues. There are 6 families of *saqqas* numbering 37 persons.

There is one family of Hindu *Kumhars* (potters) and two families of Muslim *Kumhars*. The *kumhar* used to be a very important village artisan, because he had to provide earthen pots, which were required for the Persian wheels employed to raise water from wells. Of late years iron buckets have replaced earthen pots and the work of the *kumhar* as a village *kamin* is no longer required. The people buy for cash such earthen pots as they require for domestic use. The *kumhar* is restricted to the carrying trade and earns his living chiefly by carrying *gur* for sale in distant villages. The Muslim *kumhars* still do a little potter's work in the village. But they sell their outturn of pots for cash or for definite payments of grain.

The *Nai* (barber) is the chiropodist as well as the hair-dresser of the village. He may on occasions even do a rough bit of surgery such as lancing a boil. He is a true menial and works both for Hindus and Muslims. The amount of his remuneration is not strictly definite in the *kharif*, but he is

I. 8. said to get a share of all produce. Besides the duties of chiropody and hair cutting, the barber shares with the *jhiwar* the duties of a messenger on ceremonial occasions. The *jhiwar*, however, is, as a rule, the messenger of good tidings, whereas the *nai* also takes news of deaths. Besides his takings at each harvest time the barber gets a fee of one rupee from each person to whom he is sent with news on social occasions. The number of barbers in this village being few these men are able to accumulate considerable savings and have in consequence acted as money-lenders, their clients being, as a rule, other village artisans and menials. Unfortunately, three members from one family died of plague during the year of the investigation. As these were the real managers of the funds and as the survivors are women and very young men, it is probable that their fortunes will diminish.

The Hindu *Chhimbas* (tailors) consist of 3 families numbering 11 persons. Members of one family numbering 6 do cultivation and entirely depend upon it, while the rest do tailoring work such as is required by the peasant and get paid for each article sewn. The *Dhobis* (washermen) are akin to the *chhimba* caste, but they are true village menials getting dues at harvest time and having to wash clothes for the villagers. There are 5 families of *dhobis* numbering 16 persons in the village. One of them also does tailoring.

The Brahman is the village priest. There are 10 families of Brahmans consisting of 52 persons. They do not get any very definite payments at harvest time, but they receive dues on the occasion of births, deaths and marriages and all other ceremonial occasions. In the past they have also received gifts of small plots of land. Of the Brahmans one is a head constable in the Police, one a sanitary inspector, two are teachers and one man acts as village broker. One man, strangely enough, has worked as a mason in the Central Provinces, but he is at present idle.

The *Mochi* (leather-worker) is a true village menial. He has to repair all old shoes and also the harness for the yokes of animals and such other leather work as may be required. He is sometimes given the skins of dead animals, which he tans and when this is done the owners of the skins are entitled to receive shoes from the *mochi* at a cheap rate of 8 annas per pair.

The *Chuhras* (sweeper), whose right it is to obtain the skins of dead animals, receive one rupee or one rupee eight annas in cash for skins, which are given over to the *mochi*. They are the field labourers of the village. Most of them are Sikhs, but they have a separate *Gurdwara* (Sikh temple) from the other Sikhs. There are 58 families of *chuhras*

numbering 277 persons. The *Chuhra* receives a fixed payment of grain for his work as a field labourer and he also gets food twice a day, the food given to him being exactly of the same kind as that supplied to the person for whom he works. The grain payments come to 10 maunds of grains of all kinds in the *kharif* (autumn harvest) and 16 maunds of grain in the *rabi* (spring harvest). The *Chuhra* also gets 4 seers of *gur* for every 24 hours of working on the cane-crushing machine and he also gets a pot of the liquid extracted from the sugarcane. The *Chuhra* women have to do the work of cleaning up the cattle sheds and making cow dung into pats of fuel. 27 families of *Chuhras* do nothing but this work of cleaning up bullock sheds. 9 families depend on land, which they have taken on rent. The males of three families hire themselves out for labour on the canal. It should be noted that the rural *Chuhra*, as a rule, has nothing to do with the removal of night soil, which is the principal occupation of the town *chuhra*. There is, of course, practically no night soil to be removed because there is no system of latrines in the village. When necessity arises the fields near the village are used, and if occasionally a person is too sick to go to the fields, the necessary duties of sanitation are performed by the women of the family as part of their ordinary duty of keeping the house clean and tidy. I. 8.

The *Julahas* or *Barwalas* (weavers) consist of 19 families numbering 102 persons. They all have the old fashioned hand loom in which the shuttle is thrown across the warp from hand to hand to form the woof. There are also four improved looms in which the shuttle is propelled by a simple mechanical contrivance across the warp threads. The breadth of cloth woven on this improved loom is about twice that of the old hand looms and one man can weave 10 or 12 yards of cloth daily in these new looms as against 8 yards in the old looms. The thread used in these new looms is machine-spun thread whereas that used in the old looms is spun by the village women by means of the ordinary hand spinning wheel. The *julaha* converts into cloth the thread which is given to him by the peasant, and he charges Rs. 3/- with 2 seers of wheat grain for every 40 yards woven. Two of the *julahas*, besides acting as weavers, deal in cattle. Three families of *julahas* also keep petty shops where they sell vegetables, fruit, tobacco, oil, etc. One of the *barwalas*, an old man, who is a military pensioner acts as the village *qazi*.

The *Telis* (oil-pressers) are village artisans. They do not receive dues at harvest time. They buy oil seeds from the peasants and sell oil, which

I. 8. they extract in their oil presses. They also do the work of cleaning the ginned cotton by teasing it. They get wheat grain equal in weight to the cotton, which they tease. There are 10 families of *Telis* numbering 52 persons.

The *Arains* (market gardeners) are mostly occupancy tenants and cultivate small plots of land. They are not classed as market gardeners, but they usually grow a greater proportion of pepper and vegetables than the ordinary cultivator. One of these *Arains* obtained the rank of *Subedar* in the Army and his widow gets a pension.

The *Mirasis* and *Sansis* are classed as village menials and get as much as they can at harvest time. They also get small fees on social occasions. The *mirasi* is usually the genealogist of the Muslim whose pedigree he chants and the *sansi* performs the same function for the Hindu. There is only one family of *sansis* in this village, the head of which is dead and the members of which depend entirely on begging. The *mirasis* on the other hand consisting of 4 families numbering 22 persons are better off and some of them have obtained service as teachers and clerks.

The *Bharais* are persons who beat the drums and act as musicians in the village. They are regarded as village menials, but they are really mendicants.

The *Jogi-Rawals* consist of 49 families numbering 187 persons. They have now nothing to do with village economy. There can be no doubt that they are almost all of them descended from the original *Jhander* owners of the village who at some time became Muslims and who later on adopted the practice of astrology and possibly necromancy. They earn their living by the practice of these arts in other parts of India and abroad and they remit considerable sums to their native village. They have a very bad reputation as cheats.

I. 9. 9. The *Chuhra* is the only regular field labourer of the village. His economic position in the village organization resembles that of the serf of mediæval Europe, though he is not *adscriptus glebæ*. For the most part he is bound down to hard and degrading duties and he has little scope for self advancement. There are signs, however, that the *chuhra* is holding out for better conditions. Some of them have taken to cultivation of land, some of them insist on receiving payment in cash for their duties, and a good many of them obtain work outside the village. As regards food the *chuhra* is almost as well off as the *Jat*. It is true that his bread may not

be as thickly buttered as that of the *Jat*, but on the other hand he eats a good deal more of it. The appetite of the *chuhra* is proverbial and he is always allowed to satisfy it to repletion. The *chuhras* have a right to dwelling places in the village and also the right to graze their animals throughout the village area, when the crops are off the field. As a rule all payments made to them are in kind, but when they perform certain extraneous duties, such as those of repairing the walls of a house, they (or female members of their families) receive small payments in cash. There are distinct signs that the *chuhras* are beginning to emigrate. They find they can get better terms in colony areas than at home. Comparatively few of them have enlisted in the army. This is somewhat surprising, because they seem to be men of good physique. Although the *chuhra* is the regular field labourer, paid as a rule in kind by the year by the farmer in whose service he is, the services of almost all castes are impressed at harvest time. The amount of work some of these casual labourers do is not very much, but they all expect to have something out of the harvest when it is reaped. In this connection it should be noted that the village artisans and menials who receive a share of the harvest for duties performed by them during the year, forfeit their right unless they are present to claim it when the produce of the harvest is divided. I. 9.

The following statement indicates the proportion of literates among the various castes of the village. The figures are for March 1925 :—

Community.	Children.	Boys.	Men.	Old men.	Total.	Females.	Percentage of community literate.
Jats ..	1	10	13	4	28	2	6·5
Kahars (Jhiwars) ..	2	3	5	1	11	..	11·2
Carpenters ..	2	13	20	1	36	..	30·5
Other Hindus ..	3	16	19	5	43	2	35·7
Sweepers ..	..	1	3	..	4	..	1·8
Jogi-Rawals ..	5	6	10	..	21	..	11·2
Bharais, Saqqas and Mirasis ..	1	4	3	..	8	..	6·3
Mochis and Weavers	2	5	9	1	17	..	7·1
Sheikhs and Arains	1	4	3	..	8	..	10·5
Total ..	*17*	*62*	*85*	*12*	*176*	*4*	*10·0*

I. 9. Besides these 1 *Jat* woman and 1 *Jat* girl can read Gurmukhi, and among Hindus 1 Brahman girl can read and write Hindi, while the widow of a *chhimba* (washerman caste) can also read and write Gurmukhi. A few Mohammedan girls know enough Arabic writing to read their religious books, but they are not able to write, and among Muslim males much the same conditions prevail. All these have been excluded from the table.

There is an aided primary school of old standing in this village. In 1925 it was transformed into a District Board School. The village children here learn little more than the alphabet and the rudiments of writing and arithmetic. For further study they go to Butala 3 miles distant, where there is an Anglo-Vernacular Middle School. There is also a Khalsa High School at Baba Bakala 5 miles distant to which some of the village boys resort. The highest standard of education attained by any one from this village hitherto has been that of the Matriculation of the Punjab University. No *Jat* boy has attained even that. There are various reasons why *Jat* boys lack education. The most important is that as soon as they are of school going age they are useful on the farm to graze cattle and their fathers employ them for this work as there is a lack of agricultural labour in the village. Another reason is that these *Jat* boys appear to be duller than those of other castes and yet another reason alleged is that schooling does not help the boy in the work of agriculture later on. As a whole the *Tarkhans* (carpenters) are the best educated. Two, who are Matriculates, have obtained good service in the Railway Department and are doing well at their profession in the Railway Workshops. It is noteworthy that carpenter boys return to their hereditary calling after receiving some schooling. In their case education is regarded as a distinct advantage in their profession. Brahmans, Goldsmiths, *Khatris* and Barbers also appear to be eager for education and many of these menial castes who have received even a moderate education have obtained respectable Government service. To a less extent these remarks apply also to boys of the *Mochi* (leather-worker), *Julaha* (weaver) and *Mirasi* (genealogist) castes. Among the lowest castes (the *Chuhras*) there are only 4 persons, who are in any sense literate. These know a little Punjabee, which they have learnt from the *Granthi* of the village *Gurdwara*. *Chuhra* boys are not permitted to sit in the school with other boys of the village, and consequently their opportunities of getting any kind of education are very few.

CHAPTER II.

CROPPING AND CULTIVATION.

The following table gives an abstract from the statement of the Village Note Book (*Milan Raqba*) for the years from 1900-01 to 1924-25 :— II. 1.

Year.	Total area.	Uncultivated Area.				Cultivated Area.				
		* Ghair Mumkin.	† Banjar Kadim.	‡ Banjar Jadid.	Total.	Chahi.	Nahri.	Barani.	Abi.	Total.
1900-01 ..	1,637	221	5	1	227	334	..	1,076	..	1,410
1901-02 ..	1,637	220	5	1	226	343	272	796	..	1,411
1902-03 ..	1,637	221	5	1	227	325	455	630	..	1,410
1903-04 ..	1,637	222	5	1	228	324	454	631	..	1,409
1904-05 to 1905-06 ..	1,637	222	6	3	231	324	453	629	..	1,406
1906-07 to 1909-10 ..	1,637	221	9	4	234	323	467	613	..	1,403
1910-11 ..	1,637	221	12	2	235	323	467	612	..	1,402
1911-12 to 1913-14 ..	1,644	230	13	8	251	228	542	608	15	1,393
1914-15 to 1917-18 ..	1,644	230	13	2	245	227	551	606	15	1,399
1918-19 to 1921-22 ..	1,644	230	22	12	264	202	591	585	2	1,380
1922-23 to 1924-25 ..	1,644	231	26	1	258	154	918	312	2	1,386

The increase in the total area of the village in 1911-12 (from 1,637 to 1,644 acres) is due to correction on re-measurement. Changes in area of the various classes of land are recorded only at the time of preparation of new editions of the " annual record " (*jamabandi*). These new editions have since 1906-07 ordinarily been prepared at intervals of four years. This is why no changes are shown in intervening years.

Of the area recorded as unculturable (*ghair mumkin*) 132 acres is under the Subraon Branch of the Upper Bari Doab canal and its distributaries, 16 acres are under roads and 38 acres under the village site. The remaining 45 acres comprise the graveyards and cremation grounds. Excluding these areas the culturable area of the village is 1,413 acres of which 1,386 acres are classed as cultivated, a part being under crops twice during the year. Most of the area classed as cultivated waste consists of small depressions where water lies and ordinarily prevents cultivation. There are also some small plots, which have fallen out of cultivation, because they are too small for the owners to trouble about them.

**Ghair Mumkin* includes all land which is not culturable, *i. e.*, waste occupied by canal, village site, roads, graveyards or cremation grounds.

†*Banjar Kadim*=culturable waste.

‡*Banjar Jadid*=land which has been fallow for four years.

II. 1. A noticeable feature is the rapid increase in the area classed as *nahri* (canal irrigated). Canal irrigation was first extended to this village in 1901-02 and now nearly two-thirds of the cultivated area is canal irrigated. The greater part of this was formerly unirrigated, but some land, which formerly received irrigation from wells and which still is commanded by, and occasionally receives irrigation from wells, has become canal irrigated. Under the rules for the classification of cultivated areas in this estate there is no *chahi-nahri* class. All land which has received canal irrigation once during the preceding 4 years is, by that fact, classed as canal irrigated and ceases to be classed either as well-irrigated or unirrigated as it may have been formerly.

II. 2. 2. In the table on the following page is shown the average area for each class of cultivation of each crop grown during the 5 years, 1920-21 to 1924-25.

The crops which occupy the largest areas are maize (6·1 per cent.), sugarcane (4·4 per cent.), cotton (13·9 per cent.), fodder, including *chari* (23·5 per cent.), wheat (24·9 per cent.), gram (4·1 per cent.) and *berra* (13·8 per cent.): this last is a mixture of wheat and gram.

II. 3. 3. The principal money-producing crops are sugarcane, cotton and wheat. Sugarcane used to be the main money-producing crop in autumn harvest, but its position in that respect has been taken by cotton. The average figures do not show fully the rise which has taken place in the cultivation of cotton. The actual areas under this crop in the years 1923, 1924 and 1925 respectively, were 232, 301 and 380 acres. The cotton grown is the short stapled Indian variety and not the American. The village along with other villages in this part of the country had at one time a great reputation for the sweetness of its sugarcane, but it is said that the quality of the cane has deteriorated since it has been irrigated by the canal.

A noticeable fact is the comparatively small amount of failed *nahri* crops in the spring harvest (3½ per cent.): one would have expected more than this, because these crops do not receive full irrigation from the canal. A possible explanation is that much of the more important wheat crop is within reach of wells, and canal irrigation is aided by wells when necessary. The failures under dry cultivation (*barani*) come to about 12 per cent. in the spring harvest and 27 per cent. in the autumn harvest. There is no doubt that *barani* cultivation in the autumn harvest is largely a gamble.

Statement showing Average Area for each class of Cultivation of each Crop grown during the 5 years, 1920-21 to 1924-25.

	Crops.	*Chahi.*	*Nahri.*	*Barani.*	Total.	Per cent. on annual cropped area.	Principal crops.
		Acres.	Acres.	Acres.	Acres.		
Kharif.	Rice	..	16·0	..	16·0	1·0	
	Maize	8·6	85·2	..	93·8	6·1	Maize.
	Other cereals ..	..	·2	·6	·8	..	
	Mash	·6	10·4	4·8	15·8	1·0	
	Til	1·0	13·0	25·4	39·4	2·6	
	Spices	·2	..	..	·2	..	
	Sugarcane ..	2·0	65·4	..	67·4	4·4	Sugarcane.
	Cotton	8·2	200·4	3·4	212·0	13·9	Cotton.
	Hemp	..	1·8	1·0	2·8	·2	
	Chari	1·0	83·6	45·0	129·6	8·5	Fodder.
	Other fodders ..	..	53·6	23·0	76·6	5·0	
	Total Cropped ..	*21·6*	*529·6*	*103·2*	*654·4*	*42·7*	
	Total Kharaba (failed)	*·2*	*10·2*	*39·0*	*49·4*	..	
	Total Sown ..	21·8	539·8	142·2	703·8	..	
	Percentage of *Kharaba* on Sown ..	1	2	27	7	..	
Rabi.	Wheat	169·0	157·8	53·6	380·4	24·9	Wheat.
	Barley	1·2	3·4	2·4	7·0	·5	
	Gram	·6	30·8	31·0	62·4	4·1	Gram.
	Berra	11·0	104·2	95·6	210·8	13·8	Berra.
	Other pulses or cereals	·4	3·4	1·4	5·2	·3	
	Linseed	·8	2·0	·8	3·6	·2	
	Rapeseed ..	1·2	1·2	2·6	5·0	·3	
	Toria	6·2	36·0	·8	43·0	2·8	
	Fodder crops ..	43·6	109·2	..	152·8	10·0	Fodder.
	Vegetables ..	3·2	2·6	..	5·8	·4	
	Tobacco	·2	·2	..	·4	..	
	Total Cropped ..	*237·4*	*450·8*	*188·2*	*876·4*	*57·3*	
	Total Kharaba (failed)	*2·2*	*16·4*	*26·8*	*45·4*	..	
	Total Sown ..	239·6	467·2	215·0	921·8	..	
	Percentage of *Kharaba* on Sown ..	1	3½	12	5	..	
Both Harvests.	*Total Cropped Area* ..	*259·0*	*980·4*	*291·4*	*1,530·8*	*100*	
	Total Kharaba ..	*2·4*	*26·6*	*65·8*	*94·8*	..	
	Total Sown ..	261·4	1,007·0	357·2	1,625·6	..	
	Percentage of *Kharaba* on Sown ..	1	2½	18	6	..	
	Percentage of Cropped on Cultivated Area of 1922-23 (1,386) ..	..	..	..	111	..	

II. 4. 4. The result of a close examination of 50 representative fields of different classes of soils suggests the following rotation of crops :—

	Kharif.	*Rabi.*	*Kharif.*	*Rabi.*	*Kharif.*	*Rabi.*	*Kharif.*	*Rabi.*
Unirrigated.								
(*a*)	Fodder.	Fallow.	Fallow.	Wheat.	Til.	Fallow.	Fodder.	Fallow.
Well and Canal Irrigated.								
(*b*)	Maize.	Senji.	Sugarcane.	Fallow.	Fallow.	Wheat.	Cotton.	Senji or Fallow.
(*c*)	Chari-Gowara.	Gram.	Fallow.	Wheat.	Maize & Mash.	Senji.	Cotton.	Senji.
(*d*)	Maize.	Fallow.	Cotton.	Fallow.	Fallow.	Toria.	Cotton.	Senji.
(*e*)	Fallow.	Wheat.	Cotton.	Senji.	Sugarcane.	Fallow.	Fallow.	Wheat.

Sugarcane takes a great deal out of the soil and occupies the land for a long time : it is usually followed by two fallows. Wheat also requires a well worked soil and is usually preceded by fallow. Cotton is ordinarily preceded or followed by fallow.

II. 5. 5. It has already been indicated that the cultivation of cotton has been greatly extended. The reason of this is attributable to the high prices obtainable for that crop. Sugarcane has increased very slightly. It is a far more troublesome crop than cotton and for this reason does not compete with it in popularity at present prices. A noticeable increase in recent years is that of *toria*, an oil-seed of the rape variety, which can be sown and reaped early. The actual area under this crop has risen from quite insignificant areas in the year 1918 to 48 acres in 1922 and to 90 acres in 1925. There have been some fluctuations, but on the whole, the crop seems to be establishing its importance.

II. 6. 6. The crops ordinarily manured are maize, sugarcane cotton and wheat. The advantages from a manurial point of view of leguminous crops are also fully appreciated. The only kind of manure used is farm-yard manure. This is carefully collected throughout the year till about May, being preserved in unsightly heaps immediately around the village site or near wells where cattle are tethered. In May it is carted to the field to be manured and there distributed in small heaps which are ploughed in later. Although the dung cakes, which were formerly almost the only form of fuel used, have been replaced largely by dry cotton plants and such branches of trees and dry leaves as can be obtained, still a great deal of what might be used as manure continues to be used as fuel. Dung cakes are slow burning and are required by housewives for the operation of simmering milk, and nothing has yet been found in rural areas to replace them satisfactorily. Besides this source of waste, much manure is also lost to the owner of the animals because their animals are allowed to wander over alien stubble picking up what grazing

they can get during the months from April to October. Even when the cattle are tethered in byres the full value of manure is not obtained, because it is stacked in the open and deteriorates under the hot sun, while not a little is blown away as a fine powder. The available manure from a yoke of animals and a single milch animal, which is what most peasants keep, is said not to exceed ten or twelve cartloads in a year. The amount of manure usually applied per acre is 15 to 20 cartloads. Maize and sugarcane are manured more heavily than cotton or wheat. For sugarcane manuring is done either immediately before the cane sets are placed in the ground, or just before the first blind hoeing, or if the cultivator has not time to do the first blind hoeing, he scatters manure over the crop just before the first watering and before the second hoeing. This direct manuring produces a luxuriant cane crop, but the quality of the cane is not as good as it would be in a rotation following on maize and *senji*, the former of which crops had been manured. Maize is manured in two ways—either before sowing in which case it is scattered over the soil immediately before the preliminary watering from the canal, or, if a heavy fall of rain has enabled the cultivator to dispense with the preliminary watering, the manure is scattered over the soil after sowing and immediately before the first watering from the canal. If cotton follows *toria*, the field is manured just before the seed is sown. If cotton follows wheat, it depends on the manure which was applied to the wheat. For wheat, the manure is carted to the field before the rains. It is scattered over the field after the preliminary watering and before sowing. II. 6.

7. The following calendar of work relates to a holding of 17·08 acres (15 fragments) owned by two men, who besides working whole time themselves employed a whole time field labourer. This man received a fixed wage in kind at each harvest. The owners of the holding maintained two yokes of plough animals, two milch buffaloes, and two calves :— II. 7.

Calendar month.	No. of men employed.	Nature of employment.	Average working hours per man at work.
Middle to end of June.	4	Carting manure and heaping it on the fields, 3 days ..	5
	2	Ploughing, 5 days ..	
	2	Irrigation from the canal watercourse, (sugarcane and fodder) 1 day ..	
	2	Grinding grain, fencing cotton, making dams after a little rain, 3 days ..	
	1	Feeding and attending cattle, 15 days ..	

(*Continued*).

(*Continued*).

II. 7.

Calendar month.	No. of men employed.	Nature of employment.	Average working hours per man at work.
Beginning to middle of July.	2	Irrigating from the canal water-course, 3 days ..	$4\frac{1}{2}$
	2	Ploughing and sowing maize, 12 days.	
	1	Cutting *moth* and *gowara* from cotton fields, collecting and chopping fodder, and feeding cattle, 16 days ..	
Middle to end of July.	3	Feeding the cattle, 15 days ..	2
		(Ploughing land and hoeing maize, if season permits) ..	
Beginning to middle of August.	2	Ploughing at intervals, 8 days ..	6
	10	Hoeing maize, 2 days ..	
	1	Feeding cattle, 15 days ..	
Middle to end of August.	2	Ploughing after the rains, 16 days ..	7
	1	Feeding the cattle, cutting *chari* and *gowara* and chopping fodder by hand, 16 days.	
Beginning to middle of September.	2	Ploughing, 3 days ..	9
		Sowing *toria*, 1 day ..	
	2	Working on well, 4 days ..	
		Irrigating from the canal water-course, 3 days ..	
	1	Feeding cattle, 15 days ..	
Middle to end of September.	2	Ploughing, 5 days ..	6
	2	Fencing cotton and sugarcane, 2 days ..	
	3	Digging a canal water channel and irrigating from the canal, 3 days ..	
	1	Feeding and attending the cattle, 15 days ..	
Beginning to middle of October.	2	Working on well, 1 day ..	7
		Irrigating from the canal water-course, 1 day ..	
	2	Ploughing and running *sohaga*, 10 days..	
	1	Feeding cattle, 15 days ...	
Middle to end of October.	2	Working on well, 1 day ..	$7\frac{1}{2}$
	2	Sowing wheat, 6 days ..	
	1	Feeding and attending cattle, 16 days ..	
Beginning to middle of November.	2	Ploughing and sowing wheat and gram after a little rain, 6 days ..	9
	1	Feeding and attending cattle, 15 days ...	

(*Continued*).

(Continued).

Calendar month.	No. of men employed.	Nature of employment.	Average working hours per man at work.
Middle of November to middle of December.	2	Irrigating *senji* and wheat sown early from well, 8 days ..	7
	1	Feeding and attending cattle, 30 days ..	
Middle of December to middle of January.	2	Working the well to irrigate *senji* and wheat, 10 days ..	7
	3	Cutting dry cotton plants, 5 days ..	
	3	Cutting and thrashing *toria*, 3 days ..	
	1	Feeding and attending the cattle, 31 days ..	
Middle of January to middle of March.	1	Working the well, 20 days ..	9½
	3	Pressing sugarcane and boiling the juice to make into *gur*, 8 days ..	
	2	Ploughing, 10 days ..	
	1	Feeding and attending cattle, 59 days ..	
Middle of March to middle of April.	2	Ploughing, 15 days Sowing sugarcane, 3 days ..	7
	3	Cutting and thrashing gram, 4 days ..	
	1	Feeding and attending cattle, 31 days ..	
	2	Irrigating from the canal water-course, 2 days ..	
Middle of April to end of April.	4	Reaping wheat, 12 days ..	10
	2	Irrigating from the canal water-course, 1 day ..	
	2	Sowing cotton, 3 days ..	
	1	Feeding and attending cattle, 15 days ..	
Beginning of May to middle of May.	2	Irrigating from the canal water-course, 2 days ..	7
	2	Ploughing and sowing of cotton, 2 days..	
	10	Hoeing sugarcane, 1 day ..	
	1	Feeding and attending cattle, 15 days ..	

(Continued).

(*Concluded*).

Calendar month.	No. of men employed.	Nature of employment.	Average working hours per man at work.
Middle of May to end of May.	3	Thrashing wheat, 8 days ..	10½
	2	Irrigating from the canal water-course, 2 days ..	
	2	Ploughing and sowing cotton, 2 days ..	
	3	Carting manure to sugarcane field, 1 day.	
	3	Carting manure to the field for sowing cotton, 1 day ..	
	3	Scattering manure over fields, 1 day ..	
	2	Cleaning water-course, 1 day .	
	1	Feeding and attending cattle, 16 days ..	
Beginning of June to middle of June.	3	Winnowing wheat, carrying *bhusa* and grains home, and stacking *bhusa*, 6 days.	7½
	3	Hoeing sugarcane, 1 day ..	
	2	Irrigating from the canal water-course, 2 days.	
	2	Sowing cotton and *chari*, 4 days ..	
	1	Fencing cotton, 1 day ..	
	1	Feeding and attending cattle, 15 days ..	

This calendar is the result of actual inquiry made from time to time. It is to be regretted that only one holding could be dealt with.

II. 8. 8. Maize, sugarcane, cotton and fodder crops are irrigated by canal water in the *kharif*. Only very small areas of cotton and maize are irrigated from wells. Occasionally when there is great need for water, cultivators work wells to supplement canal irrigation.

Toria is always sown after a first watering from the canal. A subsequent watering may sometimes be given from wells. *Senji* is grown on the moisture of a preceding crop such as cotton or *chari*. Subsequent waterings are always given from wells.

Wheat and *berra* are sometimes grown on lands which have received a preliminary watering from the canal: sometimes they are grown by well irrigation only. If the season is dry the preliminary canal watering has to be supplemented by well irrigation, and well irrigation must then also be given to the *senji* crop.

Table showing the important Crops with the number of Waterings given and probable Dates.

Crop.	No. of waterings.	Probable dates of waterings.
Maize ..	2 to 4 ..	About the end of July, middle of August, end of August and middle of September. When there are good and well distributed rains only one or two waterings are given in late August and middle of September. If maize is sown late and *senji* is sown with it as a catch crop, maize may also be given a watering in late September. Four waterings are considered to give the best results.
Sugarcane ..	12 to 14 ..	End of April, second and fourth week of May, weekly in June, fortnightly in July and August and every ten days in September. Waterings in the month of July and August depend upon rain. The last two waterings in September are hardly ever given, but they are said to be required to yield the best results.
Cotton ..	3 to 5 ..	Middle of June, middle of August, beginning and third week of September, beginning of October. Before the rains in June only those fields are irrigated which contain *gowara* and *moth* for fodder, and in October only those fields are watered in which *senji* is sown as a catch crop.
Chari-Gowara (fodder).	3 to 4 ..	Three times in June and in the first week of July. Early fodder is given no watering after the rains begin and fodder sown late is given no watering before the rains.
Toria ..	1 to 2 ..	Middle of September, second week of October. Sometimes only one watering is given from the well. But two give the best results.

(*Continued*).

(Concluded).

Crop.	No. of waterings.	Probable dates of waterings.
Wheat ..	3 to 4 ..	First week of January, middle of February beginning and middle of March. Late sown wheat is sometimes not given a watering in January. Four waterings are believed to give the best results.
Senji (fodder)	5 to 7 ..	First watering after a week and the subsequent watering after every 15 days.

N. B.—In this table the first watering before sowing any crop is not included.

II. 9. 9. The area of this village has been under the plough for nearly 5 centuries with the result that the surface of the cultivated area is everywhere quite level. All that remains to be done is to continue to preserve the levelled surface after ploughing. This is done by the use of rakes and also by the use of *sohaga* (clod crusher). Water used from wells is very carefully husbanded being applied to very small plots (*kiaris*). People are less careful about canal water, and if there has been rain, this is frequently allowed to run to waste. Moreover, it is applied to much larger plots at one time than well water with the result that far more canal water is used to irrigate a given area than would be required if the irrigation were from a well. Sometimes water which is supposed to be wasted is really applied to a field which has on it a practically matured crop in order to give irrigation to a catch crop also growing up in the field. This device is often used for *senji* following cotton or maize. In such cases, however, the *senji* must invariably be subsequently watered from a well.

II. 10. 10. The following table gives for each of the important crops the number of ploughings, which are considered necessary for good husbandry :—

Crop.	No. of ploughings.
Kharif Crops—	
Maize	6 to 8
Sugarcane..	10 ,, 12
Cotton	2 ,, 3
Sesamum (*til*)	2 ,, 3
Fodder—*chari* and *gowara* ..	2 ,, 4

II. 10.

Crop.	No. of ploughings.
Rabi Crops—	
Wheat	10 to 12
Barley	10 ,, 12
Gram	2 ,, 3
Berra (wheat and gram mixture)	8 ,, 10
Toria	5 ,, 6
Senji	Gets no special ploughing ; it is sown as a catch crop after cotton and maize.

11. Weeding and hoeing are regularly done for sugarcane and maize only. The work is usually entrusted to field labourers and as part of their payment they are allowed to take home the weeds which they have removed as fodder for their cattle. They are also given a morning meal with *gur* and butter-milk and a midday meal of *chapattis*. Occasionally daily labour (from 6 to 8 hands a day) is hired to do the weeding which is usually finished before midday. The cotton crop is rarely weeded or hoed. Sometimes a cultivator will go into his cotton field and remove the grass from it as fodder for his cattle. So also village menials are allowed to cut grass from cotton fields as fodder for their use. If the wheat field has been properly tilled, it ought not to have any weeds. Sometimes, however, the onion weed (*piazi*) plants are found in it and young boys are employed to do weeding. They are given some green fodder or young rape plants as payment. II. 11.

12. No improved implements have been introduced into this village. There are 2 kinds of ploughs, the *hal* and the *halar*. Neither of these ploughs very deeply and the furrow is not turned in the same way as it is by an English plough. Nevertheless frequent ploughing by either of these ploughs pulverises the soil in a way which is not done by the English plough and the results can be very successful. The outturn of a field of wheat is known to depend greatly on the number of ploughings which it receives, and the good cultivator endeavours to give his wheat fields as many ploughings as he can afford with the cattle power at his command. The old fashioned crusher of sugarcane which had wooden rollers has been entirely replaced by a machine made up of 3 steel rollers. This improvement is, however, of fairly long standing. A more modern improvement of great value is the replacement of the earthen pots on the Persian wheels by light II. 12.

II. 12. iron buckets. Not only is the efficiency of the apparatus increased by this means, but the frequent cleaning of the well, which was rendered necessary by its being blocked with the debris of broken pots is no longer necessary. One effect is that wells now tend to run dry, so that it is said that in many wells irrigation is possible with the new apparatus for 10 or 12 hours only.

II. 13. 13. The only selected varieties of seeds which have been used in this village are type No. 11 wheat and a thick sugarcane, which is locally called the farm variety. Some attempt has been made to grow the type of wheat known as type 8 A. This was apparently obtained by a man from some relative at Beas where there is a Demonstration Farm, but no progress has been made in extending the cultivation of this type of wheat.

The sugarcane was brought into the village some three years ago from a village 7 miles distant and it was found to produce a luxurious and abundant crop, the rate of yield being about double that of the local variety. It is said, however, that the *gur* (unrefined sugar) produced from its juice is inferior to that of the local variety. It is suggested that probably one reason for this inferiority is that the people do not know how to evaporate the juice. It takes longer to evaporate than the local variety by the present method and for this reason its sugar may deteriorate.

II. 14. 14. No improved methods of cultivation have so far been adopted. The people use the same ploughs and the same other implements that they have used for the past 500 years.

II. 15. 15. The nearest Demonstration Farm is at Beas about 9 miles away, but it does not appear that any demonstration has been made at or near this village. If any farmers have visited the Demonstration Farm at Beas they have not brought back any valuable ideas from it. The cultivators are hard-working, but it is probably difficult to move them in the direction of any new ideas. The great fragmentation of the holdings also probably has a retarding effect on development. This matter will be dealt with in the succeeding chapter.

II. 16. 16. The table on the next page shows the rainfall for each month for each of the past 10 years. The nearest rain-gauge is at Raya, 5 miles distant.

Table showing the Monthly Rainfall for the past Ten Years.

(Recorded at Raya Canal Rest House.)

Year.	Kharif.							Early Rabi.				Late Rabi.				*Total for the Year.*
	April	May	June	July	Augt.	Sept.	*Total.*	Oct.	Nov.	Dec.	*Total.*	Jan.	Feb.	March	*Total.*	
1915-16 ..	0·72	0·63	..	2·55	4·05	1·50	*9·45*	1·25	..	..	*1·25*	0·10	0·67	0·15	*0·92*	*11·62*
1916-17 ..	..	0·65	1·90	12·66	5·86	3·63	*24·70*	..	..	..	..	0·10	..	0·55	*0·65*	*25·35*
1917-18 ..	3·00	1·33	2·77	6·65	8·44	15·36	*37·55*	7·25	..	0·65	*7·90*	..	0·10	4·15	*4·25*	*49·70*
1918-19 ..	1·99	..	2·17	0·90	4·32	..	*9·38*	..	0·29	0·47	*0·76*	3·74	0·20	1·10	*5·04*	*15·18*
1919-20 ..	0·15	1·05	0·35	8·95	4·30	2·00	*16·80*	..	0·35	0·75	*1·10*	1·20	0·90	1·10	*3·20*	*21·10*
1920-21 ..	..	1·05	1·05	7·96	8·24	1·55	*19·85*	..	..	..	..	0·40	0·85	..	*1·25*	*21·10*
1921-22 ..	..	0·15	1·10	4·23	2·90	1·22	*9·60*	1·33	..	0·34	*1·67*	0·81	0·83	0·20	*1·84*	*13·11*
1922-23 ..	..	..	0·85	3·40	6·32	6·85	*17·42*	..	..	1·25	*1·25*	2·60	3·45	0·63	*6·68*	*25·35*
1923-24 ..	0·20	4·25	0·40	13·95	5·30	..	*24·10*	0·50	..	3·15	*3·65*	1·50	1·45	0·15	*3·10*	*30·85*
1924-25 ..	0·20	2·30	0·50	5·19	3·20	4·43	*15·82*	..	0·20	0·96	*1·16*	0·85	0·07	..	*0·92*	*17·90*

CHAPTER III.

IRRIGATION.

II. 1. 1. Gaggar Bhana receives its canal irrigation from 3 distributaries having their heads in the Subraon Branch of the Upper Bari Doab Canal. The distributaries and particulars of the area irrigated from the outlets on each are given in the table on the following page.

In calculating what is the culturable commanded area all land recorded as *chahi* in the revenue papers has been included for the Wadala and Gaggar Bhana distributaries, but it has been excluded on the Athwal distributary. The reason is that on the Wadala and Gaggar Bhana distributaries most of the commanded area is recorded as *chahi*, whereas on the Athwal distributary only a small portion of the commanded area is recorded as *chahi*. If the *chahi* area had been excluded on the Wadala and Gaggar Bhana distributaries very little would have been left. This accounts for what at first sight seems to be an unfair distribution. As a matter of fact, the *chahi* area within the Athwal *chaks* is so small that it would have made little difference to the result. Occupiers' rates were charged on the irrigated area shewn in the table.

A comparison of the figures of total irrigation with the figures of *nahri* crops in para. 2 of Chapter II will show that in every case the Canal Department figures are higher, and in some cases much higher than the figures of the revenue returns even including failed *nahri* areas. The reason is that the revenue harvest inspections are not made till the crop is maturing, and, as it frequently happens that the final waterings are made from wells at that time, the fact that a field has received canal irrigation previously is frequently overlooked.

The village is well situated and the irrigation from the canal is plentiful as will be seen from a comparison of the area actually irrigated for each harvest with the figures for permissible area.

III. 2. 2. All the irrigation is by flow. The outlets in the distributaries are rectangular iron boxes fitted in masonry. These are fixed in the bank of the distributary and open into the village watercourse. The people are unsophisticated, and it has not been necessary as yet to adopt the various devices for regulating the supply, which are necessary in the Punjab Colonies, where the cultivator has discovered that the flow in the watercourse can be increased by digging out the watercourse so as to make it draw better. There is not much silt in the water except occasionally after heavy rain. Most of the silt is not left in the distributary but finds its way into the watercourse where it is speedily deposited. This necessitates the periodical clearance, once or twice a year. The silt is heaped on either side of the watercourses, and makes the heads of these somewhat

Statement showing area irrigated by the Different Canal Distributaries in the Village.

Name of Distributary.	No. of Outlet.	Size of Outlet.	Area of irrigation allowed per cusec. Acres.	Culturable area commanded. Acres.	Percentage of commanded area permissible* in Kharif.	*Permissible area in Kharif. Acres.	Area actually irrigated in each harvest since Kharif 1920. K=Kharif. R=Rabi.											
							1920-21		1921-22		1922-23		1923-24		1924-25		1925-26	
							K.	R.	K.	R.	K.	R.	K.	R.	K.	R.	K.	R.
Wadala ..	R 4450	12″ × 6″	80	102	30 %	30	47	67	50	79	57	50	50	68	48	50	64	..
	L 8386	6″ × 3″	80	103	,,	31	39	49	36	54	51	47	27	48	42	45	49	..
	L 12477	6″ × 6″	80	402	,,	121	139	155	154	192	184	148	139	168	160	172	221	..
Athwal ..	R 21735	6″ × 6″	100	204	35 %	71	106	107	106	125	129	94	79	91	112	73	109	..
	R 33637	9″ × 6″	100	242	,,	85	64	62	81	51	99	40	48	62	85	82	91	..
Gaggar Bhana	L 975	9″ × 7″	90	216	35 %	72	116	113	126	122	122	127	111	112	139	145	135	..
Total ..	..	..	..	*1,269*	..	*410*	*511*	*553*	*553*	*623*	*642*	*506*	*454*	*549*	*586*	*567*	*669*	..

* Permissible area is the area for which water is allowed by the Canal Department. If cultivators habitually irrigate more than the permissible area, they are liable to have their quota of water reduced.

III. 2. prominent features on the plain surface of the village. When actual irrigation is taking place two men are employed. One turns the water on to the field actually being irrigated, while the other keeps patrolling the watercourse and strengthening its banks to prevent waste of water, and also to prevent other people from stealing it out of their turn. To each outlet there is allotted a definite area, which is carefully marked on the field map, but which is indistinguishable on the ground by any one not aware of it. Irrigation from an outlet of a field not in the area allotted to it is a canal offence, and punishable by the imposition of penal rates. Such illicit irrigation sometimes takes place. It is also a condition of irrigation that the field to be irrigated shall be divided into plots the area of each of which shall not exceed one *kanal* (a *kanal* is a little more than a tenth of an acre). This condition has usually not been observed, but orders have recently been issued to enforce it strictly in future. The penalty is the imposition of penal rates of irrigation.

III. 3. 3. Irrigation is received in the *kharif* harvest only. The canal closes late enough, however, to ensure a preliminary watering for *rabi* crops before sowing, and endeavours are made to give wheat a final watering before maturing. As a matter of fact this final watering has only been given on five or six occasions during the past 10 years and it is not consequently to be depended upon. Irrigation begins at the end of March or the beginning of April and ends in October.

III. 4. 4. The earliest date of opening was the 15th March in the year 1924, and the latest date of opening was the 1st May in the year 1918. The earliest date of closing was the 7th October in the year 1925, and the latest date of closing was the 6th November in the year 1918.

Ordinarily the distributaries run continuously throughout the summer months from the time of opening to the time of closure. It sometimes happens, however, that the water in the river runs short in September and as a consequence rotational running comes into force in that month. Whenever this happens there is of course much dissatisfaction.

The following table shows the total periods for which the branch was closed between the dates of its first opening and its closure each year during the past six years :—

Year.	No. of closures.	Total number of days during which canal remained closed.
1920	6	35
1921	6	33
1922	5	20
1923	8	63
1924	4	23
1925	7	38

5. The internal distribution of water is left to the cultivators and so far there have not been any complaints, even though some of the outlets are shared by villagers of Gaggar Bhana with adjoining villages, namely, Wadala, Chak Thathian, Buttar Sivia and Sathiala, a condition which might, and in some places frequently does, produce trouble between the villages sharing the outlet. The cycle of irrigation lasts for one week, and is divided up among the cultivators in proportion to the permissible area cultivated by each of them, which is within the area allotted to an outlet. If a cultivator omits for any reason to take his turn at his proper time, he loses his right to the water during that cycle unless he has made special arrangements with the other cultivators to exchange his turn with one or other of them. When there is good feeling between the various cultivators it sometimes also happens that a cultivator will give up his turn to another cultivator, who requires the water more badly than he does on the understanding that during the next cycle he will be repaid out of the borrower's turn. One result of allotting the turns by cycles in this way is that a man knows when his turn will come by the day of the week. It may happen if he is unlucky that he just misses his turn for two weeks in succession even though there has been closure for only eight days. This chance is accepted without demur. No cultivator has ever been known to sell his turn to others. Even if this were lawful the general sentiment of the people is very much against it, and any such attempt would be regarded as a disgraceful act. III. 5.

6. The number of wells at each Settlement is indicated below :— III. 6.

Year.	Number of wells capable of use.
1865	11
1892	12
1912	19
1925	23

Of the wells in existence in 1925, 22 were actually in use. All the 19 wells in existence in 1912 were actually in use. One of the wells in existence in 1865 has come under the bed of the canal. The remaining 10 are still being used. Information regarding the wells actually in use in 1865 and 1892 has not been obtained : the probability is that they were all in use.

III. 6. Under the rules for the grant of remissions of land revenue on newly sunk wells* 4 wells still have the *chahi* portion of the revenue on them remitted for various terms of years. The object of these rules is to ensure that the person who sinks a well shall, during the time for which he is given a lease granting him remission of land revenue, obtain a net profit from the improvement sufficient to repay him twice the cost of constructing the well. The cost of making a well is Rs. 1,600/-, so that the amount to be recouped to the landowner out of enhanced profits before the land revenue is increased is Rs. 3,200/-. In order to obtain this sum in 40 years (the maximum period of remission allowed by the rules) the annual profit must be not less than Rs. 80/-. The annual land revenue at present rates is Rs. 18/-, which is probably very much less than the actual half net assets. With the advent of canal irrigation the water-table has risen about 15 feet, but there are no signs of waterlogging or of the appearance of saltpetre. The water from all the wells is raised to the surface by means of Persian Wheels. A noticeable fact is that the old-fashioned earthen pots tied on to weak ropes have entirely given place to iron buckets fastened to an iron chain. These buckets are made by hand by the ordinary village blacksmith in a neighbouring village and cost with the link of the chain to which they are attached, one rupee. The cost of a chain of buckets for one well is Rs. 70/- to Rs. 80/-. These iron buckets and chain are said to last without attention for about 2 years. This durability as compared with the old-fashioned earthen pots on inferior ropes, which not only required frequent renewal, but also necessitated periodical clearance of the well to remove the debris of broken pottery, amply repays the initial cost. There is also a considerable efficiency in working. The new gear is light, and requires less animal power to raise the same amount of water in a given time. This efficiency might be still further increased if the wooden wheels used for

* These rules are contained in the Settlement Manual, para. 504-A, Correction Slip No. 42-S. M., dated 27th March 1922, and are quoted below :—

"The principle underlying the temporary protection of certain classes of agricultural improvements from any charge on account of land revenue is that the additional net assets derived from land in consequence of such improvements shall not be reduced by any assessment of land revenue in respect of such assets, or in other words by the assessment of such assets to land revenue, until the capital cost of the improvements, with current interest thereon, has been recouped to the improver out of those additional net assets. The theoretical period of protection depends therefore on :—

(i). the amount of capital expenditure,

(ii). the rate of interest assumed, and

(iii). the average annual value of the additional net assets due to the improvement.

The Punjab Government has accordingly directed that the period of protection for a new irrigation well should be fixed with reference to the above considerations, but subject to a minimum of 20 and a maximum of 40 years, and that it shall depend not on the amount of land revenue to be annually remitted but on the amount of the additional net assets due to such well. It has further been decided that the total sum inclusive of interest to be recouped from the extra net assets shall be reckoned in all cases at twice the capital cost of the well."

working the chain were replaced by modern cast iron wheels. This is being done in neighbouring villages, but in Gaggar Bhana the old-fashioned wooden wheels of a pattern, which must have been used by the founders of the village are still in use. The water in all the wells is sweet and the soil when watered by it produces good crops. III. 6.

7. The wells are ordinarily worked only during the day time, or in the winter months from just before dawn. Recently there has been a good deal of cattle theft in the vicinity and the people say that they are afraid to work their wells at night. Inquiries show that most of the wells are exhausted if worked continuously for more than ten hours. This allows for two yoke of animals to be used. The wells are used mostly during the winter months. The area of crops irrigated by wells during the summer is comparatively insignificant, the average being less than 12 acres. The area irrigated by a well if worked for the normal period of 10 hours is about an acre a day. The average depth to water is about 24 feet, and the average depth of water in the well is about 11 feet. III. 7.

8. In the winter much of the wheat and *senji* (fodder) which has been sown on canal irrigated land, but which has not received any canal irrigation after sowing, has to be helped by wells. The sugarcane crop also frequently needs final waterings. Less frequently, if there has been a prolonged closure in the summer, canal irrigated maize and sugarcane and even cotton have to be helped by wells. III. 8.

9. There are no separate *barani*, well or canal holdings in the village. The little *barani* cultivation usually takes place on land, which is irrigable either from the canal or from wells. Every cultivator of a holding of about 10 acres or upwards has mixed irrigation partly from wells and partly from canal. It is not possible, therefore, to compare the labour and cattle necessary for cultivation of each class of land, *barani*, well and canal. In para. 7 of Chapter II full details were given of the labour required to cultivate an area of about 17 acres of mixed land, *barani*, well and canal. *Barani* land is never manured, but it has to be very carefully ploughed after rain, so as to ensure that the moisture shall not evaporate rapidly. After the seed has been sown it requires very little attention. Well and canal lands on the other hand, if sown with valuable crops like maize, cotton or sugarcane, require weeding and other tillage after the crop has come up. It must be remembered also that on *barani* land only the less valuable kinds of crops are grown, which are not as carefully looked after as more valuable crops on canal or well irrigated lands. Well irrigation also obviously requires more bullock power than canal irrigation although the man power is much the same. III. 9.

CHAPTER IV.

HOLDINGS.

IV. 1. 1. The number of persons owning land in the village is 189, and the total cultivated area of the village is 1,386 acres, so that the cultivated area per owner is $7\frac{1}{3}$ acres. The number 189 includes 26 persons who are residents of other villages and who mainly own land in those villages. The total area of land held by them in the village is under $41\frac{1}{2}$ acres. They own fields most of which are on the boundaries of the village and close to land owned by them in the villages in which they reside. It is not possible without great difficulty to ascertain the areas of land owned by them in their own villages. It has been deemed advisable, therefore, to exclude them and the cultivated area owned by them from the calculation of the cultivated area per owner of Gaggar Bhana. Thus the number of owners of land in this village is 163 and the cultivated area held by them is slightly more than $1,344\frac{1}{2}$ acres. The cultivated area per owner of Gaggar Bhana is, therefore, slightly under $8\frac{1}{4}$ acres.

Figures have not been obtained for the year 1900. In the year 1891-92, when there was a settlement, the total cultivated area of the village was 1,394 acres. The total number of owners was 140 and the cultivated area per owner was therefore nearly 10 acres. Excluding 3 owners who mainly owned lands in other villages in which they resided and who owned only a little under 3 acres in the aggregate in Gaggar Bhana, we get 1,391 acres to be divided among 137 owners or a little under $10\frac{1}{5}$ acres per owner, as against $8\frac{1}{4}$ acres per owner at the present day. It may be noted here that occupancy tenants hold an unimportant fraction of the cultivated area of the village. In 1891-92 the cultivated area of all their holdings was under 40 acres divided among 29 persons, an average of $1\frac{1}{3}$ acres per person. Practically the same area is now divided among 41 persons, an average of slightly less than 1 acre per person. Four of these occupancy tenants have acquired status as owners by purchase, and have been included in the number of owners (163) when calculating the size of owner's holdings.

IV. 2. 2. Three *Jat* Sikh owners live permanently in other villages where they own altogether 10 acres. One *Jat* Sikh owner owns through his wife one square of land in a colony. Two non-agriculturist owners in this village, who acquired their rights in Gaggar Bhana by purchase, own $7\frac{1}{2}$ and $1\frac{1}{2}$ squares of land in the colonies. The total cultivated land owned by owners of Gaggar Bhana in other villages is therefore 288 acres. Adding this to the total cultivated area of the village held by owners who do not

belong to other villages (1,344½ acres) we get 1,632½ acres, or just over 10 acres per owner. The average figure has been exaggerated by the large grants of land held by non-agriculturist owners. If we exclude these the average is a little less than 8½ acres per owner. IV. 2.

3. The following table shows the way in which proprietary holdings are owned according to the annual revenue records of 1922-23, the last year for which details are available :— IV 3.

Holdings owned by	Number.	Percentage on total number of holdings.
(*a*) by a single owner	85	41
(*b*) ,, two owners jointly ..	42	20
(*c*) ,, three ,, ,, ..	43	21
(*d*) ,, four ,, ,, ..	20	10
(*e*) ,, five ,, ,, ..	7	3
(*f*) ,, more than five owners jointly	11	5
Total ..	*208*	*100*

4. In the following table owners are classified according to the area of land owned by each. Where two or more persons own land jointly, the area owned by each is taken into consideration for the purpose of determining his place, and so also where one person owns land in more than one holding, the total area owned by him determines his position in the table. Persons who reside in other villages and mainly own land in those villages have been excluded from this table, as has been explained in para. 1 of this Chapter. IV. 4.

Area held by each owner.	No. of owners.	Percentage on total number of owners.
(*a*) less than 1 acre cultivated area ..	20	12·3
(*b*) between 1 and 2½ acres ..	15	9·2
(*c*) ,, 2½ ,, 5 ,, ..	52	31·9
(*d*) ,, 5 ,, 7½ ,, ..	27	16·6
(*e*) ,, 7½ ,, 10 ,, ..	9	5·5
(*f*) ,, 10 ,, 15 ,, ..	20	12·3
(*g*) ,, 15 ,, 20 ,, ..	11	6·7
(*h*) ,, 20 ,, 50 ,, ..	8	4·9
(*i*) above 50 acres	1	·6
Total ..	*163*	*100·0*

IV. 5. 5. The following statement shows the areas recorded as cultivated by individual owners of classes (*a*) to (*e*) of para. 4, whether as owners or as tenants of other owners :—

Area cultivated by each person.	Number of persons.	Percentage on the total number of owners.	Average area cultivated in acres.		Total area cultivated by each group.
			Area owned.	Area rented.	
(*a*) less than 1 acre ..	3	1·8	·46	..	1·39
(*b*) between 1 and 2½ acres	6	3·7	1·50	..	9·00
(*c*) „ 2½ „ 5 „	7	4·3	3·00	·52	24·69
(*d*) „ 5 „ 7½ „	17	10·4	4·17	2·63	115·66
(*e*) „ 7½ „ 10 „	33	20·2	5·91	2·68	283·86
Total ..	*66*	..	..	..	..

The 3 persons in class (*a*) of the table given above are all *Jats*. One is an old man. The other two are brothers, neither of whom is yet of age. They all three get the land ploughed and sown for them by relatives who cultivate the other land owned by these three as their tenants paying *batai*. The cultivating owners only arrange to reap the harvest.

Of the 6 owners in class (*b*) five are *Jats* and one is a carpenter. One of the *Jats* is a disabled old man, the remaining four are in two groups of brothers and are not of full age. Each group lives with an uncle. The carpenter works at his trade in addition to doing the cultivation of his small plot of land.

All the 7 persons in class (*c*) are *Jats*. There is one group of three brothers of whom two are minors. This group owns jointly 11 acres of land. They cultivate this jointly with their uncle, who also owns 11 acres, and who lives and works with them. Thus the four are represented by one adult who cultivates 22 acres. They keep their own plough cattle, and although two of the brothers are minors they help to cultivate this land and to graze the animals. A fourth lives jointly with his two minor nephews already referred to under class (*b*), and does his ploughing by makeshifts, such as using his cow-buffaloes when they are dry. A fifth also lives with his nephews—referred to under class (*b*)—but has a camel, which he uses to work the well in which he has a share, and also to plough. The sixth and seventh are brothers and have their own plough bullocks. They own 4¾ acres each, of which they actually cultivate 3½ acres jointly and they

have taken on rent 3½ acres from other persons. The remaining 6 acres of their own land is inconveniently situated for their cultivation and has been let at a kind rent. IV. 5.

All the 17 persons in the (*d*) class are *Jats*. They cultivate in 10 separate holdings. The average size of each holding is over 11½ acres. The cultivators of each holding own plough cattle. There are 7 holdings each held by two persons, two by uncles and minor nephews who live jointly with them and five by brothers. Of the five pairs of brothers one brother of one pair is a pensioner and helps his brother, one of each of two pairs is in service, and the other brother, the stay-at-home does all the cultivation, two other pairs of brothers do the work of cultivation jointly. Only three individuals in this group cultivate alone the areas held by them varying from 6½ to 7½ acres. Excluding the holdings of these solitary cultivators the size of the holding in this group is increased to between 13 and 14 acres.

All the 33 persons in class (*e*) are *Jats*. They cultivate in 19 separate holdings, the average area of each holding being nearly 15 acres. They all own plough cattle. Of these 19 holdings 4 are cultivated by 3 sets each of three brothers, 6 others by sets each of two brothers or near relatives such as uncle and nephew, and 9 by individual cultivators. Of the holdings cultivated by sets of three, one is practically cultivated under the direction of one man only, the other two brothers being employed in the Bengal Coal Mines and giving their brother only occasional assistance at such times as they happen to spend at home. The other two sets of three brothers each cultivate jointly. One set of three consists of two brothers and a minor nephew. The two brothers cultivate the land. Of the 6 sets of two, two sets each contain minors as one partner so that the cultivation is in the hands of one person. The remaining four sets of two brothers cultivate jointly. The 3-person holdings vary in size from 23¼ to 27¾ acres, the 2-person holdings from 16 to 19½ acres and single-person holdings from 7½ to 9½ acres.

6. We have now to examine closely the circumstances of the owners of the smaller holdings detailed in para. 4 of this Chapter to ascertain what are their means of livelihood and to what extent they depend on the land which they own. Each group will be considered separately. IV. 6.

The first group comprises 20 persons each of whom owns less than one acre of land. The number is made up as follows :—

Jats	2
Brahmans (who have become owners by gift)	13
Jogi-Rawals (who have become owners by purchase) ..	2
Tarkhans (carpenters „ „ „) ..	3

IV. 6. The two *Jat* owners are minors, real brothers. The small area (three quarters of an acre) of cultivated land that remains to each is part of the common land of the village. The rest of their patrimony was sold by their father. They now both live with their maternal uncle in another village. Their land is cultivated by a collateral who keeps all the produce and pays the land revenue.

The 13 Brahman owners in all hold $2\frac{3}{4}$ acres of cultivated land. The whole of this is in small plots which were given to the present owners or their ancestors for religious reasons by various *Jat* owners many years ago. Of these 13 persons, one is a Head Constable in the Punjab Police, one is a Sanitary Inspector at Amritsar, one is a Sub-Postmaster and one is a School Teacher in a District Board Anglo-Vernacular Middle School. Of the remaining nine, who are not in some sort of Government service, one is a petty shop-keeper and also performs his ancestral functions as a Brahman, one man is a village weighman and negotiates the sales of village produce, besides performing his Brahmanical functions, one has been in service as a mason in the Central Provinces Canal Department. He appears to have lived for the past 4 or 5 years on his savings which are now exhausted. He is said to be thinking of going out to work again. Two are widows. One has her real brother supporting her who performs the duties of a Brahman and also keeps a small shop in an adjoining village. The other is supported by her son, a young boy who has gone to work under the Attock Oil Company. Two are old men. One of these has mortgaged all his land and is now dependent on the offerings he gets as a Brahman. The other besides this source of income has a son, who is a head teacher in a primary school. The remaining two are young men. One of them has employment in the Bengal Coal Mines. The other has also done service outside the village, but the actual kind of work done by him is not known. None of these Brahman owners cultivates his own land. With the exception of the one man who has mortgaged his land, the others all let their land at rent in kind, which is a share of the produce.

The two *Jogi-Rawal* owners are brothers. Their father is an army pensioner who owns $1\frac{1}{2}$ squares of land in the Lyallpur Canal Colony, where they all three reside. They do not do any cultivation but take as rent a share of the produce of their land. They bought a small piece of land either because they had lent money on it and the money was not repaid, or else because they wanted to improve their status in their ancestral village by becoming landowners in it.

The three *tarkhans* (carpenters) have also become owners by purchase. One of them lives in the village and mainly works at his craft, receiving the

customary dues. He also cultivates a small area by hiring bullocks to plough from other owners. This year he put his milch buffalo (which was near the dry period) to the plough and hired a second animal to complete the yoke. Later he purchased two male buffaloes and with them he has begun to cultivate a larger area than usual (nearly four acres). He sold the animals after the spring sowings. The other two work at Lahore in the Railway Workshops. Both of these have let their land for a share of the produce. IV. 6.

In the second group there are 15 persons who each own from 1 to 2½ acres of cultivated land. The group is made up of one Sikh priest (*Granthi*) who holds land in the name of Holy *Granth*, which was piously gifted by *Jat* owners some years ago, seven *Jat* owners, two Jogi-Rawals and five *tarkhans* (carpenters). The *Granthi* leases the land in the name of the *Granth* and takes a share of the produce as rent. He also begs for his daily meals in the village. His duties are to supply the wants of travellers who may happen to visit the *Gurdwara* to rest, or for their meals. There is a small *muafi* (grant of land revenue) attached to the shrine, and the income from this and from the land rented suffices for maintenance and repairs of the building. The meals for travellers are begged by the *Granthi* from the village.

Three of the 7 *Jat* owners in this group depend upon the cultivation of land. The areas owned by them are very small but they take land on cash or kind rent from others and thus manage to get a living. Two brothers are minors. They live jointly with their uncle and with his help raise some crops. They keep a buffalo, the milk of which they convert into *ghi* with the help of their mother. From the sale of the *ghi* they get a little money. Two out of a group of three brothers have obtained work in the Bengal Coal Mines. Their land (as well as his own) is cultivated by the third brother, who alone is resident in the village. He is dependent on the cultivation of his own and his brothers' holdings and also has leased other land on rent. He is reckoned with the first mentioned three who are entirely dependent on cultivation.

The two *Jogi-Rawals* live in the village and they mostly depend upon begging. They have mortgaged a greater part of their land, which they originally bought from *Jat* owners. They have let the remainder of their land at a kind rent.

There are 5 *tarkhans* (carpenters) who have become owners by purchase. One is a carpenter in the service of the railway and lives at Beas station. His land is let at a kind rent. One group of three *tarkhans* consists of two brothers and a widow of a third brother. One brother has

IV. 6. left the village and nothing is known about him. The widow lives in another village. The single owner who remains has let his land at a kind rent. One is a widow who usually lives at her father's house in another village. Her land is cultivated by a collateral as stated in the first group.

In the third group there are 52 owners who own from 2½ to 5 acres of cultivated land. Of these 52 owners 5 are *Jogi-Rawals* and 47 *Jats*. Of the 5 *Jogi-Rawals*, 4 live in the village. They have mortgaged most of their land and now chiefly depend upon begging, which is their profession. The fifth is a military pensioner and a grantee of 1½ squares of canal irrigated land in the Lyallpur District, where he lives with his two sons. He takes a share of the produce of his land here. He became an owner here by purchase. Of the 47 *Jats*, 14 cultivate their own land, and also are tenants-at-will of other owners. 14 are in 7 groups each consisting of two real brothers. Each group cultivates its own land, and also takes land on cash and kind rent. A group of 3 brothers besides cultivating their own land are tenants-at-will of other landowners. They live jointly. A group of 3 brothers cultivate their own land in partnership with their uncle, who owns land equal to the area owned by all three of them. They all live jointly. These 34 persons cultivate all their land, but the remaining 13 are mainly rent receivers, the rent being a share of the produce. Two of these 13 are minors, one is an old man, one is a widow who lives usually in another village, two live with their uncle in a colony, where the uncle owns a square of land, three have mortgaged nearly all their land and live in their mother's village, where they own a little land. Two are on military service, one has gone to China, and one man lives with his nephews, and cultivates only a small plot of his land.

All the 27 owners in the fourth group (owning from 5 to 7½ acres of cultivated land) are *Jats*. 15 of them cultivate the whole of the land they own, either individually or in groups, and all except one group of three also cultivate land, which they have taken on rent usually payable in kind as a share of the produce. Practically all the land of eleven of the remaining twelve is rented to tenants who pay usually produce rents. Where the owner is recorded as cultivating a small plot, the owner's part in cultivation is almost nominal. Such small plots are usually retained to grow fodder for the milch cattle, or sometimes to grow cotton from which the owner can derive a little cash. In such cases there is usually an arrangement by which the ploughing and sowing is done for the owner by one of the tenants. The twelfth man is the young ne'er-do-weel of the village. He has mortgaged all his land and now extorts maintenance from an uncle under threat

of selling it. Of the eleven rent receivers four are minors, four are disabled by age or by accident (two of these died during the course of the inquiry), one owns land in a canal colony where he lives, one is in the Hong Kong Police, one has let most of his land and lives jointly with two minor nephews, who are included in the third group. IV. 6.

In the fifth group (owners of 7½ to 10 acres of cultivated land) eight out of the nine owners are *Jats*. Six of the *Jat* owners cultivate all their land and five of them also cultivate land which they have taken on kind rent from others. The sixth man who only cultivates his own land is a military pensioner, and the work of cultivation is chiefly done by his son. The seventh *Jat* has let all his land at a kind rent, and also makes a little money by money-lending and by selling *ghi*. The eighth *Jat* owner has mortgaged almost the whole of his holding and lives with his sister in another village. The ninth owner is a *tarkhan* who has acquired his right by purchase. He is also an occupancy tenant in the village. His father was given 7½ squares of land in Lyallpur for military services. His land is let at a cash rent of Rs. 90/-.

All the 20 owners in the sixth group (owners of 10 to 15 acres of cultivated land) are *Jats*. Eleven of them depend on the cultivation of land in this village. Of these two give some of their land on rent to others but cultivate the greater part themselves. The other 9 cultivate most of their own land as well as land which they have taken on rent from others, and they have given outlying fields of their land to other cultivators at produce rents. Six others are rent receivers and have given out their land at produce rents. Three of these are old men, one being a pensioned military *Jamadar*, and three are widows, one of whom also gets a pension for her deceased husband's services. The remaining three owners are said to have gone to China. Nothing has been heard of them for seven or eight years. Their land is cultivated by near relatives who are recorded as tenants, but who in reality take all the produce of the land and pay all the revenue.

All the eleven owners of the seventh group (owners of from 15 to 20 acres of cultivated land) are *Jats*. Ten of these depend on the cultivation of their land. The eleventh is a widow who is really only given maintenance by her husband's collaterals.

All the eight owners of the eighth group (owners of 20 to 50 acres of cultivated land) are *Jats*. Six of them besides cultivating part of their own land let out their surplus to tenants at produce rents; one man who is old and past work lets all his land at a produce rent. One, a widow, has died

IV. 6. recently. Her land has passed to her husband's collateral who now owns over 60 acres of land.

In the ninth group (those who own more than 50 acres of cultivated land) there is only one man—a *Jat* who owns 69 acres. He cultivates some of this with the help of his sons, and he gets the rest cultivated by tenants who pay a share of the produce as rent.

IV. 7. 7. Of the 163 landowners 131 are resident in the village. One of these is the village *Granthi,* who holds land in the name of the Holy *Granth,* but does not cultivate it depending on getting a share of the produce as rent and on doles. 9 Brahmans and 6 *Jogi-Rawals* also depend on rent and doles and do no cultivation. Of 4 carpenters two are mainly dependent on their craft, but one of them also does a little cultivation. The families of two others live in the village, and they themselves are, therefore, reckoned as living there. They actually have employment outside the village and visit their families only occasionally. They do no cultivation. The remaining 111 residents are *Jats,* 98 of whom do cultivation. The 13 who do no cultivation are made up of 6 widows, who get maintenance or rent (one of them gets a pension), six old men who depend upon their rent (one besides his rent gets a little income by money-lending and one besides his rent has a small pension as a retired *Jamadar* of the Indian Army), and one man who is the village ne'er-do-weel (he has mortgaged his holding and now sponges on his uncle).

IV. 8. 8. There are 32 non-resident owners. These are distributed as shown below :—

Caste.	*Number.*
Brahmans	.. 4
Jogi-Rawals ..	.. 3
Tarkhans	.. 5
Jats	.. 20
Total	.. *32*

Of the four Brahmans one is a Head Constable of the Punjab Police whose pay is Rs. 45/- per mensem, one is a Sub-Postmaster whose pay is Rs. 75/- per mensem, one is a Sanitary Inspector whose pay is Rs. 65/- per mensem, and one is a teacher in a District Board Middle School, whose pay is Rs. 35/- per mensem.

The three *Jogi-Rawal* non-resident owners are a father and two sons each of whom has acquired land in his ancestral village by purchase. The

father has a grant of one and a half squares of land as a reward for military services and also a pension. They live in a colony. IV. 8.

The whereabouts of one of the five *tarkhan* owners and other details about him are not known. Two are widows and live in other villages. One lives at Lahore where he has obtained work at the Railway Workshops. The amount of his earnings is not known. He rarely comes to the village. One other owned $7\frac{1}{2}$ squares of land in a colony area. He has died recently and his descendants live in the colony.

Of the 20 *Jat* absentees only one is in the Army and three are in the Burma Military Police. Four men are said to have gone to China seven or eight years ago. Nothing has been heard of them since. Two men appear to be labourers in the Bengal Coal Mines, the amount of their earnings is not known. The remaining ten live on land in other villages where they have relatives.

9. The following table shows the number of cultivating holdings :— IV. 9.

(*a*)	Cultivated by a single cultivator ..	581
(*b*)	,, ,, two cultivators jointly ..	169
(*c*)	,, ,, three ,, ,, ..	93
(*d*)	,, ,, four ,, ,, ..	6
(*e*)	,, ,, five ,, ,, ..	5
(*f*)	,, ,, more than 5 cultivators ..	..
	Total ..	*854*

The table has been prepared from the annual record of 1922-23. Under the rules a separate number must be given in the cultivators' column of the annual record to every area of land held by a man under a single title. This is the reason why the numbers run up. It is not really true that 581 distinct persons each cultivate a separate holding. A single person may cultivate 15 acres of which 5 acres are his own patrimony, one acre has been obtained by him by purchase from another owner, and 9 acres may be rented by him from 8 different owners. There will be 10 distinct entries in the column of cultivation of the annual record to represent these ten distinct causes of title. It may also sometimes happen that a tenant has as co-tenant one man for a certain number of fields and another man for other fields—or again he may give cash rent for one area and a kind rent for another area. Any of these facts would cause a multiplication of entries in

IV. 9. the column of entries. The following table gives more valuable information than is contained in the statement on the preceding page.

Cultivating holdings are classified according to the number of cultivators in each holding and without regard to ownership. Hired labourers are not counted as cultivators in this table, the only persons included being cultivating owners and cultivating tenants.

	No. of cultivators in each group.	No. of cultivating holdings cultivated by each group of col. 2.	Total area cultivated by each group of col. 2.	Average area cultivated by each group of col. 2 (col. 4 divided by col. 3).	Remarks.
1	2	3	4	5	6
Residents of village ..	One	84	762·89	9 08	Of the 84 separate cultivators there are 19 who cultivate 18·13 acres in all. Excluding them the average cultivated area per cultivator is 11·45 acres.
Outsiders ..	,,	28	84·18	3·00	
Total ..	One	112	847·07	7·56	
Residents of village ..	Two	34	266·63	7·84	
Outsiders ..	,,	19	41·19	2·16	
Total ..	Two	53	307·82	5·80	
Residents of village ..	Three	22	200·00	9·09	
Outsiders ..	,,	5	9·61	1·92	
Total ..	Three	27	209·61	7·76	
Residents of village ..	Four	3	17·87	5·96	
Residents of village ..	Five	2	3·83	1·91	

These figures are based on entries in the cultivators' column of the annual record for 1922-23.

IV. 10. 10. In the following table cultivators are classed according to the areas cultivated by them. The figures include cultivating owners as well as

tenants. The area credited to each cultivator is the total area which comes to his share. Thus if three tenants cultivate jointly and in equal shares 9 acres, each will be credited with three acres. If, in addition to these, a cultivator has another holding of four acres which he cultivates alone, he will be credited with seven acres and will be shown in a different class from the other two :— IV. 10.

Cultivators who cultivate	Number.	Percentage on total number of cultivators.
(*a*) 2½ acres or less	18	14·5
(*b*) Between 2½ and 5 acres ..	7	5·5
(*c*) „ 5 „ 7½ „ ..	22	17·5
(*d*) „ 7½ „ 10 „ ..	29	23
(*e*) „ 10 „ 15 „ ..	28	22
(*f*) „ 15 „ 20 „ ..	13	10·5
(*g*) „ 20 „ 50 „ ..	9	7
(*h*) More than 50 acres ..	..	..
Total ..	*126*	*100*

Thus 80 per cent. of the total number of holdings are in the hands of cultivators whose cultivating holdings are over 5 acres. If we exclude the 18 holdings under 2½ acres in area which are nearly all holdings either nominally cultivated by owners or else holdings cultivated by menials and used to supply fodder for milch cattle, or possibly in order to enable the owner or tenant to get a little ready cash from cotton or some other easily marketable crop, the number of cultivators is reduced to 108, and the percentage of cultivating holdings of 5 acres and upwards is increased to 93.

11. There are 41 occupancy tenants in the village. Of these 36 do not own any land, 4 own land in the village and one owns land in another village. Of these 41 occupancy tenants, 29 are *tarkhans* (carpenters) and 12 *Arains*. 4 of the *tarkhans* have acquired land by purchase in the village, IV. 11.

IV. 11. and 1 *Arain* owns land in another village. There are 85 non-occupancy tenants. Of these 47 are *Jat* cultivating owners who have taken land from other owners usually at rents, which are a share of the produce. They rent 338 acres altogether. 7 are occupancy tenants who have also taken land as non-occupancy tenants giving a share of the produce as rent. They hold 50 acres. 16 are non-occupancy tenants of menial castes who neither own land nor hold any area as occupancy tenants. 15 are residents of other villages, who have taken 48 acres on rent. With the exception of these 15 all the tenants are residents of this village.

In the following table the length of tenancy to date is shown. There is a tendency to change fields which are given to the same tenant, so as to avoid possible claims of rights of occupancy. The table gives the number of fields held for the periods noted against each by the same individual or group of individuals. Where a son or a nephew has carried on the tenancy of his father or uncle, the tenancy is regarded as continuous. If a tenant has taken from the same owner another field in exchange for one which he has given up, the tenancy is not reckoned as continuous. Such breaks are common to prevent the acquisition of occupancy rights.

Number of Field Numbers held for—	*Number.*	*Total area in acres.*
Less than 3 years ..	537	395
Between 3 and 5 years ..	92	77
,, 5 ,, 10 ,, ..	109	49
Over 10 years	64	45
Total ..	*802*	*566*

As a rule when the tenancy is carried on from year to year, there is no written or verbal agreement as to the term for which the tenancy shall last. There are, however, two tenants who by oral agreement have secured leases for three and five years respectively. There are not any examples of written leases. In the two examples where a longer lease than for a term of one year has been secured the tenants have taken greater pains to cultivate and to manure their tenancies.

12. Only 16 of the village menials are tenants-at-will. Six of these, IV. 12.
namely, one *Jogi-Rawal*, two *Kahars* (or *Mehras*) and three *Chuhras* (sweepers) cultivate small areas with the help of the cattle of the landowners, and sow paying and not very difficult crops such as maize and melons. They supply the manure and the human labour. They retain only one-third of the produce, and pay one-third the cost of the seed and the water rate. The land revenue is paid by the owner. The 10 remaining menial tenants cultivate larger areas and have their own plough cattle. They consist of 1 *Chhimba*, 1 *Arain*, 2 *Telis* and 6 *Chuhras* and they pay rent in the same way as other tenants.

All the other tenants enumerated in para. 11, except three occupancy tenants who hold small areas, have their own plough cattle, and cultivate the land in the ordinary manner as tenants. The three occupancy tenants hold their non-occupancy land on the same terms as the six menial tenants already mentioned. The *Jats* besides the land held by them as tenants own land which together with their tenancy gives them a livelihood. They do not as a rule have any supplementary means of livelihood besides this, but sometimes two or three of them do a little carting. This is not often, because the *Jat* is usually fully occupied in the cultivation of his land whether leased or proprietary. Of the tenants who are not *Jats* most have some supplementary means of livelihood. The *Jogi-Rawal* is the village watchman (*chaukidar*). He also keeps goats from the sale of which he derives some profit. One of the *Kahars* (*Mehras*) has obtained work in the Bengal Coal Mines, another has a small shop for the sale of sweet stuff. The other works at his hereditary occupation as a water-bearer. The *Arain* and *Chhimba* tenants are entirely dependent on their land. The *Telis* do oil pressing, and make a profit by buying oilseeds and converting them into oil. There are 9 *Chuhra* (sweeper) cultivators. Only six of these are really tenants and dependent on their tenancies. The remaining three cultivate small areas with the landowner's bullocks and act as casual labourers. One also does some carting occasionally.

13. The following statements show the fragmentation of proprietary IV. 13.
and occupancy holdings. Plot is used to denote a continuous piece of land. It may include more than one field number. One field may be connected to another at one point only. On the other hand, two fields may be separated only by a path a yard or two wide. These will be reckoned as separate plots, though for practical purposes they are continuous.

Statement showing the Fragmentation of Proprietary and Occupancy Holdings.

Holders of	No. of holdings with specified No. of plots.	Average area of a holding.	Largest holding.	Smallest holding.	Largest plot.	Smallest plot.	Remarks.
		Acres.	Acres.	Acres.	Acres.	Acres.	
1 plot ..	1	·10	·10	·10	·10	·10	6 Brahmans jointly.
2 plots ..	6	1·37	2·53	·41	1·74	·10	2 Brahmans jointly. 1 Brahman. 1 Guru Granth Sahib. 2 Carpenters singly. 2 Jogi-Rawals jointly.
3 „ ..	4	6·00	17·15	1·34	8·71	·06	3 Jats jointly. 2 Jats „ 1 Jat. 1 Jogi-Rawal.
4 „ ..	2	2·43	3·31	1·55	1·13	·20	4 Brahmans jointly. 2 Jogi-Rawals „
5 „ ..	1	3·31	3·31	3·31	·83	·45	1 Jat.
6 „ ..	1	3·67	3·67	3·67	1·34	·21	1 Jat.
7 „ ..	3	6·83	10·95	3·64	6·15	·31	3 Jats jointly. 2 Jats singly.
8 „ ..	4	5·33	7·38	2·48	2·05	·10	2 Jats jointly. 3 Jats „ 1 Jat. 3 Carpenters jointly.
9 „ ..	6	8·16	11·57	2·90	4·41	·03	2 Jats jointly. 3 Jats singly. 3 Carpenters jointly. 1 Carpenter.
10 „ ..	4	6·72	9·24	3·84	2·97	·10	4 Jats singly.
11 „ ..	5	9·15	14·26	5·63	3·70	·02	3 Jats singly. 2 pairs of 2 Jats.
12 „ ..	2	6·58	7·54	5·62	1·54	·21	2 Jats singly.
13 „ ..	5	6·98	8·99	5·22	1·23	·02	3 Jats singly. 3 Jats jointly. 2 Jats „
14 „ ..	5	11·81	21·69	4·29	5·95	·02	3 Jats singly. 3 Jats jointly. 2 Jats „
15 „ ..	6	9·55	11·57	6·72	2·46	·05	2 pairs of Jogi-Rawals. 2 pairs of Jats. 2 Jats singly.

PROPRIETARY HOLDINGS.

PROPRIETE—	16 Plots ..	5	13·15	18·49	10·60	5·94	·02	5 Jats singly.
	17 „ ..	4	12·16	16·12	7·07	2·46	·05	2 pairs of Jats. 2 Jats singly.
	18 „ ..	3	12·74	15·00	10·33	2·25	·02	3 Jats singly.
	19 „ ..	7	13·70	17·87	8·78	3·18	·05	3 groups of Jats—3 at a time. 4 Jats jointly. 2 Jats „ 2 Jats singly.
	20 „ ..	4	16·95	24·28	14·05	8·41	·04	2 pairs of Jats. 3 Jats jointly. 1 Jat singly.
	21 „ ..	1	13·58	13·58	13·58	1·64	·10	1 Jat singly.
	22 „ ..	3	17·13	18·54	15·29	3·38	·05	2 groups of Jats—3 at a time. 1 Jat singly.
	23 „ ..	1	32·13	32·13	32·13	3·70	·31	2 Jats jointly.
	24 „ ..	1	23·58	23·58	23·58	3·18	·10	4 Jats jointly.
	25 „ ..	4	26·09	34·50	17·28	4·71	·10	4 Jats singly.
	26 „ ..	1	13·20	13·20	13·20	1·13	·10	2 Jats jointly.
	29 „ ..	2	28·17	28·55	27·79	5·84	·04	2 Jats jointly. 1 Jat singly.
	30 „ ..	2	46·30	49·74	42·56	5·12	·03	2 Jats singly.
	31 „ ..	1	35·85	35·85	35·85	2·97	·10	2 Jats jointly.
	34 „ ..	1	69·01	69·01	69·01	12·10	·10	1 Jat singly.
	37 „ ..	1	32·75	32·75	32·75	4·10	·12	1 Jat singly.
	39 „ ..	1	35·48	35·48	35·48	2·76	·02	1 Jat singly.
	40 „ ..	1	52·12	52·12	52·12	5·02	·02	3 Jats jointly.
OCCUPANCY HOLDINGS.	1 plot ..	2	·56	·92	·61	·92	·61	3 Carpenters jointly. 2 Carpenters „
	2 plots ..	5	·88	1·23	·61	·81	·10	3 Carpenters singly. 2 groups of carpenters—3 at a time.
	3 „ ..	3	2·53	3·28	1·64	2·05	·10	2 Carpenters jointly. 2 groups of 4 carpenters—3 at a time.
	4 „ ..	4	2·93	4·41	2·25	1·74	·05	2 Carpenters singly 5 Arains jointly. 1 Arain singly.
	5 „ ..	1	3·05	3·05	3·05	1·34	·21	1 Arain singly.
	6 „ ..	1	2·38	2·38	2·38	·93	·10	1 Arain singly.
	7 „ ..	1	3·02	3·02	3·02	·93	·10	3 Arains jointly.

Statement showing the Fragmentation of Proprietary and Cultivating Holdings among the Village Owners and Cultivators.

	No. of Fragments.	FRAGMENTATION OF			
		PROPRIETARY HOLDINGS.		CULTIVATION.	
		Number of holders with specified No. of fragments.	Per cent. of the Total.	Number of cultivators with specified No. of fragments.	Percentage of total.
Owners ..	1 to 5 fragments ..	14	12·2	4	4·6
	6 to 10 ,, ..	18	15·6	7	8·1
	11 to 15 ,, ..	23	20·0	17	19·8
	16 to 20 ,, ..	23	20·0	16	18·6
	21 to 25 ,, ..	10	8·8	14	16·3
	26 to 30 ,, ..	5	4·4	2	2·3
	31 to 35 ,, ..	2	1·7	3	3·5
	36 to 40 ,, ..	3	2·6	..	..
Total ..	..	98	85·3	63	73·2
Occupancy Tenants ..	1 to 5 fragments ..	15	13·0	3	3·4
	6 to 10 ,, ..	2	1·7	1	1·2
	11 to 15 ,, ..	..	..	1	1·2
	16 to 20 ,, ..	..	..	..	..
	21 to 25 ,, ..	..	..	2	2·3
Total ..	..	17	14·7	7	8·1
Tenants-at-will ..	1 to 5 fragments ..	..	..	6	6·9
	6 to 10 ,, ..	..	..	3	3·5
	11 to 15 ,, ..	..	..	4	4·6
	16 to 20 ,, ..	..	..	1	1·2
	21 to 25 ,, ..	..	..	1	1·2
	26 to 30 ,, ..	..	..	1	1·2
Total ..	..	..	..	16	18·6
GRAND TOTAL ..	..	***115***	..	***86***	..

14. In the four maps at the end of this Chapter the fragmentation of proprietary and cultivating holdings are graphically shown. An examination of them will show that although fragmentation undoubtedly exists, yet some of the drawbacks of it are lessened by the fact that the fragments are to a large extent grouped together. Even so, however, there are many outlying plots. IV. 14.

15. An examination of the old records shows that even in 1852 when the first Summary Settlement was made, fragmentation was great. The genealogical tree indicates that the original partition of the village lands was into two *tarafs*, Bhana and Gaggar, each *taraf* having a block of land. When the *Jogi-Rawals* refused responsibility for the land revenue and gave up their land in 1851-2, it was first taken by a Waring *lambardar* and subsequently passed on by him as common land of the whole village. As a consequence of this, owners of *taraf* Bhana now also own scattered fragments in *taraf* Gaggar, but owners of *taraf* Gaggar own no land in *taraf* Bhana. These fields were further broken up among the various owners of each *patti*. People widely recognize the disadvantages of fragmentation, and there are indications that they are counteracting it by exchange, and consolidating their holdings. It should further be noted that some of the evils of fragmentation are lessened by the concentration of fragments within an area. It will be seen from the maps that the fragments, as a rule, but not invariably, lie to one side of the village. They may all be concentrated round one well (or two or three wells in some cases). The main cause of the increase in fragmentation since 1852 is succession. Petty gifts to Brahmans, and purchases by the better off from their less well-to-do fellows have also increased the numbers of fragments. Exchanges have all been in the direction of concentration if not of consolidation. The exchange need not necessarily combine two fragments into one but it does bring together the fields owned by a proprietor. The number of fragments may be the same, but instead of being a mile apart, they may be only a few yards apart. There are 37 examples in which altogether 94 field numbers having a total area of 52½ acres have been exchanged with a view to concentration or consolidation. So far as can be ascertained partition has not had the effect of increasing the number of fragments. The soil is fairly homogeneous and when a proprietary holding is partitioned the various owners are shrewd enough to take whole field numbers at the very least and not to attempt to divide them up. There are examples of crude attempts at consolidation, which have enabled an owner to collect his fields into one place and in one example to sink a well in consequence. There are also examples of branches IV. 15

IV. 15. of the proprietary stock dying out and the holding being consolidated in consequence. Two years ago a man exchanged outlying plots with an absentee owner and sunk a well in the consolidated area. This year another owner has by exchanges consolidated his holding and sunk a well. In the neighbouring village of Butala the advantages of consolidation have been recognized to the extent of a man exchanging his land *bigah* for *bigah*, and also paying Rs. 100/- per *bigah* (a *bigah* is $\frac{1}{5}$th of an acre) in order to consolidate his holding.

IV. 16. 16. Partition has had little effect in increasing fragmentation in recent years, although in the past it undoubtedly was the principal cause of fragmentation. No examples of increase of fragmentation owing to partition have been found in recent years.

IV. 17. 17. One of the chief disadvantages that arise from fragmentation is the difficulty of arranging for the irrigation of fields from each of the three outlets which bring water to the village. If the whole of a man's land is within the area allotted to one water-course, it is comparatively easy to arrange for his turn, though even here when his turn comes he has to take water past fields cultivated by others in order to reach his own fields, which are scattered about in the area. When his land is served by two water-courses his difficulties are increased. His turns for the two water-courses may overlap, so that at the time when he is irrigating from one water-course his turn comes to irrigate from another a mile away. For example one cultivator has land irrigated both by the Wadala and Athwal distributaries and his turns overlap. Usually he is able to arrange to change his turn and does not suffer much inconvenience; when the wheat sowings are taking place, however, there is a great demand for water and it is uncertain when the supply will cease. The cultivator cannot then risk giving up his turn and he has to employ extra labour to enable him to irrigate from both distributaries at the same time. There is also frequent trouble due to water passing over intervening fields. The work of looking after the water-course while irrigation is taking place is so great that the whole time of two men is usually needed, though the nature of the work is such that in most cases one man could do it.

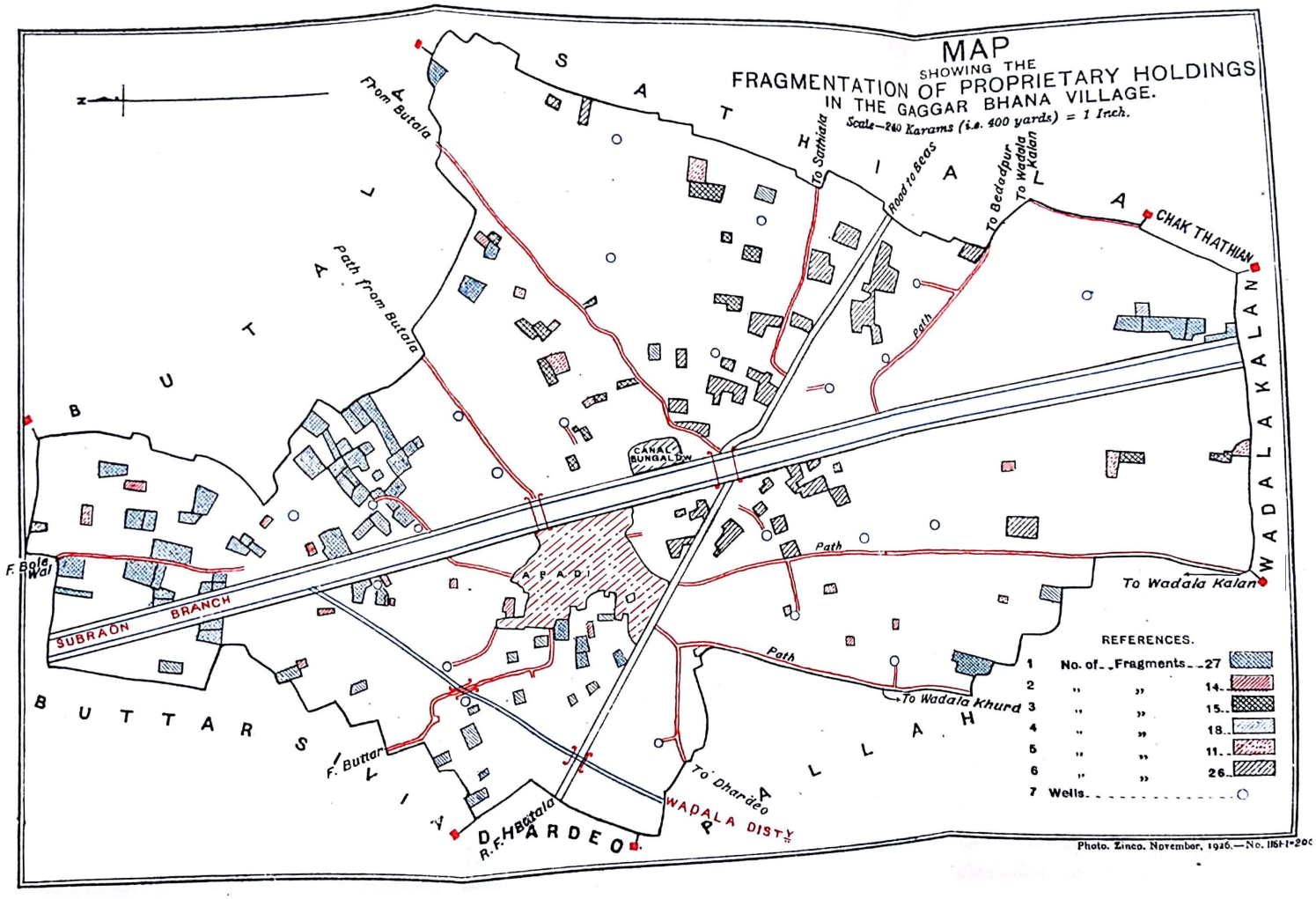
The people in this village are not naturally litigious and only one example of a boundary dispute necessitating recourse to the courts occurred during the year. A criminal complaint was lodged but it was finally settled

in the village. The fact of fragmentation does, however, necessitate a greater degree of co-operation between the owners of adjacent fields than would ordinarily be necessary. For example, if a man cultivates half an acre of land surrounded by land cultivated by others, his cropping must conform to that of his neighbours. He cannot grow cotton when they have left the land for wheat, and he cannot arrange to grow wheat if his neighbours are growing cotton or maize. One reason for this is that he can convey manure to his field only over the fields of his neighbours and unless his neighbour's fields are empty, and being themselves manured, he will not be allowed a right of way over them. Again every good farmer cultivates up to the extreme edge of his field. To do this he has to drive one of his yoke of plough animals over the land of a neighbour and he will not be allowed to do this if his neighbour's land is under crop. Again, at harvest time, as spring and autumn crops to some extent overlap, difficulties may occur if the cultivator has ventured to grow a crop different from his neighbour's. His wheat sheaves have to be conveyed to his threshing floor, and his neighbour's fields may be under cotton, which is just coming up. It would be impossible for him to cart his sheaves over his neighbour's cotton field. As a consequence of these difficulties some of the smallest fragments have been left uncultivated. There are 108 uncultivated plots in the village area, having a total area of 23½ acres, 30 of these plots measure from 4 to 10 *marlas* each (one-fiftieth to one-twentieth of an acre) which it is not worth any person's while to cultivate. Of the cultivated land there are five small plots each of an area of less than one tenth of an acre, which are cultivated by persons other than the owners, who are paying land revenue for them and who are apparently unaware of their rights in them. IV, 17.

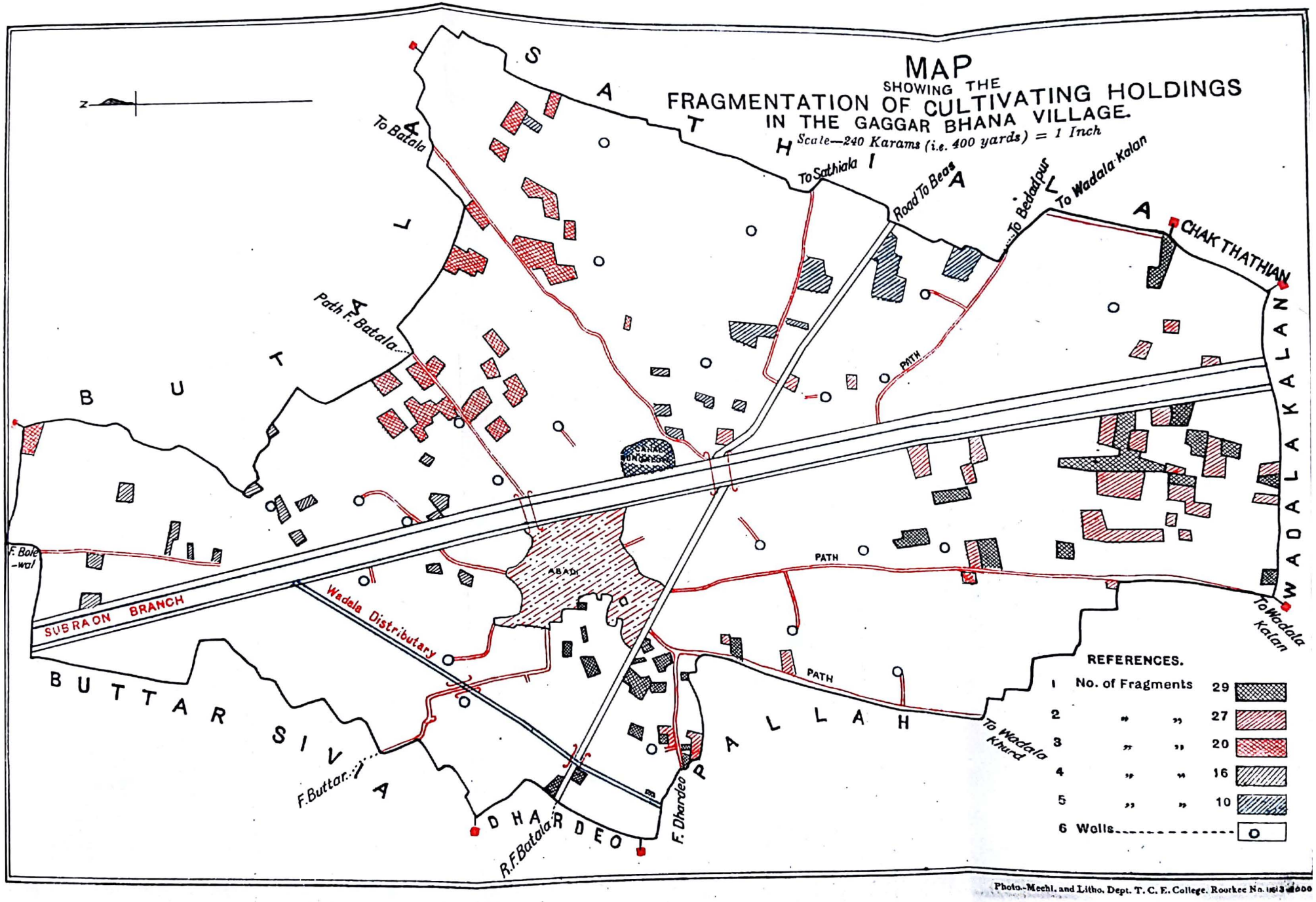
18. No instances can be cited of cultivators being able to reduce the number of workers employed in a holding by consolidation. The people say, however, that they would be saved much useless labour if they had their fields in one block. They give as examples of useless work the necessity of carrying their ploughs and other agricultural implements from one field to another, which may be distant. There may also be the necessity of added labour when irrigation is taking place from the canal, two men being required to do work which might sometimes be done by one. Owing to the concentration of holdings which has already taken place, and of the advantages of which the people seem to be fully aware, it does not seem that actual consolidation is likely to result in any decrease in the number of field labourers employed, though it seems probable that it might give the IV, 18.

IV. 18. cultivator a little more leisure than he now has. The one direction in which reduction seems possible is in the number of watchers employed. Even with fields concentrated round a well, it is frequently necessary to have two watchers to guard growing crops against pilfering when with actual consolidation one would suffice.

IV. 19. 19. The usual argument against consolidation, that account cannot be taken of varieties of soil, does not apply in this village where the soil is usually homogeneous and such differences as there are, are mainly the result of cultivation or irrigation. It is alleged that the main objection to consolidation comes from the *patwari* (village accountant), who sees in the simplification which will result from consolidation, the possibility of some diminution in the illegal fees now taken by him for pointing out the nature and extent of each cultivator's rights. This probably is an exaggeration.



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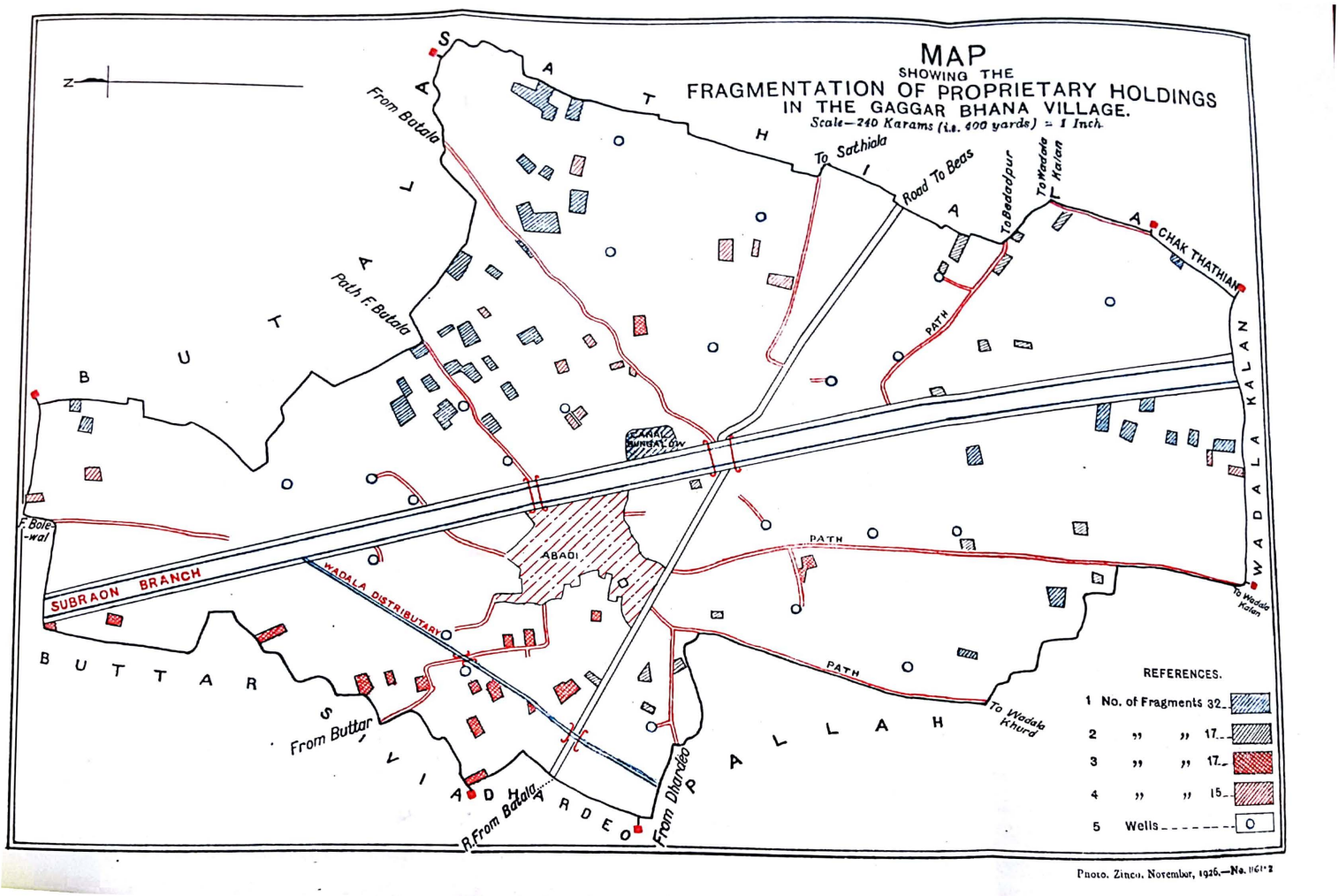


Photo. Zinco. November, 1926.—No. 1161-2

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MAP

SHOWING THE

FRAGMENTATION OF CULTIVATING HOLDINGS IN THE GAGGAR BHANA VILLAGE.

Scale—240 Karams (i.e. 400 yards). = 1 Inch.

N

SATHIALA

From Batala

To Sathiala

Road To Beas

To Beadpur

To Wadala Kalan

CHAK THATHIAN

WADALA KALAN

To Wadala Kalan

BUTALA

Path F. Batala

PATH

CANAL BUNGALOW

ADADI

PATH

PATH

F. Bole-wal

SUBRAON BRANCH

WADALA DISTRIBUTARY

To Wadala-Khurd

BUTTARSIALA

From Buttar

DHARDEO

R.F. Batala

F. Dhardeo

PALLA

REFERENCES.

1	No. of Fragments	34
2	,, ,,	18
3	,, ,,	14
4	,, ,,	13
5	,, ,,	13
6	Wells	0

Photo. Zinco. November. 1926.—No. [illegible]

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CHAPTER V.

EFFECTS OF TENANCY.

1. From what has been said in the last chapter, it will be evident that there is no broad distinction in this village between owners' and tenants' holdings. In most cases the owner of a small area of land is also the tenant of other plots, which, added to his own, make up an area which it is worth his while to cultivate. The area held by tenants who are not owners amounts to only 182 acres and of this area, a large proportion, namely 50 acres, is cultivated by persons who have rights of occupancy. For this reason a detailed examination of owners' and tenants' holdings does not yield valuable results. V. 1.

The fact that practically all the tenancies, except those which enjoy a right of occupancy, are held from year to year would lead one to conclude that tenants are less attentive to the necessity of rotation of crops and manure than are owners. This conclusion is modified by the fact that although a tenant is liable to ejectment, this liability is not always enforced when the tenant is a careful farmer. Consequently as a general rule there is not a marked difference between the cultivation of a tenant's holding, and that of an owner's. Nevertheless, there are differences and these are due not only to the fact that the tenant wishes to get the most he can out of the land, but also to the fact that as a rule he is a poorer man than the average owner and cannot afford the better methods of cultivation which the owner uses. He cannot, for example, use as many plough bullocks as an owner; nor can he afford to keep as good animals. From this it follows that even if he wished to do so he cannot apply as much manure to the land as an owner, for the quantity of manure is almost entirely dependent on the number of animals which a cultivator has. There is never sufficient manure for all the requirements of every cultivator. From this it follows that the tenant who is also an owner gives the preference to his own land. The land he has taken on *batai* or cash rent gets only the manure, which is left over after the requirements of the owned land have been met. The tenants pure and simple apply manure only to a field in which they will sow maize. They are able to get two crops off this field, for the maize in *kharif* is followed by wheat or *berra* in *rabi*, and thus they get the full value of the manure applied. An examination of two holdings, one cultivated by a *Jat* owner M. S. and one by an *Arain* tenant A. M. showed that the former had ploughed his land nine times before sowing wheat, whereas the latter was able to plough only six times. The difference is due to the fact that

V. 1. M. S. had three yoke of valuable plough bullocks worth Rs. 500/- per pair, whereas A. M. had only one pair of bullocks which he had bought on credit for Rs. 160/-. Further, whereas the average width of each furrow driven by M. S. was 8 inches and its depth 5 to 6 inches, the average width of the furrows in A. M.'s field was about 10 inches and the depth 4 to 5 inches. As a consequence, whereas the soil of M. S.'s field was finely pulverised, that of A. M.'s field contained large clods, and there were in places uneradicated weeds. It was found also that M. S. watered his field much earlier than A. M., his second watering almost coinciding with A. M.'s first. It is doubtful, however, if this fact is due to the difference in tenure.

V. 2. 2. There is not a noticeable difference between the cropping of owners' and tenants' land. The main difference is that the tenant pure and simple and especially the tenant of a small holding grows a larger proportion of fodder crops than the owner. This is because he has not an economically paying holding. Very often the tenant of a small holding grows little else but fodder for his milch cattle. In such cases he has to borrow or hire his plough cattle as he requires them. The *Arain* tenants grow vegetables and pepper in small plots, but they are not market gardeners as are *Arains* near cities.

V. 3. 3. There is no cultivation of perennials in this village. Occasionally a wild plum-tree is found in a field where it is preserved if the cultivator is the owner. The tenant, unless he is an occupancy tenant, has no use for trees. The occupancy tenant keeps them, because he can claim the timber for his household requirements.

V. 4. 4. The conditions of the tenancies by which the tenant is liable to ejectment at the end of the year, discourage him from making any improvement. It is possible that if he did so, he would be ejected at once by the owner, either from motives of greed, because the owner wants the benefit of the improvement, or more likely from motives of fear, because the owner fears that the tenant will claim rights of occupancy on the plea of the improvement, or else an exorbitant sum as the cost of the improvement. If manure is applied to a field by a tenant he takes care to crop it in such a manner as to extract the full value of the manure which he has put in. The example of a field being manured to produce maize, which is immediately followed by wheat or mixed wheat and gram (*berra*) has already been cited.

V. 5. 5. The tenant pure and simple is a much poorer man than the owner who cultivates his own or another's land, and he cannot afford to keep as

good animals. There is no grazing ground in the village, but the animals are allowed to graze on the stubble of vacant fields. No attempt can be made to breed animals here. The owner cultivator, as a rule, has bullocks of a better type than the tenant, who even if he can afford to own bullocks can purchase only old or otherwise inferior animals. Frequently he has to rely on male buffaloes, which are also sometimes used by owner cultivators. These animals are slower than bullocks and they feel the heat a great deal more, being quite unable to work during the heat of the day. On the other hand, they are very cheap compared with bullocks, costing about a quarter or a third of what a bullock costs. Occasionally a camel is used for ploughing or working a well, but this use of the animal is rare in the village. V. 5.

6. The general type of dwelling-house is the same for owners and tenants. It is a low flat-roofed building consisting frequently of a single long narrow room divided by partitions lengthwise. These partitions do not always reach the roof. The walls consist of sun-dried bricks. These are cut out of the damp clay near the village pond, and the surface of the wall formed by them is covered with a plaster of mud and fine wheat straw and cow dung mixed with water. There are one or two doorways to the room opening directly on to a courtyard. The doors are made of rough wooden planks which can be chained up on the inside and also on the outside. The doorways are, as a rule, the only means of ventilating the room, and as they all open on one side, there is ordinarily no through ventilation. Sometimes if the back of the house does not abut on another house there may be one or two windows in it. These windows are just a square opening in the wall with wooden perpendicular bars and a wooden shutter, to keep out the cold in the winter or the extreme heat in the summer. The floor of the room is of earth, plastered with cow dung. This plastering is done at frequent intervals to keep down the dust. The furniture within the house consists only of beds, and these are frequently removed to the courtyard to be used as settees by the family. The walls are sometimes decorated with rude paintings or, if a young member of the family is at school, with English sentences usually inscribed in large block letters of different colours. "God save the King," "Be good and you will be happy" is the kind of mural decoration that seems most popular. The courtyard contains the open-air kitchen consisting of simple fire-places with a wall at the back, on the top of which is a cupboard, which contains pans of milk being soured preparatory to being converted into butter. In the courtyard one also finds the corn flour-bins, and here is also the miscellaneous furniture of the peasant's household—the spinning wheel, the ginning mill, the grind-stones (these are now rarely V. 6.

V. 6. used), the cooking utensils, the water pots, the milk churn and so forth. Close by in the courtyard are tethered the milch animals, close to their feeding stalls. Round the courtyard there may be two or three buildings, such as has been described. The number of kitchens is regulated by the number of married sons, who have separated from the parent stock. Besides these buildings there is usually a cattle stable, called a *haveli*. This in outward appearance is much the same as the dwelling-houses of the family, but it has a larger door-way to it and very often forms the approach from the lane to the family buildings. Sometimes the family outgrows the capacity of the family buildings, and then the *haveli* is removed to the nearest vacant space outside the village *abadi*. When this is done, one member of the family at least has to sleep with the cattle at night so as to guard them. There is little difference between the houses owned by the ordinary peasant proprietor and the persons who are tenants and not owners. It has been seen that these latter are chiefly village menials, the *Arains* being almost reckoned among these in Gaggar Bhana. The wealthier land owners add upper stories of burnt bricks to their ancestral dwellings, and the poorest *chuhras* (sweepers) are content with mere hovels, but from the headman to the humblest sweeper, the houses are all alike insanitary and infested with flies, vermin, rats, and every kind of germ conveying parasite. Custom has probably secured immunity to disease in many persons, but the saving grace is the life in the open courtyard and the brilliant sunshine.

V. 7. 7. A small village lower primary school in which children are educated up to the fourth class (which means that they are taught reading, writing and the elements of simple arithmetic) was established here in 1901. It was originally an aided school kept by a *Maulvi* (Muslim religious teacher). In 1925 it was taken over by the District Board. There are in it 40 boys divided up as follows :—

Caste.	*No.*	*Percentage of caste.*
Jats	4	·9
Other Hindus	9	4·0
Jogi-Rawals	7	3·7
Carpenters (*Tarkhans*) ..	5	4·2
Other Mohammedans ..	9	1·7
Boys from other villages ..	6	..

Some remarkable facts emerge from this table. There are no *Chuhras* (sweeper caste) and the percentage of *Jats* is very small. The rules of caste

rigorously exclude even the young *Chuhra* from being taught with the other children of the village. There is no such ban upon the *Jat*, and the neglect by this caste of the benefits of education is more difficult to explain. The reason commonly given is that the *Jat* boy has from his earliest years to help his elders in farm work. He cannot stay at home, but must be out in the fields, acting as a scarecrow if there is nothing else he can do. The number of *mehras* (water-bearer caste) who attend the school is 4. The fathers of these boys are absent from the village and the boys are too young to help their mothers in the work of water-bearers. They are sent to school for a year or two to keep them out of mischief. The sons of the *Brahman*, *Khatri* and goldsmith have no work in the fields. They may help their fathers in weighing out flour or grain, and may be taught the system of accounts which the father uses. Such boys naturally attend a school if there is one. In short the cause why the *Jat* boy does not go to school while the *Brahman* or *Khatri* boy does is the nature of the respective occupations of their fathers. V. 7.

8. Even in this small village, however, the subsequent advantages of education are beginning to be known, and the desire of *Jats* to have their children educated is steadily increasing. Unfortunately there is no intention that the educated *Jat* shall follow his father's plough. The object of education is to open out comparatively lucrative careers such as are seen to be open to the educated Hindus of other castes. So far, however, only one *Jat* of this village has reached the standard of Matriculation of the Punjab University and he unfortunately died young. The only literates among *Jats* are the pensioners who during their service have learnt a little Gurmukhi, and a few boys and young men (23 altogether) who have been taught in the village school up to the 4th primary class. The *Tarkhans* are mostly content that their children shall learn the rudiments taught in their village. They may go a stage further and get a higher standard in the neighbouring village of Butala and Baba Bakala. These *Tarkhan* boys, unlike the *Jats*, for the most part follow their hereditary calling. Some of them go to the Railway Workshops at Lahore where they earn good money. It is noticeable that, as a whole, these *Tarkhans* appear to be more intelligent than the *Jats*. The *Julahas* (weavers) have also taken to education more than the *Jats*. Some of them have obtained service outside the village. The educated *Julaha* has obtained less practice in weaving in early youth and sometimes lacks that delicacy of touch which seems essential to a weaver and he is not able to ply the hand shuttle as deftly as V. 8.

V. 8. the boy who has been brought up to the work from his earliest years. The *Brahman* and *Khatri* lads also go into Government service, but their education does not in any way unfit them for their business of priestcraft or trade. They have sharper intellects than the others, and are, therefore, apparently more successful in getting well paid appointments in Government service.

V. 9. 9. The standard of living is much the same for all. They eat the same kind of food which consists mainly of unleavened bread (*chapatti*) coated with clarified butter (*ghi*). The bread is made of wheat flour and maize flour. Wheat is used throughout the year, and maize only for some months in the winter when bread made of maize flour is eaten with boiled greens. All drink as much butter milk as they can get, and the more luxurious will drink milk before the butter is separated from it. The more wealthy, and those who have seen service in the Army also eat meat, but as a general rule, the people are vegetarians. The use of tea in winter is also not uncommon among peasants who can afford it. For clothing the men all wear homespun cotton garments. The cotton is grown in the village, ginned by the housewife, teased by the *Teli*, spun at home and woven by the *Julaha*, the final operation of converting the cloth into clothes being done by the village washerman (*Chhimba*). So much satisfies the men. The women are more fastidious in their dress, and support the village shopkeeper who sells finer grades of cloth. Even so, however, there is not a very great difference between the comparatively rich and the comparatively poor. The wife of the richer man probably has more gold ornaments than the other. She wears them, however, only on high days and holidays, and ordinarily is not more conspicuously wealthy than other women.

V. 10. 10. There are no co-operative societies in this village.

CHAPTER VI.

LAND REVENUE AND TACCAVI.

1 & 2. Before British rule the village was included in the Sikh *Taluka* of Mattewal. The revenue was fixed each harvest. The Government share of the crop was one-fourth, and a cash rate of one rupee per *kanal* (about Rs. 9/8/- per acre) was levied for sugarcane, and 8 annas per *kanal* (about Rs. 4/12/- per acre) for wheat. The outturn of the growing crop was appraised and the value of the Government share was calculated in rupees at the prevalent prices. This was the assessment which the people were supposed to pay. It is probable, however, that in actual fact they paid much less than this. When the British took over the administration, the average value of the cash equivalent was fixed at Rs. 3,200/-, and the headmen of the village in a document sealed by them in December 1847 agreed to pay this sum for the next three years. The First Summary Settlement was made in 1851-2. As a result of it the assessment of 1847 was reduced to Rs. 2,450/-, which fell at the rate of Rs. 1/9/9 per acre on the total area and Rs. 1/12/9 on the cultivated area. Even this reduced assessment was found to be excessive and in 1853-4 it was reduced to Rs. 2,120/-, which fell at the rate of Rs. 1/6/6 on the total area and Rs. 1/11/0 on the cultivated area. A further remission of Rs. 178/- was made on account of land acquired for roads and for the canal, and at the time of the First Regular Settlement in 1864-5 the assessment stood at Rs. 1,972/-. At this Regular Settlement there was a further reduction to Rs. 1,700/-, which fell at the rate of Rs. 1/1/9 on the total area and Rs. 1/5/9 on the cultivated area. This assessment continued till 1891-2, when the First Revised Settlement was begun. The assessment was then raised to Rs. 2,170/-, which fell at the rate of Rs. 1/5/3 per acre of total area and Rs. 1/9/0 per acre of cultivated area. In 1912-13 the Second Revised Settlement took place which is now current. The assessment was raised to Rs. 2,850/-, and fell at the rate of Rs. 1/11/9 per acre of the total area and Rs. 2/0/8 per cultivated acre. The rules provided for increases whenever there was an increase in the canal irrigated area. Accordingly the

VI. 1. & 2. assessment in 1924-25 amounted to Rs. 2,980/-. This sum is paid by revenue payers classified as under—

Revenue Payers Paying—	*Number.*	*Total Land Revenue.*
		Rs.
Rs. 10 and under ..	.. 213	528/-
Rs. 20 and over Rs. 10	.. 62	891/-
Rs. 30 „ „ Rs. 20	.. 12	287/-
Rs. 40 „ „ Rs. 30	.. 14	470/-
Rs. 50 „ „ Rs. 40	.. 3	132/-
Rs. 60 „ „ Rs. 50	.. 1	59/-
Rs. 70 „ „ Rs. 60	.. ..	..
Rs. 80 „ „ Rs. 70	.. 2	154/-
Rs. 90 „ „ Rs. 80	.. ..	..
Rs. 100 „ „ Rs. 90	.. 1	84/-
Above Rs. 100 ..	.. 3	375/-
Total ..	.. 311	2,980/-

It will be noticed that the number of land revenue payers greatly exceeds the number of land owners which was shown in para. 1 of Chapter IV to be 189. This is because mortgagees and occupancy tenants who are not owners are shown as revenue payers and thus help to swell the total. The great increase in the assessment between the First and Second Revised Settlements was mainly due to the extension of canal irrigation to this village in 1902-03. Judged by modern standards the Summary Assessment of 1851-2 (Rs. 2,450/-) was excessive. The *Jogi-Rawals* were at that time owners, having ancestral shares in the village, as the descendants of their *Jhander* ancestor, Gaggar. It is said that they with one exception refused to be responsible for their share of the assessment. Their land was accordingly handed to a *Waring* headman. Subsequently it was partitioned among other owners. This explains the presence in the village of a large proportion of landless persons who have no part in village economy. The *Chuhras*, the *Telis*, the *Chhimbas* and other menial tribes are all landless, but each of them has definite work to do in the village—not so the *Jogi-Rawals*. "They toil not, neither do they spin."

VI. 3. 3. Of the assessment imposed at last revision Rs. 27/- was deferred on account of protective leases for 4 wells. The leases of 3 wells with protective leases of the total value of Rs. 15/- have come to an end, and there

is now only one well with a lease of Rs. 12/- which will end in 1929. No other part of the land revenue is deferred, but under the rules a rate of 8 annas per acre is chargeable on all land not previously assessed at *nahri* rates, which has received canal irrigation and has consequently been classed as *nahri*. This rate is called the *nahri parta* and is intended to represent the increase in profits due to the extension of canal irrigation. VI. 3.

4. The following table gives a complete list of occupiers' rates charged for canal irrigation in this village :— VI. 4.

Crop.	*Rate.* Rs. a. p.
Sugarcane	10 1 4
Rice and waternuts	7 9 0
Cotton, tobacco, etc.	5 8 9
Gardens and vegetables except turnips ..	5 8 9
Melons, maize, fibres other than cotton ..	4 8 6
Oilseeds except *rabi* oilseeds	4 4 7
Rabi oilseeds, wheat, barley, oats, field peas and beans	3 12 6
Bajra, gram, *masur* and pulses	3 4 5
Jowar, *china* and all fodder, including grass which has received two waterings ..	2 0 0
Miscellaneous	1 0 2

The rates given in this table are those fixed in 1924-25. They differ in some important particulars from the rates formerly in force. Thus the rate for sugarcane has been raised from Rs. 7/1/0 to Rs. 10/1/4, the rate for cotton from Rs. 2/12/5 to Rs. 5/8/9 and the rate for wheat from Rs. 2/12/5 to Rs. 3/12/6. On the other hand the rate for fodder crops (which are very extensively produced in this village, because there is no grazing ground) has been reduced from Rs. 2/12/5 and Rs. 2/9/4 to Rs. 2/0/0. The miscellaneous rate (Rs. 1/0/2) is intended for waterings intended only to raise grass, or for the purposes of green manuring. This rate is very seldom applied in the village.

Penal rates are double the rates in the table. Hitherto it has been the custom to charge full rates for *senji* (fodder) grown in between cotton plants. Under the new rules this crop, which is grown on moisture remaining after the cultivation of cotton, will not pay any occupiers' rate unless it can be proved that the cultivator has deliberately given an excessive watering to the cotton crop merely in order to sow his fodder.

VI. 4. The rates are applied whenever the crop sprouts; no allowance is ordinarily made for failure. In case of destruction by hailstorms, or any other widespread calamity such as happened some years ago when the cotton crop was destroyed, remissions of water-rates are made. Remissions are never allowed unless claimed by the irrigator within a fortnight of the time when his field has been measured up. Unfortunately complaints are sometimes made that owing to delay in delivering the memorandum of measurements on the part of the person measuring the field for which a remission is claimable, the irrigator is unable to present his claim for remission within the prescribed time. The result is that the irrigator is to some extent in the hands of the person measuring up the field, and it is to be feared that the allegations that the villagers pay this person a fixed percentage of their crops to ensure that he shall measure up their irrigated areas correctly, and shall give them their slips on which they can claim remission early are not always unfounded.

The Gaggar Bhana, Athwal and Wadala distributaries, which give irrigation to this village are *kharif* channels, that is to say, they run in the summer months only. They do not give full irrigation to the *rabi* crops, and sugarcane, which is a *kharif* crop, requires to be helped by wells to be successful, because it lacks the preliminary and final waterings from the canal. For this reason the rates for sugarcane and *rabi* crops are lower than the rates for these classes of crops in other parts of the canal, where irrigation from it is perennial.

VI. 5. 5. The following table shows what has been paid by the village in the past five years for land revenue, cesses and occupiers' rates. It also shows the total and the incidence per matured acre :—

Year.	Land revenue.	Cesses.	Occupiers' rates.	Total	Incidence per acre matured.
	Rs.	Rs.	Rs.	Rs.	Rs. a. p.
1920-21 ..	2,832	492	3,320	6,644	4 15 5
1921-22 ..	2,832	493	3,406	6,731	4 10 4
1922-23 ..	2,838	493	3,585	6,916	4 1 6
1923-24 ..	2,838	493	2,975	6,306	4 0 6
1924-25 ..	2,980	493	4,986	8,459	5 4 0
Average of 5 years	*2,864*	*493*	*3,654*	*7,011*	*4 9 2*

The average for water-rates is lower than it will be in future, because only one year (1924-25) during which the increased water-rates were charged is included in the average. This accounts also for the large increase in that year over the rates levied in previous years. The future average will certainly exceed Rs. 5/- per matured acre and there is no reason to suppose that it will differ greatly from the incidence of the year 1924-25 (Rs. 5/4/0). VI. 5.

6. No coercive processes of any kind have been issued during the past five years to recover any part of the demands mentioned in para. 5. The land revenue is always punctually paid. There are four *lambardars* (headmen) in the village, of whom one is a *sufedposh* (a rural official who receives a small annual grant out of the revenue) and although they are all illiterate, they are able with the help of the village accountant (*patwari*) to collect all the dues and to pay them into the Government Treasury at Amritsar. Each *lambardar* has his own set of revenue payers, and a week or two before payment is due at the Treasury he obtains from the village accountant a complete statement showing the amount due from each, and warns each of them. A day or two before the payment into the Treasury the *lambardar* brings all his clients to the village accountant who explains to each what he has to pay. The collection from each revenue payer is made there and then, and the *lambardar's* seal is affixed to the quittance. The village accountant is practically a Government servant who receives a fixed pay from Government and who has to maintain the Government records. It is not really part of his duty to do this work of explaining to each man what he has to do. His work ends when he gives the list of payments to the headman. The headman being illiterate is quite unable to explain to a man as uneducated as himself the petty variations of the account, and the *patwari* has, therefore, to undertake the business. He is said to get one or two rupees from each headman for doing this work. VI. 6.

There are very few defaulters. Sometimes a relative of a *lambardar* presumes on his relationship and causes a little trouble, but, as a rule, there is no difficulty about payment. Occasionally there is a dispute about the correctness of a charge from occupiers. Either a mistake has been made in entering the name of the irrigator or there has been a mis-classification. In such disputed cases the *lambardar* usually makes good the deficiency out of his own pocket rather than risk the loss of his collection fees by unpunctuality. He may have to go to a money-lender for the purpose, but this is unlikely because the amount involved is small. It rarely happens that a revenue payer really has not the cash in hand. In such cases he may be

VI. 6. waiting a favourable opportunity to sell his crop and when this is so he borrows from a friend for a day or two without paying any interest. If he has not the means ready at hand, he must incur a more formal debt on which he has to pay interest.

The headmen on whom the burden of collecting revenue falls receive 5 per cent. of the amount of revenue collected by them out of the payments for cesses. These are in addition to the land revenue. For occupiers' rates each headman receives 3 per cent. as discount out of the amounts collected by him. This 3 per cent. is liable to forfeiture unless the occupiers rate is punctually paid.

The village accountant or revenue *patwari* receives Rs. 20/- per mensem from Government and also 40 per cent. out of the mutation fees, which are levied whenever any change of rights due to mortgage, sale or inheritance is made on the revenue records. This brings him another Rs. 18/- or Rs. 20/- per annum. He also gets fees for supplying copies of documents in his charge, and as has been seen, he also is said to collect some unauthorised dues at the time of collection of land revenue.

The canal *patwari* is another petty official who has a hand in the preparation of the bills for the use of canal water. He receives from Government some Rs. 30/- per mensem including bonuses. There are usually complaints against him (as there are against nearly all persons of his class) that he takes advantage of his position to exact illegal dues from the irrigators. He can cause much trouble by making wrong entries of irrigation and by mis-classification. It is true that his work is checked by a superior official, but the general opinion of the people is that unless they fee the man, there will be trouble for them. Accordingly, the general custom of the village is said to be that *fasalana* (tips)—5 seers of grain per plough —are paid to the canal *patwari* half-yearly. These payments are not, however, openly acknowledged.

VI. 7. 7. The money for the payment of land revenue and occupiers' rate is usually found by the sale of surplus produce. The land revenue and occupiers' rates for the autumn crops have to be paid in January and February and the money is obtained by the sale of raw sugar (*gur*) and cotton. Sometimes a man will defer the sale of these products to get a better price. He then borrows the money. He is accommodated free of interest if the loan is only for a few days : otherwise there is a formal entry in the lender's account book and interest is charged. The land revenue for the spring harvest (*rabi*) is paid in May and June. The money is found by the sale of raw sugar (*gur*), wheat, or *toria* (an oilseed of the rape variety)

Thirty specific cases representing large, medium and small owners were examined to ascertain the means of payment for the spring instalments of revenue and occupiers' rates. In 9 of these payment was made by the sale of raw sugar (*gur*), cotton and rape (*toria*), and one of these sold wheat straw also. Two paid their dues from money made by hiring out their carts. Five sold wheat and gram. Two received their pensions about the time of payment and used these. Two who were headmen met their charges from their fees, and also sold some gram. Ten borrowed money from various money-lenders. VI. 7

8. It will be seen in the next Chapter (on Indebtedness) that the amount of money borrowed in order to pay land revenue and other Government dues is comparatively small. It has not been found possible to ascertain the precise causes which led to money being borrowed for these purposes in past years. During the year, when the inquiry was made, such borrowings were undoubtedly due to a shortage of the wheat harvest, the outturn of which was very disappointing. It was ascertained that Rs. 88/- were borrowed altogether from a *Khatri* at 24 per cent. interest to meet the demands of the current year. VI. 8

9. The dates fixed for the payment of land revenue are the 1st July for the spring harvest (*rabi*), and the 15th December and the 15th February for the autumn harvest (*kharif*). The occupiers' rates have to be paid in at latest by the 15th July and the 15th February respectively. The dates fixed appear to be convenient for the revenue payers. They are sufficiently late to enable those who depend on the sale of the produce of the crop for which the revenue or occupiers' rates are due to sell their produce before payment, and at the same time, they are sufficiently early to ensure that the money thus obtained is not frittered away by the small farmer. VI. 9.

10. There have not been any remissions or suspensions of revenue during the past ten years. This fact is a tribute not only to the moderation of the assessment, but to the security of agricultural conditions in the village. This latter indeed might have been predicated from the fact that in the summer the village has an abundance of canal irrigation, which can be supplemented by wells when necessary, and in the winter, although the canal gives only a preliminary watering to the crops, the wells suffice to bring them to maturity. Further, the rainfall in this area is less precarious than it is in other parts of the Punjab. VI. 10.

VI. 11. 11. The circumstances in which money is borrowed for the payment of water-rate are precisely similar to those in the case of land revenue. All these Government dues are lumped together when it comes to a question of payment, and it is not possible to distinguish the necessity which has led to indebtedness in any particular case. A man can pay both or he can pay neither and has to borrow. The dates of payment of occupiers' rates are up to 15th February for the autumn harvest, and up to 15th July for the spring harvest. These dates suit all classes. There have not been any remissions or suspensions of occupiers' rates during the past ten years. Suspensions are not granted under the rules, and remissions are only given in the case of calamity such as a hailstorm destroying the crops. No such calamity has occurred in recent years.

VI. 12, 13, & 14. 12, 13, & 14. No *taccavi* (Government loans for improvement of agricultural land or for seed grain or bullocks) has ever been taken by any person in the village. The people for the most part seem to be ignorant of the fact that such loans are available, and that the terms are far easier than those obtainable from the village money-lender. Where any one is aware that such loans are available the disadvantages of taking them are exaggerated. Thus it is said that payment is rigidly and punctually exacted whenever the date of payment of any instalment comes round. It is also said that the petty officials who have to give the cash are apt to be exacting. Whatever the reason the fact remains that during the past ten years no such loan has been taken by any one in Gaggar Bhana.

CHAPTER VII.

INDEBTEDNESS.

1. The table on the following page gives separately for each of the principal castes and for the people of the village as a whole the amount of indebtedness, the purposes for which the debt was incurred and the percentage under each head. The information was collected for the debts actually existing on the 1st June 1925. The figures show unsecured debts only. Mortgages are not included. They will be dealt with in Chapter VIII. VII. 1.

2. No co-operative credit society has been established in this village. VII. 2.

3. In the table on page 86 the persons from whom each of the principal castes borrow money are classified as agriculturists and non-agriculturists. Agriculturists are persons belonging to agricultural tribes notified as such under the Punjab Alienation of Land Act, 1900. The average indebtedness per family and per head are shown, and also the indebtedness per family of persons actually in debt excluding families which are not in debt. VII. 3.

This table shows that 72½ per cent. of the total unsecured debt is incurred within the village, 33½ per cent. being lent by agriculturists of the village and 39 per cent. by non-agriculturists of the village. Of the 27½ per cent. borrowed outside the village, 8½ per cent. is lent by agriculturists and 19 per cent. by non-agriculturists. Over one-third of the debt due to non-agriculturists outside the village is due to *Aroras* for the purchase of cattle. This one-third includes Rs. 3,305/- out of the Rs. 3,425/- shown in the table as payable by *Jats* to non-agriculturists of other villages. These *Aroras* who come from the Western Punjab are itinerant vendors of cattle which they purchase in other parts of the Punjab, usually in the Hissar District. They sell the animals at high prices, and agree to receive payment in one or two instalments. The price is made sufficiently high to include interest due on unpaid instalments. No further interest is charged unless the instalment is not paid when the *Arora* comes round to collect his debts. Interest at rates of 24 to 30 per cent. is charged on such overdue instalments. The persons who lend money belong to various castes and it is difficult to give exact numbers when the lender does this business only in a casual way. Among the agriculturists there are three *Jats* who are prominent and who have each from three to four thousand rupees on loan. Seven other *Jats* have each lent from one to two thousand rupees and there are a great many *Jats* each of whom has lent less than Rs. 500/-. Among those who do not

Statement showing Amount of Debt incurred in the Village for Different Purposes.

No.	Purposes for which loans were taken.	Jats.	Jhiwars.	Carpenters.	Other Hindus.	Sweepers.	Jogi-Rawals.	Weavers.	Sheikhs.	Bharais, etc.	Mochis.	Dhobis, Telis, etc.	Arains.	*TOTAL.*	*PERCENTAGES.*
1	Family expenses, etc.	2,195	380	355	2,100	833	2,254	250	..	508	659	351	695	*10,580*	*13*
2	Payment of Land Revenue rents, and water rates (*abiana*).	1,440	..	..	..	..	..	..	..	..	..	..	100	*1,540*	*2*
3	Marriage and other social functions ..	4,915	4,980	1,250	3,175	2,267	2,860	..	..	640	1,179	845	640	*22,751*	*28*
4	Payment of old debt and securities ..	1,575	233	300	..	140	..	..	..	..	..	..	100	*2,318*	*3*
5	House building, etc.	605	110	1,120	50	90	2,090	80	..	360	..	265	..	*4,770*	*6*
6	Purchase of cattle	11,337	715	417	140	3,353	4,032	..	..	520	355	1,774	630	*23,273*	*28½*
7	Purchase of land	2,005	..	..	..	..	..	..	..	..	..	..	..	*2,005*	*2½*
8	For wells and other accessories ..	300	..	..	..	..	..	..	..	..	..	..	..	*300*	*¼*
9	Redemption of land	1,027	..	400	..	..	100	..	..	..	..	..	50	*1,577*	*2*
10	Litigation	360	100	..	..	..	1,830	..	..	..	160	..	..	*2,450*	*3*
11	Bribes to subordinate officials ..	380	..	..	..	..	..	..	..	..	..	290	..	*670*	*¾*
12	For business, etc.	..	..	..	..	..	..	3,697	4,328	..	835	..	..	*8,860*	*11*
	Total ..	*26,139*	*6,518*	*3,842*	*5,465*	*6,683*	*13,166*	*4,027*	*4,328*	*2,028*	*3,188*	*3,525*	*2,215*	*81,124*	*100*
	Percentages	*32¼*	*8*	*4½*	*6¾*	*8¼*	*16¼*	*5*	*5¼*	*2½*	*4*	*4½*	*2¾*	..	..

(*For analysis of this table, see p. 90*).

belong to agricultural tribes there are eight persons who do money-lending as a business. These include one *Khatri* (who has lent about Rs. 10,000/-), a *nai* (barber), three *tarkhans* (carpenters), one Brahman, a *julaha* (weaver), a *bharai* (drummer) and a *Jogi-Rawal*. The *Khatri* lends chiefly to agriculturists. The barber money-lender and three members of his family died during the course of the year of pneumonic plague, so that only minors are now left. The barber's loans are entirely to persons of menial tribes, including *Jogi-Rawals*. The *tarkhans* lend to *Jats*, but most of their loans are to village shopkeepers and menials. The *julaha* has lent money occasionally to *Jats*, but most of his loans are to members of menial tribes. The *Khatri* is the hereditary money-lender of the village. He formerly had a little shop but now he does nothing but money-lending. The *nai* and his relatives worked also for Muslims. He was a man of hard and thrifty habits and saved the money from the dues paid to him by Hindus and Muslims. One *tarkhan* made his money in China, and his son, along with two others, were at Abadan during the War where they made money which was added to their funds. The Brahman made money from his hereditary calling and from shop-keeping. The *julaha* made a little money by weaving, but he has made most of it by cattle dealing. The *bharai* was in military service and made money as a soldier, and the *Jogi-Rawal* by the practice of Astrology. The total amounts invested by the *bharai* and *Jogi-Rawal* mentioned last do not exceed Rs. 500/-, while others have sums varying from one to five thousands rupees. VII. 3.

Money is always lent by advances on account. The balance is recorded and a one anna stamp affixed. There are no examples of bonds. Those of the lenders who are illiterate (as most of them are) get the entries in the account books written up by the village shopkeeper, who writes up the accounts free of charge. The rates of interest vary from 1 to $2\frac{1}{2}$ per cent. per mensem (12 to 30 per cent. per annum). Landowners have better credit than others and the interest charged them varies from 1 to 2 per cent. per mensem, while the others have to pay from $1\frac{1}{2}$ to $2\frac{1}{2}$ per cent. The commonest rate of interest is 2 per cent. per mensem. The rate of interest varies with the reputation of the borrower. If he has been punctual in re-paying a former debt, he is able to get another loan on easier terms than the man who has proved troublesome in re-paying his loan. As a rule, the agriculturist gets easier terms from an agriculturist than from a non-agriculturist. This is because the agriculturist can, if the loan is not re-paid, take land on mortgage, but the non-agriculturist is debarred from doing this.

Statement showing the State of Indebtedness in the Village.

No.	Communities of the village.	Their Borrowings From				Total Debt.	Average debt per family (families under debt).	Average debt per family (total families).	Average debt per head of the total population.
		Agriculturists		*Non-Agriculturists*					
		Of the Home village.	Of outside villages.	Of the Home village.	Of outside villages.				
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Jat	9,379	3,335	10,000	3,425	26,139	413	304	57
2	Jhiwar	3,228	250	2,840	200	6,518	435	272	67
3	Carpenter	847	..	1,705	1,190	3,742	374	163	32
4	Other Hindus	1,335	1,650	1,430	1,050	5,465	683	238	44
5	Sweeper	3,119	732	2,482	350	6,683	159	122	24
6	Jogi-Rawal	4,858	50	4,268	3,990	13,166	376	269	70
7	Weaver	630	400	1,403	1,594	4,027	288	212	39
8	Sheikh	839	..	1,454	2,035	4,328	541	541	120
9	Bharai, Mirasi, Faqir and Sansi	374	154	1,280	220	2,028	169	113	21
10	Mochi	458	195	1,763	772	3,188	168	110	23
11	Dhobi, Potter, Saqqa and Teli	1,441	50	1,549	485	3,525	252	153	30
12	Arain	575	90	1,480	170	2,315	386	386	58
	Total ..	*27,083*	*6,906*	*31,654*	*15,481*	*81,124*	*326*	*222*	*45*
	Percentage on the total debt of the village.	*33½*	*8½*	*39*	*19*	..	..	..	..

4. The only person in the village dependent upon money-lending is the *Khatri* who is the hereditary money-lender of the village. For all the others money-lending is not the chief source of income. The barbers all do their professional work (which includes the taking of ceremonial messages on the occasion of births and marriages), the carpenters work at their calling outside the village and the *Jats* are in the main agriculturists. A widow who does money-lending is dependent mainly on a pension which is given to her on account of her husband who was a *Subedar* in the Army. The *Khatri* money-lender has over Rs. 10,000/- on loan, and reckoning the interest at 1½ per cent. per mensem his income comes to Rs. 1,800/- per annum. The man's mode of life indicates that this estimate of his income is approximately correct. It is probably an under-statement rather than an over-statement. VII. 4.

5. The *Jats* repay their debts as a rule by the sale of surplus produce usually cotton or *gur* (sugar). If this does not suffice, and if owing to added interests their debt is increasing, they resort to mortgaging their land. This is considered to be a good thing to do because it stops the increase in interest charges, and when there is a favourable season the debtor can redeem his mortgaged land. In one case which happened three years ago the *Jat* sold his land. This is a most unusual thing to happen. The *Jat* is an old man who had incurred debt and mortgaged his land in order to educate his son. The young man, after attaining the goal of his ambition by becoming a matriculate of the Punjab University, died suddenly on foreign service. His father who had no hope of other children made over his land to his collaterals who paid all his debts. A few of the *Jats* and most of the men of non-agriculturist castes re-pay their debts by getting some kind of employment outside their village. An indication of the money thus made available for the repayment of debt may be got from the following tables which give the amount remitted by money order to the village Post Office in 1925. No account is taken in this table of money remitted to the Post Office for payment to persons of other villages. VII. 5

If we exclude the money orders in which the remitter is Government, and those in which the remitter and the payee are of the same caste, there is a sum of Rs. 3,919/- which has been remitted to persons of other castes than the remitter. It may be assumed that the whole of this is in re-payment of debt. Of the balance there is no guide as to how much is meant for payment of debt and how much for the maintenance of the remitter's family. It is probable that a very considerable portion is eventually paid to a creditor.

Table showing the amount of Money received by Money Orders at Gaggar Bhana Post Office in the year 1925.

Caste of Remitter.	Caste of Payee.																			
	Sikh Jat.	Jhiwar.	Sikh carpenter.	Hindu barber.	Brahman.	Khatri.	Goldsmith.	Sikh Chhimba.	Sweeper.	Jogi-Rawal.	Bharai.	Mochi.	Saqqa.	Dhobi.	Weaver.	Sheikh.	Arain.	Mirasi.	Sikh Granthi.	*Total.*
A.—From Within British India.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Jogi-Rawal ..	570	..	..	95	145	145	..	70	..	3,419	20	..	..	25	259	10	..	..	10	*4,768*
Bharai	..	..	..	..	..	..	..	..	..	..	284	..	..	..	..	..	..	..	..	*284*
Mochi	..	..	..	..	..	..	..	..	..	..	..	729	..	..	..	400	..	..	..	*1,129*
Saqqa	..	..	..	..	..	100	..	..	..	..	..	..	347	..	..	..	..	..	..	*447*
Dhobi	..	..	..	..	..	..	..	..	..	..	..	..	..	175	..	..	..	..	..	*175*
Weaver	..	..	..	..	..	..	..	..	..	40	..	..	..	..	161	..	..	..	..	*201*
Arain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	185	..	..	*185*
Mirasi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	121	..	*121*
Sikh Jat	342	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*342*
Jhiwar	100	959	200	..	28	300	..	..	..	..	..	..	..	..	..	..	..	..	5	*1,592*
Carpenter	60	..	2,001	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*2,061*
Brahman	..	..	..	..	660	47	..	..	..	..	..	..	..	..	..	..	..	..	13	*720*
Khatri	..	..	..	..	..	144	..	..	..	..	..	..	..	..	..	..	..	..	..	*144*
Goldsmith	..	..	..	..	..	..	70	..	..	..	..	..	..	..	..	..	..	..	..	*70*
Chhimba	..	..	..	..	..	..	..	50	..	..	..	..	..	..	..	..	..	..	..	*50*
Sweeper	..	..	..	..	..	..	..	..	69	..	..	..	..	..	..	..	..	..	..	*69*
Government Department ..	28	6	..	158	..	48	..	..	..	..	..	..	..	..	..	..	15	..	..	*255*
Total of A ..	*1,100*	*965*	*2,201*	*253*	*833*	*784*	*70*	*120*	*69*	*3,459*	*304*	*729*	*347*	*200*	*420*	*410*	*200*	*121*	*28*	*12,613*
B.—From Outside British India.																				
Sikh Jat	1,400	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*1,400*
Jhiwar	..	100	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*100*
Carpenter	..	..	265	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*265*
Arain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100	..	..	*100*
Total of B ..	*1,400*	*100*	*265*	..	..	..	..	..	..	..	..	..	..	..	..	..	*100*	..	..	*1,865*
Total of A and B ..	*2,500*	*1,065*	*2,466*	*253*	*833*	*784*	*70*	*120*	*69*	*3,459*	*304*	*729*	*347*	*200*	*420*	*410*	*300*	*121*	*28*	*14,478*

NOTE.—(1) Salary of the village Patwari received in 1925 .. .. =Rs. 204/-
(2) Salary of the village Schoolmaster received in 1925 .. =Rs. 212/-
(3) Salary of the village Economic Investigator received in 1925 =Rs. 1,755/-
(4) Salary of the village Zilladar of Riarki Circle received in 1925 =Rs. 263/-

Total Rs. 2,434/-. This sum has not been included in the above two tables (A and B) : also the money received by outsiders in this village.

The following table, which gives for each month the average amount remitted to the Gaggar Bhana Post Office for the five years ending 1925, shows that there is nothing exceptional in the remittances of 1925. It was not possible in preparing this table of averages to distinguish between remittances for inhabitants of Gaggar Bhana and remittances to inhabitants of neighbouring villages, and that is the reason for the excess in the average figures. The total for the year 1925 is Rs. 17,203/-, and of this sum Rs. 14,478/- was remitted to inhabitants of this village. It would seem therefore that the average annual remittances to inhabitants of the village amount to Rs. 14,000/-. VII. 5.

Table showing the Total Amount of Money received by Money Orders at Gaggar Bhana Post Office during the 5 *years ending* 1925.

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	*Total for the Year.*
1921..	..	1,880	1,689	1,280	1,038	1,137	1,369	832	1,242	1,815	1,906	2,000	*16,188*
1922..	2,007	1,381	1,880	1,231	952	1,751	873	1,763	1,472	2,156	1,562	1,344	*18,372*
1923..	1,027	1,466	2,118	1,455	1,681	1,422	1,129	992	1,482	854	2,947	768	*17,341*
1924..	2,662	1,384	2,196	850	1,385	718	1,461	548	859	964	1,715	1,202	*15,944*
1925..	710	1,747	2,185	1,244	1,761	1,066	802	2,065	995	1,612	1,123	1,893	*17,203*
Total for 5 years	..	..	..	..	..	..	..	..	..	..	..	..	***85,048***
Average for one year	..	..	..	..	..	..	..	..	..	..	..	..	***17,009***

It is certain that besides money remitted by money order a good deal of money is brought to the village by persons when they come back to it after a short absence. It is impossible to estimate how much this is or what proportion of it is devoted to the re-payment of debts. Only one example was found of re-payment of debt by the sale of a house. The debtor was a *Jogi-Rawal* and the sale was by order of a Civil Court. The creditor was a *Jat.*

VII. 6. 6. An examination of the figures given in the table in para. 1 of this Chapter shows that there are two principal causes of debt—social observances and the purchase of cattle. Of the Rs. 81,124/- owed by the inhabitants no less than 56½ per cent. is attributable to these two causes. 32¼ per cent. of the total is owed by the agriculturist *Jat* tribe, who owe Rs. 26,139/- altogether. Of this sum a little less than 43½ per cent. is due to the purchase of cattle, the proportion under this head being very much greater, than it is for any other community except *chuhras* (sweepers). This is natural because the cultivator must have bullocks with which to plough his land, and the useful life of a bullock is not more than 8 years, so that there has to be a continuous supply of bullocks. The large proportion of debt due to the purchase of cattle for non-agricultural classes results from the fact that in a community like this which is almost wholly vegetarian, the people are much more dependent on milk and the products of milk than a community of meat eaters. A long drink of *lassi* (butter milk) is thought to be essential to a working man at least once a day, and *ghi* (clarified butter), which helps to make the unleavened bread digestible is equally a necessity. The children also require milk here as they do elsewhere. The only way to ensure a milk supply for a family is to have a cow or a buffalo, and the cost of buying these causes debt among the non-agricultural classes. The price of cattle has increased very greatly in the last few years, and although the price of the peasant's surplus produce has also increased, yet it is doubtful if the latter compensates for the former. The increased cost of cattle is commonly given as one reason why debt has been incurred. The expenditure on cattle is productive. The same cannot be said of the expenditure on social observances. The cost of marriages among all classes is very great, and among the menial castes it is probably much greater in proportion to their income than among the landowners' caste. Thus among *jhiwars* (the water-bearers' caste) the debts incurred on account of social observances exceed those incurred by *Jats* for the same objects.

After these two principal causes of debt there come the expenses of the family. The *Jats*, other Hindus and *Jogi-Rawals* are the castes most indebted under the head which includes all expenditure on food, clothes and so on. The proportion which this head bears to the total indebtedness of the *Jats* is, however, less than 8½ per cent. The *Jats* are almost the only persons who have incurred debts for the payment of land revenue, *abiana*, etc., but the amount of this debt is only Rs. 1,440/—(about 5½ per cent. of the total indebtedness of the *Jats*). The debts incurred for the purchase or

redemption of land come to about 11½ per cent. of the total. One surprising feature is the small part which litigation plays in causing indebtedness among the landholders of this village. The *Jogi-Rawals* on the other hand appear to have spent a good deal on this object. The item of bribes to subordinate officials is somewhat significant, although the whole amount is only Rs. 670/-. The impression one derives from examining the figures of indebtedness is that the debts are not really great, and that except for the debts incurred on account of social observances, there is not much extravagance or improvidence among the people as a whole. People say that their embarrassment is due to the land revenue or to the water rates, but the actual figures disprove these statements. There is little to show that increased credit or encouragement by money-lenders to borrow has caused an increase in debt. One young man who is lazy and vicious has undoubtedly increased his debt and has gone to the bad. He would almost certainly have been ruined even without increased credit, so that it is difficult to attribute his downfall to that cause. VII. 6.

7. The only definite effect of indebtedness that is noticeable is that it causes some of the villagers to migrate for work, or else to take service in the Army. This contact with the outer world may be useful for the village, but there is so little of it that the effect is not determinable. VII. 7.

CHAPTER VIII.

MORTGAGES.

VIII. 1. 1. The following statement gives details of the conditions of mortgage indebtedness for each quadrennial period from 1892-93 to 1922-23, when the last record was prepared :—

Year.	No. of mortgages.	AREA MORTGAGED IN ACRES.		Total area mortgaged expressed as a fraction of the total area of the village.	Cultivated area mortgaged expressed as a fraction of the cultivated area of the village.	Land revenue assessed on mortgaged area.
		Total area.	Cultivated area.			
						Rs.
1892-93 ..	73	191	190	·12	·14	276
1894-95 ..	86	215	214	·13	·15	309
1898-99 ..	105	199	199	·12	·14	286
1902-03 ..	105	198	198	·12	·14	286
1906-07 ..	109	163	163	·10	·12	257
1911-12 ..	91	146	146	·09	·10	219
1914-15 ..	90	144	144	·09	·10	265
1918-19 ..	115	172	169	·10	·12	307
1922-23 ..	88	144	142	·09	·10	290

This statement has been excerpted from Statement No. 6 of the Village Note Book. All the mortgages are mortgages with possession. There are no collateral mortgages in the village and even if there were they would not be shown in this statement. The figures in the second column do not really indicate the number of mortgages. They represent the number of cultivating holdings in which mortgages exist. It may happen that a mortgagor dies leaving three sons. The original mortgage was one transaction, but after the death of the mortgagor the sons may decide to partition the proprietary holding. Each son will thus get a part of the mortgaged land, and in the subsequent edition of the annual record will be shown as holding separately. The three separate holdings will be shown three times in Statement No. 6 of the Village Note Book. Thus it will be made to show an increase in the number of mortgages when none has taken place. It may also happen that more than one mortgage transaction takes place in one cultivating holding. A man may mortgage part of his land to one person one year, and another part to another person or to the same person a year or two later. These are really two distinct transactions, but as they refer to the same holding, they will be reckoned only once.

It will be seen then that the figures given in Column 2 are of little value. On the other hand the figures in Columns 3 and 4 show the actual area under mortgage in each quadrennial period. VIII. 1.

It will be noticed that the total area mortgaged rarely exceeds the cultivated area mortgaged. Much more frequently the two are identical. The reason is that the mortgagee is unwilling to take possession of uncultivated land unless it comes to him as part of a complete holding, and complete holdings are rarely mortgaged.

2. An Appendix at the end of the Chapter gives details for each mortgagor in the village. It will be noticed that all the mortgages are with possession. There are no collateral mortgages or mortgages without possession in the village. VIII. 2.

3. The following statement classifies mortgagors according to the cultivated area owned by each :— VIII. 3.

(*a*)	Total number of mortgagors	*55*
(*b*)	Number who own less than 1 cultivated acre ..	3
(*c*)	,, between 1 and $2\frac{1}{2}$ acres ..	4
(*d*)	,, ,, ,, $2\frac{1}{2}$,, 5 ,, ..	10
(*e*)	,, ,, ,, 5 ,, $7\frac{1}{2}$,, ..	8
(*f*)	,, ,, ,, $7\frac{1}{2}$,, 10 ,, ..	8
(*g*)	,, ,, ,, 10 ,, 15 ,, ..	15
(*h*)	,, ,, ,, 15 ,, 20 ,, ..	5
(*i*)	,, ,, ,, 20 ,, 50 ,, ..	1
(*j*)	,, ,, over 50 acres ..	1

The mortgagors who own less than one acre each are three Brahman brothers whose total holding is less than an acre, the whole holding having been mortgaged by their father some twenty years ago. Of the four mortgagors who own more than 1 and less than $2\frac{1}{2}$ acres one is a *Jogi-Rawal* who has mortgaged land to his near relatives. The remaining three in this group are three *Jat* brothers whose joint holding exceeds $2\frac{1}{2}$ acres. Their land together with the land of a cousin was mortgaged 20 years ago by their father.

VIII. 4. 4. The following statement shows the mortgages made in each of the past 34 years, with details in every year :—

Year.	Total number of mortgages.	Total area mortgaged.	Mortgaged area cultivated.			Mortgage debt.	Average mortgage value per acre.	Average mortgage value per acre cultivated.	Multiple of land revenue.
			Un-Irrigated.	Irrigated.	Total.				
		Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	
1891-92 ..	23	47	..	..	47	2,979	63·4	63·4	48·0
1892-93 ..	3	6	..	..	6	340	56·7	56·7	42·5
1893-94 ..	26	49	..	..	49	4,130	84·3	84·3	59·0
1894-95 ..	14	29	..	..	27	2,669	92·0	98·8	63·5
1895-96 ..	10	16	..	..	16	1,430	89·4	89·4	59·6
1896-97 ..	14	20	..	..	20	1,241	62·0	62·0	40·0
1897-98 ..	15	26	..	..	26	2,012	77·4	77·4	55·9
1898-99 ..	13	20	..	..	20	1,630	81·5	81·5	58·2
1899-1900 ..	22	40	37	3	40	4,039	101·0	101·0	69·6
1900-01 ..	12	13	12	1	13	1,300	100·0	100·0	68·4
1901-02 ..	3	3	3	..	3	195	65·0	65·0	48·7
1902-03 ..	8	11	10	1	11	987	89·7	89·7	61·7
1903-04 ..	9	9	4	5	9	1,169	129·9	129·9	89·9
1904-05 ..	19	22	13	9	22	2,309	105·0	105·0	64·1
1905-06 ..	18	13	7	6	13	856	65·8	65·8	33·0
1906-07 ..	8	10	..	..	10	1,353	135·3	135·3	79·6
1907-08 ..	6	8	2	6	8	1,254	158·7	158·7	96·5
1908-09 ..	6	14	9	5	14	2,650	189·3	189·3	120·4
1909-10 ..	1	3	..	3	3	700	233·3	233·3	116·7
1910-11 ..	4	3	..	..	3	556	185·3	185·3	111·2
1911-12 ..	18	16	9	7	16	1,936	120·9	120·9	107·6
1912-13 ..	..	..	..	..	..	..	..	..	..
1913-14 ..	14	18	10	8	18	3,637	202·5	202·5	104·0
1914-15 ..	11	19	9	10	19	3,194	168·1	168·1	103·0
1915-16 ..	13	17	11	6	17	2,548	149·9	149·9	101·9
1916-17 ..	5	4	2	2	4	619	154·7	154·7	88·4
1917-18 ..	2	5	..	5	5	1,270	254·0	254·0	84·7
1918-19 ..	13	20	9	11	20	2,174	108·7	108·7	37·5
1919-20 ..	5	2	..	2	2	499	249·5	249·5	124·7
1920-21 ..	7	3	2	1	3	611	203·7	203·7	122·2
1921-22 ..	4	6	3	3	6	817	136·2	136·2	62·8
1922-23 ..	10	10	3	7	10	2,765	276·5	276·5	153·6
1923-24 ..	9	11	6	5	11	1,969	179·0	179·0	109·4
1924-25 ..	5	4	3	1	4	1,015	253·7	253·7	145·0

The numbers shown in Column 2 of this statement indicate the number of separate transactions which have been sanctioned in the Mutation Register. It frequently happens that, in order to avoid the trouble and expense of registration, land is mortgaged by means of several deeds each of which

is of less than Rs. 100/-. Each of these deeds will be treated as a separate mortgage transaction in the register of mutations. Take, for example, the year 1918-19, when the number of mortgages shown is 13. Five of these relate to a single transaction by which 1·69 acres were mortgaged for Rs. 497/8/- by five mortgage deeds for Rs. 99/8/- each. So also if the same land is mortgaged more than once, it is reckoned twice over even though the second mortgage is due to the exercise of a pre-emptive right. The statement relates to mortgages of rights of occupancy as well as to rights of ownership. Such mortgages are, however, rare. In the last 14 years there have been only 7 resulting in the mortgage of 12 acres. VIII. 4.

5. The following statement classifies redemptions according to the area of cultivated land owned by each mortgagor who has redeemed the whole or a part of the land under mortgage. The figures relate to redemptions which have taken place from 1904 to 1925 inclusive. VIII. 5.

(*a*)	Total number of redemptions	*83*
Number of redemptions made by mortgagors owning—		
(*b*)	less than 1 acre of cultivated land	1
(*c*)	between 1 and 2½ acres of cultivated land	
(*d*)	„ 2½ „ 5 „ „	10
(*e*)	„ 5 „ 7½ „ „	25
(*f*)	„ 7½ „ 10 „ „	8
(*g*)	„ 10 „ 15 „ „	19
(*h*)	„ 15 „ 20 „ „	5
(*i*)	„ 20 „ 50 „ „	13
(*j*)	more than 50 „ „	2

Table showing the Redemptions in the Years shown below.

Year.	No. of redemptions.	Total area redeemed.	Cultivated area redeemed.	Consideration money paid on account of redemption.
		Acres.	Acres.	Rs.
1891-92 ..	14	28	28	1,120
1892-93 ..	3	4·5	4·5	224
1893-94 ..	14	37	37	1,515
1894-95 ..	5	13	12·5	610
1895-96 ..	10	21	21	943

(*Continued*).

VIII. 5.

(*Concluded*).

Year.	No. of redemptions.	Total area redeemed.	Cultivated area redeemed.	Consideration money paid on account of redemption.
		Acres.	Acres.	Rs.
1896-97 ..	3	8	8	363
1897-98 ..	17	48	48	2,144
1898-99 ..	13	21	21	1,067
1899-1900 ..	20	35	35	1,956
1900-01 ..	6	10	10	455
1901-02 ..	6	9	9	600
1902-03 ..	11	14	14	820
1903-04 ..	9	17	17	1,243
1904-05 ..	11	25	25	1,271
1905-06 ..	10	15	15	892
1906-07 ..	16	30	30	2,005
1907-08 ..	18	22	22	1,861
1908-09 ..	14	15	15	1,474
1909-10 ..	3	8	8	885
1910-11 ..	3	2	2	198
1911-12 ..	16	16	16	1,267
1912-13 ..	3	5	5	660
1913-14 ..	12	20	20	2,468
1914-15 ..	7	13	13	1,148
1915-16 ..	2	3	3	750
1916-17 ..	3	7	7	573
1917-18 ..	..	..	..	..
1918-19 ..	2	2	2	130
1919-20 ..	4	8	8	852
1920-21 ..	7	15	15	1,547
1921-22 ..	3	5	5	839
1922-23 ..	13	22	22	2,853
1923-24 ..	4	3	3	465
1924-25 ..	14	21	21	3,320

In this table as in the table for mortgages figures for occupancy tenants' holdings have been included, but they are not important. Between 1913 and 1925 there were 56 redemptions of mortgages. None of these was automatic. Nine of these redemptions were effected by the sale of a part of the mortgaged land and 22 cases by the mortgage of other land or by the re-mortgage of the whole or a part of the land mortgaged. In these 31 cases either the vendee or the new mortgagee was responsible for redemption. In the remaining 25 cases the owner himself redeemed the land, as a rule out of the profits of cultivation of other land either as owner or tenant. VIII. 5.

6. The total area under mortgage in 1924-25 was 141 acres made up as follows :— VIII. 6.

	Acres.
(1) *Area mortgaged by members of agricultural tribes—*	
(*a*) to members of agricultural tribes of the village ..	89
(*b*) „ „ „ „ „ „ other villages ..	36
(*c*) to members of non-agricultural tribes of the village (*Khatris, Bharais* and *Tarkhans*)	6
(*d*) to members of non-agricultural tribes of other villages	1
Total ..	*132*
(2) *Area mortgaged by members of non-agricultural tribes—*	
(*a*) to members of agricultural tribes of the village ..	2
(*b*) „ „ „ „ „ „ other villages ..	0
(*c*) to members of non-agricultural tribes of the village (*Jogi-Rawals, Nais* and *Bharais*)	5
(*d*) to members of non-agricultural tribes of other villages	2
Total ..	*9*
Grand Total ..	*141*

Of the six acres mortgaged by members of agricultural tribes to persons who belong to non-agricultural tribes, less than two acres is mortgaged to the *Khatri*, the only member of the money-lending castes in the village, nearly three acres are mortgaged to a *Jogi-Rawal*, who obtained a fortune by service in the Army and owns one and a half squares in the Lyallpur colony, and a little over one acre to a carpenter. These figures show that the money-lending castes now occupy a very unimportant position in this village. Most of the secured debt is obtained from agriculturists. The professional money-lender has to content himself with such profits as he can get from unsecured loans.

VIII. 7. 7. Landowners who wish to mortgage their lands have no difficulty at all in finding mortgagees. There are in the village itself sufficiently well-to-do members of agricultural tribes ready to take up land on mortgage, and owing to the proximity of the large villages of Butala and Sathiala, where there are some fairly wealthy members of agricultural tribes who have made their money outside their villages, the man who wants a loan on mortgage can always get it on reasonable terms. The high average mortgage money per acre shows that credit can always be obtained on fair terms. Owing to the rapidly rising price of land mortgagors have sometimes re-mortgaged their lands at brief intervals to secure bigger loans. It not infrequently happens that a mortgagor will threaten to place his mortgage elsewhere if the mortgagee does not increase his loan. Hence a practice has grown up of a clause being inserted in the mortgage deed preventing the mortgagor from redeeming his land before the expiry of a term of years, say 5, 10 or 15, according to the extent of the area mortgaged. This condition is, however, not often enforced.

VIII. 8. 8. No examples have been found of a mortgagor changing a mortgage of a more burdensome kind into a mortgage under Section 6 (*a*) of the Punjab Alienation of Land Act. There is no combination among lenders to prevent this. Mortgages of this kind are very rare, and it seems probable that owing to lack of certainty as to the profits of this class of mortgage, lenders are likely to advance far less for such a mortgage on these terms than they would on an ordinary mortgage.

VIII. 9. 9. The following statement shows the reasons which have led to mortgaging within the last 10 years :—

Mortgages due to	expenses of living	10
,, ,, ,,	bad livelihood	10
,, ,, ,,	marriage expenses	8
,, ,, ,,	expenditure by wandering *Jogi-Rawals* ..	5
,, ,, ,,	expenses of migration to China ..	4
,, ,, ,,	redemption of other land	4
,, ,, ,,	law expenses	2
,, ,, ,,	purchase of wife	2
,, ,, ,,	obtaining land on mortgage	1
,, ,, ,,	consolidating holding	1
,, ,, ,,	maintenance of widow	1
,, ,, ,,	purchase of bullocks	1
	Total ..	*49*

The various causes given for mortgages mostly explain themselves. Expenses of living include only those cases in which owing either to bad luck or to the smallness of his holding a landowner has been unable to meet his liabilities without drawing on his secured credit. It is probable that in such cases the mortgagor has reached the limit of his unsecured credit. It sometimes happens, however, that a man finding that he is unable to meet the heavy interest charges which are levied for unsecured debts prefers to reduce them by mortgaging his land, hoping for something to turn up to enable him to redeem his land. Bad livelihood also causes mortgages because the owner is unable to balance his budget. Here, however, there is common talk that the man is lazy and good-for-nothing. He is sometimes a sonless proprietor who has nothing to live for and is not averse to doing his reversioners out of their interests. As a rule, he probably started with more than enough land, but he has frittered it away by his thriftless and lazy methods. Marriage expenses loom large for all classes and no amount of careful husbandry will enable them to be met out of income. All that the careful man can hope for is to pay them off eventually. In fact he may be said to get married on the *hire-purchase system*. The *Jogi-Rawals* are a wandering lot. They sit down in the village until their credit secured and unsecured is exhausted and then they set forth to beg and steal—they have already done their borrowing! Many of them derive considerable profits by practising astrology as has already been said. China is a fair field for the adventurous, but it takes money to get there. This is usually raised by mortgaging one's property up to the hilt and then disappearing into that mysterious country for a long term of years. Sometimes the wanderer returns with his pockets full of money and redeems his land. Often he does not return and the land passes to heirs, who have to pay off the debt as best they can. Occasionally he is able to send back remittances to his relatives who may redeem the land for him. Redemption of land entails expenditure and often causes mortgaging. The mortgagor may have inherited the land from a distant relative and has to pay off the debt or else it may be it is his own land which he mortgages on more favourable terms, having to arrange for its redemption before it is remortgaged. The expenses of the law are not heavy in this village where the people live on fairly amicable terms, but sometimes trouble comes and a man must defend himself as best he can, and this always costs money. Wives are not usually purchased except when they are second-hand. Then a fairly heavy sum has to be paid for them to the nearest relative of the deceased husband, who is

VIII. 9.

VIII. 9. thought to have a sort of *droit du seigneur*. The *Chadar Andazi* ceremony* which follows the purchase is a very cheap business compared with a regular marriage. Sometimes a man will mortgage land to obtain another piece of land and thus to consolidate his holding. Sometimes he will mortgage an outlying piece of land for the same purpose even without obtaining other land. There have been examples of both these causes in the past 10 years. The mortgage on account of the maintenance of a widow was a mortgage by a widow to near collaterals. The mortgage debt was comparatively small but the mortgagees undertook to maintain the widow besides. It is not usually necessary to mortgage land to buy plough cattle, but occasionally if the animal dies before all instalments due on it are paid, or for some such reason, the necessity for cash payment arises. Bullocks are expensive and in the example that has happened land was mortgaged in order to buy one. Where there are several shareholders mortgages are usually made by each shareholder separately, as he requires the money. Most of the examples of joint mortgages are due to descent from some common ancestor or agnate who was the original mortgagor. In most cases the mortgagor has obtained value for his mortgage, though he may not always have received the whole of this value in cash. Some portion of the mortgage debt may represent interest accruing on an old unsecured debt. The good husbandman is not much troubled by this, but the wastrel is fair game to the creditor and is probably fleeced. There do not appear to be many such men in the village. The mortgages attributed to bad livelihood are due to not more than two or three men.

**Chadar Andazi*=throwing round the sheet: the priest does this to the couple who sit side by side, and pronounces them man and wife.

APPENDIX TO CHAPTER VIII.

MORTGAGES.

The following statements gives details for each mortgagor in the village.

No.	Name of mortgagor. (Caste in brackets).	Name of mortgagee. (Caste in brackets).	Total area owned by the mortgagor.	Cultivated area owned by the mortgagor.	Total area mortgaged.	Cultivated area mortgaged.	Mortgage year.	Mortgage debt.	Mortgage debt as multiple of land revenue.	Remarks.
			Acres.	Acre	Acres.	Acres.		Rs. a. p.		
1	G. A., son of K. D. (Rawal).	W. (Rawal) ..	*3·55*	*3·55*	*3·23*	*3·23*	*1916*	*1,000 0 0*	*164·94*	Mortgagee charges rent from tenant at Rs. 3/- per *bigha*.
2	B., s/o K. D. (Rawal).	B. S. and Brothers (Jat).	3·55	3·55	2·02	2·02	1920	500 0 0	119·60	Mortgagees cultivate.
3	Do. ..	W. (Rawal) ..			·48	·48	1921	299 14 6	218·09	Is cultivated by tenant for mortgagee at Rs. 3/- per *bigha*.
		Total ..	*3·55*	*3·55*	*2·50*	*2·50*	..	*799 14 6*	..	
4	H. S., s/o D. S. (Jat)	A. S. (Jat) ..	12·35	12·35	(*a*) ·83	·83	1913	160 0 0	91·43	Is cultivated by tenant at 2/5th (mortgagee takes 2/5th share).
					(*b*) ·13	·13	1907	16 11 0	44·50	Mortgagee is nephew of mortgagor, who is childless.
5	Do. ..	R. S. and others (Jat)			1·53	1·53	1894	300 0 0	90·54	Is cultivated by mortgagee.
		Total ..	*12·35*	*12·35*	*2·49*	*2·49*	..	*476 11 0*	..	
6	W. S., s/o S. S. (Jat)	A. S. (Jat) ..	13·11	13·11	(*a*) ·43	·43	1900	200 0 0		
					(*b*) 3·72	3·72	1906	350 0 0		
					(*c*) ·44	·44	1912	220 0 0	67·49	Cultivated by tenant who gives 2/5th of the produce.
					(*d*) 1·62	1·62	1912	100 0 0		
					(*e*) ·40	·40	1913	80 0 0		
					(*f*) ·69	·69	1907	66 10 0		

Note.—All mortgages are with possession and until repayment of mortgage debt, excepting No. 89.

No.	Name of mortgagor. (Caste in brackets).	Name of mortgagee. (Caste in brackets).	Total area owned by the mortgagor.	Cultivated area owned by the mortgagor.	Total area mortgaged.	Cultivated area mortgaged.	Mortgage year.	Mortgage debt.	Mortgage debt as multiple of land revenue.	Remarks.
			Acres.	Acres.	Acres.	Acres.		Rs. a. p.		
7	W. S., s/o of S. S. (Jat).	H. S. (Jat) ..			·55	·55	1919	99 0 0	99·00	Cultivated by tenant on ½ share.
8	Do. ..	R. S. and others ..			1·54	1·54	1894	300 0 0	90·54	Cultivated by mortgagee.
		Total ..	*13·11*	*13·11*	*9·39*	*9·39*	..	*1,41b 10 0*	..	
9	A. S., s/o A. S. (Jat)..	R. S. and others (Jat)	*13·58*	*13·58*	*1·55*	*1·55*	*1894*	*300 0 0*	*90·54*	
10	K. S., s/o T. S. (Jat)..	T. S. (Jat) ..	9·29	9·29	·87	·87	1924	220 0 0	167·62	
11	Do. ..	H. S. and others (Jat)			1·31	1·31	1924	298 8 0	103·82	
		Total ..	*9·29*	*9·29*	*2·18*	*2·18*	..	*518 8 0*	..	
12	G., s/o M. S. (Jat) ..	T. S. (Jat) ..	6·13	6·03	1·35	1·35	1920	198 0 0	90·51	Cultivated by mortgagees and until repayment of mortgage debt.
13	Do. ..	S. (Jat) ..			·79	79	1920	99 0 0 14 0 0	46·35	
		Total ..	*6·13*	*6·03*	*2·11*	*2·14*	..	*311 0 0*	..	
14	G., s/o S. (Jat) ..	G. S. (Jat) ..	56·20	55·19	2·87	2·87	1925	700 0 0	141·77	Cultivated by mortgagees. G. cultivated land from two widows: Musammat T. and Musammat R. He released Musammat T.'s land by mortgaging his land for Rs. 700/- Musammat R.'s land has not been released.
15	Do. ..	L. and others (Jat) ..			·60	·60	1904	69 0 0	69·00	
16	Do. ..	A. and others ..			·68	·68	1913	120 0 0	68·57	
17	Do. ..	Musammat H. ..			2·42	2·42	1912	600 0 0	114·28	
18	Do. ..	H. and others (Jat)..			1·99	1·99	1921	199 12 0	46·31	
19	Do. ..	L. S. and others (Lohars).			1·20	1·20	1905	156 0 0	60·87	
		Total ..	*56·20*	*55·19*	*9·76*	*9·76*	..	*1,844 12 0*	..	

20	L. S., s/o W. S. (Jat)	S. M. (Bharai) ..	*17·72*	*17·46*	*1·42*	*1·42*	*1899*	*67 0 0*	*56·24*	}	Cultivated by tenant at 1/3rd share.
21	N. S., s/o W. S. (Jat)	Do. ..	*17·72*	*17·46*	*1·42*	*1·42*	*1899*	*67 0 0*	*56·42*	}	
22	R. S., s/o P. S. (Jat)..	M. S. (Jat) ..	11·31	11·19	1·58	1·58	1925	300 0 0	88·88		Cultivated by mortgagee.
23	Do. ..	H. S. (Jat) ..			1·68	1·68	1917	450 0 0	126·31	}	Cultivated by tenant at Rs. 10/- per *bigha*.
24	Do. ..	M. and others (Jat) ..			·98	·98	1918	198 8 0	61·46		
25	Do. ..	C. S. (Jat) ..			·72	·72	1918	199 0 0	79·60		
		Total ..	*11·31*	*11·19*	*4·96*	*4·96*	..	*1,147 8 0*	..		
26	N. S., s/o D. D. (Jat)	J. S. (Jat) ..	9·00	8·80	(*a*) ·69	·69	1920	199 12 0	163·89	}	Cultivated by mortgagees.
					(*b*) ·42	·42	1920	199 12 0	..		
		Total ..	*9·00*	*8·80*	*1·11*	*1·11*	..	*399 8 0*	..		
27	W. S., s/o J. S. (Jat)	G. S. and others (Jat)	14·82	14·39	3·09	3·09	1924	297 0 0	47·52	}	Cultivated by mortgagees.
28	.. ..	R. S. and others (Jat)			1·52	1·52	1907	100 0 0	34·78		
		Total ..	*14·82*	*14·39*	*4·61*	*4·61*	..	*397 0 0*	..		
29	S. S., s/o J. S. (Jat) ..	R. S. and others (Jat)	*14·49*	*14·05*	*1·52*	*1·52*	*1907*	*100 0 0*	*34·04*	}	Cultivated by mortgagees.
30	A. S., s/o M. (Jat) ..	L. S. and others (Jat)	*11·92*	*11·59*	*·18*	*·18*	*1923*	*70 0 0*	*186·66*		
31	Musammat M., widow of W. S. (Jat).	Do.	*11·92*	*11·59*	*·18*	*·18*	*1923*	*70 0 0*	*160·00*		Cultivated by mortgagees.
32	S., s/o W. (Rawal) ..	N. B. (Rawal) ..	2·15	1·66	(*a*) ·96	·96	1915	99 0 0	59·77	}	Cultivated by tenant at 1/3rd share. The mortgagees are relatives of mortgagors.
					(*b*)1·12	1·12	1915	99 0 0			
33	Do.	W. (Rawal) ..			·75	·75	1915	148 0 0	91·07		Cultivated by tenant at Rs. 3/- per *bigha*.
		Total ..	*2·15*	*1·66*	*2·83*	*2·83*	..	*346 0 0*	..		He has mortgaged more than his share.

No.	Name of mortgagor. (Caste in brackets).	Name of mortgagee. (Caste in brackets).	Total area owned by the mortgagor.	Cultivated area owned by the mortgagor.	Total area mortgaged.	Cultivated area mortgaged.	Mortgage year.	Mortgage debt.	Mortgage debt as multiple of land revenue.	Remarks.
			Acres.	Acres.	Acres.	Acres.		Rs. a. p.		
34	Musammat M., widow of K. S. (Jat)	A. S. and others (Jat)	15·10	14·79	12·42	12·11	1918	480 0 0	14·40	Cultivated by mortgagees.
35	Do. ..	M. S. and others (Jat)			(*a*) ·80	·80	1913	198 0 0		
					(*b*) ·52	·52	1901	99 0 0	88·39	
					(*c*)1·36	1·36	1905	156 0 0		
		Total ..	*15·10*	*14·79*	*15·10*	*14·79*	..	*933 0 0*	..	
36	Musammat I., widow of G. (Jat).	M. S. and W. S. ..	*3·84*	*3·84*	*·61*	*·61*	*1925*	*400 0 0*	*400·00*	Cultivated by mortgagees.
37	W. S., s/o N. (Jat).	Musammat A. (Jat) ..	3·18	3·18	·43	·43	1907	100 0 0	145·45	Cultivated by tenant at 2/5th share.
38	Do. ..	D. S. (Jat) ..			·41	·41	1923	99 0 0	105·60	Cultivated by mortgagees.
39	Do. ..	S. S. (Jat) ..			·37	·37	1923	99 0 0	144·00	
40	Do. ..	G. S. and others (Jat)			·52	·52	1923	148 0 0	118·40	
		Total ..	*3·18*	*3·18*	*1·73*	*1·73*	..	*446 0 0*	..	
41	S. S., s/o R. S. (Jat).	N. S. (Jat) ..	10·87	10·87	(*a*)5·96	5·96	1913	1,700 0 0	155·67	Cultivated by tenant at Rs. 2/- per *bigha* a year.
					(*b*) ·83	·83	1919	100 0 0		
42	Do. ..	W. and others (Jat) ..			4·08	4·08	1914	650 0 0	81·25	Cultivated by mortgagees.
		Total ..	*10·87*	*10·87*	*10·87*	*10·87*	..	*2,450 0 0*	..	

43	W. S., s/o C. (Jat) ..	I. S. and others (Jat)	5·61	5·58	·17	·17	1907	17	8	0	46·66	Cultivated by mortgagees.
44	W. S., s/o Ch. (Jat) ..	Do. ..	5·61	5·58	·17	·17	1907	17	8	0	46·66	
45	H. S., s/o Ch. (Jat) ..	Do. ..	5·61	5·58	·17	·17	1907	17	8	0	46·66	
46	P., s/o B. ..	Do. ..	5·61	5·58	·17	·17	1907	17	8	0	46·66	
47	L. S., s/o J. S. ..	L. S. and others ..	5·64	5·34	·58	·58	1921	199	0	0	115·61	
48	A. S., s/o R. S. ..	Musammat A. (Jat) ..	10·55	10·55	·68	·68	1918	120	0	0	87·27	
49	N. S., s/o J. S. (Jat) ..	S. S. and others (Jat)	6·59	6·53	2·10	2·10	1918	495	0	0	107·02	
50	B., s/o J. S. ..	N. S. (Jat) ..	6·59	5·33	·83	·83	1913	99	0	0	51·17	
51	M., s/o J. S. ..	S. S. ..	44·87	41·91	3·51	3·51	1913	600	0	0	82·05	Cultivated by tenant at 1/3rd share.
52	Do. ..	M. S. and others ..			3·71	3·71	1904	400	0	0	50·79	Cultivated by mortgagees.
53	Do. ..	R. S. and others ..			1·15	1·15	Before settlement.	90	0	0	36·00	
		Total ..	44·87	41·91	8·37	8·37	..	1,090	0	0	..	
54	B. N., s/o K. R. (Brahman).	N. (Khatri) ..	·12	·12	·12	·12	1904	9	0	0	24·80	Cultivated by tenant at 2/5th share.
55	A. N., s/o K. R. (Brahman).	Do. ..	·12	·12	·12	·12	1904	9	0	0	24·80	
56	M. D., s/o K. R. (Brahman).	Do. ..	·12	·12	·12	·12	1904	9	0	0	24·80	
57	T. S. s/o A. (Jat) ..	M. S. (Jat) ..	4·69	4·69	·62	·62	1924	198	0	0	166·73	Cultivated by mortgagee.
58	Do. ..	N. (Khatri) ..			·74	·74	1925	140	0	0	106·66	Cultivated by tenant at ½ share.
					·46	·46	1903	94	0	0	115·79	
		Total ..	4·69	4·69	1·82	1·82	..	432	0	0	..	
59	B., s/o N. (Jat) ..	N. (Khatri) ..	3·97	3·94	·35	·35	1903	94	0	0	115·79	Cultivated by tenant at ½ share.

No.	Name of mortgagor. (Caste in brackets).	Name of mortgagee. (Caste in brackets).	Total area owned by the mortgagor.	Cultivated area owned by the mortgagor.	Total area mortgaged.	Cultivated area mortgaged.	Mortgage year.	Mortgage debt.	Mortgage debt as multiple of land revenue.	Remarks.
			Acres.	Acres.	Acres.	Acres.		Rs. a. p.		
60	P. S., s/o M. S. (Jat) ..	L. S. (Jat) ..	9·86	9·85	·84	·84	1921	199 0 0	138·43	Cultivated by mortgagees.
61	Do. ..	A. and others (Jat)			·70	·70	1918	99 0 0	63·36	
62	Do. ..	G. S. and others (Jat)			·76	·76	1921	150 0 0	120·00	
		Total ..	*9·86*	*9·85*	*2·30*	*2·30*	..	*448 0 0*	..	
63	S. S., s/o M. S. (Jat) ..	H. S. (Jat) ..	*4·09*	*3·88*	·79	·79	*1915*	*93 0 0*	*53·25*	Cultivated by tenant at 1/3rd share.
64	C. S., s/o N. S. ..	H. S. (Jat) ..	*8·86*	*8·86*	·80	·80	*1911*	*200 0 0*	*114·28*	Cultivated by tenant at 2/5th share.
65	J., s/o B. ..	K. S. (Jat) ..	13·64	13·53	·58	·58	1911	99 0 0	99·00	Cultivated by mortgagees.
66	Do. ..	K. (Jat) ..			·48	·48	1911	49 0 0	46·11	
67	Do. ..	K. S. and others (Jat)			1·41	1·41	1915	140 0 0	50·91	
68	Do. ..	T. and others (Jat) ..			1·65	1·65	1906	400 0 0	112·28	
69	Do. ..	I. S. and others (Jat)			·89	·89	1904	100 0 0	66·66	
		Total ..	*13·64*	*13·53*	*5·01*	*5·01*	..	*788 0 0*	..	
70	C. S., s/o N. (Jat) ..	K. S. and others (Jat)	*10·89*	*10·89*	*2·89*	*2·89*	*1913*	*500 0 0*	*81·63*	
71	M. S., s/o B. S. (Jat)	S. S. (Jat) ..	13·96	13·64	(*a*) 1·29	1·29	1915	198 0 0	..	
					(*b*) ·76	·76	1911	99 0 0	66·81	
72	Do. ..	A. S. (Jat) ..			1·22	1·22	1904	171 0 0	82·91	Cultivated by mortgagees.
73	Do. ..	T. and others (Jat) ..			3·46	3·46	1900	320 0 0	55·05	
74	Do. ..	G. and others (Jat) ..			1·29	1·29	1911	253 0 0	85·16	
					·87	·87	1904	80 0 0		
		Total ..	*13·96*	*13·64*	*8·89*	*8·89*	..	*1,121 0 0*		

75	S. S., s/o A. S. (Jat)..	K. S. and others (Jat)	3·96	3·77	·61	·61	1914	120	0	0	120·00	Cultivated by mortgagees.
76	Do. ..	N. (Khatri) ..			1·01	1·01	1895	99	0	0	51·09	Cultivated by tenant at 1/3rd share.
77	Do. ..	S. S. (Jat) ..			·42	·42	1905	50	0	0	50·00	Cultivated by mortgagees.
		Total ..	*3·96*	*3·77*	*2·04*	*2·04*	..	*269*	*0*	*0*	..	
78	M. S., s/o P. S. (Jat)..	B. S. and others (Jat)	17·06	16·74	1·10	1·10	1914	150	0	0	80·00	Cultivated by mortgagees.
79	Do. ..	B. S. (Jat) ..			3·90	3·90	1920	1,243	0	0	163·01	
80	Do. ..	A. S. (Jat) ..			·55	·55	1903	57	0	0	60·80	
81	Do. ..	I. S. and others (Jat)			1·11	1·11	1910	233	5	4	103·75	
		Total ..	*17 06*	*16·74*	*6·66*	*6·66*	..	*1,683*	*5*	*4*	..	
82	S., s/o A. ..	I. S. and others (Jat)	17·06	16·74	1·11	1·11	1910	233	5	4	103·75	Cultivated by mortgagees.
83	Do. ..	A. S. (Jat) ..			·54	·54	1903	57	0	0	60·80	
		Total ..	*17·06*	*16·74*	*1·65*	*1·65*	..	*290*	*5*	*4*	..	
84	K., s/o P. S. (Jat) ..	I. S. and others (Jat).	17·06	16·74	1·11	1·11	1910	233	5	4	103·75	Cultivated by mortgagees.
85	Do. ..	A. S. (Jat) ..			·54	·54	1903	57	0	0	60·80	
		Total ..	*17·06*	*16·74*	*1·65*	*1·65*	..	*290*	*5*	*4*	..	
86	S. S., s/o A. S. (Jat)..	S. S. (Jat) ..	1·28	*1·24*	*·13*	*·13*	*1905*	*16*	*11*	*0*	*66·00*	Cultivated by mortgagees.
87	M., s/o A. S. (Jat) ..	Do. ..	*1·28*	*1·24*	*·13*	*·13*	*1905*	*16*	*10*	*0*	*66·00*	
88	B., s/o A. S. (Jat) ..	Do. ..	*1·28*	*1·24*	*·13*	*·13*	*1905*	*16*	*11*	*0*	*66·00*	
89	S. S., s/o M. S. (Jat)..	B. (Nai) ..	*14·38*	*41·27*	*·48*	*·48*	*1915*	*42*	*4*	*0*	*45·06*	(89) It is to be redeemed after 12 years without payment of mortgage debt.
90	G., s/o D. (Jat) ..	Musammat A. (Jat)..	*8·21*	*8·21*	*1·01*	*1·01*	*1918*	*210*	*0*	*0*	*81·95*	

No.	Name of mortgagor. (Caste in brackets.)	Name of mortgagee. (Caste in brackets.)	Total area owned by the mortgagor.	Cultivated area owned by the mortgagor.	Total area mortgaged.	Cultivated area mortgaged.	Mortgage year.	Mortgage debt.	Mortgage debt as multiple of land revenue.	Remarks.
			Acres.	Acres.	Acres.	Acres.		Rs. a. p.		
91	J., s/o D. ..	Musammat A. (Jat.)..	*8·21*	*8·21*	*1·01*	*1·01*	*1918*	*210 0 0*	*81·95*	Cultivated by tenants at 1/3rd share.
92	I., s/o of S. ..	N. S. (Jat) ..	8·94	8·44	1·22	1·22	1924	300 0 0	145·45	
93	Do. ..	A. S. (Jat) ..			·13	·13	1923	38 0 0	202·66	Cultivated by mortgagees.
94	Do. ..	A. S. and others (Jat)			1·61	1·61	1923	300 0 0	81·35	
95	Do. ..	A. and others (Jat) ..			·80	·80	1915	121 0 0	69·14	
96	Do. ..	B. S. (Jat) ..			1·28	1·28	1917	300 0 0	109·09	
97	Do. ..	M. S. and others (Jat)			·72	·72	1915	200 0 0	128·00	
98	Do. ..	N. S. (Jat) ..			1·08	1·08	1922	400 0 0	168·42	
		Total ..	*8·94*	*8·44*	*6·84*	*6·84*	..	*1,659 0 0*	..	
99	H. S., s/o M. (Jat) ..	H. S. (Jat) ..	8·94	8·44	·80	·80	1924	199 14 0	152·28	Cultivated by mortgagees.
100	Do. ..	W. S. and others (Jat)			1·08	1·08	1912	125 0 0	52·63	
		Total ..	*8·94*	*8·44*	*1·88*	*1·88*	..	*324 14 0*	..	
101	R. S., s/o D. S. (Jat)	Mustt. B. K. and others.	*4·42*	*4·42*	*·65*	*·65*	*1925*	*185 0 0*	*123·33*	Cultivated by mortgagees.
102	B. S., s/o D. S. (Jat)	L. S. and others (Jat)	*4·42*	*4·42*	*·57*	*·57*	*1923*	*198 0 0*	*226·28*	
		GRAND TOTAL ..	*545·03*	*534·36*	*140·96*	*140·65*	..	*24,747 0 0*	..	

CHAPTER IX.

SALES.

1. The following statement shows sales of land annually in this village during the years from 1891-92 to 1923-24 :— IX. 1

Year.	No. of sales.	Total area sold.	Cultivated area sold.	Sale price.	Average sale price per acre.	Average sale price per acre cultivated.	Sale price as multiple of land revenue.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.
1891-92 ..	5	12·5	12·5	2,208	176·6	176·6	138·0
1892-93 ..	2	3·5	3·5	600	171·4	171·4	120·0
1893-94 ..	3	5·0	5·0	899	179·8	179·8	128·4
1894-95 ..	1	3·0	3·0	650	216·7	216·7	162·5
1895-96 ..	7	13·0	13·0	2,549	196·1	196·1	150·0
1896-97 ..	1	2·0	2·0	300	150·0	150·0	100·0
1897-98 ..	2	6·0	6·0	1,000	166·7	166·7	111·1
1898-99 ..	6	10·0	10·0	1,855	185·5	185·5	132·5
1899-1900 ..	2	2·5	2·5	600	240·0	240·0	150·0
1900-01 ..	..	..	..	..	..	..	..
1901-02 ..	1	1·0	1·0	174	174·0	174·0	174·0
1902-03 ..	..	..	..	..	..	..	..
1903-04 ..	1	3·0	3·0	700	233·3	233·3	175·0
1904-05 ..	..	..	..	..	..	..	..
1905-06 ..	..	..	..	..	..	..	..
1906-07 ..	6	13·0	13·0	3,871	297·8	297·8	184·3
1907-08 ..	5	8·0	8·0	1,599	199·9	199·9	123·0
1908-09 ..	10	7·0	7·0	2,519	359·8	359·8	251·9
1909-10 ..	3	7·0	7·0	1,840	262·8	262·8	167·3
1910-11 ..	..	..	..	..	..	..	..
1911-12 ..	4	14·0	14·0	2,636	188·6	188·6	105·5
1912-13 ..	3	7·0	7·0	1,533	219·0	219·0	153·3
1913-14 ..	1	10·0	10·0	1,500	150·0	150·0	68·2
1914-15 ..	1	less than	one acre	63	..	..	..
1915-16 ..	4	3·0	3·0	1,100	366·7	366·7	183·3
1916-17 ..	..	..	..	..	..	..	..
1917-18 ..	..	..	..	..	..	..	..
1918-19 ..	9	3·0	3·0	1,875	625·0	625·0	312·5
1919-20 ..	2	3·0	3·0	1,200	400·0	400·0	300·0
1920-21 ..	9	5·0	4·0	2,700	540·0	675·0	385·7
1921-22 ..	4	1·0	1·0	1,107	1,107·0	1,107·0	353·5
1922-23 ..	10	6·0	6·0	4,873	812·2	812·2	487·3
1923-24 ..	7	1·0	1·0	1,190	1,190·0	1,190·0	595·0

This statement has been taken from Statement No. 5 of the Village Note Book. The figures for sale price are the figures recorded by the parties. It is well known that in fact the prices recorded in deeds or in the Mutation Register are apt to be exaggerated with a view to defeating the claims of pre-emptors. It is probable that this village is not an exception to the general rule. It has not, however, been found possible to ascertain the actual prices paid. Although sale prices are usually exaggerated, mortgage debts are usually more or less correctly given. The mortgagor hopes to redeem his land as a rule and he would be harming himself if he consented

IX. 1. to entry in the land revenue records of a sum much in excess of what he will have to pay in order to redeem the land. So also the mortgagee is unlikely to allow too low a mortgage debt to be entered. In estimating the actual prices it is fair to assume that they will be something between the average mortgage price and the recorded sale price. This assumption could not be made if there were a large area of uncultivated land sold because the price of such land (which is usually sold and not mortgaged) would pull down the price of land generally. In this village, however, there is very little uncultivated land, and land has been sold by plots in the same way as land has been mortgaged by plots, all uncultivated land being excluded.

IX. 2. 2. The following statement classifies the sales of land :—

Quadrennium.	1891-92 to 1894-95.	1895-96 to 1898-99.	1899-1900 to 1902-03.	1903-04 to 1906-07.	1907-08 to 1910-11.	1911-12 to 1914-15.	1915-16 to 1918-19.	1919-20 to 1922-23.	*Total.*
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	*Acres.*
(*i*) *Total area sold by agricultural tribes—*	*24·04*	*19·92*	*10·54*	*13·84*	*22·52*	*20·87*	*6·59*	*11·37*	*129·69*
(*a*) to agricultural tribes of the village.	9·47	9·19	..	8·67	21·59	20·15	2·06	5·69	*76·82*
(*b*) to other agricultural tribes.	6·30	4·13	2·69	3·31	·93	·72	4·13	5·68	*27·89*
(*c*) to money-lenders ..	..	..	..	..	..	..	..	..	..
(*d*) to others ..	8·27	6·60	7·85	1·86	..	..	·40	..	*24·98*
(*ii*) *Total area sold by members of non-agricultural tribes—*	..	..	..	*6·10*	*5·56*	..	..	..	*11·66*
(*a*) to agricultural tribes of the village.	..	..	..	6·10	..	..	..	..	*6·10*
(*b*) to other agricultural tribes.	..	..	..	..	..	..	..	..	..
(*c*) to money-lenders ..	..	..	..	..	..	..	..	..	..
(*d*) to others ..	..	..	..	..	5·56	..	..	..	*5·56*

In preparing this statement pre-emptive purchases have been reckoned only if they take place within the same quadrennium. If they take place in different quadrennial periods both the original and the pre-emptive purchase have been reckoned. There is only one such case. In the quadrennial period 1891-2 to 1894-5 a member of an agricultural tribe sold 5·17 acres to a *Jogi-Rawal.* This land was pre-empted in the period 1903-04 to 1906-07. Consequently the area is included in the total area of 24·04 acres sold by members of agricultural tribes in the former period and also in the area of 6·10 acres sold by persons not belonging to agricultural tribes in the latter period.

The figures of this statement have been derived from the Mutation Register, and there is a slight discrepancy between them and the figures derived from Statement No. 5 of the Village Note Book. The total area here shown is 141·35 acres whereas the total of the figures given in Column 3 of the statement in para. 1 is 149·5 acres. This discrepancy is due to the omission from the second statement of pre-emptive sales. Neglecting decimals, of the 130 acres sold by members of agricultural tribes in the last 32 years some 8 acres have been acquired by Government for the purposes of the Canal Department. Thus only 122 acres have been voluntarily sold. 76 acres of this has been sold by five persons, namely, M. 38, G. 12, J. 10, K. 9 and C. 7. M. and his brother started life with a fair patrimony each holding about 22½ acres of land. They were both sonless and M.'s brother first began selling land, disposing of some 7 acres before the period now under consideration. M. soon followed his example. He neglected his fields and took to riotous living. After a time M.'s brother died and M. inherited his property, but M. continued dissipating his inheritance. Finally M.'s reversioners stepped in and bought the balance of his property, M. being left with nothing except a trifling share of the common land. M. is now dead. G.'s career is very similar to M.'s. He is now old and blind. He still owns some land but it is mortgaged, so that he is dependent on his relatives. J. is also a wastrel. In his case also the reversioners finally stepped in and acquired the balance of the property. K. is a sonless proprietor who has not cared much what happened to the land and was probably pleased to think that he was injuring his reversioners. C.'s case is somewhat different. He has spent money on marriage expenses for his children and he fell into the hands of the village money-lenders. He sold a large share of his holding to pay his debts. The causes of the sale of the remaining 55 acres are many and various. Some of them will be examined later. IX. 2.

Of the land sold to members of agricultural tribes of the village (77 acres) nearly one-third has been bought by one man (H. S.). This man in 1892 owned less than 8 acres of land. He had the reputation of being a very good farmer, but he had a great hunger for land and he was prone to litigation and harsh in his dealings with his fellow-men. He was thrifty and able to lend money, but he exacted payment rigorously and charged a high rate of interest. Bit by bit he acquired plots from his neighbours until in 1919 he owned nearly 33 acres. His overbearing nature shortly after that led to his sudden demise. His body tied up in a sack was found some eight miles down the canal. Although it is probable that every one in the village

IX. 2. knows who the murderers are, evidence sufficient to justify a trial has not been forthcoming.

IX. 3. 3. As far as can be ascertained there are only 13 persons who formerly did not own land in the village or elsewhere but have purchased land during the past 32 years. One of these is a man whose father is still alive and an agriculturist of the village. This man will, of course, ultimately inherit his father's land. Four persons belonging to menial classes have bought about a tenth of an acre each to build houses outside the village site. Four belong to the carpenter class and come from the neighbouring village of Sathiala. They seem to have made money either by money-lending or by their calling, and are definitely taking to agriculture. They have bought land on the outskirts of the village area near their own village. One man of the *Jogi-Rawal* class has served with distinction and profit in the Army and has bought land in his native village, although he has a colony grant. Another soldier is of the carpenter caste. He also has attained the rank of *Subedar* in the Indian Army and has gradually acquired land. Two others are *Jogi-Rawals*. It is not known how they made their money. None of these men was a tenant at the time when he purchased land.

IX. 4. 4. There are only two examples of persons, with less than 5 acres cultivated, selling their land in the past 32 years. One of these was the widow of a *Jogi-Rawal* who sold the whole of her holding (1·53 acres) to another *Jogi-Rawal* and the other was a sale of ·83 acre by a *Jat* out of a holding of 3·41 acres. It is probable that the widow passed her land to relatives. The other transaction is said to be due to debt, the owner being an old man who could not do much with his holding because his son was not old enough to help him.

There are not any examples of persons with holdings of less than 5 cultivated acres increasing the size of those holdings. The persons who do not belong to agricultural tribes and who acquired land as described in para. 3 are not now being considered.

IX. 5. 5. During the five years ending 1923 nine persons have sold their land. First among these is C. who has on various occasions sold 5·37 acres for Rs. 3,100/-. Of this sum Rs. 500/- was spent in redeeming some 8·57 acres of land, which was under mortgage. C. seems to have spent much money on his son's marriage and he also had bad luck, because his cattle have died. He is getting on in years and his son has only just begun to work for him. This is said to be the cause of his difficulties.

T. and U. have sold 1·34 acres (part of their joint holding) for Rs. 600/-. IX. 5.
This area was formerly mortgaged for Rs. 250/- to one of the vendees. T. is old and weak and U. is an opium eater, which is a grave defect in a young man. U. is also shown in the Mutation Register as selling ·83 acres of his own holding for Rs. 600/-, but there is a dispute about this and the matter has not yet been decided.

L.'s sale is due to an effort at consolidation. He has sold an outlying plot to people of another village, and has bought another plot of twice the area of the plot sold. The new plot is under mortgage. G. is a wastrel. He has sold or mortgaged all his property. Ch. sold an outlying field. He also intended to consolidate his holding as L. has done, but he has frittered away the money. B. was entangled in a theft case and got into debt owing, it is said, to his having to bribe certain subordinates. He sold an outlying plot to pay this debt. N. contracted heavy debts to pay for his son's education. His son died on Active Service in Egypt. N. who is an old man has sold his land to his collaterals to re-pay his debts.

6. Only one example has been found in the past ten years of a man IX. 6.
selling his land in order to redeem other land. In 1921, one C. (already mentioned in para. 5) sold 1·34 acres for Rs. 600/- in order to redeem 8·57 acres for Rs. 500/-. In the same year one Musammat A. sold an acre of land for Rs. 150/- and bought an acre for Rs. 500/-. The object of these transactions was consolidation. One M. in 1920 mortgaged 3·90 acres for Rs. 1,243/- in order to redeem 10·76 acres for Rs. 1,448/-. In 1925 one G. mortgaged 2·79 acres for Rs. 700/- in order to redeem 9·74 acres for Rs. 919/-. The balance in each case was found from other sources, but it is not known what these were.

7. There was no example found of a man mortgaging his land in order IX 7.
to buy other land.

CHAPTER X.

SALE OF VILLAGE PRODUCE.

X. 1. 1. (*i*) The following table gives the prices at which the principal crops of the village were sold in each of the five years, 1920-21 to 1924-25 :—

Prices in Seers per Rupee.

Crops.	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.
Wheat ..	6¼ to 7	8 to 8¼	11½	11 to 12	8¼ to 8½
Gram ..	9 to 9½	16 to 17	10 to 12	12	12 to 12¾
Maize ..	9 to 10	8 to 9	11 to 12	10 to 11	12 to 13
Sugar (*gur*) ..	4½ to 5	3¾ to 4	6½ to 7½	6¼ to 7½	5 to 6
Cotton ..	4 to 5	3¾ to 4	4 to 5	3 to 3½	3 to 4
Rape (*toria*) ..	5 to 5½	5½ to 6¼	8 to 8¼	6 to 7	8 to 9

The figures for 1924-25 are reliable as they are the result of enquiries made by the Investigator on the spot in 1925. The prices of wheat, gram, sugar (*gur*) and cotton were ascertained by him personally, while the prices of maize and rape (*toria*) were obtained by questioning the people, while transactions were fresh in their memory. The prices for the four preceding years are little more than guess work on the part of shopkeepers, because no reliable account-books were discovered and the cultivators were found to have very hazy ideas as to prices more than a year old.

(*ii*) The prices for the five years of these products as shown in the Circle Note Book for the Bet Bangar Assessment Circle are given in the following table :—

Prices in Seers per Rupee.

Crops.	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.
Wheat ..	6½	7¼	12	12	8
Gram ..	6	7¼	15	14	10
Berra ..	6¼	7¼	14	13	9
Maize ..	9¼	6	14	16	12
Sugar (*gur*) ..	4¾	4	6	8	6½
Cotton ..	6	4	3½	2	4
Rape (*toria*) ..	4	5¼	5¾	6	5

(*iii*) The main products of this village, which are sold are cotton, sugar (*gur*), rape (*toria*), wheat, gram and a mixture of wheat and gram (*berra*). Cotton is chiefly purchased by the village traders, who are mostly *Khojas*. There are also a Brahman and a *Khatri*. Most of these traders own pony-carts with a capacity of about 16 maunds, and they use these carts to carry their purchases to the central market at Amritsar. The Brahman and the *Khatri* deal in cotton in a small way only and usually purchase not more than one pony-cart load at a time. The *Khojas* buy the cotton in much larger quantities and besides using their own pony-carts hire bullock-carts for which they pay Rs. 15/- per cart to Amritsar. The capacity of a bullock-cart is 40 maunds. A *Khatri* trader from the neighbouring village of Baba Bakala made considerable purchases of cotton in 1925, and it is not uncommon for traders from other villages also to make purchases of cotton at Gaggar Bhana. The people are, therefore, not wholly dependent on traders resident in the village. X. 1.

Most of the sugar (*gur*) is purchased by village shopkeepers or by other inhabitants of the village who have not grown sugar for their own use during the year. A large part is also bought by *kumhars*, who take the *gur* for sale to villages in the Central Punjab, where it can be sold at a considerable profit. The sugar (*gur*) of this village has a reputation in the neighbourhood for special sweetness and quality and this is probably the reason why it is disposed of in this way instead of being taken to the central market like cotton.

Toria (rape) is not produced in very large amounts. The whole of it is sold locally to *telis* (oil pressers) either of the village or outsiders. Very little of it is taken to the central market as a rule.

Wheat, gram and maize are all usually disposed of in the village through small traders, who convey it to the central market. The millers who lease the water-mills at Raya, which is about five miles distant, also buy considerable quantities. The local purchasers of wheat and gram take it to Amritsar and Jandiala markets as a rule, but sometimes they also take it to Batala in the Gurdaspur District, Kartarpur in the Jullundur District and Kapurthala in the State of that name, and even as far as Jullundur.

These products are almost invariably sold through the village weighman or broker (*dharwai*). This village weighman is allowed to levy a cess of three pies in the rupee ($1\frac{9}{16}$ th per cent.) on all articles sold which are weighed by him. This cess is paid by the purchaser. The right to levy this cess is sold every year by the right-holders in each division (*patti*) of the

X. 1. village. The price paid in 1925 was Rs. 150/- for two divisions (*pattis*) and Rs. 40/- for a third division (*patti*). This local cess is known as *dharat.* Incidentally it may be noted that the amount paid for the right to levy this cess gives some indication of the value of the products sold during the year. If it be assumed that the *dharwai* made a profit of only Rs. 60/- on the price paid for the right to collect this cess (which would amount only to about 30 per cent. of the amount paid) it follows that the weighman must have collected about Rs. 250/- altogether. At 3 pies in the rupee this sum represents sales of Rs. 16,000/- during the year.

The usual procedure for these sales is that a representative of some grain dealer in the central market or possibly one of the larger villages in the neighbourhood such as Baba Bakala or Butala comes to the village and interviews the village *dharwai,* who is able to tell him which of the owners has grain to sell. The price is usually arranged between the *dharwai* and these travelling agents, and the agent is then taken to the owner who has the grain for sale and if the owner agrees to the price the bargain is struck and one rupee is paid in advance to seal it. The village *dharwai* then weighs out the whole of the grain and receives his cess from the agent who also pays the whole price to the owner before removing any of the grain sold. It will be seen that the village *dharwai* has to play a very important part in this transaction. He is trusted in the first place to fix a fair price and secondly, to weigh out the grain fairly. Instances are on record where the village *dharwai* has played false and has not only persuaded the seller to sell at too low a price, but has also cheated him by weighing inaccurately.

The cotton, sugar (*gur*) and grain are, as a rule, stored in the villager's house until the time comes to sell them. Examples of sale from the thrashing floor or from the sugar mill are not common. People are inclined to wait for a rise in prices before selling, but sugar (*gur*) is usually sold fairly promptly, because with keeping it loses weight owing to dryage.

(*iv*) It is a curious fact in this village that cultivators do not keep current accounts with any of the local shopkeepers. All purchases are paid for in cash or in kind and shopkeepers do not let their accounts run for any long time, rarely for more than a few days. If any one fails to pay after a few days the sum due from him is duly entered up in the account book and has to be acknowledged. It is then treated as a cash loan on which interest becomes chargeable. Repayments of debt are made in cash as a rule. If made in grain, only so much grain is given to the shopkeeper as is necessary to repay the debt with such interest as may be due at current prices. Sometimes if the relations between a shopkeeper and his clients are good,

cultivators will let him have a small cash deposit against which they make purchases later. X. 1.

(*v*) The grower, if he happens to be in debt, is not bound to sell his produce to his creditor. As a rule, he sells his produce in the open market and pays his creditor in cash.

(*vi*) It is not usual for the grower to sell his surplus produce in the central market. Growers prefer to sell it locally to the village traders who convey it to the central market for disposal. In 1925 the Investigator found that one *Jat* grower who derives some profit as a carter during the slack season bought some wheat and adding it to his own surplus wheat made up a full cart load, which he took for sale to Amritsar.

(*vii*) As a consequence of the produce being sold locally growers have to be content with a lower price than can usually be obtained at the central market. The profit goes to the middle-men who purchase from them at the village. The profit made is not excessive as the following example, which occurred on the 18th of January 1925, will show.

A *Khatri* trader of Baba Bakala bought about 200 maunds of cotton from this village at a rate of Rs. 13/5/3 per maund and he took it to Amritsar on five carts. At the village he had to pay besides the price of the cotton, three pies per rupee as *dharat*, Re. 1/- per cart loading charges and Rs. 15/- a cart of 40 maunds as hire to Amritsar. These payments work out as follows :—

	Rs.	as.	p.	
Dharat	0	3	4	per maund.
Loading charges	0	0	5	,, ,,
Carting charges	0	6	0	,, ,,
Total ..	0	9	9	,, ,,

In addition he had to pay the following further charges at Amritsar : —

	Rs.	as.	p.	
Terminal tax in cash	0	0	6	per maund.
Arhat (brokerage) @ 3 pies per rupee =	0	3	10	,, ,,
Batta (discount) @ 3 pies per rupee =	0	3	10	,, ,,
Unloading charges	0	0	9	,, ,,
Total ..	0	8	11	

Besides this he had to give up to the broker three *chhataks* per maund and also a small quantity on account of religious dues (*dharam khata*). Besides these more or less legal charges the trader had to pay 2 annas per

X, 1. bullock-cart to the octroi clerk in order to get the carts through quickly and to prevent undue delay. Adding in all these (which may be estimated at one pie per maund) the total extra charges at the central market would come to about 9 annas per maund for cotton, (for wheat, gram, *toria* and sugar (*gur*), the extra charges are said to amount to not more than 5 annas per maund). The extra charges borne by the trader who bought the cotton at the village amount to Rs. 0/9/9 at the village and 9 annas at the central market, or Re. 1/2/9 per maund. At the point of delivery, therefore, the cost of the cotton was Rs. 13/5/3 plus Re. 1/2/9 or Rs. 14/8/0 per maund. This particular lot of 200 maunds was sold in the Cotton Market at Amritsar at Rs. 15/5/0 per maund, so that the village trader made 13 annas per maund out of the transaction or Rs. 162/- altogether.

The village dealers each have their own broker (*arhti*) in the central market. The produce is all heaped up on the pavement in front of the broker's shop and the agents of large dealers come to the broker and tell him privately the price, which they are willing to give for all the heaps on his pavement. The broker settles matters with the large dealers and sells the produce at the highest price he can obtain. The village dealer who has brought the produce to the *arhti* is not told the exact price. In the evening all transactions are settled and the village dealer receives payment for his amount of the produce sold. Very little distinction is made in quality. Sometimes the owner of a markedly superior produce will get a little more, while the owner of markedly inferior produce will get a little less. As a result of this state of things some petty traders openly confess that they actually mix superior and inferior produce before taking it to the market.

X, 2. 2. The nearest central market is at Amritsar, which is about 31 miles distant from Gaggar Bhana, of which five miles lie along the canal bank and 26 miles are along the Grand Trunk metalled road. Occasionally wheat, gram and other village products are taken to Batala in the Gurdaspur District, which is only 18 miles distant along an unmetalled road. Sometimes also the produce is taken to Kartarpur 22 miles distant of which nine miles are along an unmetalled road and the rest along the Grand Trunk Road. Jullundur, which is 32 miles distant, and Kapurthala which is 25 miles distant, are also markets in the neighbourhood. The central market to which the rural traders chiefly resort is Amritsar.

X, 3. 3. The nearest railway stations are on the main line of the North Western Railway between Saharanpur and Lahore at Beas and Butari, the former being nine miles and the latter seven miles distant. The way to

the Beas station lies along an unmetalled District Board road and that to Butari for six miles along the canal bank and then for a mile along the Grand Trunk Road. X. 3.

4. Practically the only road leading to the central market is by the unmetalled canal bank road and then by the Grand Trunk Road. The District Board road to Batala is unmetalled and rather difficult to traverse in the rainy season. On the whole it may be said that the village is well situated with respect to the markets which serve it. During the rainy season, however, transport across the unmetalled roads is difficult and requires extra bullock power or greatly reduced loads on the carts. X. 4.

5. The ordinary means of conveyance are pony-carts, bullock-carts and pack-donkeys. Two of the *Jat* land owners of the village do carting as an additional means of livelihood and two other *Jat* owners earn money in this way occasionally. The pony-carts are all owned and worked by rural traders, usually *Khojas*. The donkeys are owned and worked by *kumhars*. As a rule the *kumhars* from other villages come to this village to buy sugar (*gur*) and to take it away to other parts of the Province. Pack-camels are occasionally seen, but they are not common. It is said that, since the increase in the price of bullocks, camels are becoming more popular. X. 5.

6. It may be stated as a general rule, that the produce of the village is not sold immediately except sugar (*gur*) and rape (*toria*). Sugar, as has already been said, is sold as soon as possible after preparation, because it is believed to get drier and lose weight if kept. *Toria* (rape-seed) crop is sold as soon as it is reaped because the cash obtained for it enables the cultivator to meet the first demand for land revenue for the *kharif* (autumn) harvest, which is ordinarily payable in December and January. Cotton is kept till prices are favourable but rarely longer than February, by which time the whole of the preceding crop has usually been sold. Occasionally if a cultivator is hard-pressed for ready cash, he will sell some of his cotton as it is being picked. Much of the wheat is kept for local consumption : a portion is sold to pay the land revenue and occupiers' rates of the spring harvest. By selling his *toria* the cultivator is often able to hold his cotton for a month or two longer, so as to get a better price. No exact example has been discovered of a cultivator keeping back his produce for longer than six months in order to obtain a higher price. X. 6.

7. The land revenue for the year is payable in three instalments, namely, two instalments for the *kharif* (autumn) harvest on the 15th December and X. 7.

X. 7. 15th February respectively and one instalment for the *rabi* (spring) harvest on the 1st July. These dates necessitate the collection of the land revenue at the village about a month earlier. The arrangement for having two instalments in the *kharif* harvest is usually neglected, the villagers treating the dates, 15th December and 15th February, as the limits within which the land revenue and cesses have to be collected and the whole being collected and paid into the village at one time.

The occupiers' rates are collected up to the middle of February for the *kharif* crops and up to the middle of June for the *rabi* crops. Except for *toria* and sometimes for wheat and more rarely cotton, it is unusual for the cultivator to sell his produce at once merely in order to pay the land revenue demand. He is frequently able to pay the *rabi* demand as well as the *kharif* demand out of the produce of the *kharif* harvest. Thus, the cash which he receives from his cotton and sugar enables him probably to meet most of the year's demands on account of land revenue and water-rates. This does not apply to the poorer cultivator who has only four or five acres of land and who of necessity lives much more from hand to mouth than the owner of a really economical holding. Unless he has some means of livelihood other than his holding such a man may have to sell a part of the produce of his holding as soon as possible after it is harvested in order to pay the demands for land revenue and water-rates. Sometimes cultivators help each other with temporary loans. These loans are taken on what is called *hath udhar* (hand credit), that is to say, there is no record of the transaction and no interest is charged and the loan is repaid within a few days as soon as the debtor can conveniently sell the produce at his disposal.

The following table shows in terms of the principal crops the amount of the land revenue demand in the village. The equivalent of the occupiers' rates and cesses have also been worked out for wheat, sugar and cotton. It is not necessary to work out these rates for gram, *toria* and maize.

Nature and amount of payment in cash.	Equivalent at the Lowest Prices Ruling in the Village in 1925 in Maunds of					
	Wheat.	Gram.	*Toria.*	Sugar.	Maize.	Cotton.
Land revenue. Rs. 2,980/- ..	633	949	670	447	968	298
Cesses ,, 493/- ..	105	..	..	74	..	49
Occupiers' rates ,, 8,459/- ..	1,797	..	..	1,269	..	846

These figures indicate that the total amount of wheat required to be sold to pay the whole of the Government demands and cesses for the year amounts to 2,535 maunds. The area under wheat is 380 acres. Only a small part of this is *barani* wheat and we can estimate the yield to be about 12 maunds all round for the whole of this area, so that the total wheat production would amount to 4,560 maunds on the average. In the year 1925, however, the crop was a poor one and the outturn of wheat may have been less than this. X. 7.

1,790 maunds of sugar would have to be sold to pay all the land revenue, cesses and occupiers' rates. The area under sugarcane in the autumn harvest of 1925 was 67 acres. The yield may be estimated at 27 maunds, so that the gross outturn would be 1,809 maunds and the village produced enough sugarcane in 1925 to pay for the whole of its Government dues and cesses and still had a little over.

1,193 maunds of cotton would be required to pay all the land revenue, cesses and occupiers' rates. The area under cotton in the autumn of 1925 was 380 acres, the yield of which may be estimated at five maunds per acre or 1,900 maunds altogether, so that the village produced much more cotton than was required to meet the whole of the Government demands.

8. There are not any co-operative sale societies in the village. The cultivators are very greatly dependent on the village weighman as has already been said to get them good prices for their produce. X. 8.

9. The principal articles made in the village are coarse cotton cloth (*khaddar*) manufactured from cotton grown in the village and hand-spun on spinning wheels. This hand-spun yarn is worked in an old-fashioned hand-shuttle loom. A finer quality of cloth is made by a few of the weavers on an improved loom. This finer cloth is woven from machine-spun yarn purchased from outside the village. X. 9.

The leather worker (*mochi*) also makes shoes for the villagers and sells such surplus as he has in neighbouring villages. The carpenters also prepare a few wooden boxes which are usually meant for brides who take away in them their wedding finery when they leave their fathers' homes. This is the full extent of the manufacturing capacity of the village.

CHAPTER XI.

PURCHASES AND INDUSTRY.

XI. 1. 1. From what has already been said it will be gathered that the agricultural and industrial requirements of this village are of the simplest. The cultivator needs wood and iron for his implements, and for his dwelling, cowsheds and so on. As a rule, the timber is to be found growing in his fields and the village carpenter fashions it as required, being paid either in cash or (now more rarely) in kind at harvest time. Iron for these implements can be obtained at the village shop and can be made into ploughshares, sickles or mattocks or any other simple agricultural implements. If any thing more elaborate than these is required, it must be obtained from the market town or from one of the larger villages in the neighbourhood. For example, such articles as sugarcane crushing mills, boiling pans and the iron accessories of a well cannot be obtained in the village. For them the agriculturist must go either to Amritsar or to some large village like Butala or Baba Bakala. Ropes are made by the agriculturist himself from hemp which he has grown. Iron chains for tethering buffaloes can be bought at the village shop. Sometimes, if the husbandman has not a tree available for his requirements, he may have to buy one from a neighbour, or he may be able to buy the implement itself from him second-hand. Wood required for superior planking (usually *deodar*) cannot be obtained locally and must be bought in sleepers from the market. The articles required for household use or consumption are also obtained locally. The cloth required for clothes is, as a rule, woven by the weaver out of yarn ginned and spun by the housewife from cotton grown by the farmer and teased by the oil-presser (*teli*). The village washerman and tailor convert it into wearable garments. All these operations are paid for in kind as a rule, except the sewing charges. These coarse cloth garments are worn only by the men. The women wear finer garments made from cloth purchased in the market town, or at the village shop. There is a surplus of shoemakers (*mochis*) in the village. These people take the skins of all dead cattle, tan them and convert them into shoes and such leather articles as are required for good husbandry. They also purchase tanned leather from neighbouring villages, and at harvest time hawk their surplus products about the country. The pottery required for the household is made by the local potter and bought in cash, usually from the village shopkeeper. The principal articles of food are

reserved by the farmer in sufficient quantity for himself and his household for the whole year. Persons who grow no corn usually buy their requirements for the whole year or for half a year, from one of the farmers at harvest time. Other articles of consumption such as salt, condiments, some varieties of pulses, spices and tobacco are bought from the village shopkeeper as required. These men import these articles from Amritsar. The local shops also provide oil of various kinds, and even vegetables. These are very little grown locally, and are usually brought to the village for sale by some weavers who act as shopkeepers. XI. 1.

2. There are eight shops in the village. The three humblest are kept by the weavers already mentioned. Two are kept by *Khojas* who are little better than the weaver shopkeepers. They have pony-carts, however, and they make a living by taking the produce of the village outside and by bringing back vegetables. A Brahman and a *Khatri* each keep shops at which country groceries, drugs and cooling drinks can be bought. They do a better business than the weavers and the two *Khojas* already mentioned. The most important shop, however, is kept by *Khojas*—five brothers who work jointly, and who can supply most of the requirements of the village. These people have a connection extending beyond the village. They import their goods from Amritsar, and occasionally peddle fancy articles—tempting pieces of cloth, embroideries and ornaments—among the rustic beauties. They are most active at harvest time, and derive much profit by obtaining grain at cheap rates in exchange for their wares. The farmer regards these transactions with suspicion and is inclined to attribute his indebtedness to these petty extravagances of his women-folk. XI. 2.

3. The chief market from which commodities are purchased is Amritsar, distant some 31 miles from Gaggar Bhana, 26 miles being along a metalled road. Another nearer market is the town of Batala in the Gurdaspur District which is about 18 miles distant by an unmetalled road, which is almost impassable in rainy weather. The large villages of Butala about three miles distant and Baba Bakala about five miles distant also serve as markets, and very occasionally Kapurthala and Jullundur are also visited. XI. 3.

4. It is a remarkable fact that in this Sikh village the principal shopkeeper should be a Muslim *Khoja*. It is also remarkable that contrary to usual custom, all dealings with shopkeepers are in the nature of cash transactions. All accounts have to be settled at once either by the payment of rupees, or by the payment of grain. If there is any delay in making XI. 4.

XI. 4. payment the customer is not encouraged to come again. In the rare cases where payment is not made at once, an entry is made in an account book to which the customer has to fix his thumb mark. When this is done interest is charged. It is said also that for old standing accounts when payment is made in grain, it is accepted at a rate cheaper than the market rate. It must again be noted, however, that these credit transactions are not common and are not encouraged. It is probably only a coincidence that the principal shopkeeper is a Muslim, and that it is a general rule that purchases are made for cash.

XI. 5. 5. The experiments made by the Investigator indicate that there is a tendency for the village shopkeeper to sell adulterated articles of food. The grain is mixed with dust, bits of broken pottery and with other kinds of grain. As an example, two lots of pulse were purchased from two different shopkeepers. One of these lots had been obtained by the shopkeeper directly from the farmer a few days previously. The second lot had been purchased by the shopkeeper at the market. Twelve ounces from each lot were carefully examined. The first sample (that obtained directly from the farmer) was found to contain a very small proportion of impurities—mostly a little fine dust such as might reasonably be expected from the threshing floor. The second sample (that obtained from the market) was found to contain more dust than the first and one ounce of other impurities, which were mostly small bits of pottery and grain of other kinds than pulse, that is to say, this second sample had $8\frac{1}{3}$ per cent. of impurity. A sample of wheat examined showed even worse results. It contained a large admixture of barley and gram. Bread made from wheat flour bought at a shop did not taste as good as bread made from flour bought directly from a farmer.

XI. 6. 6. It was found that the *Khatri* shopkeeper from whom flour was bought by the Investigator's servant was weighing the flour against two pieces of stone. One of these was said to weigh a *pao* (one-quarter of a *kachcha ser*, equal to 3·2 oz.). On being tested it was found to weigh less tha two-thirds of a *pao* (less than 2 oz.). The second weight was said to wei 5 *paos* (1 lb.), and it was found to be short by about one ounce. The fl was being sold at $13\frac{1}{4}$ *kachcha sers* (10 lb. 9 oz.) for the rupee.

The effect of the short weights alone was to reduce the quantity sold for a rupee to 12 *kachcha sers* (9 lb. 10 oz.). The flour was take by the Investigator and carefully weighed against stamped weights on accurate scales. It was found to weigh 11 *kachcha sers* (8 lb. 13 oz.). The shop-

keeper had not only used short weight, but he had evidently manipulated the scale so as still further to reduce the quantity supplied, the difference amounting to 1 lb. 12 ounces or nearly 17 per cent. The unstamped weights of other shopkeepers were examined and were found to be fairly accurate. It is a curious fact that the shopkeeper found to be selling flour with incorrect weights was also charging a higher price than was being demanded by another shopkeeper in another part of the village. These differences in price are fairly common in the village. XI. 6.

7. There is no Co-operative Supply Society or Union in the village. XI. 7.

8. The only cottage industries in the village are the weaving of sheets and the making of shoes. These articles are made in excess of local requirements, owing to the fact that there happen to be in the village more than the necessary number of weavers and shoemakers. The looms used are of two kinds—the ordinary hand loom in which the shuttle is thrown from hand to hand, and an improved form in which there is a simple mechanical device for throwing the shuttle. The yarn used for the former is handspun and locally produced and that for the latter machine spun and bought at Amritsar. The width of material produced by the former is little more than half of that produced by the latter. There are 12 hand-looms and 4 improved looms in the village. The shoes are entirely made by hand and all the instruments used are of the simplest kind. XI. 8.

9. The farmer retains for the use of his family a small portion of the cotton he grows. This is ginned in the house by the women in a small gin worked by hand. The ginned cotton is taken to the *teli* (oil-presser) who cleans and teases it, and takes for his work grain equal in weight to the lint teased. The cotton is then spun by the women in hand-worked spinning wheels of which there are usually several in each house. Machine spun thread is imported from Amritsar. There is a fairly large community of weavers in the village. They are all Muslims. The cloth produced on hand shuttle looms is all consumed locally. That produced on improved pattern looms is mostly exported, but a little is used locally. XI. 9.

10. There are four oil-presses in the village. These are all worked *telis* (oil-presser caste). They are not worked continuously during the mer but are worked daily in the winter. The oil seed is bought by pressers from the farmers as required, and the oil and oil cakes are r cash. There is some export of oil, but the oil cake is all consumed XI. 10.

XI. 10. locally. Besides this work the *telis* tease cotton for the villagers and prepare it for spinning.

XI, 11. 11. There are six flour mills in the village all worked by bullock power. They are owned by *tarkhans* (men of the carpenter caste). The mills are worked by persons wishing to grind corn, who use their own bullocks. The owner of the mill is given one seer of flour for every maund ground. This amounts to $2\frac{1}{2}$ per cent. of the flour ground. Besides these flour mills there are numerous hand-mills in the village. These are worked by women, but these are now rarely used except in the houses of village menials. There are flour mills worked by crude oil engines at Sathiala and Baba Bakala—villages about three and five miles distant. These are sometimes resorted to.

XI, 12. 12. There are 21 sugarcane crushing mills in the village all worked by bullock power. All are owned by agriculturist land-owners. The mills are worked by the person whose cane is being crushed, helped by his field labourers. Two seers of *gur* for each day are paid to the carpenter or to the blacksmith who come every now and then during the crushing season to keep the mills in working order. If a man does not own a mill he has to get his cane crushed at some other person's mill. The charge made is 8 to 12 annas for 24 working hours, the bullocks used being provided by the person crushing the cane who is also responsible for the daily repairs or carpenter's or blacksmith's charges. Frequently the charge for the mill is not levied, but the mill must be kept in repair by the person using it.

CHAPTER XIII.

YIELDS.

1. The following yields were assumed by the Settlement Officer at last Settlement for different classes of soil in the Bet Bangar Assessment Circle in which this village lies :— XIII. 1.

Crops.	Yield per acre in seers.		
	Chahi.	*Nahri.*	*Barani.*
Rice	..	800	400
Maize	640	560	320
Sugarcane (*gur*)	1,120	1,080	700
Cotton	200	200	120
Til	160	160	100
Wheat	560	480	320
Gram	400	320	280
Barley	520	440	280
Berra (mixed wheat and gram) ..	440	360	280
Masar	240	240	200
Toria	300	300	240
Sarson and *Taramira* ..	200	200	200

The estimates of the Director of Land Records are derived from, and are consequently the same as these yields.

2. The notes about this village recorded by successive Settlement Officers are as follows :— XIII. 2.

Mr. Blyth in 1853-4 said :—

" A fine large village in good condition highly cultivated and the proprietors well off. Summary Settlement was considered too high ; a reduction down to 10 per cent. below value given by revenue rates was given."

Mr. Prinsep in 1863-4 said :—

" Fully cultivated ; remainder recorded as " waste " is chiefly under road, canal and ponds. Fit for permanent *jamma* certainly, and this is a very fine large village well peopled and tilled. Their great industry alone has enabled them to pay high *jammas*.

" Land and produce good—*zabti* rate high—much improvement in village and large resources.

XIII. 2. " Only 21 per cent. is irrigated and wells are very deep and—(what follows here is illegible)—larger margin must be left to encourage people to sink new wells. They have made one new well only.

" They received relief at last Settlement but *jamma* now stands considerably above new rates which give only Rs. 1,400/-, while plough estimate Rs. 1,890/- and produce estimate Rs. 2,200/- ; altogether this is a fine estate much above average of this circle in fertility. But *jamma* is too high ; still the Tahsildar and Extra Assistant Commissioner propose increase.

" I consider Rs. 1,700/- is the utmost that can be legitimately demanded without being a tax on capital and industry and even this will be considerably above rate.

" Rs. 1,700/- is sufficient for maximum."

Mr. J. A. Grant, Settlement Officer, in 1891 said :—

" This village lies on the Subraon Branch of the canal which runs through it from end to end. In a cross direction runs the road from Beas which crosses the canal by a good bridge. Half the area lies on each side of the canal.

" There is a considerable dip in the land here and flood water flows down the side of the canal on either bank causing part of the soil along canal to harden, but it is not pronounced *rohi* as in Wadala lower down where it collects a little. The canal has here interfered a little with natural drainage. With this exception the soil is all good hard *maira*. The wells are all at the northern end on both sides of the canal and the lower end is given up to *barani*.

" The new measurement is not yet completed and thus the new area is not yet ascertained. There is some discrepancy about the former area too between the figures in the Settlement Record and in the English Note Book, but accepting the former figures as more correct, I may state the area as—

		Now ascertained.
Old	.. 1,252 acres	1,252 acres
Present	.. 1,307 „	1,394 „
Increase	.. +55 „	+142 „

They must have lost land under the canal and perhaps the road and made up more than this by new cultivation.

" The *chahi* area too is given as 260 acres, but the area of *chahi* crops would seem to point to this being understated. It is probably more near 300 acres, the *chahi* cropped area being 385 acres—260 would give 15 acres a wheel too which is less than is probable. 300 would give 18 which is more likely (now comes out 298).

" On the village (site) side there are six wells and the same on the other side of the canal, one of them being a new one which will have to get a protective lease. But 5 are double so there are 17 wheels at work.

" One well was destroyed by the canal and is now lying quite disused; The best irrigated crops are as under :— XIII. 2.

Maize	..	..	21 acres
Cane	..	..	25 ,,
Cotton	..	..	39 ,,
			85 acres or 7 per cent.
Wheat	..	..	159 ,, 12 ,,

The *kharif* area is very low but the wheat area is good enough. They do not seem to work their wells much in the *kharif*, for in spite of the canal being so near, the depth is 47 feet. The wells are all in the highest ground of the village. *Berra* and other *barani rabi* crops occupy quite 500 ac es.

" The people are mostly Randhawas. But there are other owners of different *gots*—Virkh, Virang, Deo and Jandher. One Virkh and one Jandher holdings are very large, the rest ordinary and the average comes out 8 acres a head after making all necessary deductions.

" The mortgage would seem to be about 10 per cent.

" The Jandhers have no well. They sank one but it failed and has never been at work.

" Rents are strangely low and there has been some confusion about the *khud kasht* area in the returns which makes them unreliable until the new measurement figures are available. But it would seem that out of the *barani* area 234 acres are held by tenants holding no *chahi* and the average cash rent on this is Rs. 3/5/0 an acre.

" On the whole the village though not so strong as Sathiala or with quite so good soil as Wadala is quite up to the average of the circle and in particular grows good cane. I do not agree with Mr. Prinsep in thinking it much above the average of the circle in fertility.

" Certainly the *jamma* was once preposterously high, Rs. 2,450/- at Summary Settlement. Mr. Davies reduced to Rs. 2,140/-. Mr. Prinsep brought it down to Rs. 1,700/-, and it now stands at Rs. 1,748/-. This falls all round at Rs. 1/5/6.

" If the low average cash rent on *barani* land were applied the *jamma* would come out at Rs. 2,200/- or Rs. 1/11/0 all round. A very moderate produce estimate applied to the principal crops and allowing liberally for *jowar* and *senji* fodder brings out the same figure. This it could certainly pay."

" Increase in area 142 acres. Rates give Rs. 2,110/- which I go above and I fix Rs. 2,170/- which is below both produce estimate and cash rents *jammas*.

" Liable to revision should canal reach them."

Mr. Craik, Settlement Officer, in 1912-13 said :—

" This is a large village of Randhawas bisected roughly lengthwise by the

XIII. 2. irrigation here. There is also some irrigation on the extreme eastern boundary from the Athwal Distributary.

" All are *kharif* channels and the supply is good. Recorded *nahri* is 467 acres and area of *nahri* crops about 500 acres.

" Of 19 wells 17 with 20 wheels are in use, all close round the *abadi* and near the canal. Average recorded *chahi* per wheel is 20 acres and average of *chahi* crops is much less.

" The *barani* lies in a block to the south-west and another block to the east and north-east. The latter is perhaps slightly inferior. There is some *rohi* land along the west bank of the canal. With these exceptions the soil is all good level *maira* quite up to circle average—about 4/7th are irrigated.

" Cropping 109 per cent. and failure 7 per cent. The latter is apt to be high in *kharif barani* crops. Best *kharif* crops aggregate 18 per cent., wheat 13 per cent. and *berra* 33 per cent.

" Population shows a large decline owing to plague. Holdings now average 8 acres effective, about 10 per cent. is mortgaged, or less than at Settlement. Of the land sold about $\frac{1}{3}$rd has gone to *Jats* of Sathiala and $\frac{2}{3}$rds to owners.

" There is some service here and they have 9 squares as service grants. Cash rents are fairly common on *barani* at Rs. 2/- per *bigha*. 15 acres of *chahi* are leased at Rs. 6/3/2 an acre which is a decidedly low rate.

" There is a canal bungalow here for which this village has to provide supplies, but it is not very much used. Still I think they are entitled to some allowance on this account : otherwise it is a strong village and can well afford to pay above rates though it contains a little rather inferior land. There has of course been a great improvement since the canal came, but it must not be forgotten that the *chahi* area is as usual much overstated . . . .

" Here I announce Rs. 2,850/- as the new *jamma*, *nahri parta* at As. -/8/- an acre Rs. 271/-, *abiana* on 17 wells Rs. 230/-, but 4 of these get leases aggregating Rs. 27/- for various periods."

From a comparison of these three opinions it may be stated that the village is on the whole above the average of the circle, though not as much above the average as it was supposed to be by the first two Settlement Officers. At the time of Mr. Grant's Settlement the village was not irrigated and that is possibly the reason why he classed it only as being up to the average of the circle. With the introduction of canal irrigation the village now appears to be definitely above the average. The sanctioned soil rates of the circle brought out an assessment of Rs. 2,791/- so that Mr. Craik's assessment of Rs. 2,850/- was above the rates' estimate. This in spite of the fact that Mr. Craik made some allowance because there was a Canal Rest House in the village, which though not much used, was likely to cause the people some inconvenience.

3. It was found impossible to obtain from the villagers any reliable information as to the character of the previous harvests. The following statement gives translations of the entries made by the *patwari* in the Village Note Book :— XIII. 3.

Year.	*Kharif.*	Percentage of *kharaba* on sown.	*Rabi.*	Percentage of *kharaba* on sown.
		Per cent.		Per cent.
1920-21..	Irrigated crops good and unirrigated poor. *Kharaba* due to absence of rains.	14·5	Irrigated crops good and unirrigated average. *Kharaba* due to scarcity of rains.	14·3
1921-22..	All crops moderately good.	12·5	Irrigated crops good and unirrigated average. *Kharaba* due to scarcity of rains.	2·35
1922-23..	All crops moderately good and *kharaba* in canal irrigated area due to poor soil.	·83	All crops good and *kharaba* very little.	·81
1923-24..	Irrigated crops good and unirrigated average. *Kharaba* due to excessive rains.	3·65	All crops good ..	·88
1924-25..	All crops good ..	2·85	Condition of crops good and *kharaba* due to scarcity of rain.	6·8

The following description of the season has been derived from the weekly District Season and Crop Report which being written up at the time has considerable value :—

Year.	*Kharif.*	*Rabi.*
1920-21	.. Poor	.. Poor.
1921-22	.. Average	.. Average.
1922-23	.. Good	.. Above average.
1923-24	.. Poor	.. Average.
1924-25	.. Above average	.. Poor.

It will be seen by comparing the statements that there is a general correspondence, the only marked divergence being for *rabi* 1925. The *patwari* described the crops as good with *kharaba* due to scarcity of rains, whereas according to the District Report the harvest was generally poor. The *patwari's* account is probably incorrect. The Investigator who was in the village at the time of this harvest from his own observations and from his

XIII. 3. conversation with villagers reached the conclusion that the season was a bad one.

XIII. 4. 4. The Investigator found it impossible to obtain from the farmers any idea of the yield of the previous five years. After conversation with many farmers he obtained from them some idea of the yields for crops which they described as very good or average. These are given in the table below. For facility of comparison the Settlement Officer's assumed yields are given in brackets below the *Zemindars'* estimates in each case :—

Crops.	Yields very good.			Yields average.		
	Per acre in maunds.					
	Chahi.	*Nahri.*	*Barani.*	*Chahi.*	*Nahri.*	*Barani.*
Rice	..	24	..	..	16-18	..
	..	(20)	..	..	(20)	
Maize	18	16	..	14	12	..
	(16)	(14)		(16)	(14)	
Sugarcane ..	38	34	..	27	25	..
	(28)	(27)		(28)	(27)	
Cotton	5½	4	..	4	3	..
	(5)	(5)		(5)	(5)	
Til	..	4	3	..	3	2¼
	..	(5)	(2½)	..	(4)	(2½)
Wheat	18	15	11	14	12	8
	(14)	(12)	..	(14)	(12)	(8)
Gram	11	9	8	9	7	6
	(10)	(8)	(7)	(10)	(8)	(7)
Barley	12	11	10	10	8	7
	(13)	(11)	(7)	(13)	(11)	(7)
Berra (mixed wheat and gram) ..	19	14	11	14	12	9
	(11)	(9)	(7)	(11)	(9)	(7)
Toria	12	11	..	6	5	..
	(7½)	(7½)	(6)	(7½)	(7½)	(6)

The yields in the *rabi* of 1925 were considered to be much below the average.

On the 23rd of May 1925 when B. S. was carting home his grain, the Investigator got the following reply to his questions. "They had sown 20 *bighas* (8·5 acres) of wheat, from which they got 555 bundles of cut crop when ripe. It was *nahri* sown and 3 subsequent waterings were given from the well. About 30 bundles were given to the reapers employed and other *kamins* (village menials). They threshed only 525 bundles themselves. The produce per *kanal* was nearly 7 bundles which was much above the average of this year as it averaged only 3 to 4 bundles per *kanal*. The total yield was only 95 maunds *kachcha* or 38 maunds *pacca*." Including the reapers'charges it may be said that the total yield amounted to 40 maunds, or nearly 4·7 maunds per acre.

From another cultivator A. similar questions put when he had brought home some *berra* (wheat and gram mixed) elicited the following answers :—

"We had sown 14 *kanals* (1·4 acres) of the crop. The watering for sowing we gave from the canal and 3 subsequent waterings we gave from the well. The total yield was 60 maunds *kachcha* (24 maunds *pacca*) of grain." The yield per acre falls at about 17·1 maunds.

D. S. cultivator said that he had sown 12 *kanals* (1·2 acres) of wheat after irrigating from the canal. Later he gave three waterings from the well. He had taken the field on half *batai* rent. The total yield was 32½ maunds *kachcha* (13 maunds *pacca*). About 16 seers he gave to the sweeper for winnowing and other labour. The yield per acre falls about 10·8 maunds.

H. S. said that he had sown 18 *bighas* (7½ acres) of *berra* (mixed wheat and gram). From that he obtained only 80 maunds *kachcha* (32 maunds *pacca*) of grain after paying reapers' dues. The crop was all sown from canal water. This comes to nearly a little over 4 maunds per acre excluding reapers' dues.

Another man obtained only 40 maunds of gram from 13 acres of *barani* land. The yield per acre falls at a little over 3 maunds per acre.

S. S. had sown 44 *kanals* (4·4 acres) of wheat with well irrigation. He gave 4 waterings to 16 *kanals* and 5 waterings to 28 *kanals*. The whole crop was cut by 2 owners working 9 full days and 3 reapers engaged who each was given one bundle of the cut crop every day. So they in all paid 27 bundles to the reapers. Each bundle on an average gave 8 seers of grain this year. Hence they paid in all 5 maunds 16 seers as reapers' dues from their own stuff threshed. They obtained only 60 maunds of grain. Thus the total yield of the field was 65 maunds 16 seers. The average yield falls at about 14·8 maunds per acre.

XIII. 4. The yields of *kharif* crops in 1925 were low. L. S. sowed 9 *kanals* of maize in a field to which he had applied 13 cartloads of manure and which was ploughed 7 times. Three hoeings were given to the crop. Only 10 maunds of grain were obtained.

Cotton from very good fields yielded nearly 5 maunds per acre in 1924. Sugarcane of the farm variety yielded about 38 maunds per acre from very good fields, but the local *katha* variety never yielded more than 30 maunds.

In 1925 cotton and sugarcane were expected to be below the average. The Investigator did not have an opportunity to check the outturn. The results of these inquiries are collected in the following statement:—

Class of soil.	Area (acres).	Crop.	Total outturn (maunds).	Outturn per acre (maunds).
Chahi-Nahri ..	8·5	Wheat ..	40	4·7
Chahi-Nahri ..	1·2	Wheat ..	13	10·8
Chahi-Nahri ..	1·4	*Berra* ..	24	17·1
Nahri ..	7·5	*Berra* ..	32	4·3
Barani ..	13·0	Gram ..	40	3·0
Chahi ..	4·4	Wheat ..	65·5	14·8

Even if the statements made by the persons questioned are accepted as true, these results are sufficiently diverse to justify mistrust. The outturn of wheat for irrigated land would appear to vary from 4·7 to 14·8 maunds per acre and the outturn of *berra* (mixed wheat and gram) from 4·3 to 17·1. In this second case a considerable difference is to be expected. A *nahri* winter crop is a crop which has been grown on land irrigated once by the canal before sowing. The rainfall was deficient later and it can be understood that such a crop would be a poor one. Deficient rain would also account for the poor outturn of gram on unirrigated land. There is, however, no explanation of the very low outturn of wheat in the first case, except that the answers to the Investigator's inquiries were incorrect. It must be remembered also in considering these figures that the harvest was a poor one, so that the outturns of all crops of all kinds would probably be below the average.

XIII. 5. 5. The Settlement Officers' notes show that the village is certainly not below the average of the Circle, and it is probably a bit above the

average. Therefore the rates of yield given in the first paragraph of this chapter may be accepted as certainly not being too low. It is interesting to compare these assumed rates of yield with the actual results of experiment made at the last Settlement (1912). This is done below for the important crops—

Crop.	Class of soil.	Area of experiment (acres.)	Yield per acre (seers).	Assumed yield per acre (seers.)
Maize ..	*Chahi* ..	6·56	807	640
	Nahri ..	4·84	541	560
Cotton ..	*Chahi* ..	2·04	208	200
	Nahri ..	2·73	220	200
Sugarcane ..	*Nahri* ..	1·03	1,243	1,080
Wheat ..	*Chahi* ..	3·13	688	560
	Barani ..	1·86	353	320
Berra (mixed wheat and gram).	*Chahi* ..	1·45	497	440
	Nahri ..	1·19	472	360
	Barani ..	4·60	433	280
Gram ..	*Nahri* ..	·93	267	320
	Barani ..	1·06	468	280

In 1916 the late Director of Agriculture and Industries (Mr. W. S. Hamilton) published a note on the "***Expenses and Profits of Cultivation in the Punjab.***" In that note he estimated the outturn of canal-irrigated wheat in the Tarn Taran *tahsil*, which is part of the Amritsar District, at about 20 maunds (800 seers) a *ghumao* (·826 acres). This is equivalent to 968 seers per acre. *Nahri* crops in the Tarn Taran *tahsil* receive canal irrigation throughout the winter months, so that it would not be fair to compare this rate of outturn with the rate of outturn of *nahri* crops in Gaggar Bhana, where the land is irrigated in the *rabi* as a rule only once before sowing. A comparison with *chahi* crops would, however, be perfectly legitimate. The *chahi* rate assumed for wheat is only 560 seers per acre, which is less than $\frac{3}{5}$ths of Mr. Hamilton's estimate.

For canal-irrigated cotton Mr. Hamilton assumed a rate of 9 maunds (360 seers) per *ghumao* (·826 acres), equivalent to 436 seers per acre. Here a

XIII 5. comparison with canal-irrigated cotton in Gaggar Bhana is legitimate because both crops receive canal irrigation under the same conditions. It will be seen that Mr. Hamilton's estimate is considerably more than twice the assumed yield. Mr. Hamilton in his note points out that Settlement Officers' estimates of outturn are based on arithmetical averages and that as a matter of fact the farmer never has an average crop. The crop which he can hope to get oftenest over a series of years, is a crop giving an outturn exceeding the arithmetical average of the crops grown over a number of years. There are not, however, any reliable data as to the rates of yield in Gaggar Bhana, and even though it is probable that the farmer of this village would regard crops which gave only the Settlement Officers' rates of yield for the assessment circle as poor crops, it would be unsafe to go above them for the purpose of general calculation.

CHAPTER XIV.

RENTS.

A.—General.

1. The following table shows how the cultivated area of the village is held and cultivated :— XIV. A. 1.

Total cultivated area of the Village.	Area cultivated by owners.	Area held free of rent.	Area cultivated by occupancy tenants.	Area cultivated by tenants-at-will.			
				Paying at revenue rates with or without *malikana*.	Paying at *batai* rates.	Paying cash rents.	Paying other rents.
1	2	3	4	5	6	7	8
Acres 1,386	803	20	38	40	245	194	46
Percentages 100	58	1½	2½	3	18	14	3

The figures are those of the quadrennium ending with the year 1922-23 and are taken from Statement No. 7 of the Village Note Book. They are the latest available. 4½ acres of the area cultivated by owners belong to owners of other villages, who have acquired rights by purchase from *Jat* owners of this village. The 20 acres shown as being held free of rent consist of small plots of land held in ignorance by owners who are not entitled to these plots. Very often a man will hold a small plot entered in a neighbour's name while his neighbour holds a corresponding small plot held in his name; they do not pay each other any rent and they may even not be aware that they are holding the wrong plots. Such plots are all shown in this column. The entry in the column for tenants-at-will paying at revenue rates with or without *malikana* is due to similar causes. Here it frequently happens also that the tenant is closely related to the landlord who allows him to cultivate the land on his paying the land revenue and cesses.

The area held by *batai* paying occupancy tenants is held as follows :—

Batai rate	..	1/2	2/5	1/3
Acres	..	66	35	144

The tenants who pay ½ *batai* only pay ½ the occupiers' rates for canal irrigation. The tenants who pay ⅖ths and ⅓rd of the produce pay all the occupiers' rates.

Of the 194 acres held by tenants paying cash rents, all except some 19½ acres is held by tenants paying Rs. 2/- per *bigha* (Rs. 4/13/0 per acre). This rate is paid for all classes of soil whether it is classed as *chahi, nahri* or *barani*

XIV. A. 1. or these three kinds in any sort of combination. The 19½ acres appear to be true competition rents. One tenancy of over 9 acres is held by a *tarkhan* (carpenter caste) from another *tarkhan* who permanently resides at Lyallpur.

The rent is Rs. 90/-. The tenant pays the land revenue and cesses amounting to about Rs. 27/- and pays the balance to the owner. Another tenancy of nearly 9 acres is on a rent of Rs. 80/-. Two others of a little less than 1¾ acre each, pay Rs. 40/- at Rs. 10/- per *bigha* each. These two are cultivated by mortgagors under mortgagees, and the rent is, therefore, exaggerated. There is, however, no reason for exaggeration in the other cases given. It would seem that the rent of Rs. 2/- per *bigha* is in the nature of a customary rent.

The heading ' tenants-at-will paying other rents ' (column 8 of the statement) contains all those rents known as *chakota* rents, that is to say, either lump rents in grain, or rents in grain at so much per *bigha*. In three cases, amounting to 25 acres the owner is a widow and has made her land over to her heirs who allow her maintenance which is described as rent. In one case of 9½ acres the owner is lame and does no work. He also has handed his land over to his heirs who give him a definite amount of grain a year as maintenance. In one case a mortgagor who cultivates his own land pays 20 maunds *kachcha* (8 maunds *pacca*) to his mortgagee for 3½ acres of land. In two cases there are true competition rents. In one of these the rent is 12 seers *pacca* of wheat per *kanal* (about $\frac{1}{10}$ th of an acre) for 4 acres and in the other it is 31 maunds *kachcha* (12⅖ maunds *pacca*) of grain and 5 maunds *kachcha* (2 maunds *pacca*) of *bhusa* for 4 acres of well-irrigated land.

A large proportion of the tenants-at-will are small owners who take land as tenants from larger owners in order to have a sufficiently large area to cultivate profitably. The area held by tenants who are neither owners nor occupancy tenants amounts to only 84½ acres in the whole village. Of this 4¼ acres is in outlying plots which are cultivated by owners of neighbouring villages who have other land in the vicinity of these plots, 20½ acres is rented by an enterprising *Arain* from various owners and the remainder is rented by village menials, principally of the *Chuhra* or sweeper caste.

XIV. A. 2. 2. Enquiries made from several owners show that they never have any difficulty in letting their land to tenants-at-will either at cash rents or on *batai*. The reason of course is because there are a great number of small peasant proprietors in the village who are kept in the village by their land and who are glad to obtain tenancies, which with their own proprietary land make it possible for them to earn a livelihood from agriculture. It would be

true to say that it is easier to get tenants than it is to get field labourers. At the same time the existence of so large a proportion of what are practically customary cash rents indicates that the competition for tenancies is not very great. XIV. A. 2.

3. All the tenants-at-will hold their land from year to year. A close examination of the tenancies shows that some fields have been held by the same tenants for many years, up to 6 and 10. As a rule, however, the tenants are given new holdings every year. The reason probably is that the owners are afraid that the tenants will acquire rights of occupancy or even if they do not do this, will make difficulties about quitting the land if the owner wishes them to give it up. The table given on the following page shows for 30 field numbers selected at random the changes which have taken place during the past 10 years. A cross indicates a change of cultivator. A change due to succession owing to the death of a cultivator is not shown as a change in this table. Where no change has taken place, the column is left blank. XIV. A. 3.

4. It has been seen that cash rents are to a large extent customary rents, and as they are on the whole low rents, it is obvious that tenants prefer them to any form of kind rent. For the same reason, owners prefer rents in kind especially if they are residents of the village and are able to check the outturn of the fields at every stage of the process of production. It will be seen that of the 194 acres under cash rents only 23 acres are well-irrigated lands, while 171 acres are canal-irrigated or unirrigated. The well-irrigated lands are the most productive lands in the village and where the owner does not keep them for himself he prefers to let them at *batai* or share rents. Next to them come the canal-irrigated lands, but canal-irrigated lands receive regular irrigation for the *kharif* crops only. For the *rabi* crops all that they can depend on is a preliminary watering before the sowing of the crop. Hitherto the *rabi* crop has been far more important than the *kharif* crop, and for the *rabi* crop the land is almost as much dependent on the winter rains as is unirrigated land. Indeed, if there has been a favourable shower before sowing there is frequently little to choose between canal-irrigated and unirrigated *rabi* crops, and it must be remembered that on the canal-irrigated crops occupiers' rates have to be paid by the tenant. This seems to be the reason why the customary rent rate of Rs. 2/- per *bigha* for unirrigated land has been applied to canal-irrigated land. In the last few years *kharif* crops owing to the rise in the price of cotton have become of increasing importance. It is probable XIV. A. 4.

XIV. A. 4.

Statement showing Changes in Tenants for 30 Field Numbers.

Serial No.	Area of plot (acres).	Years. 1915-16	1916-17	1917-18	1918-19	1919-20	1920-21	1921-22	1922-23	1923-24	1924-25	Remarks.
1	2·40								×		×	
2	·48			×	×	×	×			×		
3	·84			×				×	×	×	×	
4	·85		×								×	
5	1·19		×		×				×	×	×	
6	1·08					×				×	×	
7	·77		×		×	×	×		×	×	×	
8	1·27			×				×		×		
9	·97							×				
10	·52				×		×	×	×			
11	·81							×		×		
12	·69							×				
13	·32					×	×	×		×		
14	1·26											No change.
15	·33			×	×	×						K. and L. Arains alternately.
16	1·12			×	×	×						
17	·97											No change.
18	·37						×	×	×	×	×	
19	·87						×				×	
20	·87								×	×		
21	·36		×		×						×	
22	·14											No change.
23	·35											No change.
24	·76		×						×			
25	·34								×			
26	·87			×								
27	·78			×				×	×			
28	1·31			×			×	×				
29	·43			×	×				×	×	×	
30	·44		×		×			×				

that as a result the rent of canal-irrigated land will gradually increase in comparison with unirrigated land. As things are owners will continue to prefer share rents and tenants cash rents, unless indeed they are able to break through custom as has been done by some non-resident owners, and charge a high competition rent for land. XIV. A. 4.

5. In the following table the cash rents payable for various kinds of land have been worked out by the method given in the Settlement Manual.* The results obtained are, however, not of any value for the reasons already given—because most of the cash rents are customary rents, and there is very little variation for different classes of soil :— XIV. A. 5.

Kind of soil.	Cash rents on single classes of soil.			Lump rents.			Total cash rents.		
	Acres.	Rates.	Total rents.	Acres.	Rates.	Total rents.	Acres.	Rates.	Total rents.
		Rs. a. p.	Rs.		Rs. a. p.	Rs.		Rs. a. p.	Rs.
Chahi ..	8	4 14 0	39	15	..	..	23	5 8 2	127
Nahri ..	41	6 9 4	270	52	..	..	93	7 7 7	694
Barani ..	50	4 14 0	238	28	..	..	78	5 8 2	430
Total ..	*99*	..	*547*	*95*	*7 6 6*	*704*	*194*	*6 7 0*	*1,251*

6. In the following table rents have been excerpted from Statement No. 8 of the Village Note Book, but here again the results are of little value as an indication of an up or a down movement in rents. It need only be pointed out that in one year (1914-15) the rent charged for irrigated land is actually lower than the rent charged for unirrigated land. This absurd result has been reached because in that year the area of irrigated land let on cash rent especially well land is insignificant. The probability is that this small area was given out on a nominal rent to a relative. XIV. A. 6.

* *Vide* : Douie's "Punjab Settlement Manual," Chapter XX.

XIV. A. 6.

Years.	Rents on one kind of soil only.			Rents on mixed kind of soil.
	Chahi.	*Nahri.*	*Barani.*	All kinds of soil.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1892-93	6 1 3	..	4 14 0	..
1894-95	4 14 0	..	3 10 6	..
1898-99	6 1 3	..	4 14 0	..
1902-03	6 1 3	6 1 3	6 1 3	..
1906-07	5 13 0	5 13 0	3 14 0	..
1909-10	5 4 0	4 11 3	5 2 3	6 3 2
1911-12	4 9 7	4 11 0	3 11 4	4 6 3
1914-15	3 10 8	4 7 1	4 15 2	4 9 10
1918-19	5 0 0	4 11 9	3 14 5	5 15 9
1922-23	4 14 0	6 9 4	4 14 0	7 6 6

XIV. A. 7. 7. No *zabti* rents are levied in this village. In many places these rents, which are cash rents per acre, are levied on crop which it is somewhat difficult to divide by the method of share rents, such as sugar or cotton, but here even sugar and cotton are divided, when the land is let at share rents.

XIV. A. 8. 8. Examples of owners taking fixed grain rents are not common if we exclude those owners who have let their land to their next heirs on terms which amount to little more than maintenance. There are three cases which have already been alluded to in para. 1 of this chapter. They are collected in the following statement :—

Area in acres.	*Rent.*
$3\frac{1}{2}$	8 maunds *pacca.*
4	12 *pacca* seers per *kanal*=$11\frac{3}{4}$ maunds.
4	$12\frac{2}{5}$ *pacca* maunds of grain and 2 maunds *pacca* of straw.

The grain contracted for is always wheat and it is paid at the *rabi* harvest. The rent is exacted no matter what may be the state of the crop. If we take the price of wheat to be Rs. 4/- per maund these rates are the equivalent of from slightly below Rs. 10/- to about Rs. 13/- per acre.

XIV. A. 9. 9. Landlords do not as a rule make any advances to tenants either in cash or in kind. If any advance is made it is treated as an ordinary debt between two individuals and if seed grain is advanced in kind the value is calculated in cash, and recovery is made at harvest time in cash with interest added.

XIV. A. 10. 10. Owners and non-owners in the village have a right to pasture their cattle on waste land in the village and also on the stubble of cut crops. Owing to the fact that most of the tenants-at-will are also owners, it is impossible to distinguish between the rights which they enjoy in their

several capacities. Tenants are not allowed to fell trees on their tenancy, but those who do not own agricultural land have houses, which they have inherited in their capacity as village menials. Some expansion has taken place in recent years, and small plots near the village have been sold to some of the menials for house building outside the village site. The tenant of a piece of agricultural land has the same rights to water in it that the owner would have. For example, if it is a plot of well-irrigated land the tenant has a share of the well water and so also for canal irrigated land. XIV. A. 10.

11. The nature of the tenant's rights is such that it would be difficult for him to alienate them. It does happen sometimes, however, that a tenant may forego his turn to take water in order to oblige another shareholder, receiving an extra turn later on. There is no example known of the sale of such turns. XIV. A. 11.

12. Tenants are not entitled to fell trees on a tenancy, or to plant them, but occasionally with the consent of the landlord, they may use timber on their tenancy to repair their ploughs, or else to repair the accessories of the well. XIV. A. 12.

13. Tenants are not bound to make any gifts to their landlords on festivals, but on the occasions of marriages or other social functions the tenants give their quota of milk just as do other members of the brotherhood. XIV. A. 13.

14. In the same way the landowner reciprocates when there is a social function concerning the tenant. XIV. A. 14.

15. Neither owners or tenants make gifts to each other at harvest time, nor do they give any thing to labourers over and above their hire. XIV. A. 15.

16. No examples have been found of owners helping tenants to combat pests of any kind. XIV. A. 16.

17. In the same way the tenant has never been found to help the owner in such matters. XIV. A. 17.

18. The tenant does not *qua* tenant render any personal service to his landlord on any occasion. If he is a village menial he may have to perform his duties as a menial, but that has nothing to do with his tenancy. XIV. A. 18.

19. Grazing is not included in the tenancy, except so far as the tenant has the right to graze his cattle over the village common lands and the XIV. A. 19.

XIV. A. 19. stubble of fields after the crop has been cut. No special rent in the way of stock or milk is paid for this.

XIV. A. 20. 20. At the beginning of an agricultural year it is usual for the landlord to agree with his tenant as to the crop to be grown in a particular field. If the field has been previously manured by the tenant, he has a very big voice in the decision of the crop to be grown. In coming to a decision regard has also to be paid to the wishes of owners of adjoining fields. In a village where there is fragmentation such as exists in Gaggar Bhana, it is necessary to arrange that the same kind of crop is grown in adjoining fields. It would cause much trouble, for example, if fields of rice were grown in the middle of some fields of maize or cotton and *vice versa*. By mutual arrangement, therefore, all neighbours in cultivation grow the same crop. It thus happens that the village instead of being like a patchwork quilt with several tiny plots of different crops, usually has large areas of the same crop in one place. One advantage of this arrangement has already been indicated; all fields lie fallow in the same area at the same time. This facilitates carting and arrangements for ploughing, for there is no objection to a man taking his cart or his plough cattle over a neighbour's fields which lies empty, and there would be the greatest objection to his doing so if the field were under a growing crop.

XIV. A. 21. 21. There is no restriction to the grazing of cattle over the stubble of a field where the crop has been cut. Neither tenant nor owner has a prior right to this grazing.

XIV. A. 22. 22. The tenant gets all the manure of his animals; the owner has no claim to it. Once the manure is in the ground, however, the tenant's right to it ceases with the termination of his tenancy.

XIV. A. 23. 23. There are no conditions about the grinding of corn.

XIV. A. 24. 24. Nor are there any conditions compelling the tenant to reserve a portion of his tenancy for grazing.

XIV. A. 25. 25. The owner is entitled by custom to visit his tenant's fields whenever he wishes.

XIV. A. 26. 26. Practically every tenancy is for the agricultural year only and though tenants are often allowed to continue from year to year the landlord can always eject them at the end of an agricultural year. There has been no example of a tenant being ejected actually for bad farming or faulty rotation.

B.—Batai Rents.

1. The following statement indicates the prevailing *batai* rates for each class of land :— XIV. B. 1.

Class of land.	*Batai rate.*
Barani	½ and ⅓.
Chahi	⅓ and ⅖.
Nahri	⅓, ⅖ and ½.

In every case the owner is supposed to get the same share of the straw that he does of the grain, but a little laxity is permitted, and the owner leaves behind a part of his share for the tenant who in return carts the straw to the landlord's house. If the owner of well land has manured the land, he usually gets a half share instead of the prescribed ⅓ or ⅖. If the tenant's manure has been used the rate is lowered to one-third, and this rate is also allowed for canal lands which the tenant has manured, the landlord in some such cases even paying one-third of the water rates. This concession would be for one year only. In the following year a higher share is demanded.

2. As a rule there is no variation with the kind of crop grown, but sugarcane almost invariably pays only ⅓ whether it is *chahi* or *nahri*. XIV. B. 2.

3. The landlord always pays all the land revenue and cesses and if the *batai* rate is ½ he also pays ½ the occupiers' rate. It is said that he also pays ⅖ths of the occupiers' rate if his share is ⅖ths but this is doubtful. If this ever happens it is probably because the tenant has done the manuring and a special concession has been made. XIV. B. 3.

4. No additional cesses are paid to the landlord. His share of the produce is all that he gets. XIV. B. 4.

5. The harvest is always divided at the threshing floor, and each party takes away his own share. XIV. B. 5.

6. On the 17th May, 1925 the Investigator witnessed a division which took place between one A. S., the landlord, and his tenant M., an *Arain*. The share is ½ and the landlord has therefore to pay besides all the land revenue and cesses half the occupiers' rates. The crop divided was wheat grown on 17 *kanals* (1¾ acre). 80 sheaves were harvested and two of these were given to daily labourers who helped to reap the crop. The remaining 78 were threshed separately as the grain was supposed to be of a superior kind and was wanted for seed. After the grain had been winnowed and separated from the *bhusa*, the tenant with a rake made two heaps of the *bhusa*, the owner choosing one. The tenant and the *Chuhra* (sweeper caste) who had winnowed the grain then removed the owner's share to the owner's XIV. B. 6.

XIV. B. 6. house. From his share the owner left one *pand* (bundle) for the *Chuhra*, and three *pands* for the tenant and he gave about $\frac{1}{3}$ *pand* each to the *Granthi* (Sikh Priest) and to the Brahman, the latter was weighman.

Before division the following deductions were made from the heap. It is to be noted that these doles are given only to persons actually present at division.

	*Kham sers.**
Brahman (who weighed the grain)	5
Tenant's son (who grazed the cattle of the tenant and the landlord)	10
Village *faqir* (Muslim)	5
Village *Sansi*	5
Family Brahman	5
Family *Mirasi*	4
Family Washerman	5
Five *Chuhra's* sons (boys who happened to be grazing near by when the division took place) 2 seers each	10
Pirthalla to the *Chuhra* (literally the bottom of the heap). This was not actually weighed but was estimated to be	12

The *Chuhra* was also given $2\frac{1}{2}$ *kham maunds* (of which $1\frac{1}{2}$ was his due for winnowing and cleaning the cattle shed, and the rest was charity). Thus the total deductions were 4 maunds and 1 seer *kham*. The total yield of grain from these 17 *kanals* was 54 maunds *kham*. Every landlord does not keep to the figures given in this example. Much depends on the amount of the produce and the number of menials and beggars present at the time of the division.

XIV. B. 7. 7. The nature of the deductions made from the common heap has been indicated in the preceding paragraph. Besides these the *lohar* (blacksmith) and *tarkhan* (carpenter) are, if paid as village menials, entitled to take from the common heap 40 seers *kham* for each plough for both harvests and $1\frac{1}{2}$ sheaves of ripe crop at each harvest. The tenant's *Chuhra* is sometimes allowed grain from the common heap, but usually all that he gets is the *pirthalla* (bottom of the heap). Over and above this he is paid by the tenant out of his share, the owner's sweeper also being paid separately from the owner's share. The owner's share of the crop is always threshed by the tenant along with his own share. The tenant gets no allowance for his labour in reaping the crop but if a hired labourer is employed he gets a sheaf at the

* 40 *kham* seers = 1 *kham* maund = 16 *pacca* seers.

end of the day. This, of course, comes out of the produce before division. The average weight of grain in a sheaf is 20 to 25 seers *kham*. In good years it may be as much as 25 to 35 seers. Labourers are nearly always required for harvesting the wheat and gram, because the work must be done quickly; other crops such as maize can be cut by the tenants without help. Sometimes for the maize crop the tenant, if the owner consents, is allowed to take one or two bundles of maize for his labour in harvesting. The owner's women-folk help in the picking of cotton. Every cotton picker is given $\frac{1}{11}$th of the cotton picked. The *Chuhra's* wife gets a little more than this in return for carrying home the owner's share. XIV. B. 7.

8. The village menials paid from the common heap do not do any particular service for the landlord. The *Chuhra* (sweeper) helps the tenant occasionally in the work of the farm and also cleans out the cattle shed daily. The blacksmith and carpenter have to keep in good repair the tenant's agricultural implements. At harvest time the blacksmith is kept busy in the fields sharpening the sickles of the reapers. The potter who used to be an important person in village economy in the days when the chain of vessels worked by the Persian Wheel was earthen pots, has practically ceased to function as a village menial now that iron buckets have replaced the pots. He no longer receives a share of the grain at harvest time. XIV. B. 8.

9, 10, & 11. The tenant always provides the seed, and no deductions are made from the common heap on this account except in the case of sugarcane, in which the cane required for the next year's seed is kept apart and not brought to the crushing mill. No more cane is reserved than is actually required for seed. XIV. B. 9, 10, & 11.

12. No deductions other than those already mentioned are made from the common heap. XIV. B. 12.

13. All fodder crops are shared in the same proportion as grain. XIV. B. 13.

14. There is no general custom regarding concessions for fodder crops. Some landlords are more liberal in this respect than others and if there is scarcity may allow as much as 4 or 5 *kanals* (up to half an acre) as fodder to the tenant. Except for these casual concessions every crop (even a catch crop) is divided. XIV. B. 14.

15. The concession, if allowed, is a pure act of grace on the landlord's part and he does not expect, or get anything in return for it. All he secures is the good-will of the tenant, which is manifested in various ways—for example the tenant will carry fodder to the landlord's house and will help XIV. B. 15.

XIV. B. 15 to chop it up for his animals. He will also help to graze his landlord's animals and so on.

XIV. B. 16. 16. All straw of crops which has any feeding value is divided in the same proportion as the grain, but as has been seen the owner frequently makes an extra allowance for the tenant. This is also done when dried *chari* and the stalks of maize are divided.

XIV. B. 17. 17. There is no condition preventing the tenant from selling the fodder of a field off the land.

XIV. B. 18. 18. It has already been said that the landlord has a large voice in the decision of the crop to be grown, and it follows from this that the tenant is not allowed to grow as much fodder as he wants. If the tenant requires to grow more fodder than a landlord thinks necessary the matter is decided by a mutual arrangement. Usually the tenant sets aside an area equal to the extra plot on which he wishes to grow fodder and grows in that area a crop indicated by the landlord. The landlord is then sole owner of the crop grown on the field thus set aside, and the tenant is sole owner of the fodder grown on the extra plot set aside for fodder. If the fodder on this plot fails the loss falls on the tenant and he is not compensated by getting a share of the produce of the landlord's plot.

XIV. B. 19. 19. *Batai* rates now remain practically the same as they were 20 years ago. The area under canal irrigation has, however, increased and as the rate for canal irrigated crops is higher than that for well irrigated crops the average rate of *batai* for the village has slightly increased.

XIV. B. 20. 20. Mortgagees do not charge their tenants higher rates of *batai* than other landlords.

XIV. B. 21. 21. All *batai* tenures run from year to year. No example was found of a lease or contract for a longer term.

XIV. B. 22. 22. Cases of sub-letting by tenants-at-will are extremely rare. There is no right to sub-let as far as can be ascertained, nor has it been discovered whether the right to sub-let has or has not been reserved. The question does not seem to have arisen.

CHAPTER XV.

EXPENSES OF CULTIVATION.

A.—Particular Holdings.

The expenses of cultivation of five particular holdings have been examined in detail and the results are given below:—

HOLDING I.

(*i*). This holding has an area of 11·86 acres of which 2·97 acres are owned by the farmer and 8·86 acres are taken by him on a cash rent of Rs. 80/- at Rs. 8/- per *ghumao*. The land revenue and cesses on the farmer's own land amount to Rs. 8/- altogether and the occupiers' rates paid by the farmer for canal irrigation in the last year came to Rs. 28/2/0. Thus the total annual payment for the land in the last year was Rs. 116/2/0. A statement giving details of the area of the holding under each class of crop in each of the 5 years, 1920-25, is given on the next page. XV. 1. (*a*)

(*ii*). The farmer is a ***Jat*** Sikh. His family consists of himself (45 years of age), his wife (30 years), one son (15 years), one son (8 years), one daughter (5 years) and one son (3 years). The main work of the farm is done by the farmer himself. His eldest son helps him in the farm work generally and the boy of 8 minds the cattle while they are grazing. The two younger children as yet do nothing. The wife's duties are mainly confined to house work, including cooking and taking meals to her husband in the fields when this is necessary. She can also give a little help in cotton picking.

(*iii*). The farmer did not have a partner in cultivation.

(*iv*). No whole-time labourer is kept. There is a *chuhra* (sweeper caste) who is responsible for cleaning out the cattle shed throughout the year. This man also gives occasional help in cultivation receiving food for the day whenever he does this. He also winnows the wheat at harvest time. He was paid during the year 4 maunds of wheat, 16 seers of barley and 32 seers of *toria* (rape).

During the *kharif* 7 day-labourers were hired for four days to hoe the sugarcane. They each worked from 5 to 6 hours daily and received each 6 *chapattis* (loaves of unleavened bread) and a little *gur* (raw sugar). 5 labourers were hired for two days to hoe the maize crop and each received the same payment as those who hoed the sugarcane at harvest time. The *chuhra* received one sheaf of maize and two maunds of cobs. Female labourers were employed for cotton picking and received two maunds of cotton altogether.

For the *rabi* one labourer was employed for eight days to help in reaping the wheat harvest. He received one sheaf of wheat a day or 8 sheaves in all.

HOLDING No. I.

Statement giving details of the Area of the Holding under each class of Crop in each of the 5 years, 1920-25.

	Crop sown.	1920-21.			1921-22.			1922-23.			1923-24.			1924-25.		
		Chahi.	*Nahri.*	*Barani.*	*Chahi.*	*Nahri.*	*Barani*	*Chahi.*	*Nahri.*	*Barani.*	*Chahi.*	*Nahri.*	*Barani*	*Chahi.*	*Nahri.*	*Barani.*
KHARIF.	Rice ..	..	·71	..	..	·30	..	..	1·74	..	..	·41	..	..	·20	..
	Maize ..	..	..	..	·30	·92	..	..	1·74	..	·30	..	..	..	·61	..
	Sugarcane ..	..	·61	..	..	·82	..	1·02	0·51	..	..	..	..	..	·61	..
	Cotton ..	..	1·74	..	..	·71	..	..	1·64	..	..	3·59	..	2·04	1·10	..
	Chari ..	..	2·25	..	..	1·34	..	1·23	..	1·34	..	..	·82	..	·71	1·53
	Mash (pulse) ..	..	..	..	..	·41	..	..	..	..	..	..	..	..	..	..
	Til ..	..	..	..	·71	·51	..	..	..	..	..	..	..	..	..	·51
	Total Kharif ..	..	*5·31*	..	*1·01*	*5·01*	..	*2·25*	*5·63*	*1·34*	*·30*	*4·00*	*·82*	*2·04*	*3·23*	*2·04*
RABI.	Wheat ..	..	·30	3·0	1·74	2·0	..	1·53	2·00	..	2·00	..	·82	1·64	1·43	·61
	Barley ..	..	..	..	..	..	..	..	..	..	..	..	..	..	·21	..
	Gram ..	..	1·43	..	..	..	..	..	..	1·23	..	..	..	..	..	·71
	Berra ..	..	·92	..	·82	..	..	..	·71	..	1·13	..	..	..	·51	..
	Senji ..	..	1·23	..	·20	1·13	..	·92	1·12	..	1·74	..	..	1·00	1·12	..
	Toria ..	..	..	..	..	·44	..	·51	1·43	..	·30	1·13	..	1·64	..	..
	Alsi ..	..	·30	..	..	..	..	·30	..	..	..	..	..	..	..	..
	Masar (pulse) ..	..	·30	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total Rabi ..	..	*4·48*	*3·0*	*2·76*	*3·57*	..	*3·26*	*5·26*	*1·23*	*5·17*	*1·13*	*·82*	*4·28*	*3·27*	*1·32*
	GRAND TOTAL ..	..	9·79	3·0	3·77	8·58	..	5 51	10·89	2·57	5·47	5·13	1·64	6·32	6·50	3·36

(*v*). The cattle kept on this farm were as follows:—

	Estimated value.
	Rs.
One bullock	140
One bullock	30
One male buffalo	60
One cow in milk	40
One calf	10
One buffalo calf	30
Total ..	310

The first three are plough cattle and besides being used for ploughing are used, as occasion requires, to work the grain grinding mill.

(*vi*). No animals were hired.

(*vii*). The only manure used is home produced farmyard manure. The landlord does not pay for any manure.

(*viii*). In the *kharif* the *chari* was used to feed the farm animals. Sometimes *moth* and *mung* were sown within the cotton fields and were used as early green fodder. Wheat straw (*bhusa*) was used as dry fodder throughout the year, and when exhausted was supplemented by *chari* and the stalks and leaves of maize. In the winter the earliest green fodder available was rape (*sarson*) sown in the wheat field—later *senji* became available, and when fodder ran short sugarcane was used in place of dry fodder, though as a rule only the tops of sugarcane are used as fodder. In the last year the farmer had to buy 2 *kanals* (about a fifth of an acre) of *chari* for his animals. The cost was Rs. 12/-.

(*ix*). The animals also received grain and oil as follows:—

	Value.
	Rs.
2 maunds wheat	10
10 seers *gur* (raw sugar)	2
9 seers sesamum (*til*) oil	11

The wheat and *gur* were farm produce. The oil was bought from the oil-presser.

XV. 1. (*a*). (*x*). In the following table is given a complete list of all the agricultural implements required by a farmer cultivating land with one pair of plough cattle :—

Name of implement (with English equivalent).	Estimated price.	Time it lasts.	Uses to which it is put.	Remarks.
	Rs. As.			
Munah (the block) ..	3 0	3 years	Ploughing ..	Unless otherwise stated in any case the farmer provides the wood for woodwork, and iron and charcoal for the iron work. The carpenter and the blacksmith fashion the articles required, as part of the duties of their status as menials of the village community. The change from status to contract is noticeable and the tendency to buy these articles ready made for cash, or to have them made on cash payment for materials supplied is becoming increasingly common.
Chao (coulter) (4)* ..	1 0	3 months	Do. ..	
Phalla (plough share) (2)†	0 12	6 ,,	Do. ..	
Halas (beam) ..	5 0	3 to 4 years.	Do. ..	
Kur (part of plough which holds the share). (4)*	1 8	3 months	Do. ..	
Panjali (wooden yoke)	1 8	1 to 1½ years.	Yoke for plough cattle.	
Sohaga (flat levelling beam).	5 0	5 years	Levelling after ploughing and covering seed after sowing.	
Small *panjali* (small wooden yoke).	1 4	1½ years.	Yoke for well cattle.	
Jandra (rake) ..	1 0	2 ,,	For making ridges.	
Pahaura (scraper) ..	0 8	1 year	For cleaning cattle shed.	
Khurpas (5) (trowel)..	2 8	2 years	For hoeing maize, &c., and digging up grass	
Baguri (5) (spud) ..	2 0	2 ,,	For hoeing only.	
Kassi (2) (mattock) ..	5 0	3 ,,	For digging.	
Daranti (4) (sickle) ..	2 0	2 ,,	Reaping.	
Daranti pilchi (4) (a sort of chopper).	1 8	4 ,,	Stripping sugarcane.	
Toka (2) (chopper) ..	2 0	2 ,,	Chopping fodder.	
Kulhari (axe) ..	1 8	3 ,,	Cutting wood ..	Usually bought for cash.
Gandhala (a stick shod with iron).	0 6	3 ,,	For making holes in the ground.	
Khopas (2 pairs) (leather blinkers).	3 0	4 ,,	For blind-folding cattle when working wells or mills.	Bought for cash at the market town.
Sangli (7 forked rake)	1 8	3 ,,	Collecting *bhusa* and winnowing.	Bought for cash.
Sangi (wooden pitchfork).	1 8	2 ,,	Turning over wheat when threshing.	

*One *chao* lasts for 3 months—4 such *chaos* are used in a year bringing the total cost on this implement to Re. 1/-. *Kur* in the *halas* is also changed 4 times in the year.

†One *phalla* lasts for 6 months only and the cost on this item comes to annas 12 per annum.

Besides these articles there are ropes for various uses, blankets to cover the cattle in the winter which are usually made of old sacks bought for cash, and baskets which are bought from wandering tribes. The ropes are made by the farmer or his family from hemp grown on the farm.

(*xi*). The farmer did not hire any implements but he borrowed a cart to cart manure to his fields, and he also borrowed a cane crushing mill from his father and brothers who live separately from him.

(*xii*). No tools other than those already mentioned were used.

(*xiii*). The cost of salt and medicines for cattle were estimated for this holding at Rs. 10/- for the year.

(*xiv*). The farmer of this holding has not a cart.

(*xv*). No separate account was kept of the amount of seed required per acre for each class of soil, but the following figures were obtained indicating the amount of each kind of seed used to produce the more valuable crops.

Crop.	*Quantity.*	*Rate per maund.* Rs. as. p.
Sugarcane—6 "ropes" valued at Rs. 2/- per "rope."*		
Cotton seed	14 seers ..	5 0 0
Wheat	108 ,, ..	5 0 0
Berra (mixed wheat and gram)..	12 ,, ..	4 12 0
Barley	6 ,, ..	5 0 0
Gram	8½ ,, ..	4 8 0
Taramira	6 chhataks..	.. ..
Toria	3½ seers ..	6 8 0

Applying these to the area under these crops in the year 1924-25 we get approximately the following seed rates per acre for all classes of soil :—

	Quantity. Seers.	*Value at sowing time.* Rs. as. p.
Sugarcane	.. ..	20 0 0
Maize	5 ..	1 0 0
Cotton	4½ ..	1 2 0
Wheat	30 ..	4 8 0
Berra	24 ..	3 0 0
Gram	12 ..	1 7 0
Toria	2 ..	0 7 0

*A "rope" is such a quantity of cane as can be tied up with a rope 4 *haths* or 6 feet long. For every *kanal* (one-tenth of an acre) of cane to be grown one *marla* (one-twentieth of a *kanal*) of cane had to be left over for seed from the previous cane crop.

XV. 1. (*a*). All seed is provided by the tenant and not by the landlord. The farmer saved the seed out of the produce of the last year.

(*xvi*). There are no expenses of sowing other than those already given except for sugarcane and when wheat is sown by hand in furrows (known as *kerra*). For sugarcane a small amount of *gur* is given to the labourers who place the sets in the furrows. This is over and above their daily wage. For *kerra* sowing the menials' sons who are engaged for this work are allowed to take away fodder for their cattle.

(*xvii*). No expenses other than those already detailed were incurred for cultivation after sowing.

(*xviii*). There are no harvesting expenses other than those already mentioned.

(*xix*). The following deductions were made from the common heap for the payment of village menials other than labourers who have been separately dealt with under (*iv*) above :—

(*a*) *Kharif harvest.*

Blacksmith-carpenter	.. 2 bundles of ripe maize.
Ditto ..	..24 seers of cobs.
Waterman (*jhiwar* or *mehra*)	..16 „ „ „
Leather-worker (*mochi*) and other family menials	..40 „ „ „

Each bundle of ripe maize was estimated to contain 3 seers of grain, and 2 maunds of cobs is equivalent to 48 seers of grain, so that the total deductions for the *kharif* on account of menials may be estimated at 54 seers altogether. Assuming that 14 seers go to family menials other than the leather-worker the deductions made for the blacksmith, carpenter, water-bearer and leather-worker all of which may be regarded as expenses of cultivation come to one maund of grain.

(*b*) *Rabi harvest.*

(1) Deductions before threshing—

Blacksmith-carpenter for general repairs throughout the year	.. 4 bundles of wheat.
Blacksmith-carpenter for sharpening sickles at harvest time	.. 5 „ „ „
Water-bearer (*jhiwar* or *mehra*), washerman, leather-worker and family menials ..	.. 3 „ „ „

(2) Deductions after threshing—

	Seers.
Blacksmith-carpenter	20
Waterman	20
Leather-worker	8
Mirasi (genealogist)	8
Barber	8
Washerman	8
Oil-presser	4

The nature of the duties of these menials is described in paras. 8 and 9 of Chapter I.

Of these deductions only the deductions for the blacksmith-carpenter, waterman and leather-worker relate to expenses of cultivation. Thus the total deductions on account of cultivation expenses in the *rabi* harvest may be estimated as follows :—

	Bundles.
Blacksmith-carpenter ..	9
Waterman and leather-worker	2
Total ..	11

Each bundle is estimated to yield 8 seers of grain so that the grain equivalent is 2 maunds 8 seers. The *bhusa* equivalent is roughly worth Rs. 3/-. The actual grain deductions from the common heap are 1 maund 8 seers. Thus the total grain deductions are 3 maunds 16 seers which at Rs. 5/- per maund is equal to Rs. 17/-. Adding the value of *bhusa* the money value of the *rabi* deductions is Rs. 20/-. Adding the money equivalent of the *kharif* deductions (1 maund of maize at Rs. 5/- per maund) the total deductions relating to cultivation expenses made on account of menials come to Rs. 25/-.

(*xx*). No other expenses were incurred on account of threshing or winnowing or carrying the grain to the farmer's house.

(*xxi*). There were no extraordinary expenses during the year.

HOLDING II.

1924-25.

XV. 1. (*a*).

	Crops.	*Chahi.*	*Nahri.*	*Barani.*
		Acres.	*Acres.*	*Acres.*
Kharif ..	Maize ..	..	1·64	..
	Sugarcane ..	..	1·13	..
	Cotton ..	..	6·35	..
	Chari ..	..	·51	·92
Rabi ..	Wheat ..	3·18	2·4	..
	Gram ..	..	..	1·23 (·41) *kharaba.*
	Berra ..	..	..	2·56 (1·54) „
	Toria ..	..	1·54	..
	Senji ..	1·02	·41	..
	Alsi ..	·30	..	..

(*i*). This holding is farmed by two *Jat* Sikhs who formerly lived jointly with their father. Figures showing the character of the cultivation in years previous to 1924-25 are therefore not available. The holding consists of 16·28 acres altogether of which 11·36 are owned by the two brothers and 4·92 acres are taken by them on a cash rent of Rs. 31/- per annum. The land revenue and cesses amounted to Rs. 40/8/0 for the year and the occupiers' rates to Rs. 72/8/0.

(*ii*). The family is made up as follows :—

One man age 35 years, one man age 28 years, one woman age 25 and an infant of one year. One whole-time farm labourer (a *chuhra*) is employed for the whole year receiving his wages in grain. Besides this 1·64 acres sown with maize in the *kharif* and with gram in the *rabi* were cultivated by a *mochi* (leather-worker) with the help of the farmer's bullocks. The tenant does the hoeing, watching, etc., and receives one-third of the produce. The cost of seed and occupiers' rates were shared by the owner and tenant in the same proportion.

(*iii*). There are no other partners in cultivation.

(*iv*). The whole-time labourer received 14 maunds of wheat for the year's work, and also full meals daily. He was also given 32 seers of gram, 32 seers of *toria*, 1 maund of *gur* and 1 maund and 8 seers of

maize. Besides this whole-time labourer extra hands were employed as follows :—

An unknown number of female labourers for cotton picking were employed who received altogether 2 maunds of cotton. The sugarcane crop was hoed six times, and 21 labourers were employed altogether each for a day. They each received 6 *chapattis* (loaves of unleavened bread) with a little *gur* (raw sugar). For the wheat harvest 4 extra men were employed for 7 days and 2 for one day. They worked 12 hours a day and received one bundle of wheat each, 30 bundles being deducted altogether. The amount of grain in each bundle was estimated at 10 seers and the value of the *bhusa* in each bundle at 6 annas.

(*v*). There are 4 bullocks valued at Rs. 840/- kept by the farmers. These are used almost exclusively for ploughing and well work. Occasionally they are also used for working the flour mill. There are also two milch buffaloes and one buffalo calf (female). These animals are valued at Rs. 310/-.

(*vi*). When cotton was being sown extra bullocks were borrowed from neighbours. No hire was paid but there was an understanding that bullocks would be lent in exchange.

(*vii*). The only manure used is farmyard manure, home produced. The landlord does not pay for any manure.

(*viii*). Wheat *bhusa* and dry maize stalks were used as dry fodder. *Chari* was used as green fodder in *kharif* and rape (*sarson*) and *senji* in the *rabi*. The whole of this is home produce.

(*ix*). 5 maunds of wheat, 5 maunds of gram, 1 maund of *gur* (raw sugar) and 16 seers of *til* (sesamum) oil were fed to the cattle during the year. The oil was bought from the oil-presser, but the rest was home produce.

(*x*). The implements used are the same as those described under Holding I, only this holding is cultivated by two pairs of plough cattle.

(*xi*). No implements were hired.

(*xii*). No special tools were used by the farmers.

(*xiii*). Salt and medicines required for the cattle are estimated to have cost Rs. 10/-.

(*xiv*). These farmers own a cart jointly with their father from whom they have separated. It is used for carting manure to the fields and for carting green fodder to the farmers' house. It is not used except for this kind of farm work. The cart cost Rs. 140/-, and the expenses of maintenance are practically *nil*, only a little oil being required for lubricating the wheels, the cost of which is about 8 annas a year.

XV. 1. (*a*). (*xv*). The seed was provided by the farmers. It was saved over from the former crop, but unfortunately the rate per acre was not ascertained.

(*xvi*). All expenses have been already given. A little *gur* (raw sugar) was given to the persons who helped in sowing the sugarcane. The total amount distributed was under 5 seers.

(*xvii*). No cultivation was done after sowing except for maize and sugarcane as stated under (*iv*) above.

(*xviii*). There are no harvesting expenses except those on account of deductions for menials referred to in (*xix*) below and extra hired labour mentioned in (*iv*) above.

(*xix*). The deductions made at harvest time on account of menials' dues etc., are given below :—

(*a*) *Kharif*—

The blacksmith-carpenter was allowed the last picking of the cotton crop, the amount collected by him being estimated to be 1 maund and 24 seers. The blacksmith who repaired the sugarcane press received a special payment of 8 seers of *gur* (raw sugar). The blacksmith-carpenter who did the ordinary repair work throughout the year also received 8 seers of *gur*.

The washerman (*dhobi*), leather-worker (*mochi*) and other menials received altogether 1½ maunds of *gur*.

From the maize crop the following deductions were made :—

	Seers.
Blacksmith-carpenter	48
Water-bearer (*jhiwar* or *mehra*)	16
Leather-worker (*mochi*)	12
Genealogist (*mirasi*)	12
Washerman (*dhobi*)	12
Barber (*nai*)	12
Total deductions of maize ..	112

(*b*) *Rabi*—

(1) Before threshing—

	Bundles.
Blacksmith-carpenter	5
Blacksmith-carpenter for sharpening sickles at harvest time	5
Water-bearer (*jhiwar* or *mehra*)	6

	Bundles.
Washerman (*dhobi*), leather-worker (*mochi*), barber (*nai*), genealogist (*mirasi*) one bundle each	4
Chuhra	7
Beggars and others	15
Total ..	42

The amount of grain in each bundle was estimated to be 10 seers so that the total deductions on this account would be $10\frac{1}{2}$ maunds. The value of the *bhusa* was estimated at Rs. 15/12/0.

(2) After threshing—

The following deductions were made from the common wheat heap after threshing :—

	Seers.
Blacksmith-carpenter	40
Water-bearer (*jhiwar* or *mehra*)	20
Washerman (*dhobi*)	20
Genealogist (*mirasi*)	8
Barber (*nai*)	16
Leather-worker (*mochi*)	16
Beggars and others	48
Total ..	168

From the gram crop the following deductions in grain were made :—

	Seers.
Blacksmith-carpenter	16
Genealogist (*mirasi*)	8

From the *toria* crop the blacksmith-carpenter received 16 seers. Collecting these figures we get the following as the cash value of the deductions on account of customary dues on this farm :—

	Value. Rs.	As.
Kharif—		
Cotton—1 maund 24 seers at Rs. 12/- per maund	19	3
Raw sugar (*gur*)—1 maund 36 seers at Rs. 8/- per maund	15	4
Maize—2 maunds 32 seers at Rs. 5/- per maund	14	0
Total *kharif* ..	48	7

XV. 1. (a).

	Value. Rs.	As.
Rabi—		
Wheat (grain)—14 maunds 28 seers at Rs. 5/- per maund	73	8
Wheat (*bhusa*)	15	12
Gram—24 seers at Rs. 4/8/- per maund ..	2	11
Toria—16 seers at Rs. 5/- per maund ..	2	0
Total *rabi* ..	93	15
Grand total for the year ..	*142*	*6*

Of this total the amount relating to cost of cultivation is :—

	Rs.	As.
Kharif—		
Cotton—(all)	19	3
Raw sugar—24 seers (only the leather-worker has been reckoned from among washerman, leather-worker and other menials, and his share has been assumed to be not more than what the blacksmith gets) at Rs. 8/- per maund	4	13
Maize—1 maund 36 seers at Rs. 5/- per maund..	9	8
Total *kharif* ..	33	8
Rabi—		
Wheat (grain)—7 maunds 36 seers (before and after threshing) at Rs. 5/- per maund ..	39	8
Wheat (*bhusa*)	9	0
Gram—16 seers	1	10
Toria—(all)	2	0
Total *rabi* ..	52	2
Grand total relating to cost of cultivation ..	*85*	*10*

(*xx*). No other expenses were incurred on account of threshing or winnowing or removing the grain from the threshing floor.

(*xxi*). A little over one acre of wheat had to be re-sown because rain fell before the seed had germinated and owing to the formation of a crust on the soil germination was very poor. The extra seed used was 20 seers.

HOLDING III.

(*i*). The total area cultivated has not been given, but judging from the cropping which is at least 100 per cent. of the cultivated area, the cultivated area of this holding must be between 25 and 30 acres, practically the whole of which is irrigated either by the canal or by wells. The land revenue and cesses amounted to Rs. 80/- and the occupiers' rates to Rs. 140/- during the past year. A statement giving details of the area of the holding under each class of crop in each of the 5 years, 1920-25, is given on the next page.

(*ii*). The whole holding is owned by the farmer who is one of the headmen of the village. His family consists of himself, age 58 years, two sons, ages 35 and 28 years, wife of one son, age 25 and three grand children, ages 6, 3 (boys) and 1 (girl) respectively. One whole-time farm labourer (a *chuhra*) is employed. He is given all his meals, and is paid a wage in grain at each harvest.

(*iii*). There are no partners in cultivation. 2·05 acres were given to a menial (leather worker). This area was cultivated with the farmer's bullocks and sown with maize in the *kharif* and gram in the *rabi*. The tenant received one-third share of each crop. The cost of the seed and occupiers' rates were shared by the owner and tenant in the same proportion.

(*iv*). The permanent field labourer (*chuhra*) received as his wages half a maund of *gur* (raw sugar), 8 maunds of maize (grain) and 3 bundles of maize (unthreshed) in the *kharif* and 24 maunds of wheat, 1 maund 24 seers of *toria* and 5 bundles of wheat in the *rabi*. Besides this permanent man, females were engaged to pick the cotton, who received a share of the pickings. This share amounted in all to 3 maunds and 8 seers. The sugarcane received six hoeings, and six extra men were engaged for this work. They worked from 5 to 6 hours a day and each received six *chapattis* (loaves of unleavened bread) and some *gur* (raw sugar). Five extra men were engaged on three days to hoe the maize on the same terms as were arranged with the men who hoed the sugarcane. At the time of the wheat harvest four reapers were engaged for seven days. These men worked for 12 hours a day and were each paid one bundle of wheat a day—28 bundles altogether.

(*v*). The farmer owns four bullocks the estimated value of which is Rs. 990/-. The animals are used for ploughing, working the well and (occasionally) for grinding grain. They are not used for anything except the agricultural work of the holding. There are besides these, two female buffaloes valued at Rs. 225/- and one female buffalo calf valued at Rs. 40/-.

HOLDING III.

Statement giving details of the Area of the Holding under each class of Crop in each of the 5 years, 1920-25.

	Crops sown.	1920-21.			1921-22.			1922-23.			1923-24.			1924-25.			Remarks.
		Chahi	*Nahri*	*Barani*	*Chahi*	*Nahri*	*Barani*	*Chahi*	*Nahri*	*Barani*	*Chahi*	*Nahri*	*Barani*	*Chahi*	*Nahri*	*Barani*	
KHARIF.	Sugarcane ..	..	2·87	..	·30	..	..	1·64	..	..	..	2·46	..	..	1·02	..	
	Maize ..	..	·92	..	..	2·76	..	..	2·76	..	..	2·56	..	..	1·85	..	
	Cotton ..	..	3·59	..	..	2·00	..	..	3·79	..	..	1·43	..	..	5·34	..	
	Chari ..	..	2·87	1·12	..	1·54	2·25	·71	..	1·00	..	..	1·74	..	*·41* 3·59	·61	·41 *kharaba* (not matured).
	Mash ..	..	..	..	..	..	·61	..	..	..	..	·10	..	..	..	..	
	Til ..	..	..	*2·05*	..	..	·30	..	..	2·05	..	·82	..	..	..	..	2·05 *kharaba.*
	Hemp ..	..	·10	..	..	..	..	..	..	..	..	..	..	..	·10	..	
	Total ..	..	*10·35*	*3·17*	*·30*	*6·30*	*3·16*	*2·35*	*6·55*	*3·05*	..	*7·37*	*1·74*	..	*12·31*	*·61*	
RABI.	Wheat ..	3·59	1·13	..	5·90	6·20	..	4·70	·41	..	4·90	6·20	..	1·64	2·87	..	
	Gram ..	..	*·71*	..	..	2·66	..	..	..	2·56	..	1·84	..	..	*·82*	1·43	·71 *kharaba.* ·82 ,,
	Berra ..	..	·71	1·34	..	..	..	..	..	3·89	..	..	..	..	..	2·66 *1·54*	1·54 ,,
	Toria ..	..	..	..	..	1·74	..	..	..	..	..	..	..	..	2·87	..	
	Sarson ..	..	..	..	..	·10	..	..	..	..	..	..	..	..	..	..	
	Senji ..	..	1·64	..	·82	·92	..	..	2·15	..	2·05	·71	..	1·74	·82	..	
	Total ..	*3·59*	*4·19*	*1·34*	*6·72*	*11·62*	..	*4·70*	*2·56*	*6·45*	*6·95*	*8·75*	..	*3·38*	*7·38*	*2·97*	
	Grand Total ..	3·59	14·54	4·51	7·02	17·92	3·16	7·05	9·11	9·50	6·95	16·12	1·74	3·38	19·69	6·24	

(*vi*). At the time when the cotton crop was sown additional plough cattle were borrowed from a neighbour. No payment was made for hire, but there was an understanding that the borrower would lend his own bullocks in return when the lender required them.

(*vii*). Only home produced farmyard manure was used.

(*viii*). The whole of the fodder used was home produced and consisted of wheat *bhusa*, dry maize stalks, a little sugarcane or sugarcane tops, *chari*, *senji* and *sarson*.

(*ix*). The total amount of grain given to the cattle was—

Wheat	..	5 maunds.
Gram	..	4 ,,

Besides this the animals were given 4 maunds of *gur* (raw sugar).

(*x*). The details of agricultural implements are the same as for Holding I.

(*xi*). A cart was borrowed for three days for carting manure. No hire was paid.

(*xii*). No other miscellaneous tools are used.

(*xiii*). The cost of salt and medicines was estimated at Rs. 10/- for the year.

(*xiv*). The cultivator does not own a cart.

(*xv*). The actual quantities of seed used with the estimated cost at sowing time are as follows:—

Crop.	*Quantity.* Mds.	Srs.	*Rate per maund.* Rs.	as.	p.
Wheat	3	20	5	0	0
Gram	1	0	4	8	0
Berra	2	20	5	12	0
Toria	0	6	6	8	0
Cotton	0	26	5	0	0
Sugarcane	10 marlas worth		30	0	0
Maize	0	11½	5	0	0
Senji	1	8	8	0	0
Chari	0	32	5	5	4

Applying these quantities to the areas for the year 1924-25 we get the following approximate rates per acre:—

	Seers.
Wheat	30
Gram	12
Berra	30
Toria	2

XV.
1. (a).

		Seers.
Cotton	.. .. ..	4½
Sugarcane	.. .. ..	10 marlas.
Maize	.. .. ..	6
Senji	.. .. ..	19
Chari	.. .. ..	20

The rate for wheat is obviously wrong, and the other rates are also doubtful.

(*xvi*). There are no recognized special charges at sowing time. A little extra *gur* (raw sugar) was distributed when the sugarcane was sown. This is estimated at from 5 to 8 seers.

(*xvii*). Except for maize and sugarcane for which details have been given under (*iv*), no cultivation was done after sowing.

(*xviii*). The harvesting charges have all been reckoned above under (*iv*) or are included under (*xix*) below.

(*xix*). The following deductions were made on account of menials' dues and charity customary at harvest time :—

(*a*) *Kharif*—

Gur (*raw sugar*).	Seers.
Blacksmith for helping mill in working order ..	4
Blacksmith-carpenter (customary dues)	4
Leather-worker and other menials' (customary dues) ..	20
Total ..	28

Maize (*before threshing*).	Bundles.
Blacksmith-carpenter	1
Water-bearer (*jhiwar* or *mehra*)	1
Other menials	3
Total unthreshed ..	5

Maize (*after threshing*).	Seers.
Blacksmith-carpenter	40
Water-bearer (*jhiwar* or *mehra*)	24
Genealogist (*mirasi*)	20
Leather-worker (*mochi*)	24
Washerman (*dhobi*)	20
Others	20
Total threshed	148

(*b*) *Rabi*—

Wheat (unthreshed).	*Bundles.*
Blacksmith-carpenter	5
Water-bearer (*jhiwar* or *mehra*)	1
Washerman (*dhobi*)	1
Barber (*nai*)	1
Leather worker (*mochi*)	1
Genealogist (*mirasi*)	1
Beggars and charity	12
Total ..	22

Wheat (threshed).	*Seers.*
Blacksmith-carpenter	40
Water-bearer (*jhiwar* or *mehra*)	20
Barber (*nai*)	8
Genealogist (*mirasi*)	8
Leather worker (*mochi*)	24
Oil-presser (*teli*)	12
Other menials and beggars	64
Total ..	176

Toria.	*Seers.*
Blacksmith-carpenter	8
Total ..	8

The cash value of these deductions is estimated to be as follows:—

	Rs.	As.
Kharif—		
Gur—2 maunds 8 seers at Rs. 8/- per maund ..	17	10
Maize—5 bundles each yielding 10 seers = 1 md. 10 seers.		
Add—threshed grain= 3 ,, 28 ,,		
4 ,, 38 ,,		
@ Rs. 5/- per maund ..	24	14
Total *kharif* ..	42	8

XV. 1 (*a*). *Rabi*—

		Rs.	As.
Wheat (unthreshed)—			
22 bundles each yielding 10 seers = 5 mds. 20 seers.			
Add—threshed grain = 4 „ 16 „			
9 „ 36 „			
@ Rs. 5/- per maund		49	8
Value of *bhusa* of unthreshed wheat		3	6
Toria—8 seers at Rs. 5/- per maund		1	0
Total *rabi* ..		53	14
Grand total for the year ..		*96*	*6*

Out of this the deductions which relate to cultivation may be valued as follows:—

Kharif—

		Rs.	As.
Gur—14 seers		2	11
Maize (unthreshed)	0 mds. 20 seers.		
„ (threshed)	2 „ 8 „		
	2 „ 28 „		
@ Rs. 5/- per maund		13	8
Total *kharif* ..		16	3

Rabi—

		Rs.	As.
Wheat (unthreshed) ..	1 mds. 30 seers.		
„ (threshed) ..	2 „ 4 „		
Total ..	3 „ 34 „		
@ Rs. 5/- per maund		19	4
Value of *bhusa* of unthreshed wheat		3	0
Toria		1	0
Total *rabi* ..		23	4
Grand total relating to cost of cultivation ..		*39*	*7*

(*xx*). No other expenses were incurred on account of winnowing and threshing, or for the carriage of the product to the farmer's house.

(*xxi*). No extraordinary expenditure was incurred during the year.

HOLDING IV.

(*i*). The holding is cultivated by an *Arain* tenant whose total tenancy consists of 14·36 acres. The tenant owns none of this land and he pays a kind rent of ½ *batai* for it except for the sugarcane crop for which the *batai* rate is one-third. The seed was all provided by the tenant. The landlord paid all the land revenue and also half the occupiers' rates. The tenant's half of the occupiers' rates came to Rs. 35/8/0. A statement giving details of the area of the holding under each class of crop in each of the 5 years, 1920-25, is given on the next page.

(*ii*). The tenant farmer is 56 years of age, his wife 45, his eldest son 23, and his eldest son's wife 18. There are two other sons aged 18 and 14, respectively, and a daughter aged 12. The father and the two elder sons do all the cultivation and the youngest son grazes the cattle.

(*iii*). There are no partners in cultivation.

(*iv*). There are no permanent field labourers. Casual labour was employed as follows :—

Cotton pickers (female labourers employed in addition to female members of the family) were paid 1 maund 24 seers of cotton altogether. For hoeing the maize crop 5 men were employed on 3 days, working about five hours a day and receiving 6 *chapattis* (loaves of unleavened bread) a day each. The *chuhra* received 1 maund and 8 seers of maize cobs out of the tenant's share. For the *rabi* two men were employed to help in reaping the wheat harvest and received one bundle of unthreshed wheat per day each. The tenant had also to pay from his share of the wheat harvest 1 maund and 8 seers to the *chuhra* (sweeper—day labourer), 8 seers to the leather worker (*mochi*), 8 seers to the washerman (*dhobi*), 12 seers to the water-bearer (*saqqa*), 8 seers to the oil-presser (*teli*). He also paid the *chuhra* 4 seers of grain from the barley harvest. The payments made to the *chuhra* from the tenant's share indicate that this man must have given the tenant farmer more than the customary help.

(*v*). The plough cattle kept are one bullock valued at Rs. 77/- and a male buffalo valued at Rs. 50/-. It will be noticed from the statement showing the crops grown on this tenancy that there is practically no well irrigation. These animals besides ploughing are occasionally used for grinding corn. They do no other work. Besides these animals there is a female buffalo for milk the value of which is Rs. 130/-, and the tenant has a share in a male buffalo calf which has not been valued.

(*vi*). During cotton sowing a pair of plough animals was borrowed from a neighbour without hire. The condition was that the tenant would lend his own animals in return.

HOLDING IV.

Statement giving details of the Area of the Holding under each Class of Crop in each of the 5 years, 1920-25.

Crop sown.	1920-21.			1921-22.			1922-23.			1923-24.			1924-25.			Remarks.
	Chahi	*Nahri*	*Barani*	*Chahi*	*Nahri*	*Barani*	*Chahi*	*Nahri*	*Barani*	*Chahi*	*Nahri*	*Barani*	*Chahi*	*Nahri*	*Barani*	
KHARIF.																
Rice ..	..	·82	..	..	·51	..	..	·51	..	..	·51	..	..	..	..	
Maize ..	..	1·13	..	..	1·54	..	..	1·13	..	..	·61	..	..	1·34	..	·51 *kharaba* (not matured).
Sugarcane ..	·82	..	..	..	·71	..	..	1·13	..	..	1·02	..	..	1·02	..	
Cotton ..	..	1·02	..	..	1·54	..	..	1·33	..	..	2·87	..	..	2·76	..	
Chari ..	..	3·89	1·53	..	4·90	..	·51	1·54	..	..	..	3·38	..	·71	·71	
Mash ..	..	·10	..	..	1·02	..	..	·20	..	..	·20	..	..	..	..	
Til ..	..	·10	..	..	·92	..	..	·92	..	..	..	..	..	..	..	
Total Kharif ..	*·82*	*7·06*	*1·53*	..	*11·14*	..	*·51*	*6·76*	..	..	*5·21*	*3·38*	..	*5·83*	*·71*	
RABI.																
Wheat ..	·61	4·50	..	·71	4·20	..	..	5·30	1·13	2·05	5·20	..	..	3·28	4·50	
Barley ..	..	..	..	..	·20	..	..	·20	..	..	·10	..	..	·51	..	
Gram ..	..	..	..	..	·10	..	..	..	·51	..	..	..	..	1·12	..	
Toria ..	..	..	..	..	·92	..	..	..	..	..	·51	..	..	·82	..	
Sarson ..	..	..	..	..	..	..	..	..	·51	..	..	..	..	..	..	
Alsi ..	..	..	..	..	·10	..	..	..	..	·30	..	..	..	·20	..	
Senji ..	..	1·54	..	..	2·25	..	..	1·34	..	1·44	..	..	..	1·64	..	
Massar ..	..	·30	..	..	·51	..	..	·51	..	..	·10	..	..	..	..	
Total Rabi ..	*·61*	*6·34*	..	*·71*	*8·28*	..	..	*7·35*	*2·15*	*3·79*	*5·91*	..	..	*7·57*	*4·50*	
Grand Total ..	1·43	13·40	1·53	·71	19·42	..	·51	14·11	2·15	3·79	11·12	3·38	..	13·40	5·21	

(*vii*). The tenant provided the manure which was all farmyard and home produced. The tenant, however, derived the advantage of any manure, which was incorporated in the soil when he first took over the tenancy.

(*viii*). The fodder was all home produced and was of the same kind as for the other holdings.

(*ix*). The plough animals were given 1 maund 24 seers of gram, 16 seers of *gur* (raw sugar), and sesamum (*til*) oil worth Rs. 6/-. The oil was bought from the oil-presser. The other articles were home produced.

(*x*). The farm implements were as indicated in Holding I.

(*xi*). A sugarcane mill was hired (for crushing the sugarcane) at a cost of 8 annas per day of 24 hours for seven days, the total hire being Rs. 3/8/0. A cart was borrowed to cart the manure to the fields.

(*xii*). At the time of hoeing maize and sugarcane extra *khurpas* (trowels) were borrowed from neighbours.

(*xiii*). The cost of salt and medicine for the animals was estimated to be Rs. 5/- during the year.

(*xiv*). The cultivator has not a cart.

(*xv*). The seed was provided by the tenant.

The amount for seed used during 1924-25 was as follows :—

	Rs.	as.	ps.
Wheat—4 mds. 8 srs. at Rs. 5/- per maund ..	21	0	0
Barley—11½ seers at Rs. 5/- „ ..	1	7	0
Gram—12 seers at Rs. 4/8/- „ ..	1	5	6
Toria—1 seer at Rs. 6/8/- „ ..	0	4	0
Senji—32 seers at 6 seers for the rupee ..	5	5	4
Sugarcane—10 marlas at Rs. 2/- per marla ..	20	0	0
Cotton—8 seers at Rs. 5/- per maund	1	0	0
Maize—11 seers cost	1	13	0
Chari and *gowara*—28 seers at 6 seers for the rupee	4	10	8

These amounts work out approximately as follows per acre :—

	Seers.
Wheat	20
Barley	23½
Gram	10½
Toria	2
Senji	19
Cotton	3
Maize	6
Chari-gowara	20
Sugarcane	10 marlas.

XV. 1. (*a*).

(*xvi*). There are no expenses for sowing other than those detailed.

(*xvii*). Except for maize and sugarcane no cultivation is done after sowing.

(*xviii*). There are no expenses at harvesting other than those detailed in (*iv*) above and (*xix*) below.

(*xix*). The deductions made from the common heap were as follows; (these are in addition to the deductions made for reapers which have been given under *iv*.) :—

(*a*) *Kharif*—

Gur—

Chuhra	1 maund.
Blacksmith-carpenter	2 seers.

Maize (before threshing)—

Blacksmith-carpenter	1 bundle.

Maize (cobs)—

Chuhra	48 seers.
Blacksmith-carpenter	32 ,,
Other menials	16 ,,

(*b*) *Rabi*—

Wheat grain—

Chuhra	104 seers.
Blacksmith-carpenter	32 ,,

Toria—

Chuhra	8 seers.

The value of these deductions is estimated as follows :—

Kharif.	Rs.	as.	ps.
Gur—1 md. 2 srs. at Rs. 8/- per maund ..	8	6	0
Maize—(value of grain at Rs. 5/-) estimated at 2/3rds weight of cobs.	8	0	0
Value of 1 bundle with cobs on ..	1	0	0
Total *kharif* ..	17	6	0
Rabi.			
Wheat at Rs. 5/- per maund	17	0	0
Toria at Rs. 6/- ,, ...	1	4	0
Total *rabi* ..	18	4	0
Total for the year ..	*35*	*10*	*0*

Practically the whole of this is related to the expenses of cultivation.

(*xx*). No other expenses were incurred on account of threshing or winnowing or conveying grain to the landlord's house.

(*xxi*). No extraordinary expenses were incurred during the year.

HOLDING V.

1924-25.

XV. 1. (a).

Crops.	*Chahi.*	*Nahri.*	*Barani.*
		Acres.	
Maize ..	..	1·02	..
Sugarcane ..	..	·51	..
Cotton ..	..	4·30	..
Chari ..	..	1·74	..
Wheat ..	..	4·10	..
Gram ..	..	1·44	..
Senji ..	..	3·07	..

(*i*). This holding consists of 11·75 acres of land of which 8·05 acres are owned by the farmer and 3·70 acres are taken by him on a rent of a ½ *batai*. The land revenue and cesses paid on his own land came to Rs. 20/- and the occupiers' rate paid on the whole farm to Rs. 61/-. On the land which he has rented he has grown 3·76 acres of crop as under :—

	Acres.
Maize	1·02
Cotton	2·03
Chari	·71
Total ..	*3·76*

The balance of the crops grown were on his own land. The farmer is a *Jat* Sikh and his family consists of himself age 45, his wife age 38 and four children all under 10.

(*ii*). One young *chuhra* was engaged to look after the farm cattle and to chop the green fodder. He received his food and a grain wage of 9 maunds of wheat.

XV. 1. (a).

(*iii*). There were no partners in cultivation.

(*iv*). Besides the young *chuhra* already mentioned in (*ii*) no permanent field labourers were engaged but the following casual labour was employed.

Cotton pickers, who were all female labourers, received 44 seers of cotton altogether. This was paid from the common heap. Sugarcane was given four hoeings and for this work four men were employed who worked for 5 hours a day receiving each an early meal of two *chapattis* (loaves of unleavened bread) and 8 annas per diem. The maize crop was sown on a ½ *batai* rent. Seven men were employed for the first hoeing and received each 6 *chapattis*. For the second hoeing 8 men were employed on the same terms and for the third hoeing 9 men were employed who each received the early meal of two *chapattis* and a little *gur* (raw sugar) as well as 8 annas. For the wheat harvest 2 reapers were engaged for eight days and worked for 12 hours a day receiving one bundle of wheat per diem.

(*v*). The farmer had two bullocks worth Rs. 180/- and a male buffalo worth Rs. 30/-. These were used for ploughing, and occasionally for grinding grain. They were not used except for farm purposes. The farmer also owned one milch buffalo and a calf valued at Rs. 120/-, one milch cow and calf valued at Rs. 55/-.

(*vi*). No cattle were hired.

(*vii*). Only home produced farmyard manure was used.

(*viii*). The animals are fed on the ordinary fodder produced on the farm.

(*ix*). They also received 3 maunds of gram, 2 maunds of wheat, 32 seers of *gur* (raw sugar) and 18 seers of sesamum (*til*) oil. The *gur* and *til* oil were bought. The rest was home produce.

(*x*). The implements used are of the same kind as described under Holding I.

(*xi*). No implements were hired.

(*xii*). No other miscellaneous tools were used.

(*xiii*). Salt and medicines required for the cattle are estimated to have cost Rs. 10/- during the year.

(*xiv*). The farmer does not own a cart.

(*xv*). No estimate has been made of the amount of seed used on this farm during the year when the observations were made.

(*xvi*). There were no special expenses connected with sowing.

(*xvii*). The only cultivation after sowing appears to have been that of maize and sugarcane.

(*xviii*). All harvesting expenses have been included under (*iv*) above and (*xix*) below.

(*xix*). Besides the deductions mentioned in (*iv*) the following deductions were made for customary dues :—

(*a*) *Kharif*—

Maize.—This crop was cultivated at ½ *batai* rent and from the common heap the payments were :—

Chuhra	80	seers of cobs.
Blacksmith-carpenter	20	„
Water-bearer (*mehra* or *jhiwar*) ..	12	„
Washerman (*dhobi*)	12	„
Barber (*nai*)	12	„
Leather-worker (*mochi*)	12	„
Genealogist (*mirasi*)	12	„
Total	160	„

(*b*) *Rabi*—

Wheat crop (before threshing)—

	Bundles.
Blacksmith-carpenter	3
Water-bearer (*jhiwar* or *mehra*) ..	1
Washerman (*dhobi*)	1
Barber (*nai*)	1
Chuhra	8
Other menials and beggars ..	15
Total ..	29

Wheat (after threshing)—

	Seers.
Blacksmith-carpenter	40
Water-bearer (*jhiwar* or *mehra*) ..	24
Leather-worker (*mochi*)	8
Washerman (*dhobi*)	8
Genealogist (*mirasi*)	8
Oil-presser (*teli*)	8
Barber (*nai*)	8
Total ..	104

The gram was sown on ½ *batai* and from the common heap the *chuhra* was given 2 maunds.

XV. 1. (*a*). The total cost of deductions for customary dues may be estimated as follows :—

	Rs.	as.	ps.
Kharif—			
Maize—4 maunds of cobs equal to $2\frac{2}{3}$ maunds of grain at Rs 5/- per maund ..	13	10	0
Rabi—			
Wheat—29 bundles yielding 8 seers of grain per bundle at Rs. 5/- per maund ..	29	0	0
Bhusa—about	8	12	0
2 maunds 24 seers of wheat at Rs. 5/- per maund	13	0	0
2 maunds of gram at Rs. 4/8/- per maund ..	9	0	0
Total *rabi* ..	59	12	0
Total for the year for customary dues ..	*73*	*6*	*0*

Of these the expenditure related to cost of production may be estimated as under :—

	Rs.	as.	ps.
Kharif—			
Maize—2 maunds 4 seers of corn cobs yielding 1 maund 16 seers of grain at Rs. 5/- per maund	7	0	0
Rabi—			
Wheat—12 bundles unthreshed wheat yielding 96 seers grain at Rs. 5/- per maund ..	12	0	0
Bhusa—about	3	10	0
Wheat—72 seers at Rs. 5/- per maund ..	9	0	0
2 maunds gram at Rs. 4/8/- per maund ..	9	0	0
Total *rabi* ..	33	10	0
Total for the year for cost of production ..		*10*	*0*

(*xx*). There are no expenses not already reckoned. No cost was incurred in conveying the grain to the landlord's or the farmer's houses.

(*xxi*). There was no extraordinary expenditure.

The table on the following page gives the main facts which have been examined for each holding.

Summary of Data collected for Five Holdings.

Holding.	Area in acres.	Size of farmer's family with caste.	Permanent field labourers employed.	Cattle on farm.	Value of cattle.	Value of farm implements.	Estimated cash value of outside labour employed.	Cash value of deductions made from common heap.	Land revenue, rent and occupiers' rates paid.	Remarks.
					Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
I ..	11·86	(Jat Sikh 6) (adults 3, children 3)	*Nil.*	6 { 3 plough, 1 in milk, 2 calves.	310 0 0	43 6 0	76 14 0	25 0 0	116 2 0	
II ..	16·28	(Jat Sikh 4) (adults 3, child 1)	1 *Chuhra* (sweeper caste).	7 { 4 plough, 2 in milk, 1 calf.	1,150 0 0	43 6 0	176 11 0	85 10 0	144 0 0	
III ..	30	(Jat Sikh 7) (adults 4, children 3)	1 *Chuhra* (sweeper caste).	7 { 4 plough, 2 female buffaloes 1 calf.	1,255 0 0	43 6 0	285 10 0	39 7 0	220 0 0	
IV ..	14·36	(Arain 7) (adults 7)	*Nil.*	4 { 2 plough, 1 in milk, 1 calf. (shared).	257 0 0	43 6 0	43 2 0	35 10 0	35 8 0	The farmer being a tenant paying ½ *batai* only paid ½ the occupiers' rate.
V ..	11·75	(Jat Sikh 6) (adults 2, children 4)	1 *Chuhra* (sweeper caste).	6 { 3 plough, 1 in milk, 2 calf.	385 0 0	43 6 0	97 12 0	40 10 0	81 0 0	

Note.—The food of permanent field labourers was supplied by the farmer and is not shown in this table.

B.—General.

XV. 1. (*b*). (*i*). The following statement shows the number of cattle at each of the last 5 cattle censuses. It will be seen that the numbers have remained fairly constant, but there has been a marked diminution in the number of cows with a slight increase in the number of milch buffaloes. The reason given is that there is less grazing available now than there used to be. Another probable reason is that people are overcoming their prejudice against selling *ghi* and the milk of the buffalo is more abundant and *ghi*-productive than the milk of the cow, so that the buffalo is a better paying animal. In fact this change shows a tendency towards dairy farming.

Statistics of cattle during the years shown below :—

Year.	Bulls and bullocks.	Cows.	Buffaloes.	Male buffaloes.	Young stock and buffalo calves.	Goats.	Sheep.	Horses and Ponies.	Camels.	Mules.	Donkeys.	Total.	Carts.	Ploughs.
1908-09 ..	204	142	187	73	181	337	71	39	..	1	6	1,241	19	97
1914-15 ..	225	104	190	58	272	218	..	45	..	..	11	1,123	17	83
1920 ..	162	73	203	41	356	119	147	38	..	..	8	1,147	19	99
1922 ..	187	78	204	43	398*	310	43	36	..	..	13	1,312	19	96
1925 ..	200	95	196	55	342†	175	68	41	5	..	11	1,188	22	106

* Cow calves 146, buffalo calves 252.

† Cow calves 154, buffalo calves 188.

The decrease in the number of animals has not been enough materially to affect the amount of manure available and hitherto nothing has been done to make good the deficiency.

(*ii*). The owners of dead cattle do not sell the carcases. These are the right of the village menial of the lowest caste. The skin of the animal goes to the *chuhra* who skins the carcase, the vultures and village dogs eat the flesh and the bones are taken away by an enterprising outsider who collects them and sells them to a bone dealer at the nearest railway station. This valuable form of manure is, therefore, entirely lost to the village.

(*iii*). There are no grazing grounds in the village. There are odd pieces of uncultivated land dotted about, on which the grass has been entirely grazed down, and besides this the cattle of the village (no matter to whom

they belong) are allowed to graze over all fallow land as soon as the crops have been cut. XV. 1 (b).

(*iv*). There is no Government forest or *rakh* near the village, but there is considerable grazing to be had along the banks of the canal, which passes through the village. The right to graze is auctioned by the Canal Department and has fetched Rs. 35/- and Rs. 36/- in the last two years. As a matter of fact there is no doubt that a good deal of grazing takes place along the canal banks without the consent of the higher canal officials. It is almost impossible to prevent this.

(*v*). The only sources of fuel in the village are cow dung and the dry stalks of cotton plants, and such twigs and fallen branches as can be picked up along the canal banks which are double lined with *shisham* trees. Even the dry leaves of the *shisham* are swept up and used as fuel. The cow dung is made into cakes of fuel by people of the sweeper (*chuhra*) class. It is difficult to estimate the proportion of cow dung which is used as fuel. The families of *non-zemindars* who own animals, as most of them do, convert the whole of it into cakes of fuel, and the agriculturists who own a larger number of animals than the non-agriculturists use a very large proportion of cow dung as fuel. On the whole, it is estimated that no less than one-third of the cow dung in the village is consumed as fuel. This estimate is little more than a guess.

(*vi*). As already stated there is no Government *rakh* in the neighbourhood of the village.

WELL CULTIVATION.

2. The following facts regarding the cost of sinking a well have been obtained from an owner whose well was sunk while the Investigator was in the village in 1925. XV. 2

The owner succeeded in consolidating a part of his holding and his first improvement was to sink a well. The dimensions of the well are : diameter 10½ feet, depth of masonry wall 40½ feet, depth to water 24 feet, depth of water in well 17 feet. The thickness of the masonry wall varies. The lowest portion for 15 feet is 27 inches thick, the middle 16 feet is 23 inches thick and the top 12½ feet is 18 inches thick. The cost (actual and estimated is as follows :—

	Rs. a. p.
Bricks—36,500 at Rs. 15/- per thousand ..	547 8 0
Carriage from kiln at Rs. 4/- per thousand ..	146 0 0
Digging the first 13½ feet as a hole in the ground (This was done by *chuhras* of the village at contract rates plus their food) ..	30 0 0

		Rs.	a.	p.
XV. 2.	Bricklayer's charges for all brickwork ..	75	0	0
	Diver's charges for digging 17 feet below water level	52	0	0
	Carpenter's charges for making the solid wooden foundation on which the brick work of the well is built	20	0	0
	Cost of iron used in the wood foundation ..	7	0	0
	Daily labour (two men employed daily at 10 annas per day each) plus two meals ..	70	0	0
	Slaked lime—9 maunds	18	0	0
	Kankar lime—4 maunds	30	0	0
	Sacks, baskets and ropes for removing earth..	13	0	0
	Wood used for the foundation—3 *kikar* trees belonging to the owner were felled. The estimated cost is	50	0	0
	The astrologer (*Jotshi*) who indicated where the well was to be sunk was given a cow which cost—	40	0	0
	and cash	8	0	0
	Total ..	1,106	8	0
	The superstructure consisting of wooden beams and wheels cost	98	0	0
	The chain of iron buckets and the wheel over which they work cost	170	0	0
	Total ..	268	0	0
	Grand total ..	*1,374*	*8*	*0*

Besides these expenses it was estimated that the cost of supplying food to the members of the brotherhood and labourers who helped to construct the well was as follows :—

12 maunds wheat at Rs. 5/- a maund ..	60	0	0
32 seers *ghi* at Rs. 2/- a seer	64	0	0
3¼ maunds *gur* at Rs. 8/- a maund	26	0	0
2 maunds *shakkar* at Rs. 10/- a maund ..	20	0	0
Pulses, etc.	10	0	0
Total ..	180	0	0

After the completion of the well presents of pieces of cloth were given to the astrologer (*Jotshi*) and artisans who helped in the work. These consisted of six *phulkaris*, one sheet and four pieces of homespun cotton cloth (*khaddar*) the cost of the whole being estimated to be Rs. 21/-. XV. 2.

After the completion of the work a feast was given to the brotherhood which is estimated to have cost Rs. 61/-. Thus the additional expenses debited to the well are Rs. 262/-, raising the total cost to Rs. 1,636/8/0.

Towards this cost Rs. 600/- were borrowed from the village money-lender at 12 per cent. interest and Rs. 600/- were borrowed from a relative without interest. It should be noted that the actual expenditure in cash was probably very little more than Rs. 1,200/-. The rest of the expenditure was in kind. The wood for the woodwork was provided from trees grown on the farm, and the food was all the produce of the farm.

It is said that two years ago a similar well was sunk at a cost of Rs. 1,400/- altogether.

The cost of maintenance of such a well has not been ascertained, but it must be considerably less than what the cost of maintenance was in former days when instead of a chain of iron buckets there was a chain of earthen pots tied to a string. These pots used to break easily and not only had to be renewed at frequent intervals, but their *debris* had periodically to be removed from the well cylinder. Now the well remains clean for years, and the chain of buckets is said to last for at least two years, and probably lasts on the average twice as long as this. The life of the woodwork of the well has not been ascertained. A well cannot ordinarily be worked for more than ten hours. After that it runs dry. The new iron buckets which are far more efficient than the old earthenware pots are said to be the cause of the wells running dry as quickly as they do. Much more water is taken out in a shorter time. Ordinarily two pairs of bullocks suffice to work a well during a day.

3. On canal irrigated holdings the work of clearing the water-courses is ordinarily done by the cultivator, whether he is owner or tenant. This clearance is usually done as the irrigation proceeds. There is no very great deposit of silt in the water-courses such as there is on inundation canals and some other canals. The bulk of the silt is deposited near the head and the cultivator is careful always to keep this clear while his land is being irrigated so that he may get his full supply of water. XV 3.

CHAPTER XVI.

CONSUMPTION.

XVI. 1. 1. For the purpose of food consumption the inhabitants of the village may be divided into two classes :—

(*i*) The landowners, field labourers, tenants and other castes who do hard bodily labour, and

(*ii*) the trading and non-agricultural castes not included in (*i*).

In the first group are included *Jats*, *jhiwars* (*mehras*), carpenters (*tarkhans*), sweepers (*chuhras*), *Arains* and *telis* (*oil-pressers*) ; in the second group *Khatris*, Brahmans, goldsmiths, *nais*, *Jogi-Rawals*, *Khojas* (*Sheikhs*), *mochis*, *julahas*, *bharais*, *mirasis*, *saqqas*, *dhobis* and *kumhars*.

The various castes included in class (*i*) are practically all vegetarians. Occasionally a man may be found who eats meat habitually, but there are few such. Those who can best afford meat, such as the *Jats*, do not want it unless they have acquired the taste by service in the Army, and the others such as the *chuhras* and *Arains*, who are glad enough to eat meat when they can get it, cannot as a rule afford it. The Hindu castes in group (*ii*) are all strict vegetarians. The sedentary nature of their occupations and the fact that as a rule they consume more milk and its products than the other castes, reduces the amount of cereals and pulses which they consume. The *Jogi-Rawals* and *Khojas* being Muslims are more frequent meat-eaters than the others, and for this reason and also because they have no hard bodily work to do, their consumption of cereals is less than that of the persons in class (*i*).

The number of meals taken varies according to the season of the year from three to four a day. In the summer when the peasant has to go out very early to his ploughing or sowing he starts without food and he does two or three hours' hard work before he breaks his fast. This happens at about 7 or 8 a.m. known as *lassi wela*, the time when the *lassi* (butter milk) is brought out to him either by his wife or by some junior member of his family. With his *lassi* he takes also a small portion of solid food usually a single *chapatti* (unleavened bread) smeared with *ghi* (clarified butter). Then he sets to work again till near midday (*roti wela*) when he has his first solid meal of *chapattis* and *ghi* washed down with water and perhaps butter milk. At this time also he may eat a little *gur* or raw sugar, vegetables and pickles, then to work again till the afternoon when if hungry he has another snack, possibly only a *chapatti* left over from *roti wela*. At sunset he goes home to his house and partakes of supper, the big meal of the day, when he takes a solid foundation of *chapattis* rendered palatable with

pulse, boiled vegetables, and raw sugar and *gur*. This time also he has a drink of milk, and if he is a meat-eater he takes meat. Thus normally he has only two solid meals in the day. At harvest time and in the summer when there is ploughing to be done, the number of meals is increased to four, including the early *lassi wela*. The afternoon snack is then expanded to a full meal, which is taken in the house or if time cannot be spared for the peasant to go home, as at harvesting, this meal is brought out to him by his women-folk. When the cultivator goes home for his afternoon meal as he does when he is ploughing he does not usually return to work in his field, but devotes the remaining hours of daylight to looking after his cattle and chopping food for them. XVI. 1.

2. For each of these two classes mentioned in para. 1 detailed observations have been made and the result of these observations is tabulated below. Two families of *Jat* Sikhs which were observed are inhabitants of Wazir Bhullar. Wazir Bhullar is a village of much the same kind as Gaggar Bhana situated about 10 miles from that village. The Investigator had special opportunities of making the detailed enquiries for the *Jat* class at Wazir Bhullar and figures obtained by him for this class may be accepted as correct. XVI. 2.

The two families of *Arains* belonging to Gaggar Bhana village were carefully observed. The figures obtained are believed to be fairly correct.

For the second-class one family of *julahas* (weavers) was observed. The figures were recorded by the head of the family, who happened to be a literate man and who entered into the spirit of the enquiry. The returns are believed to be accurate.

The average daily food consumption of *Jat* Sikh family No. 1 of Wazir Bhullar based on an observation of the quantities consumed on each of four successive days in April 1926 is as follows:—

	Seers.	*Equivalent in ozs.*
Wheat flour (*ata*)	$3\frac{1}{2}$	112
Pulses (*dal mash*)	$\frac{15}{32}$	15
Gur or raw sugar	$\frac{27}{128}$	6·7
Pumpkin (vegetables)	$\frac{1}{2}$	16
Curded milk	$\frac{1}{2}$	16
Ghi (clarified butter) and fresh butter (home made) ..	$\frac{3}{8}$	12
Milk	$1\frac{1}{2}$	48
Salt	$\frac{5}{128}$	1·2
Other condiments	$\frac{3}{256}$	4
Pickles (mango and lemon) ..	$\frac{1}{32}$	1

XVI. 2. It was ascertained that one seer of wheat flour was made into ten *chapattis* weighing $1^{7}/_{16}$ seers, so that the weight of each *chapatti* would average $^{23}/_{160}$ths of a seer, or 4·6 ozs.

The following table shows the wheat consumption of each member of the family in loaves. In the last column the *chapattis* are converted into wheat flour at the rate of 10 loaves for every seer of wheat flour :—

Member of family.	Age in years.	Number of chapattis consumed at each meal.			Equivalent in *ata* (wheat flour).	
		Breakfast.	Midday.	Evening.	Seers.	Ozs.
Father ..	35	4	2	4	1	32
Mother ..	30	2	1	3	$^{3}/_{5}$	19·2
Son ..	10	$2^{1}/_{2}$	1	$2^{1}/_{2}$	$^{3}/_{5}$	19·2
Son ..	$7^{1}/_{2}$	2	1	2	$^{1}/_{2}$	16
Son ..	5	$1^{1}/_{2}$	1	2	$^{9}/_{20}$	14·4
Daughter ..	$3^{1}/_{2}$	1	1	$1^{1}/_{2}$	$^{7}/_{20}$	11·2
Total wheat flour ..	..	..	..	..	$3^{1}/_{2}$	112

The threshing of wheat was in progress. The food was cooked three times a day.

The average daily food consumption of *Jat* Sikh family No. 2 of Wazir Bhullar, based on an observation of the amounts consumed on three successive days at the end of April 1926, is as follows :—

	Seers.	*Equivalent in ozs.*
Wheat flour (*ata*)	$6^{1}/_{4}$	200
Pulses (*dal mash*)	$^{1}/_{2}$	16
Raw sugar	$^{9}/_{20}$	9·9
Pumpkin (vegetables)	$^{1}/_{2}$	16
Curded milk	$^{7}/_{12}$	18·7
Ghi (clarified butter) and fresh butter	$^{1}/_{2}$	16
Milk	2	64
Salt	$^{1}/_{24}$	1·3
Other condiments	$^{1}/_{43}$	·6

Five seers of milk were obtained daily. Of this 2 seers was drunk as pure milk, about ½ seer converted into curds and the rest into fresh butter and buttermilk. The fresh butter is included in the *ghi* item.

One seer of *ata* was made into 10 *chapattis*.

The following table shows the number of *chapattis* consumed by each member of the family and the equivalent in wheat flour for each :—

Member of family.	Age in years.	Number of chapattis consumed at each meal.			Equivalent in *ata* (wheat flour).	
		Breakfast.	Midday.	Evening.	Seers.	Ozs.
Father ..	60	3	2	3 1/2	17/20	27·2
Mother ..	50	2 1/2	1	2	11/20	17·6
Son ..	22	4	2	3 1/2	19/20	30·4
Son's wife ..	20	2 1/2	1	2 1/2	3/5	19·2
Son ..	10	2 1/2	1	2 1/2	3/5	19·2
Son ..	8	2	1	2	1/2	16·
Daughter ..	2	1/2	..	1/2	1/10	3·2
Labourer ..	30	5	2	5	1 1/5	38·4
Labourer ..	13	3 1/2	1 1/2	4	9/10	28·8
Total wheat flour..	..	..	..	..	6 1/4	200

The two labourers took their meals with the family. They are allowed to drink as much buttermilk (*lassi*) as is available and they are also allowed *gur* or raw sugar at the midday meal, and pickles at other times. Their allowance of *ghi* is, however, very meagre, amounting to no more than a polish on each *chapatti*. The large amount of *chapattis* consumed by the labourers is noteworthy. These men are always allowed to eat as much as they want, and it is a common cause of grumbling among the small farmers that their labourers eat away their profits.

The average daily food consumption of *Arain* family No. 1 of Gaggar Bhana, based on observation of the quantities consumed on each of three successive days in March 1926, is as follows :—

	Seers.	*Equivalent in ozs.*
Wheat flour (*ata*)	6 1/6	197·3
Pulses (*dal mash*)	1/3	10·6
Green gram	1/6	5·3
Curded milk	1/7	4·6
Ghi and butter	1/4	8·0
Milk	1 1/2	48·0
Salt	1/24	1·3
Other condiments	1/256	·1
Pickles	1/24	1·3

XVI. 2. The family had a buffalo which gave 5 seers of milk daily. This provided the items shown above of curded milk, *ghi* and fresh milk, and also enough buttermilk (*lassi*) for the whole family. The following table shows the number of *chapattis* consumed by each member of the family and the equivalent in wheat flour for each. One seer of *ata* was converted into 8 *chapattis* which weighed $1\,^{9}/_{16}$ seers or 50 ozs.

Members of family.	Age in years.	Number of chapattis consumed at each meal.				Equivalent in *ata* (wheat flour).	
		Morning.	Midday.	Afternoon.	Evening.	Seers.	Ozs.
Father ..	56	1	2	..	3	$^{3}/_{4}$	24
Mother ..	45	1	2	1	2	$^{3}/_{4}$	24
Son ..	23	1	$3\,^{1}/_{2}$	1	$3\,^{1}/_{2}$	$1\,^{1}/_{8}$	36
Son's wife ..	18	1	2	1	2	$^{3}/_{4}$	24
Son ..	18	1	3	1	3	1	32
Son ..	14	1	$2\,^{1}/_{2}$	1	$2\,^{1}/_{2}$	$^{7}/_{8}$	28
Daughter ..	12	1	2	1	2	$^{3}/_{4}$	24
Total wheat flour	..	..	..	..	..	6	192

Chapattis were given to the *Qazi* and two mendicants which are not reckoned in this table and this accounts for the extra $\frac{1}{6}$ seers of flour. The male members of the family were cultivating their land preparatory to sowing sugarcane when these observations were made.

The average daily food consumption of *Arain* family No. 2 of Gaggar Bhana, based on observation of the quantities consumed on three successive days in March 1926, is as follows:—

	Seers.	*Equivalent in ozs.*
Wheat flour	6	192
Pulses	$^{1}/_{3}$	10·6
Radishes	$^{1}/_{2}$	16
Green gram	$^{1}/_{3}$	10·6
Curded milk	$^{1}/_{4}$	8
Butter	$^{3}/_{16}$	6
Salt	$^{1}/_{24}$	1·3
Other condiments	$^{1}/_{32}$	1
Pickles	$^{1}/_{16}$	2

The following table shows the number of *chapattis* consumed by each member of the family and the equivalent in wheat flour at the rate of 8 *chapattis* for every seer of flour :— XVI. 2.

Member of family.	Age in years.	Number of chapattis consumed at each meal.				Equivalent in *ata* (wheat flour).	
		Morning.	Midday.	Afternoon.	Evening.	Seers.	Ozs.
Father ..	45	1	4	..	5	$1^1/_4$	40
Mother ..	40	1	3	1	3	1	32
Son ..	22	1	4	..	5	$1^1/_4$	40
,, ..	16	1	3	1	3	1	32
Daughter ..	10	1	2	1	2	$^3/_4$	24
Son ..	6	1	$1^1/_2$	1	$1^1/_2$	$^5/_8$	20
,, ..	2	..	$^1/_2$	..	$^1/_2$	$^1/_8$	4
Total wheat flour ..	..	..	..	..	..	6	192

One *chapatti* was given to the village *Qazi*. It has been included in the foregoing account.

The average daily food consumption of a family of *julahas* (weavers) as obtained by observation on seven consecutive days in the middle of March 1926, is as follows :—

	Seers.	*Equivalent in ozs.*
Wheat flour	4	128
Pulses	$^2/_7$	9·1
Radishes	$^5/_{14}$	11·5
Gram	$^9/_{56}$	5·1
Potatoes	$^2/_7$	9·1
Green vegetables including green gram	$^1/_{14}$	2·3
Ghi	$^3/_{14}$	6·8
Salt	$^3/_{112}$	·8
Other condiments	$^1/_{56}$	·6
Pickles	$^1/_{28}$	1·1

An extra half seer of wheat flour was converted into *chapattis* for the *Qazi* during the week. This is not reckoned in the foregoing account. The following table shows for each member of the family the number of

XVI. 2. *chapattis* consumed and the equivalent in wheat flour. As with *Arains* one seer of wheat flour is made into 8 *chapattis*.

Member of family.	Age in years.	Number of chapattis consumed at each meal.				Equivalent in *ata* (wheat flour).	
		Morning.	Midday.	Afternoon.	Evening.	Seers.	Ozs.
Father ..	36	1	3	..	4	1	32
Mother ..	28	1	2	1	2	3/4	24
Son ..	11	1	2	1	2	3/4	24
Daughter ..	6	3/4	1 1/2	3/4	1 1/2	9/16	18
Daughter ..	4	3/4	1 1/2	3/4	1 1/2	9/16	18
Son ..	2 1/2	1/2	1	1/2	1	3/8	12
Son ..	1	..	..	..	..	..	..
Total ..	..	..	..	..	..	4	122

The figures worked out in the preceding five tables indicate a higher rate of consumption than those given in "*The Rates of Food Consumption by Zamindars of the Tallagang Tahsil of the Attock District*" (The Board of Economic Inquiry, Punjab, Rural Section Publication, No. 6). Among the reasons for the difference are the facts that the observations were taken at a time when the workers of the family were doing a great deal of bodily work, and also that odd *chapattis* given to beggars and menials are included in the figures. On two occasions special mention is made of *chapattis* given to the *Qazi* and beggars. Such gifts are not exceptional. There are besides these occasional alms regular daily rations handed over to the waterman's wife and the sweeper's wife. These have not been mentioned, but inquiries made show that they are always given. There are two ways of allowing for these payments to village menials and beggars. One way is to make a proportional reduction on the consumption figures for each family. A second way is to allow for the family food consumption of all except the village menial and mendicant classes at the average rates obtained from the foregoing tables, and to allow for the village menials and others at half rations. The former method will be adopted and a reduction of one-sixteenth will be made all round.

From the tables given the following average rates of consumption of wheat flour have been deduced:— XVI. 2.

Average Rates of Food Consumption of Four Families of Cultivators.

Age in years.	Average daily consumption of *Ata* (wheat flour).			
	Males.		Females.	
	chhattaks.	ozs.	chhattaks.	ozs.
Under 5 ..	3·53	7·06	3·53	7·06
5 to 10 ..	9·17	18·34	9·17	18·34
11 to 15 ..	14·20	28·40	12·00	24·00
16 to 25 ..	17·30	34·60	10·80	21·60
26 to 55 ..	18·4	36·80	11·60	23·20
Over 55 ..	12·8	25·60	No figures.	

Average Daily Rate of Food Consumption of One Family of Weavers:—

Age in years.	Average daily consumption of *Ata* (wheat flour).			
	Males.		Females.	
	chhattaks.	ozs.	chhattaks.	ozs.
Under 5 ..	3·53	7·06	3·53	7·06
5 to 10 ..	9-17	18·34	9·17	18·34
11 to 15 ..	12·00	24·00	No figures.	
16 to 25 ..	No figures.		No figures.	
26 to 55 ..	16·00	32·00	12·00	24·00
Over 55 ..	No figures.		No figures.	

In order to obtain figures for the two classes " under 5 " and " 6 to 10 " an average has been taken of all children in the five families observed, male or female, cultivator or non-cultivator. This is why the figures for male and female, cultivator and non-cultivator, are identical. After " 11 " a separate average has been taken for each class. The numbers are so small, however, that it would not be justifiable on the basis of these averages alone to found any conclusion.

XVI. 2. Certain blanks in these averages have to be filled and certain anomalies must be corrected. There are no women over 55 in the families under observation, and there are only two men over that age. The average consumption of women over 55 may be taken at about ¾ths of that of women between 26 and 55 or say 9 chhattaks. For non-cultivators there are no figures for males in the classes "16-25" and "over 55," and for females in the classes "11-15," "16-25" and "over 55." The following figures which are slightly less than the figures for the cultivating class may be accepted. They seem to fit in.

		Chhattaks.	*Equivalent in ozs.*
Males	16-25 ..	14	28
„	over 55 ..	12	24
Females	11-15 ..	11	22
„	16-25 ..	12	24
„	over 55 ..	9	18

There is an anomaly in the figures for the cultivating class in that the average for females from "11 to 15" is 12 chhattaks while that for females from "16 to 25" is only 10·8. The latter figure has been raised to 12. If we apply these corrections and make the deduction of one-sixteenth to allow for food given to village menials and in charity we get the following results :—

	Age.	Corrected figures of daily consumption after deducting 1/16th.			
		Cultivators.		Non-cultivators.	
		Chhattaks.	Equivalent in ozs.	Chhattaks.	Equivalent in ozs.
Males.	Under 5	3·31	6·62	3·31	6·62
	5-10	8·60	17·20	8·60	17·20
	11-15	13·32	26·64	11·25	22·50
	16-25	16·22	32·44	13·13	26·26
	26—55	17·25	34·50	15·00	30·00
	Over 55	12·00	24·00	11·25	22·50
Females.	Under 5	3·31	6·62	3·31	6·62
	5-10	8·60	17·20	8·60	17·20
	11-15	11·25	22·50	10·11	20·22
	16-25	11·25	22·50	11·25	22·50
	26—55	10·87	21·74	11·25	22·50
	Over 55	8·44	16·88	8·44	16·88

We can now proceed to work out the wheat consumption of the village applying the results obtained at the end of the last paragraph, and dividing the inhabitants into two classes which may be called cultivating and non-cultivating classes.

Statement showing Monthly Wheat Consumption amongst different Castes in Gaggar Bhana. XVI. 2.

Castes.	Sex.	Age.	Total No.	Daily food rate in chhattaks.	Product of cols. 4 and 5 in seers.	Total monthly consumption in maunds.
1	2	3	4	5	6	7
CULTIVATING CLASSES.	MALES.	Under 5 years	113	3·31	23·38	17·53
1. Jats.		5 to 10 „	75	8·60	40·31	30·23
		11 „ 15 „	69	13·32	57·44	43·08
2. *Jhiwars* (water-bearers).		16 „ 25 „	92	16·22	93·26	69·94
3. *Tarkhans* (carpenters).		26 „ 55 „	183	17·25	197·29	147·97
4. *Chuhras* (sweepers).		Over 55 „	51	12·00	38·25	28·69
5. Arains.		Total ..	*583*	..	..	*337·44*
6. *Telis* (oil-pressers).	FEMALES.	Under 5 years	96	3·31	19·86	14·89
		5 to 10 „	67	8·60	36·01	27·00
7. Jats.		11 „ 15 „	46	11·25	32·34	24·25
8. *Jhiwars* (water-bearers).		16 „ 25 „	101	11·25	71·01	53·26
9. *Tarkhans* (carpenters).		26 „ 55 „	123	10·87	83·56	67·26
10. *Chuhras* (sweepers).		Over 55 „	29	8·44	15·30	11·47
11. Arains.		Total ..	*462*	..	..	*193·54*
		Grand Total	***1,045***	..	..	***530·98***
NON-CULTIVATING CLASSES.	MALES.	Under 5 years	70	3·31	14·50	10·87
1. Other Hindus (*Khatris*, Brahmans, Goldsmiths, *Nais*, etc.).		5 to 10 „	57	8·60	30·64	22·98
		11 „ 15 „	51	11·25	35·86	26·89
		16 „ 25 „	85	13·13	69·75	52·31
		26 „ 55 „	120	15·00	112·50	84·40
		Over 55 „	31	11·25	21·80	16·35
2. Jogi-Rawals		Total ..	*414*	..	..	*213·80*
3. *Khojas* (*Sheikhs*).	FEMALES.	Under 5 years.	66	3·31	13·65	10·24
4. *Mochis* (leather workers).		5 to 10 „	44	8·60	23·65	17·74
5. *Julahas*.		11 „ 15 „	32	10·11	20·22	15·16
6. *Bharais* (drummers).		16 „ 25 „	82	11·25	57·66	43·24
7. *Mirasis* (genealogists).		26 „ 55 „	93	11·25	65·39	49·04
8. *Dhobis* (washermen).		Over 55 „	19	8·44	10·02	7·51
9. *Saqqas* (water-bearers).		Total ..	*336*	..	..	*142·93*
10. *Kumhars* (potters).		Grand Total	***750***	..	..	***356·73***
TOTAL FOR THE WHOLE VILLAGE ..			***1,795***	..	..	***887·71***

XVI. 3. 3. It was not possible to obtain actual figures of consumption for the period of a year. It is not easy to weigh the amount which a man has in stock of wheat or flour. The construction of the wheat bins is such that the wheat cannot be abstracted from a bin without some inconvenience. Flour is usually kept in an earthen pot, but it is ground weekly as a rule, the wheat being taken for grinding as required.

XVI. 4. 4. As a rule, the only persons in this village who eat meat are Mohammedans. Occasionally, however, military pensioners or persons who are still serving in the Army and are at home on leave also eat meat, either the flesh of goats or of fowls. The Mohammedan *Khojas* and *Jogi-Rawals* are regular consumers of meat, which they eat every third or fourth day. Sweepers also eat it very occasionally during the harvesting time. The Muslims eat the meat mixed with vegetables and rice, the quantity consumed being about 3 ounces (1½ chhattaks) per diem per head of meat consumers all round. The average monthly consumption is 7 or 8 goats. The military pensioners and other Sikhs, who have acquired to some extent the meat-eating habit between them do not probably consume more than 5 or 6 goats in the year. The total consumption for the village may be estimated between 90 and 100 goats in the year. The animals killed are usually under one year of age. Eight to ten months is said to be the age at which their meat is most palatable. The Muslim goat keepers, however, will not let an animal die a natural death and have no compunction about slaughtering it if they see it is ill and not likely to recover. The village meat seller is a *Jogi-Rawal* who slaughters an animal every third or fourth day. The meat is sold at 8 annas a seer.

XVI. 5. 5. The table on the following page shows for each class of the population the number of milch cows and buffaloes kept and also the number of young stock, which are not yet in milk.

The figures for average price given in this table indicate the difference in quality of the animals owned by the various classes. The menials, as a rule, pay much less for their animals than other classes and consequently have far inferior animals.

The total number of cows in March 1925 was 96 of which 52 were actually yielding milk. The total number of buffaloes was 196 of which 127 were actually yielding milk. Enquiries made show that the highest yield of milk per buffalo does not exceed 10 seers while in some cases it is not even more than 8 seers. The yield of milk from cows is 7 seers as a maximum and 6 seers for a cow not fully in milk. On the whole the enquiries indicate that the buffaloes yield about 4 seers of milk per diem on the average and the cows

Statement showing Milch Cows and Buffaloes owned by the Different Castes in this Village in March 1925.

Castes.	Cows.				Buffaloes.			
	Total.	Average cost price.	No. of animals actually giving milk.	Young stock.	Total.	Average cost price.	No. of animals actually giving milk.	Young stock.
		Rs.				Rs.		
Jats ..	36	40/8/-	22	30	98	120	64	72
Jhiwars ..	1	30	1	5	9	144	5	3
Barbers and Hindu potters.	..	..	..	..	5	105	3	2
Darzis ..	..	..	..	..	2	120	1	..
Brahmans ..	2	60	..	2	2	150	1	1
Goldsmiths ..	..	..	..	..	1	180	1	1
Khatris ..	1	..	1	1	2	82	1	1
Carpenters ..	2	33	2	5	13	143	9	5
Sweepers ..	25	44	11	36	14	81	10	12
Jogi-Rawals ..	5	46/8/-	3	6	12	112/8/-	10	7
Bharais ..	3	50	2	2	7	90	5	3
Saqqas ..	2	29	..	3	3	45	2	2
Telis ..	1	50	1	4	6	90	4	4
Mochis ..	6	33	1	11	9	80	5	6
Weavers ..	8	31	7	6	1	24	1	1
Dhobis ..	..	..	..	..	2	75	1	1
Kumhars ..	..	..	..	..	1	..	..	1
Mirasis ..	2	..	..	4	1	55	1	..
Sheikhs ..	1	40	..	1	2	150	1	..
Arains ..	1	30	..	2	6	94	1	6
Total ..	*96*	..	*51*	*118*	*196*	..	*126*	*128*

XVI. 5. $2\frac{1}{2}$ to 3 seers. If we apply these figures to the total number of milch animals, we get a total milk supply from cows and buffaloes of 1,024 seers per diem, which comes to a little over half a seer per diem per head of population. During the period of the enquiry there were 98 nanny-goats of which 40 were giving milk. Their average milk supply may be reckoned at half a seer per diem. This would add 48 seers daily to the milk supply of the village. Goats' milk produces very little *ghi*. It is either consumed as it is or else converted into *lassi* (buttermilk). Enquiries indicate that no milk is either imported into or exported from this village. The landowners consume milk, *lassi* (butter milk), butter, curds (*dehi*) and *ghi* (clarified butter) and sometimes they sell a little *ghi*. The village menials, however, content themselves with the buttermilk and curds and sell most of the *ghi* which is the product of milk. The milk supply appears to be most plentiful during the months of August and September, when most of the *Jogi-Rawals* have returned from their expeditions with money in their hands and are able to buy animals from itinerant dealers. These animals are subsequently sold at Amritsar at the *Diwali* Fair before the *Jogi-Rawals* go out on fresh expeditions.

XVI. 6. 6. The figures given in para. 2 of this Chapter show that the total wheat consumption of the village per annum is approximately 10,653 maunds. The average area of this crop which was matured during the past 5 years is as follows :—

Class of Soil.	*Acres.*
Chahi	169
Nahri	158
Barani	53
Total ..	*380*

The average area of mixed wheat and gram (*berra*) is as follows :—

	Acres.
Chahi	11
Nahri	104
Barani	96
Total ..	*211*

Applying to these areas the rates of yield as ascertained in Chapter XIII, we get the following results as the average total for the year :— XVI. 6.

Wheat Crop.	*Acres.*		*Maunds.*		*Maunds.*
Chahi	169	×	14	=	2,366
Nahri	158	×	12	=	1,896
Barani	53	×	8	=	424
Total ..					*4,686*
Mixed Wheat and Gram.					
Chahi	11	×	11	=	121
Nahri	104	×	9	=	936
Barani	96	×	7	=	672
Total ..					*1,729*

Allowing for the fact that a fair percentage of the population is normally absent from the village, these figures indicate that in ordinary years there is not a sufficient supply of local wheat to provide for the requirements of all the inhabitants. One explanation of this fact is that there are in this village a large number of "useless mouths" who earn their living outside the village. Such are the *Jogi-Rawals*, *mochis*, weavers, carpenters and Brahmans, who altogether comprise about one-third of the population. It seems difficult to suppose that there is the deficiency in the staple food grains which is brought out by the figures. One can only suppose that the estimates of outturn are defective. The chief articles of food which are exported are oil-seeds, wheat and *gur* (raw sugar). The chief articles of food usually imported are rice, pulses and condiments. During the year when the investigation took place the spring harvest was very poor and the yields were far below the average, so that during that year large imports of wheat and maize had to be made from outside the village. Wheat and maize are always used in the form of *chapattis*. Gram is sometimes mixed with wheat and used as *chapattis* and sometimes used in the form of pulse. Vegetables are usually imported except young mustard, which is grown locally in the fields.

7. If there is scarcity the poorer inhabitants replace wheat with maize. They also probably have to sell their milch animals and consequently have less milk. At the first sign of scarcity, however, such of the people as are not able to make their living in the village leave it for work outside. XVI. 7.

8. As far as is known very little change has taken place in the diet of the people during the past 15 years. In fact it might be said that they are probably eating now exactly what they did 15 or 16 years ago. There has been very little advancement in luxury in this respect. XVI. 8.

APPENDIX A.

Questionnaire used by Investigators.

I.—GENERAL.

1. Physical description of village and soils.
2. Statistics of population for all censuses that have been taken. Distribution, if available, by sex, age and caste. Causes of changes in population. Mortality from plague, influenza, cholera and other serious epidemics: point out if mortality was particularly severe between certain ages, or in either sex.
3. Marriage. Age of marriage for boys and girls in the various communities.
4. What is the size of an average family?
5. Prepare a statement showing—

(1) The number of (*a*) persons, (*b*) families, who depend on agriculture for their livelihood, and classify as follows:—

(*a*) (*i*) wholly dependent,
(*ii*) partly dependent;
(*b*) (*i*) rent receivers only (*i. e.*, non-cultivating owners),
(*ii*) actual cultivating owners,
(*iii*) rent payers (tenants) only,
(*iv*) labourers,
(*v*) others, for whom details should be given.

(2) The number of (*a*) persons, (*b*) families, whose chief means of livelihood is cottage industry.

(3) The number of (*a*) persons, (*b*) families, who do not follow any productive calling and live on charity, begging, religion, etc., etc.

(4) The number of (*a*) artisans, (*b*) families of artisans, in the village. Give details.

(5) The number of (*a*) field labourers, (*b*) families of field labourers.

(6) The number of (*a*) persons, (*b*) families, whose principal means of livelihood is agriculture, but who depend upon other occupations, such as industry, field labour, grass and wood selling, *gadda* hire, service, etc., to supplement their income from agriculture.

(7) The number of (*a*) persons, (*b*) families, whose principal means of livelihood, is any occupation other than agriculture, but who follow agriculture as a subsidiary calling.

(8) The number of persons who live outside the village for a large part of the year and who earn their livelihood in professions such as service.

(9) The number of—

(*i*) military servants,
(*ii*) teachers,
(*iii*) pleaders,
(*iv*) civil servants,
(*v*) persons who work in cities as menial servants,
(*vi*) pensioners.

NOTE.—Distinguish between those persons who, or whose families, are resident in the village more than nine months in the year, and those who, although natives of the village, ordinarily spend less than three months in it.

(10) Number of (*a*) persons, (*b*) families, living on money-lending and trade. Give, if possible, details as to income-tax paid in recent years.

6. How does a cultivator employ himself in hours not spent in work connected with the cultivation of the land?
7. How does a cultivator employ himself in slack seasons—
(*a*) When agricultural conditions are normal; (*b*) when they are abnormal? Does he follow any subsidiary industry?

8. Describe fully the way in which village artisans and menials are paid by cultivators. Describe their rights and privileges in the village.
Give annual wages usually paid to each class and also *inams* and other dues paid on the occasions of social and religious ceremonies.

9. Describe fully the economic position of a field labourer in the village organization. Describe his rights and privileges in the village.
How is he paid ?
Is there a tendency for younger men to emigrate to the towns ? If so, in what capacity ?

II.—CROPPING AND CULTIVATION.

1. Give from the *Milan Raqba* statement of the Village Note Book an abstract showing for the village as a whole:—

	Total area.	Banjar Kadim.	Banjar Jadid.	Cultivated area with classes of soils.
1900 .... 1920 (or nearest year).				

2. Prepare from the Jinswar statements of the *Lal Kitab* a statement in the form shown on page 3, with any modification that may be necessary for the particular village, showing the average cropping for the past five years.

3. Have any important changes occurred in the cropping during the past twenty years; if so, what ?

4. Take about 50 fields representative of different classes of soils, and from the *khasra girdawari* examine the cropping for the last eight harvests in order to see what are the most common rotations of crops.

5. Have the high prices of (1) cotton, (2) sugarcane, resulted in their cultivation being extended ?

6. What crops are manured ? What manure is used ? Whence is it obtained ? How much is used per acre for each crop ? When is it applied ?

7. Give in the form of a calendar an account of the year's operations on two holdings of different sizes selected from the following, 2, 5, 10, 20, 50 acres, showing month by month the number of workers, etc.

8. What crops are irrigated by (*a*) wells; (*b*) canals; (*c*) other means of irrigation ? Give the usual number and dates of waterings for each. What number of waterings for each of the chief crops do the zamindars consider necessary to give the best results ?

9. Are the fields carefully levelled for irrigation by (*a*) wells and (*b*) canals ? Is there any waste of water ?

10. What is the number of ploughings usually given for each of the chief crops and when are they given ? Does this vary on different classes of soils ?

11. Is weeding regularly done ? If so, for what crops ? Who do the weeding ?

12. Have any improved implements been introduced in the village ? If so, whence have they been obtained ?

13. Have any selected varieties of seeds as recommended by the Agricultural Department been adopted in the village ? If so, what ? Give details of numbers and varieties. Have the results been good ? Give, if possible, the increase in yields or other advantages obtained from the use of selected seed ?

14. What improved methods of cultivation, if any, have been adopted ? What have been the results ?

15. Where is the nearest demonstration farm ? Have any demonstrations been made in or near the village ? Have any of the zamindars visited an Experimental or Demonstration Farm ? If there is a District Agricultural Association, do the zamindars know anything about it ? Has it conferred any practical benefit on the village ?

16. Where is the nearest rain-gauge ? Give monthly figures of rainfall for each of the past ten years.

1	2	3	4	5	6	7	8	9	10	11	12	13
		Crops.	Chahi.	Chahi nahri.	Nahri.	Chahi sailab.	Abi.	Sailab.	Barani.	Total.	Per cent. on annual cropped area.	Special crops.
Kharif.	1	Rice	..	..	..	..	..	..	..	..	..	Rice.
	2	Jowar	..	..	..	..	..	..	..	..	..	
	3	Bajra	..	..	..	..	..	..	..	..	..	
	4	Maize	..	..	..	..	..	..	..	..	..	
	5	Til	..	..	..	..	..	..	..	..	..	
	6	Sugarcane	..	..	..	..	..	..	..	..	..	Sugarcane.
	7	Pepper	..	..	..	..	..	..	..	..	..	
	8	Cotton	..	..	..	..	..	..	..	..	..	Cotton.
	9	Indigo	..	..	..	..	..	..	..	..	..	Indigo.
	10	Fruits	..	..	..	..	..	..	..	..	..	
	11	Vegetables	..	..	..	..	..	..	..	..	..	
	12	Fodder	..	..	..	..	..	..	..	..	..	
	13	Others	..	..	..	..	..	..	..	..	..	
	14	Total cropped	..	..	..	..	..	..	..	..	..	
	15	Kharaba	..	..	..	..	..	..	..	..	..	
	16	Total sown	..	..	..	..	..	..	..	..	..	
	17	Percentage of Kharaba on sown	..	..	..	..	..	..	..	..	..	
Rabi.	18	Wheat	..	..	..	..	..	..	..	..	..	Wheat.
	19	Barley	..	..	..	..	..	..	..	..	..	
	20	Gram	..	..	..	..	..	..	..	..	..	Gram.
	21	Peas	..	..	..	..	..	..	..	..	..	Peas.
	22	Tobacco	..	..	..	..	..	..	..	..	..	
	23	Fruits	..	..	..	..	..	..	..	..	..	
	24	Vegetables	..	..	..	..	..	..	..	..	..	
	25	Fodder	..	..	..	..	..	..	..	..	..	
	26	Others	..	..	..	..	..	..	..	..	..	
	27	Total cropped	..	..	..	..	..	..	..	..	..	
	28	Kharaba	..	..	..	..	..	..	..	..	..	
	29	Total sown	..	..	..	..	..	..	..	..	..	
	30	Percentage of Kharaba on sown	..	..	..	..	..	..	..	..	..	
Both harvests.	31	Total cropped area ..	..	..	..	..	..	..	..	..	..	
	32	Total Kharaba ..	..	..	..	..	..	..	..	..	..	
	33	Total sown ..	..	..	..	..	..	..	..	..	..	
	34	Per cent. of Kharaba on sown	..	..	..	..	..	..	..	..	..	
	35	Per cent. of cropped on cultivated area ..	..	..	..	..	..	..	..	..	..	

III.—IRRIGATION.

1. What are the sources of canal irrigation ? Is the village situated near the "tail" ?
2. Is irrigation by flow or lift ?
3. Is canal irrigation received in both harvests ? In the *rabi* is canal water obtained for sowings only, or are subsequent waterings also possible ?
4. When does canal irrigation usually begin, and when does it stop ? Is it continuous or by rotation on different branches or minors of the canal ?
5. How is the internal distribution of water made between cultivators ? Is it a fair distribution ? Do cultivators who do not require water when their turn comes round sell it to others ? If so, at what rates ?
6. Give the number of wells (*a*) in use, (*b*) capable of use, now, and twenty years ago.
7. When are the wells usually worked ? Give the number of yokes for each well and the hours of work done by each yoke in one day. What area can a well irrigate in twenty-four hours assuming the number of yokes to be sufficient to keep the well in work the whole of that time. Give depth of water, and number of hours the well can be worked.
8. Is canal irrigation assisted by wells ? If so, when and to what extent, and for what crops ?
9. If there are *barani*, well and canal holdings in the village compare the labour and cattle necessary for the proper cultivation of ten acres of *barani*, well, and canal lands, respectively. Give the figures for labour and cattle for any of these three types of holdings that may exist in the village and illustrate them by the actuals of ten holdings of various sizes.

IV.—HOLDINGS.

1. From the total number of owners in the village as given in *Statement VI* of the Village Note Book deduct the number of those whose names have been counted more than once. Divide the total cultivated area of the village by this number and so get the cultivated area per owner. Compare the result with that obtained for a similar calculation on the figures of 1900.
2. If any of the owners own cultivated land outside the village, add the area so owned to the total cultivated area of the village, and divide by the number of owners as found in 1 above and so obtain the *total* cultivated area per owner. Note the number of owners who do not cultivate at all.
3. Give a statement showing—
   Number of proprietary holdings owned :—
   (*a*) by a single owner.
   (*b*) ,, 2 persons jointly.
   (*c*) ,, 3 ,, ,,
   (*d*) ,, 4 ,, ,,
   (*e*) ,, 5 ,, ,,
   (*f*) ,, more than 5 persons jointly.
4. Prepare a statement as follows :—
   Number of owners who own—
   (*a*) less than 1 acre cultivated land.
   (*b*) between 1 and 2½ acres land.
   (*c*) ,, 2½ ,, 5 ,, ,,
   (*d*) ,, 5 ,, 7½ ,, ,,
   (*e*) ,, 7½ ,, 10 ,, ,,
   (*f*) ,, 10 ,, 15 ,, ,,
   (*g*) ,, 15 ,, 20 ,, ,,
   (*h*) ,, 20 ,, 50 ,, ,,
   (*i*) more than 50 acres land.

NOTE—1. In the case of (*a*) above, give a complete list of owners with their caste, main occupation, etc.

2. In this statement if three owners own 8 acres jointly and nothing more in the village, all three will come into (*b*).

3. For this statement take first of all only the cultivated area of the village concerned but in a Remarks Column show the effect of taking into account the cultivated land owned outside the village, *e.g.*, if cultivated area outside the village is also taken into account 3 of the owners in class (*e*) will come into class (*f*), and 2 in class (*f*) into class (*g*).

5. For classes (*a*), (*b*), (*c*), (*d*) and (*e*) above, ascertain which of the owners cultivate the whole or part of their own land and in addition also cultivate other land as tenants. Then prepare a revised statement as follows:—

Number of owners who cultivate:—

(*a*) less than 1 acre (..acres owned;..acres rented).
(*b*) between 1 and 2½ acres (.. ,, ,, ;.. ,, ,,).
(*c*) ,, 2½ and 5 ,, (.. ,, ,, ;.. ,, ,,).
(*d*) ,, 5 and 7½ ,, (.. ,, ,, ;.. ,, ,,).
(*e*) ,, 7½ and 10 ,, (.. ,, ,, ;.. ,, ,,).

6. For (*a*), (*b*), (*c*), (*d*) and (*e*) in paragraph 4 above, state for each sub-division, (1) the number of owners who actually cultivate in the village; (2) the number who cultivate elsewhere as tenants or owners; (3) the number who, on account of old age, infirmity, youth or other disability, neither cultivate nor have other means of livelihood; (4) the number of owners who do not cultivate, but have other means of livelihood, (*a*) inside the village, (*b*) outside it, and state what these are; (5) the number of owners who cultivate and have also other means of livelihood, regular or casual. State what these are.

7. How many owners are resident in the village?
How many of them cultivate? What do the others do?

8. How many owners are non-resident? Of the non-resident able-bodied men how many are (*a*) in the Army, (*b*) in Government service, (*c*) in other service, (*d*) casual labourers? Give a statement of pay and earnings.

9. Give a list similar to 3 above showing—
Number of cultivating holdings cultivated:—

(*a*) by a single cultivator.
(*b*) ,, 2 cultivators jointly.
(*c*) ,, 3 ,, ,,
(*d*) ,, 4 ,, ,,
(*e*) ,, 5 ,, ,,
(*f*) ,, more than 5 cultivators jointly.

NOTE.—Hired labourers will not be counted as cultivators for this purpose.

10. Prepare a statement similar to 4 above showing—
Number of cultivators who cultivate:—

(*a*) 2½ acres cultivated or less.
(*b*) between 2½ and 5 acres cultivated.
(*c*) ,, 5 and 7½ acres ,,
(*d*) ,, 7½ and 10 ,, ,,
(*e*) ,, 10 and 15 ,, ,,
(*f*) ,, 15 and 20 ,, ,,
(*g*) ,, 20 and 50 ,, ,,
(*h*) more than 50 acres cultivated.

NOTE.— 1. Cultivating owners and tenants, whether owners or not, will come into this account.
2. If three tenants cultivate 9 acres jointly, each will be credited with 3 acres; if, in addition, one of them cultivates 4 acres alone, he will come into class (*c*).
3. Show the effect on the classification of taking into account land cultivated outside the village.
4. Where there are sub-tenants, these, and not the tenants under whom they hold, should be counted. Hired labourers should not be included, but partners in cultivation should.

11. What is the number of—
(*i*) occupancy tenants,
(*ii*) non-occupancy tenants under owners or occupancy tenants,
(*iii*) sub-tenants under tenants-at-will,
(*a*) who own no land at all,
(*b*) who own no land in the village.

How many are permanently resident in the village? Give the length of tenancy to date as follows:—

(*a*) Less than 3 years.
(*b*) Between 3 and 5 years.
(*c*) ,, 5 and 10 years.
(*d*) More than 10 years.

NOTE.—Where a son or nephew has carried on the tenancy of his father or uncle, etc., the tenancy should be regarded as continuous.

12. Of the tenants, how many are village menials ? How many tenants have supplementary means of livelihood and what are the supplementary means ?

13. Read Chapter III of Dr. Mann's "*Land and Labour in a Deccan Village.*"* Prepare a statement of proprietary holdings similar to that on page 47, and a statement similar to that on page 51 for cultivating holdings.

NOTE.—Plot in this connection means not necessarily a *khasra* number. It is used to denote an unbroken piece of land and will include several *khasra* numbers if these are continuous and held by the same owner or cultivator, as the case may be.

14. Illustrate graphically the fragmentation of proprietary and cultivating holdings as in the charts facing pages 46 and 52 of Dr. Mann's book.

Take ten proprietary holdings and illustrate five on each of two sheets, choosing two extreme cases of fragmentation and the rest ordinary ones. Do the same for ten cultivating holdings.

15. Take four proprietary holdings in which there is much fragmentation. By means of the genealogical tables and the settlement records of the various settlements trace the history of each back as far as possible showing how fragmentation has been the result of (*a*) succession, (*b*) sales, gifts and exchanges, (*c*) partitions.

Give examples, if any can be found, of the reverse process of consolidation due to owners dying without sons, exchanges, purchases, etc.

16. Take four cases in which partition has occurred. Show graphically the extent of fragmentation before and after partition. If possible, select two areas in which more than one partition has occurred.

17. What are the practical disadvantages of fragmentation in this village ? Illustrate your answer by reference to specific instances. If possible, give details of litigation arising from boundary disputes. In particular, inquire whether any land is lying uncultivated owing to excessive fragmentation. Give a list of some of the smallest plots and say what use is made of them.

18. Can you give any instances in the village in which a cultivator could actually reduce the number of workers employed on his holding if consolidation were effected ?

In practice, would the cultivator reduce his labourers or would the same labourers be used, but for less time ?

19. What are the objections urged by the zemindars against consolidation of holdings ? Have any of them voluntarily agreed to consolidation ? Have practical benefits resulted ?

V.—EFFECT OF TENANCY.

If possible, compare in as much detail as possible several holdings cultivated by their owners with several holdings cultivated entirely by tenants who are not themselves mortgagors nor relations of the owners of the holdings they cultivate. For the purpose of this comparison, tenants who do not cultivate themselves should not be included.

1. Is there any difference in the methods of cultivation, number and dates of ploughings, manuring, etc. ?
2. Is there any difference in the cropping ?
3. Is there any difference in perennials, such as trees, etc., on the holdings ?
4. Is there any difference in efforts at improving land ?
5. Is there any difference in the cattle, etc., kept ?
6. Is there any difference in the buildings ?
7. Is there any difference in education of the children ?
   Amplify, if possible, by reference to actual facts and figures.
8. Is there any difference in the careers of the children (*i. e.*, working as agriculturists, engaging in other business, migrating to towns, taking service, etc.) ?
9. Is there any difference in the standard of living, or of debt, and in the facility with which credit can be obtained ?
10. Do tenants join Co-operative Societies as freely as owners ?

*University of Bombay, Economic Series, No. 1, Oxford University Press, Bombay.

VI.—LAND REVENUE AND TACCAVI.

1. What was the fixed land revenue imposed at previous settlements and at the last settlement ?
2. Give the incidence per cultivated acre of the present fixed demand.
3. What portion, if any, of the fixed demand is deferred on account of (*a*) protective well leases, (*b*) other causes ?
4. Attach a list of occupiers' rates charged on canal irrigation.
5. What has been paid by the village in each of the past five years for (*a*) Land Revenue, (*b*) Cesses, (*c*) Occupiers' rates, (*d*) Total.
   Give the average of the period, and the average incidence per matured acre.
6. What coercive processes, if any, have been issued during the past five years for (*a*) land revenue fixed, (*b*) land revenue fluctuating ? Has land revenue been paid punctually ? Has the lambardar had to pay part of it out of his own pocket and then recover from owners ?
7. How is the money for land revenue obtained ? Is surplus produce sold ? Is it paid out of earnings from casual labour ? Is the money for it borrowed ? Has any money been borrowed for this purpose from Co-operative Societies ? If so, when, by whom, and how much ?
   Take 30 specific cases representing large, medium and small owners and record the results.
8. In cases where money was borrowed for the payment of land revenue inquire carefully into the causes. Did the borrower sell any of his produce of the harvest in question before or after the payment of land revenue ? If so, what did he do with the money so obtained ? Did he buy cattle or other necessaries with it ? Did he use it to pay off debts ?
9. Are the dates fixed for the payment of land revenue convenient for owners ? If not, what other dates would be more convenient ?
10. What (*a*) remissions, (*b*) suspensions, of land revenue, have been granted during the past ten years ? Why were they granted in each case ?
11. Make enquiries similar to those detailed in 8 and 10 above for the payment of occupiers' rates.
12. What *taccavi* has been taken for (*a*) sinking of wells, (*b*) other improvements, (*c*) purchase of cattle, fodder, or seed, during the past ten years ?
13. Were the instalments repaid with ease ? If not, how were they paid ? Were any coercive processes necessary ? Was there any attachment and sale of property ?
14. Is *taccavi* popular ? Are loans taken from money-lenders when *taccavi* might be taken ? Give specific cases, if any, and record the reason. If *taccavi* is not popular, what are the reasons, as given by the zamindars ?

VII.—INDEBTEDNESS.

1. What are the chief purposes for which loans are taken ? Give approximate percentage of principal in each case, showing what is due to (*a*) personal expenditure such as food, clothing, marriage, funeral, litigation, (*b*) professional expenditure such as seed, cattle, land improvement, land revenue, *taccavi*, rent, purchase of land.
2. If a member of a Co-operative Society for five years or more, state :—
   (*i*) amount of old debt repaid by borrowing from the society,
   (*ii*) amount of old debt repaid by his own saving,
   (*iii*) land redeemed by borrowing from the society,
   (*iv*) land redeemed by his own saving,
   (*v*) land bought,
   (*vi*) land taken in mortgage.
   Give amount paid in each case.
3. Who are the money-lenders ? Zamindars or non-zamindars ? Give their number in each case. Are zamindars replacing non-zamindars as money-lenders, and with what results ? Give the ordinary business terms of each class. Do they vary their terms according to the security offered ? On what security is money lent ? What are the terms of repayment ? Is recovery of loans strictly enforced ?
4. Give the approximate yearly income of persons whose chief profession is money-lending ?
5. Try to ascertain the sources from which repayments are made, as for example :—sale of produce, grain or fodder, sale of cattle, sale of land, mortgage of land, sale or mortgage of houses, cash earnings, or other sources.
6. From above discuss actual indebtedness you observed : how far due to poverty, ignorance, social observances, improvidence, temptation of increased credit and increased prosperity, diminished ability to repay through reduction of income, bad seasons, unsound credit. Is (*a*) the land revenue, or (*b*) enhancement of land revenue, or (*c*) too early a date for payment of the same, mentioned as a cause ? Do the money-lenders encourage debt ?
7. Can you give any facts as to the effect of indebtedness on the people ?

VIII.—MORTGAGES.*

General.

1. Give an abstract from *Statement No.* 6 of the Village Note Book, showing quadrennially for the last 20 years—
   (*a*) Number of mortgages.
   (*b*) (*i*) Total area mortgaged.
   (*ii*) Cultivated area mortgaged.
   (*c*) Land Revenue assessed on mortgaged area.
   (*d*) Proportion that total and cultivated area mortgaged bears to the total and cultivated area of village.

2. Give for each mortgage the following information :—
   (*a*) (*i*) Total area owned by the mortgagor.
   (*ii*) Cultivated area owned by the mortgagor.
   (*b*) (*i*) Total area mortgaged.
   (*ii*) Cultivated area mortgaged.
   (*c*) Date of mortgage.
   (*d*) Amount of mortgage debt and multiple of land revenue it represents.
   (*e*) Form of mortgage :—(*a*) whether for fixed term, in which case, length of period and year of expiry should be given ; or (*b*) until repayment of mortgage debt, etc., with possession or without possession.
   (*f*) Whether, when the mortgage is with possession, the mortgagor cultivates as a tenant, and if so, on what rent ? If not, who cultivates the land ?

3. Prepare a statement in the following form :—
   Number of proprietary holdings in which there are mortgages.
   (*a*) Total.
   (*b*) Of which cultivated area owned is less than 1 acre.
   (*c*) „ „ „ between 1 and 2½ acres.
   (*d*) „ „ „ „ 2½ „ 5 „
   (*e*) „ „ „ „ 5 „ 7½ „
   (*f*) „ „ „ „ 7½ „ 10 „
   (*g*) „ „ „ „ 10 „ 15 „
   (*h*) „ „ „ „ 15 „ 20 „
   (*i*) „ „ „ „ 20 „ 50 „
   (*j*) „ „ „ more than 50 „

4. Prepare a statement as follows :—

Mortgages made in last quadrennium previous to 1902 in which quadrennial jamabandi was prepared, and in each succeeding quadrennial jamabandi.	Total area under mortgage.	Cultivated area under mortgage.	Mortgage debt.	Average mortgage value per acre.	Average mortgage value per acre cultivated.	Multiple of land revenue of (4).
(1)	(2)	(3)	(4)	(5)	(6)	(7)
..	200	150	20,000 / 15,000	100 / 75	133 / 100	160 / 120
..	..	..	..	..	..	..
..	..	..	..	..	..	..

NOTE.—1. The necessary information will have to be obtained from *Statement No.* 5 of the Village Note Books.

2. Where the mortgage money actually received was less than that recorded in *Statement No.* 5 of the Village Note Book or in the mortgage deed, the actual, if ascertainable, should be entered in red ink below that recorded in column 4 above. Entries in columns (5), (6) and (7) should also be made on the basis of actuals, as illustrated above.

* The Special Questionnaire for Mortgages should be answered if the investigator thinks useful results will be obtained.

5. Redemption—
   (*a*) Give information for Redemptions similar to that given for mortgages in para. 3 above.
   (*b*) Prepare a statement for Redemptions similar to that given in statement para. 4, but omit the last 3 columns.
   (*c*) For each of the redemptions made between 1913 and the present day ascertain whether (1) redemption was automatic; (2) other land was sold or mortgaged in order to effect the redemption; (3) redemption was made by the owner, mortgagor or a subsequent vendee; (4) how the money was obtained to carry out the redemption ?
   (*d*) Have mortgages, not subject to automatic redemption, been redeemed and other mortgages, subject to automatic redemption, contracted in their place ? Give in each such case briefly the terms of the old mortgage and of the new—(area, mortgage debt, interest payable, period of new mortgage, etc.).

6. For the total mortgages now in existence state what area is mortgaged to—
   (*a*) zamindars of the village,
   (*b*) other zamindars,
   (*c*) money-lenders, not belonging to agricultural tribes,
   (*d*) others.
   Give any information you may acquire about money-lending mortgagees.

7. Have landowners who wish to mortgage their land any difficulty in finding mortgagees ?

8. Have mortgagors who wish to change a mortgage of a more burdensome kind into a mortgage under Section 6 (*a*) of the Land Alienation Act any difficulty in doing so ? Is there any combination among money-lenders to prevent this ?

9. In cases where mortgages have been contracted during the past ten years, ascertain :—
   (*a*) The reason why the mortgage was made.
   (*b*) Did the mortgagor get the money in cash ? If so, what did he do with it ?
   (*c*) If the mortgage consideration was extinction of debts, how were these debts contracted ?
   (*d*) Where there are several shareholders, ascertain whether the mortgage is by all or by only some of the shareholders.

IX.—SALES.

1. Prepare a statement as follows:—

Sales made in last quadrennium previous to 1902 in which quadrennial jamabandi was prepared, and in each succeeding quadrennial jamabandi.	Total area sold.	Cultivated area sold.	Sale prices.	Average sale value per acre, *i. e.*, 4/2.	Average sale value per acre cultivated *i.e.*, 4/3.	Multiple of land revenue of (4).
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Rs.	Rs.	Rs.	
..	200	150	20,000	100	133	160
			15,000	75	100	120
..	..	..	..	..	..	..
..	..	..	..	..	..	..

NOTE.— 1. The necessary information will have to be obtained from *Statement No.* 5 of the Village Note Books.
2. Where the sale price actually received was less than that recorded in *Statement* No. 5 of the Village Note Books or in the sale deed, the actual, if ascertainable, should be entered in red ink below that recorded in column 4 above. Entries in columns (5), (6) and (7) should also be made on the basis of actuals, as illustrated above.

2. Show for each quadrennial period the sales—
   (*i*) By agriculturists—
      (*a*) to zamindars of the village,
      (*b*) other zamindars,
      (*c*) money-lenders, other than those of agricultural tribes,
      (*d*) others.
   (*ii*) By non-zamindars—
      (*a*) to zamindars of the village,
      (*b*) other zamindars,
      (*c*) money-lenders, other than those of agricultural tribes,
      (*d*) others.
   Give any information you may acquire about money-lending vendees.
3. Have any persons who formerly did not own land in the village or elsewhere purchased land in the village during the past twenty years? How many of these were at the time of purchase cultivating land as tenants-at-will in the village or elsewhere? What were their castes?
4. Have any small holders (owners of less than 5 acres cultivated at time of sale or purchase)—
   (1) lost land by sale during the past twenty years?
   (2) gained land by purchase during the past twenty years?
   What was the effect—
   (1) on reducing their holdings?
   (2) on increasing their holdings?
5. Investigate in the case of ten sales made during the past five years the causes of sale.
6. Have any sales been made during the past ten years in order to redeem mortgages on other land? If so, give details.
7. Have any mortgages been made during the past ten years in order to purchase other land? If so, give details.

X.—SALE OF VILLAGE PRODUCE.

1. Describe the methods of sale—
   (*i*) Give the prices at which six principal crops of the village were sold in each of the last five years.
   (*ii*) Give also the prices of these six products for each year as entered in the Circle Note Book.
   (*iii*) State generally who are the purchasers and how the prices are fixed between them and the growers. Note specially whether the price is fixed before, at the time, or after the produce is handed over, and whether the seller exercises any real influence in deciding the prices.
   (*iv*) Where a grower sells to his family shopkeeper, how is the account adjusted? Does the latter pay at once in cash or does he credit the grower's account? If the latter, how long after the delivery of the produce and at what rates?
   (*v*) Where a grower is in debt and sells to his creditor, does he get as good a price as a grower who is not in debt? If not, what is the difference?
   (*vi*) How much of the surplus was carried by the producer for sale in a central market?
   Is there any custom of selling in a central market through brokers who act as agents for the producers?
   (*vii*) Describe the methods of purchase followed by purchasers in the central market—
      (*a*) Who pays the *arhat*?
      (*b*) Who tests the accuracy of the scales and measures used?
      (*c*) Who pays the weighing charges?
      (*d*) Give details of all other charges.
      (*e*) Does the cultivator get the rates prevailing in the central market for his products?
2. How many central markets are there in the neighbourhood? What is the distance of each from the village?
3. How far is the nearest railway station? Is it reached by a metalled road?
4. How many roads lead to the principal markets available to the cultivator? Are they *kachcha* roads or metalled?
   What is their condition in the rainy season?
5. What are the means of conveyance available—
   (*a*) *gaddas*; (*b*) donkeys; (*c*) camels; (*d*) others.
6. Was any produce held up during the past five years in order to secure a better price? How far does the local Credit Society, if there is any, help towards this end?
7. State the dates when the land revenue is ordinarily collected in the village. Does the land revenue demand tend to make the cultivator sell his produce at once? State the land revenue demand in terms of weight of produce at the actual village price.
8. If a Co-operative Sale Society exists, describe the benefits actually derived from it.
9. What are the articles manufactured in the village? How are they sold?

XI.—PURCHASES AND INDUSTRY.

1. How do villagers purchase commodities required—
   (*a*) for industrial and agricultural use ?
   (*b*) for their own household consumption ?
2. What is the number of petty shopkeepers in the village and what commodities do they sell ?
3. What are the chief markets from which commodities are purchased and what is their distance from the village ?
4. Are goods purchased on credit or on cash ? If the former, how are payments made ? For how long do credit accounts run ? What disadvantages result from credit purchases ?
5. Are the goods adulterated or pure ? If the former, find out if possible the loss to the consumer due to this ?
6. Take measure and scales used by shopkeepers and test their accuracy. Note the discrepancy in each case.
7. If goods are purchased from a Co-operative Supply Society or Union, compare the prices with those of the local shops.
8. Do any village industries exist in the village ? Give details.
9. How is the cotton ginned ? Is the spinning done in the village ? If so, by whom ? Is any thread imported ? What is the number of looms ? Who does the weaving ? Is the cloth used for village consumption or is any exported ?
10. What is the number of oil-presses ? Who owns them ? Are they all in use ? Who works them ?
11. Is flour ground in the village ? If so, how ? Who owns and who works the mills ?
12. Is sugarcane pressed in the village ? How many presses are there ? Who owns and who works them ?

XII.—PRICE OF LAND.

1. From the statement relating to sales obtain the percentage increase or decrease in the sale price of land—
   (*a*) between 1895-99
   (*b*) between 1905-09
   } and the last quadrennial period.
2. Compare the above percentages with the percentage variations in cash rents between the same periods.
3. See para. 376 of *Douie's* "*Settlement Manual.*" Work out the general rise in prices by the second method explained therein, (*a*) since 1895-99, (*b*) since 1905-09, taking for the purpose the six most important crops in the village and using yields in accordance with the instructions given in Question 6 of the Section on *Yields*.
4. Compare the percentages in Question 1 with the percentages in Question **3**.
5. If any land now under cash rents has been purchased during the past five years, give the following figures separately for each transaction :—
   (*a*) area of land sold ;
   (*b*) total purchase price ;
   (*c*) average price per acre ;
   (*d*) cash rent per acre ;
   (*e*) per cent. return of (*d*) on (*c*) ;
   (*f*) cash rent per acre after deducting actual expenses paid by the landlord ;
   (*g*) per cent. return of (*f*) on (*c*).
6. Take three holdings sold during the past five years *not* under cash rents. If reliable figures are available, work out the net per cent. return to the landlord on the purchase price.

XIII.—YIELDS.

1. Attach to your report a list of the yields assumed by the Settlement Officer at last Settlement for each class of soil and each crop in the circle in which the village is situated ; and the estimates issued by the Director of Land Records.
2. Attach a copy of the Settlement Officer's inspection note of the village.
3. Enquire into the character of each harvest for the last five years for each of the chief crops. Classify it as very good, good, above average, average, below average, poor, bad, according to its character.
4. Give the zamindars' estimate of the yield in maunds per acre of each of the main crops for each of the above harvests on each class of soil.
   Make your enquiries from various zamindars at various times and note the replies of each. Attach these to your report for purposes of comparison and give your opinion as to the reliability of the zamindar's estimate.

5. Take the Settlement Officer's assumed yields for the circle and adjust them for the village as follows:—
   If Settlement Officer classed the village as *average* take the yields as they are; if he classed it as *very good, good* or *above average*, make suitable addition to the yields; if he classed it as *bad, poor* or *below average* make suitable deductions.
6. In using "yields" for general calculations use your "ascertained" yields if you regard them as reliable. Otherwise use the adjusted settlement yields described in paragraph 5 above.

XIV.—RENTS.

A.—General.

1. Prepare the following statement:—

Total cultivated area of village.	Area cultivated by owner.	Area cultivated by occupancy tenants.	Area cultivated by Tenants-at-will.			
			Paying at revenue rates.	Paying at batai rates.	Paying cash rents.	Paying other rents.
1	2	3	4	5	6	7
	Acre per cent. of total.	Acre per cent. of total.	Acre per cent. of total.	Acre per cent. of total.	Acre per cent. of total.	Acre per cent. of total.

2. Is there any difficulty in obtaining tenants?
3. Are changes frequent among tenants? Investigate conditions regarding the period of tenancy on thirty holdings.
4. Do (*a*) tenants, (*b*) landlords prefer cash or share rents?
   Give reasons. Does their preference depend on kinds of crops or irrigation?
5. Read Chapter XX of *Douie's* "*Settlement Manual*," and according to the principles there laid down, work out the cash rents paid on different classes of soil.
6. Have cash rents risen with the rise in the value of agricultural produce? (Use material in *Statement* 8 of the Village Note Book to answer this question).
7. Are *zabti* rents paid on particular crops? If so, on what crops and at what rates?
8. Is there any case of an owner taking fixed grain rents, irrespective of the state of the crop? Cite all such rents.
9. Do landlords give any advances to tenants in cash or grain? If so, on what terms and how do they recover? Does the owner lend seed to his tenants and if so on what terms?
10. Does the tenant receive from the owner any assistance or has the tenant any rights regarding assistance towards (*a*) material for houses, (*b*) grazing, (*c*) fuel, (*d*) site for house, (*e*) water for any purposes, (*f*) natural products of the soil?
11. Is the exercise of the rights limited to the tenant's own requirements or has he any right of sale?
12. What rights, if any, has a tenant regarding the use of trees on the land and the planting of new trees?
13. Does the tenant make any gift of animal produce, such as milk, a goat at Bakr-Id, eggs, poultry, etc., to the owner?
14. Does the owner make any such gift to the tenant, *e. g.*, a feast at the principal holy-day or after harvest?
15. Does either owner or tenant make any gift, such as a feast at harvest time, to the labourers?
16. Can you find any instance of aid rendered by the owner to the tenant to combat pests, such as locusts, rats, etc.?
17. Does the tenant render any similar aid to the owner?
18. Does the tenant render any personal service to the owner
    (*a*) on social occasions such as marriage, (*b*) on shikar, (*c*) on the entertainment of guests, (*d*) or otherwise?

19. Where grazing is included in the tenancy, does the owner provide any part of the stock? If so, describe the custom or contract? Does the tenant pay rent in stock? Does the owner share the produce, *e. g.*, milk, wool, young stock?
20. Does the owner actually influence or direct the rotation or the selection of crops to be grown? Have you found any instance of an owner insisting on a certain crop being grown or on a certain rotation?
21. Can the owner graze his cattle on his tenant's fields after the crops are cut?
22. Does the tenant get all the manure, or does the owner claim any share?
23. Does the owner make the tenant grind his grain at the owner's mill (for districts such as Kangra, where owners keep mills)?
24. Are there any conditions forbidding the cultivation of part of the lands under tenancy such as the reservation of lands for grazing?
25. Can you find any other conditions of tenancy not referred to above, which are observed generally without being anywhere recorded, *e. g.*, presumably the tenant admits the right of the owner to visit the fields and view the crops?
26. Can you find any instance of an owner evicting a tenant for bad cultivation, faulty rotation, etc.?

B.—Batai Rents.

1. What are the usual rates on different classes of soil in each harvest?
2. How does the batai rate vary with the crop, such as wheat, sugar-cane, cotton, tobacco, fruit (mangoes)?
3. How does the batai rate vary with the custom according as the landlord or tenant, pays the revenue, water rate, local rate, other dues or some of these?
4. Are there any additional cesses paid to the landlord? If so, what? (*e. g.*, *haq zimindari* 2 seers per maund).
5. Is the crop divided on the tenant's land or at the owner's house? Does the owner or tenant carry the owner's share to his granary?
6. Describe in detail an actual partition of the crop witnessed by yourself. Note deductions for charity; and to whom they go.
7. What deductions are made from the common heap for menials? Who threshes the owner's share? What payment is made? Who does the reaping, and how are the reapers paid? When the tenants themselves do the reaping do they receive the reapers' dues, if any?
8. What services, if any, do these menials render (*a*) to the owner, (*b*) tenant, in consideration of the portions received from the common heap?
9. Who provides the seed?
10. Is it, or any portion of it, deducted from the common heap before sharing?
11. If so, is the quantity deducted the actual quantity used, or is a little extra deducted over and above this? Who takes the seed so deducted?
12. What deductions not so far mentioned are made from the common heap?
13. Are the fodder crops shared? If so, give the rates for various fodder crops.
14. Do landlords allow any concessions regarding fodder, *e. g.*, do they exclude from division a few kanals under fodder crops? What concessions do they allow? Does the owner allow the tenant a plot for vegetables or other produce for his own household use, taking no share for himself? Is there any crop of which the owner takes no share (such as a catch crop, *e. g.*, *senji* after cotton)?
15. Where concessions for fodder are given; does the tenant make any gift of animal produce to the owner in return?
16. Is the straw divided? If so, of what crops and in what shares?
17. Is there any condition prohibiting fodder or straw from being sold off the land?
18. Does the landlord impose any conditions regarding the area or kind of fodder crops? If so, what?
19. What changes have occurred in batai rates during the past twenty years?
20. Do mortgagees charge higher rates of batai than owners?
21. Do all batai tenures run from year to year or is there any instance of a lease or contract for more than one year?
22. Is there any instance of a share tenant sub-letting to another? If so, does this indicate a right to sub-let? If there is no instance, is this because the owner reserves this right when letting his land?
23. Make a special enquiry of ten holdings under batai rents. Ascertain from the *Khasra Girdawari* what crops (area, irrigation, etc.) were grown on each during the past five years. Ascertain, if possible, what was (1) the tenant's share in maunds of each crop, (2) the landlord's share in any or all of these five years. (If this information cannot be obtained, do *not* attempt to estimate it yourself.)
24. If accurate information can be obtained to Question 23, then work out the value at the prices current at the harvest in question of the (1) tenant's share, (2) landlord's share. If information for both harvests in a year is available, then work out the value of the total rent received *per cultivated acre* :—

    Total value of rent, Rs. 350.
    Total cultivated area of holding, 35 acres.
    Average rent per acre cultivated, Rs. 10.

XV.—EXPENSES OF CULTIVATION.

1. All classes of cultivation—

(*a*) PARTICULAR HOLDINGS.

Take five particular holdings for investigation. State for each of them :—

(*i*) Area cultivated, with kinds of soil (nahri, chahi, etc.), and uncultivated.
Area sown in last five years with crops sown.
Area returned as matured, kharaba, etc.

(*ii*) Cultivators, with details of working members of family, including every one who assists in any process of agriculture upon the holding.

(*iii*) Partners in cultivation, with details as above.

(*iv*) Labourers paid in cash or kind throughout the year, with detail of payments, service rendered, hours and days of work.

(*v*) Cattle employed, with duties performed by them. Give details of days and hours worked throughout the year. Is any use made of them when not required for any agricultural process upon the holdings ? Give details.

(*vi*) State if any cattle are hired, with details of hours, days and payments.

(*vii*) What manures are used ? How much is bought and how much home-produced ? What was the value of the former ? Give details as to utilisation. Does the landlord pay for any part of the manure ?

(*viii*) What fodder is used for the cattle employed (para. (*v*) above) ? How much is home-produced and how much bought ? Give values, and details of disposal.

(*ix*) What grain is fed to cattle ? How much is bought and how much home-produced ? Give values, and details of disposal.

(*x*) What implements are used ? Which are bought and which home-made ? Give values ; how long does each one last ? Distinguish between those bought for cash and those supplied under custom for payment in kind.

(*xi*) Give details of any implements hired, up to the final harvesting of the grain. Give details of period of hire, amount of payment made in cash or kind.

(*xii*) Give details of any other miscellaneous tools used.

(*xiii*) Give details of any other expenses of cultivation ; salt for cattle, medicine for cattle, repairs, *rakhas*, carriage of manure to the fields, if not already included.

(*xiv*) Has the cultivator got a cart ? If so, detail the uses to which it is put ; expenses of initial cost and maintenance, earnings in cash or kind, with details of hours and days ; distinguish between work on the cultivation of the holdings, and work independent of this. Estimate value of work done in connection with cultivation of the holding.

(*xv*) *Seed.*—Give rate per acre for different crops on different classes of soil. Who provides it ? What is its value at sowing time ? Where is it obtained from ?

(*xvi*) *Sowing.*—Are there any expenses of sowing not included in above ?

(*xvii*) *Cultivation after sowing.*—Are there any expenses not included above ? Give details. Give details as to weeding ; who does it ?

(*xviii*) *Harvesting.*—Are there any expenses not included in above ? What are they ?

(*xix*) *Deductions from common heap.*—Distinguish those which relate to expenses of cultivation. Give values.

(*xx*) *Threshing, winnowing.*—Are there any expenses not included above ? What expenses are incurred in carriage of crop to shop or granary or to landlord's house ?

(*xxi*) Give any examples of extraordinary expenses of cultivation within recent years due to calamities of season, such as flood. Has seed had to be re-sown more than once ? Is there any expenditure on hedging or on protection of the holding apart from particular crops, or on making boundaries ?

(*b*) GENERAL.

(*i*) Give figures for cattle, sheep, goats, etc., for each of the last five cattle censuses. How have increases or decreases in the cattle, etc., affected the supply of manure ? If cattle, etc., have decreased, have cultivators made good the supply of manure in any other way ?

(*ii*) Do the owners of cattle sell the bones of dead animals ? If so, to whom ? If they are not sold, what use is made of them ?

(*iii*) Are there any grazing grounds in the village, apart from fallow lands ? What is their area compared with the area of similar lands twenty years ago ?

(*iv*) Is there a Government forest or *rakh* near by in which the village cattle graze ? If so, what facilities for grazing are allowed and on what fees ?

(*v*) What are the sources of fuel in the village ?
Is cow-dung used for fuel ? If so, make an estimate of the percentage of the total cow-dung so used.

(*vi*) If there is a Government forest or *rakh* near the village, do the villagers obtain fuel therefrom ? If so, on what conditions and on what payments ?

2. Well Cultivation—

(*a*) Particular Holdings.

(*i*) When was the well sunk and how much did it cost ?
Did the owner have it sunk through a contractor or did he himself superintend the work ? Did he buy the bricks or have them made himself ?

(*ii*) How did the owner find the capital ? Did he take a *taccavi* loan ? Did he borrow from a money-lender ? If so, how much did he borrow, what was the rate of interest and when did he pay off the loan ?

(*iii*) What are the expenses of maintenance borne (1) by the owner, (2) by the tenant, apart from the work done by the *tarkhan, kumhar* or *lohar* in return for harvest dues ? To what did they actually amount during each of the past five years ?

(*b*) General.

(*iv*) What is the present cost of sinking a well ? How does it compare with the cost of twenty, ten and five years ago ?

(*v*) Split up the cost into its component parts—price of bricks, payments to divers, to hired labourers, wood work, etc.

(*vi*) What is the cost of a *chakla chob* ? Of what wood is it made ? How long does it last ?

(*vii*) How many bullocks are used (*a*) for the well, (*b*) for ploughing on an average-sized well holding ? Give specific examples.

3. For Canal-Irrigated Holdings.
Are the water-channels regularly cleared ? Does the owner or tenant clear them ? What is cost of clearance per acre irrigated ? (check by particular examples).

XVI.—CONSUMPTION.

1. Take the following classes of the village population for separate examination :—
(*a*) Well-to-do land-owners.
(*b*) Small land-owners and well-to-do tenants.
(*c*) Small tenants and agricultural labourers.
(*d*) Village menials.
(*e*) Well-to-do non-agriculturists.
(*f*) Other non-agriculturists not included in any of the above classes.
For each class give a description from personal observation so far as possible :—
(*a*) of the number of meals each day at different seasons of the year ;
(*b*) the kind of food taken at each meal, *e. g., lassi*, pulses, vegetables, *chapattis*, etc.

2. Take up the following distribution according to ages and sexes :—
Males and Females separately :—
(*a*) Below 5 years of age.
(*b*) Between 5 and 10 years of age.
(*c*) „ 10 „ 15 „ „
(*d*) „ 15 „ 25 „ „
(*e*) „ 25 „ 55 „ „
(*f*) Over 55 years.
Give the average monthly consumption of different kinds of food for each age period of each *class* of the population mentioned in Question 1. For cereals, pulses, *ghi*, millets and for other articles which can be so expressed, express the result in seers.

3. If possible obtain actual figures of consumption of the chief articles of food, wheat, millets, pulses, etc., for ten families during a year and check your results in Question 2 against these known quantities.
In the case of wheat, for instance, it should be possible to ascertain—
(*a*) Amount in stock with a family before the new wheat is brought in.
(*b*) The amount, if any, of this sold during the following year.
(*c*) The amount of the Rabi crop reserved for home consumption.
(*d*) Sales and purchases during the year.
(*e*) Amount in stock at the end of the year.

Knowing the number, sex and ages of the family and dependents fed, the results of Question 2 can be checked. If information relating to particular families can be obtained easily the figures for as many families as possible should be stated.

4. What classes of the population eat meat? What kinds of meat do they eat? Do they consume meat regularly or only occasionally? Give a rough estimate of the meat consumption of the village for a year.

5. What is the milk production of the village (*a*) cows, (*b*) buffaloes, (*c*) goats? Is any milk exported? Is any milk imported? How is the milk consumed, as *ghi* or *lassi* or milk?
Is the milk supply adequate for the needs of the population?

6. Do the food grains produced in the village suffice for the consumption? Is there any export? If so, of what grains? What other articles of food are imported and exported?

7. How do the people vary their diet in times of scarcity? Give information for each class separately. At such times do any of the population leave the village for work outside? Where do they go and for what work?

8. Ascertain, if possible, what changes in diet have occurred during the past fifteen years?

Special Questionnaire for Mortgages.

PART I.—FOR EACH MORTGAGE.

(1) Give caste or tribe of—
  (*a*) mortgagor, noting whether he is—
    (*i*) a member of a notified agricultural tribe in the district, or
    (*ii*) not a member of such a tribe;
  (*b*) mortgagee, noting whether he is—
    (*i*) a member of a notified agricultural tribe; or
    (*ii*) not a member of such a tribe, but the holder of a certificate as an agriculturist under the original Alienation of Land Act (XIII of 1900); or
    (*iii*) not a member of such a tribe and not the holder of such a certificate.

(2) Is the mortgage embodied in a—
  (*a*) registered deed, or
  (*b*) unregistered deed, or
  (*c*) *only* in the mutation register and *Jamabandi*?

(3) Give the particulars of the mortgage—
  (*a*) date;
  (*b*) area mortgaged—
    (*i*) uncultivated;
    (*ii*) cultivated *Barani*;
    (*iii*) cultivated *Nahri*;
    (*iv*) cultivated *Chahi*;
    (*v*) is a share in the *Shamilat* expressly included;
  (*c*) any additional security such as houses, trees, etc.;
  (*d*) sum inserted in the mortgage as consideration, with any additional details given therein;
  (*e*) sum due now as calculated from the mortgage deed and any endorsements thereon.

(4) Classify the mortgage as to whether it is—
    (*i*) without possession—
  (*a*) in the form of clause (*b*), section 6, Land Alienation Act;
  (*b*) in some other form; give points where it differs from above;
    (*ii*) with possession—
  (*a*) in form of clause (*a*) of section 6, Alienation of Land Act;
  (*b*) in form of clause (*c*) of section 6, Alienation of Land Act;
  (*c*) without any condition for automatic redemption, with *bai-bilwafa* clause;
  (*d*) as above without *bai-bilwafa* clause;
  (*e*) any other form.

(5) In (*c*), (*d*) and (*e*) above, note what is the condition as to interest. Is the rent to be taken as interest on the whole amount of the consideration or on only a part?

(6) In (*c*), (*d*) and (*e*) above, note the condition on which the mortgage may be redeemed.

(7) Trace the history of the mortgage as far back as you can.
Give particulars of—
  (*i*) previous deeds,
  (*ii*) consideration,
  (*iii*) area,
  (*iv*) amounts of principal and interest,
  (*v*) any payments towards redemption or reduction of the debt,
  (*vi*) purpose given for further borrowing.

(8) What changes have taken place in the area mortgaged during the period of the mortgage, such as increase of cultivated area, increase of *chahi* or *nahri* ?

(9) During the currency of the mortgage, note any change in the land revenue assessed on the area mortgaged.

(10) From the revenue records of the village estimate the value of the land mortgaged at the time of each quadrennial *Jamabandi*.

(11) (*a*) In mortgages with possession, note who has cultivated the land during the currency of the mortgage (as entered in successive *Jamabandis*).

(*a*) Note the rent as entered in successive *Jamabandis*.

(*c*) Attempt an estimate of the value of the rent paid in kind, based upon the Director of Land Records' outturns and Tahsil prices.

(12) If original mortgagee is alive and trustworthy information is available, ascertain from what source the mortgagee obtained the consideration money, *e. g.*, whether he borrowed it from a money-lender, or saved it from his pay in civil or military employ, or from some other source.

[NOTE.—Where the *bai-bilwafa* clause has been struck out by the Deputy Commissioner classify as (*c*)].

(13) Is the mortgagee the real party advancing the money, or is he the agent of another party (*benám*) ; give such particulars as you may be able to obtain in case you believe the transaction is *benámi*. Note specially if there is any attempt at evasion of the Alienation of Land Act.

(14) Is there any evidence of a prior mortgage having been redeemed under the conditions of section 6, Alienation of Land Act, and of the same land having been re-mortgaged to the same mortgagee ?

If so, give such information as may be available that throws light on the effects of the Alienation of Land Act and attempts to evade it.

(15) From the information you have gathered, note whether the mortgage was for the benefit of the mortgagor, *e. g.*, to enable him to improve his land or increase his income or was merely an abuse of credit, enabling him to meet unproductive expenditure or to secure debts incurred on unproductive expenditure. (Classify as an abuse of credit, every contract that was not directed at the economic improvement of the mortgagor.)

PART II.—GENERAL QUESTIONS FOR THE ASSESSMENT CIRCLE UNDER INVESTIGATION.

1. Classify existing mortgages into—
   (*a*) executed prior to 8th June 1901 ;
   (*b*) executed subsequent to this date ;

   Sub-divide these into (*a. i*) and (*b. i*) between members of what are now agricultural tribes :

   (*a. ii*) and (*b. ii*) between members of what are now agricultural tribes and others ; note if any statutory "agriculturists" are among the "others ;"

   (*a. iii*) and (*b. iii*) between parties, neither of whom are members of what are now agricultural tribes.

2. Note in the above classification the number of mortgages (*a*) secured by a registered deed, (*b*) secured by an unregistered deed, (*c*) not embodied in a deed.

3. Note in the above classification the total area mortgaged, uncultivated, cultivated *barani, chahi* and *nahri ;* note the number which include a share in the *shamilat.*

4. Note in the above classification the total consideration money entered in the deed or mutation register, and the total which you have now found to be due.

5. Note in the above classification the distribution of mortgages by classes (Part I, Q. 4).

6. Summarise the information collected as to the *bai-bilwafa* clause (Part I, Q. 4), with reference to the classification in paragraph 1 above.

7. Summarise the information collected as to the conditions relating to interest (Part I, Q. 5) with reference to the classification in paragraph 1 above.

8. Summarise the information collected as to redemption (Part I, Q. 6).

9. Summarise the information obtained as to the history of mortgages (Part I, Q. 7).

10. Summarise the information obtained as to changes in the area mortgaged (Part I, Q. 8), in the land revenue assessed (Q. 9), and in the value (Q. 10).

11. Summarise the information as to cultivation and rent, giving such reference to the classification as may prove of value.

12. Is the mortgage money derived from non-agriculturist money-lenders, from agriculturist money-lenders or from savings from salaries or other earnings ? (Part I, Q. 12).

13. Discuss the information gathered as to the *benami* transactions and evasions of the Alienation of Land Act. (Part I, Q. 13, 14).

14. Discuss the economic effects on the land-owners of the power to mortgage their land (Part I, Q. 15), encouragement of extravagance, encouragement of land improvement, etc.

5. Discuss the information you have secured bearing on the rise of mortgagees from amongst agricultural tribes, from the points of view of (*i*) number of such mortgagees at different dates ; (*ii*) number of mortgages at different dates ; (*iii*) consideration money advanced. Is there any evidence of a decline in mortgages—(*iv*) in favour of non-agricultural mortgagees ; (*v*) by agricultural mortgagors ?

16. Note any general conclusions which the evidence leads you to make on the subject of mortgages in the area under investigation.

Special Questionnaire on Goats.

1. Give the number of goats in the village, classify by sex, and add details as to variety, if there is any local variety recognised.

2. Give details of the owners, with caste, tribe, main occupation, religion and note which of them are—(*a*) owners of land in the village, (*b*) co-sharers in the *shamilat*, (*c*) tenants without proprietary right, (*d*) menials who do not cultivate as tenants, (*e*) other non-cultivators.

3. Who looks after the goats ? Note the common custom in the village for night and day herding ; give the age, sex and tribe or caste of the goat-herd.

4. Where the goat-herd is not a relative of the owner, give particulars of the remuneration he receives.

5. What are the goats fed on ? Note how far they are fed on grain or other food other than leaves ; on leaves on owner's private land, on leaves from *shamilat*, or from road-side trees, government lands, etc.

6. Are the goats confined or let loose to browse at will ? What check is exercised over browsing ?

7. Do goats live on food which other domestic animals do not touch, or do they compete with other domestic animals for food ? Do they eat grass in competition with sheep or cattle ?

How far is the cost of feeding met by payment in cash, manure, service, milk, etc., and how far is it free ?

9. Is any grazing fee levied by the proprietors of the village ? If so, give particulars. Is any grazing fee paid to any one else, such as Revenue Department, the Forest Department, Railway, Canal Department, District Board ?

10. Note any other expense involved in the keeping of goats not included above.

11. What is done with the manure ? Are goats folded on the land for manurial purposes ? If so, what is the custom governing this practice ?
Is goat manure stacked separate from cow manure ?

12. What is the local opinion as to the value of manure ? Is it regarded as more powerful than cow manure ?

13. Is any control exercised over covering so as to secure kidding at any special season ? Give details.

14. How many kids does a female goat produce in its lifetime ? Does she kid once a year or twice ? Does she produce more than one kid at a time ?

15. When are female goats slaughtered ? At what age or after which lactation ?

16. What is a normal yield of milk per lactation ? Can you get accurate details as to yield per day at the beginning, middle and end of lactation ? What is the period of lactation ?

17. What is done with the milk ? Where is it sold and for what price ? What is a normal value to put on the milk of one lactation ? How often a day is the goat milked ?

18. Who are the chief consumers of goats' milk ? Does it replace or supplement cow's milk ? Is it drunk by those who cannot afford cow's milk ?

19. How much milk is left for the kid ? When is the kid removed from its mother ?

20. What differences are there in the uses to which the milk of goats and cows is put ? *e.g., ghi, lassi, etc.*

21. At what age are male and female goats slaughtered for meat? What is a normal amount of meat per animal? At what prices is it sold?

22. Who are the chief consumers of goats' meat?

23. Is there any special occasion on which goats are slaughtered by Hindus and Mahommedans? If so, how many animals are slaughtered in the village on such occasions?

24. Is the village or tract under investigation self-supporting so far as goats are concerned, or are goats imported or sold? Give details as to number, price, etc.

25. Give details as to local uses to which goat's hair, bones, horns, hides are put.

26. Give details as to trade in the above, with prices obtained for the produce.

27. Is there any other income from goat-keeping not included above? If so, give details.

28. If the profits from goat-keeping were taken into consideration at Settlement, give such remarks as the Settlement Officer may have made in the Village Note Books, Assessment Reports, etc.

29. Give, if available, figures for the number of goats in the village at different periods.

30. Give details of any nomad goat-keepers who visit the village.

31. Summarise any complaints you may hear of damage done by goats from (*a*) co-sharers in the village, (*b*) District Board Arboricultural Staff, (*c*) Forest Staff, (*d*) others.

32. Is there any evidence that goats have denuded any area of trees?

33. Is there any evidence that goats have served to reduce the amount of wood fuel in the area?

34. Is there any evidence that goat-herds damage trees by using axes or other implements, and by cutting branches instead of lopping leaves? Describe the implements used.

35. Can you test such evidence by an actual comparison between two areas, one in which there are a number of goats and one in which there are none?

36. Where goats are not kept, can you discover any reason?

37. Is any attempt made to improve the breed of goats, by selecting rams, or by any other method?

APPENDIX B.

GLOSSARY OF TERMS.

ABADI .. Village site.

ABI .. Watered by lift from tanks, pools, marshes or streams.

ABIANA .. Water-rate ; occupiers' rate ; An assessment levied on account of irrigation in addition to the assessment at unirrigated rates.

AGRICULTURAL TRIBES .. Tribes which have been finally notified as agricultural in accordance with the Punjab Alienation of Land Act XIII of 1900.

ALSI .. Linseed (*Linum usitatissimum*).

ANGLO-VERNACULAR MIDDLE SCHOOL. An elementary school in which English is taught up to a certain standard of examination.

ANNA .. One-sixteenth of a rupee.

ANNUAL RECORDS.. See *Jamabandi*.

ARAIN .. A Mohammedan agricultural tribe, found as market gardeners near cities.

ARHAT .. Commission ; brokerage.

ARHTI .. Commission agent.

ARORA .. A Hindu trading caste.

ASSESSMENT CIRCLE. A group of estates similar in their agricultural characteristics which can be treated broadly in the same manner for purposes of land revenue assessment.

ATA .. Flour of whole wheat.

BAGURI .. Hand hoe for blind hoeing of sugarcane.

BAJRA .. Bulrush or spiked millet (*Pennisetum typhoideum*).

BANJAR JADID .. Land which has not been cultivated for four successive harvests: new fallow.

BANJAR KADIM .. Land which has not been cultivated for at least eight successive harvests : old fallow.

BARANI .. Dependent on rain fall.

BARWALA .. A village watchman and messenger.

BATAI .. A system of farming where the rent is a certain proportion of the produce, *c.f. metayer* system.

BERRA .. Wheat and gram grown in mixture.

BHARAI .. Muslim drum-beater caste.

BHUSA .. Straw crushed and broken into short lengths by trampling with bullocks during the process of threshing.

BIGAH .. A measure of area : in Amritsar District equals four *kanals* or ·412 of an acre.

BRAHMAN .. A caste among Hindus, from which priests are chosen.

CHADAR ANDAZI .. A marriage performed by throwing a sheet over the bride and the bridegroom. Marriages by this form are almost always between a widow and a near relative of her deceased husband.

CHAHI .. Irrigated from wells.

CHAKOTA RENTS .. Lump grain rents or rents consisting of a fixed amount of grain in the spring (*rabi*), and a fixed amount of money in autumn (*kharif*) harvest.

CHAK .. An Assessment Circle ; a block of land. Group of rectangles or squares in canal colonies.

CHAO .. Coulter : a tapering triangular block of hard wood to which is attached the plough-share ; used in the *munah* plough.

CHAPATTI .. A flat cake of unleavened bread.

CHARI .. Jowar (q. v.); Great millet (*Andropogans orghum*) grown for fodder.

CHAUKIDAR .. Village watchman.

CHHAH .. Butter milk (*lassi*).

CHHAH-WELA .. Early morning meal time of zamindars.

CHHATTAK .. An Indian weight equal to 2·057 ozs. or 1/16th of a seer.

CHHIMBA .. Washerman caste, often found as tailors in towns.

CHINA .. A kind of millet (*Panicum miliaceum*).

CHIRAGH .. Native lamp.

CHUHRA .. Sweeper caste ; the lowest grade of Hindu society.

COLLATERAL MORTGAGE. A mortgage in which the mortgagor retains possession of the land mortgaged.

COLONY .. The name given to a large area brought under cultivation as a result of a canal project.

CUSEC .. Technical irrigation term meaning a cubic foot of water per second.

DAL .. Split pulses.

DARANTI .. Sickle.

DARANTI PILCHI .. A sort of chopper.

DARBAR SAHIB .. The name by which the Golden Temple or Harmandar at Amritsar is always known to all Sikhs; by extension the term is applied to any Sikh temple.

DARZI .. Tailor.

DEO .. A clan of *Jats*.

DEODAR .. A cedar (*Cedrus deodara*).

DEPUTY COMMISSIONE .. The administrative head of a District.

DHARAM KHATA .. (Literally) Religious cash account. Charity dues deducted from the sale made in *mandi*.

DHARAT .. Weighment fee levied on sales of produce within villages

DHARWAI .. Weighman or broker.

DEHI .. Curd.

DIWALI .. A Sikh and Hindu festival, characterised by illumination at night.

DHOBI .. Persons belonging to the caste of washerman.

DISTRICT .. The most important administrative unit of area. There are 29 districts in the Punjab.

DISTRICT BOARD .. A council chiefly of persons elected on a land revenue paying franchise which discharges the functions of rural administration in a district: roughly equivalent to a rural county council.

DUNG-CAKES .. Cakes made of cow-dung and dried to serve as fuel.

FAQIR .. Beggar; a Mohammedan caste or community.

FASALANAS .. Tips, frequently expected at harvest time by subordinate Government officials.

GANDHALA .. A stick shod with iron for digging holes.

GHAIR MUMKIN .. Not culturable.

GHI .. Clarified butter, used in India instead of lard.

GHUMAO .. A measure of area in Amritsar District equals eight *kanalz* or two *bigahs*—(·824 of an acre).

GOT .. Sub-division of a tribe or caste.

GOWARA .. A hardy *kharif* pulse grown both for seed and as a fodder crop (*Cyamoposis psoralioides*).

GRAM .. A kind of pea (*Cicer arietinum*).

GRANTHI .. A Sikh priest: a man who reads the Granth, the sacred writings of the Sikhs.

GUR .. Raw sugar in lumps—unrefined sugar.

GURDWARA .. A Sikh temple : frequently also called Darbar Sahib.

GURMUKHI .. Script adapted from the Hindi (or Bhasha) in which the Granth is written. Is consequently regarded as the distinctive script of Sikhs, who sometimes use it to write Punjabi.

GURU .. Spiritual father or guide : especially applied to the founders of the Sikh religion.

HAL .. Wooden plough.

HALAR .. Wooden plough ; same as *munah*.

HALAS .. The beam of the plough.

HATH UDHAR .. Short term credit for which no written document is executed.

HAVELI .. Stable ; byre.

HINDI .. A language derived from Sanskrit.

JAMA .. Land revenue demand.

JAMABANDI .. Register of holdings of owners and tenants showing land held by each and amounts payable as rent, land revenue and cesses. This register is prepared with great care at the time of each Settlement and is the Settlement Record. The entries in it are legally presumed to be correct. An abridged revised edition containing full accounts of all changes used to be prepared every year, with a complete revised edition every fourth year. These subsequent editions (which are also legally presumed to be correct) cannot embody any changes of permanent or *quasi*-permanent rights from the Settlement Record except those which are sanctioned by a Revenue Officer. These subsequent editions of the Settlement Record are also called *jamabandis* in the vernacular, but are known as annual records in English. The term annual record persists, although the abridged annual record is no longer prepared and only the quadrennial detailed edition of the Settlement Record is now prepared.

JAMADAR .. A rank in the Indian Army.

JANDRA .. Ridging rake.

JAT .. One of the principal land-owning agricultural tribes in the Punjab.

JHANDER .. A clan of *Jats*.

JHIWAR .. Water-bearer caste (Hindu).
JILLAN .. A very stiff clay.
JOGI .. Mendicant.
JOGI-RAWAL .. A mendicant caste in the village.
JOTSHI .. Astrologer.
JOWAR .. A large millet; a very common food grain (*Andropogan Sorghum* or *Sorghum Vulgare*).
JULAHA .. A weaver caste.

KACHCHA OR KHAM WEIGHT. Applied to village measures of area and weight as distinguished from those recognised by Government.
KACHCHA WELL .. A well not lined with masonry.
KAHAR .. Water-carrier, same as Mehras (Hindus).
KAMIN .. Menial, a landless field labourer; village servant.
KANAL .. A measure of area: in Amritsar District equals ·103 acres.
KANKAR .. Hard lime nodules, frequently found in beds below the surface of the soil.
KASSI .. Mattock.
KATHA (SUGARCANE). A variety of red thin cane commonly grown for production of raw sugar in districts having low rainfall.
KERRA .. Dropping seed in the furrow behind the plough.
KHADDAR .. Rough hand-woven cloth.
KHAM .. See *kachcha*.
KHARABA .. Portion of crop which has failed to come to maturity.
KHARIF .. Autumn harvest or monsoon or summer crops.
KHATRI .. One of the main Hindu trading caste.
——SUD .. A sub-caste.
KHOJA .. A Muslim trading caste.
KHOPA .. Leather blinkers.
KHUD KASHT .. Cultivated by the owner himself.
KHURPA .. Trowel, hand-hoe.
KIARIS .. Compartment of a field for irrigation.
KIKAR .. A tree (*Acacia arabica*).
KULHARI .. Axe.
KUMHAR .. Potter caste.
KUR .. Part of the plough which holds the plough-share.

LAMBARDAR .. Village headman: he collects the revenue and cesses and pays them into the treasury.
LASSI .. Butter milk.
LASSI-WELA .. Early morning meal of the cultivator.
LOHAR .. Blacksmith caste.

MAIRA .. Sandy loam.

MAIZE .. Vernacular '*makki*' (*Zea mays*).

MALIKANA .. Fee paid in recognition of proprietary title.

MALWA .. A tract of the Punjab.

MASSAR OR MASUR.. A kind of pulse (*Lens esculenta*).

MASH .. A kind of pulse (*Phaseolus radiatus*).

MASUR .. See *massar*.

MAULVI .. A Muslim teacher.

MAUND .. An Indian weight equal to $82\frac{2}{7}$ lbs. or 40 seers.

MAZHABI .. Sikh *Chuhras*.

MEHRA OR KAHAR.. Water-bearer caste.

MILAN RAQBA .. Annual area statement.

MIRASI .. Minstrel caste : they used to wander over the country side singing its legends and keeping alive the memory of its heroes—now rapidly dying out.

MISAL .. A clan governed by a petty chief subject to the Maharaja during the Sikh rule.

MOCHI .. Mohammedan leather-worker caste.

MOTH .. A small pulse (*Phaseolus aconitifolius*).

MUAFI .. Revenue free.

MUKLAWA .. The ceremony of a bride's going to her husband's house for the second time.

MUNAH .. A block—a form of plough in use in the Punjab. The upright portion of the plough which joins the phough-share at one end and the handle for the cultivator at the other.

MUNG .. A kind of pulse (*Phaseolus mungo*).

MUSAMMAT .. A title prefixed to the name of a woman, *c. f.* MRS.

MUTATION REGISTER. A register in which mutations, *i. e.*, changes in rights of land are recorded. These changes are not incorporated in the annual record until they have been sanctioned by a Revenue Officer.

NAHRI .. Irrigated from canals.

NAHRI PARTA .. Water advantage rate : The assessment rate over and above the assessment rate on unirrigated land which canal-irrigated land has to pay on account of its advantageous position with respect to canal irrigation.

NAI .. Barber caste.

NOTE BOOK .. See Village Note Book.

OCTROI .. Municipal tax on commodities imported within its area.

PACCA WEIGHT .. Applied to measures of weight and area recognised by Government as distinguished from those used in the villages.

PACCA WELL .. A well lined with masonry.

PAHAURA .. Scraper.

PAND .. Bundle.

PANJABI .. Language spoken in the Punjab.

PANJALI .. Wooden yoke.

PANSARI .. Grocer.

PAO .. Measure of weight: equals 8 ozs. or $\frac{1}{4}$ of a seer.

PARGANA .. A group of estates forming a sub-division of a District or Tahsil.

PATTI .. A sub-division of an estate—also a well holding.

PATWARI .. The village accountant. Formerly a village official, now practically a Government official who has to maintain the records and statistics of the village. Also means a canal subordinate official.

RE-EMPTIVE RIGHTS. .. Prior rights of purchase or redemption in mortgages.

PHALLA .. Plough-share.

PHULKARI .. An embroidered sheet.

IAZI .. A sort of *rabi* weed (*Asphodelus fistulosus*).

PIE .. One-twelfth of an anna.

PIPAL .. A tree usually held to be sacred by Hindus and Sikhs (*Ficus religiosa*).

PIRTHALLA .. "Bottom of the heap."

PRIMARY SCHOOL .. A School teaching up to the 5th standard.

PUNJAB ALIENATION OF LAND ACT. An Act passed in 1900 restricting the sale of land by persons of agricultural tribes.

—SECTION 6 (A) .. The mortgagor delivers possession of the land to the mortgagee, who, subject to agreement and to certain conditions, can retain possession for a period not exceeding 20 years, after which the land is re-delivered to the mortgagee, free of all charges.

QAZI .. Originally a Mohammedan judge or magistrate, now usually one who interprets Islamic law and performs marriages between Mohammedans. He has no powers conferred by law.

RABI .. Spring harvest or winter crops.
RAKH .. A forest reserve.
RANDHAWA .. A clan of *Jats*.
RECORDS OF RIGHTS. .. See *Jamabandi*.
ROHI .. A stiffish soil containing a considerable amount of clay.
ROTI .. Bread.
ROTI-WELA .. Time of mid-day meal of the cultivator.
RUPEE .. The Indian standard coin, now stabilised at 1*s*. 6*d*.

SADHU .. Hindu religious mendicant.
SAYED .. Muslim religious caste.
SANGI .. Wooden pitch-fork.
SANGLI .. Seven-forked rake.
SANSI .. A wandering tribe given to theft. There is frequently a village Sansi who has settled down and who is the genealogist for the Hindus.
SAQQA .. Muslim water-bearer caste.
SARSON .. Rape (*Brassica compestris, var. glauca*).
SECTION 6 (A) .. See Alienation of Land Act.
SEER OR SER .. An Indian weight approximately equal to 2 lbs.
SENJI .. Indian clover, a fodder crop (*Melilotus parviflora*).
SETTLEMENT .. The preparation of complete records of rights in land and the fixing of the Government revenue for the same throughout a large area usually a district.
——REGULAR .. The first detailed Settlement after the Summary Settlement.
——REVISED .. The revision of the Regular Settlement.
——SUMMARY .. The first Settlement prepared after British occupation.
SHAKKAR .. Raw sugar reduced to a coarse powder.
SHEIKH .. Literally the chief. A Muslim tribe.
SHISHAM .. A valuable timber tree (*Dalbergia sissoo*).
SIKH .. A religious sect.
SOHAGA .. Levelling beam ; wooden beam used in breaking clods and covering seeds.
SQUARE .. A unit of land in a canal colony of 25-27 acres.
SUB-ASSISTANT SURGEON .. A subordinate rank in Government medical service.
SUBEDAR .. A rank in the Indian Army.
SUFEDPOSH .. A rural official who receives a small annual grant out of the revenues.
SUNARS .. Goldsmith caste.

TACCAVI .. Loan made by Government for seeds, bullocks or agricultural improvement.

TAHSIL .. A sub-division of a district with a separate administrative staff. In the Punjab there are usually from 3 to 5 tahsils in a district.

TAHSILDAR .. An official in chief executive charge of a tahsil.

TALUKA .. A sub-division of the Province in the pre-British period.

TARAF .. A sub-division of an estate.

TARAMIRA .. A kind of oil seed (*Eruca sativa*).

TARKHAN .. Carpenter caste.

TELI .. Oil-presser caste.

TIL .. An oil seed ; Sesamum (*Sesamum indicum*).

TIROJA .. Third visit of bride.

TOKA .. Fodder cutter or chopper.

TORIA .. Rape — an oil seed (*Brassica campestris, var. toria*).

VILLAGE NOTE BOOK .. A book in which the visiting officer notes the state of the village.

VIRANG .. A clan of *Jats*, same as Waring.

VIRK .. A clan of *Jats*.

WARING .. A clan of *Jats*.

ZABTI RENTS .. Cash rents for a particular crop which cannot conveniently be divided.

ZEMINDAR .. Landowner, farmer.

ZILLADAR .. A canal official whose duty it is to supervise the work of canal patwaris.

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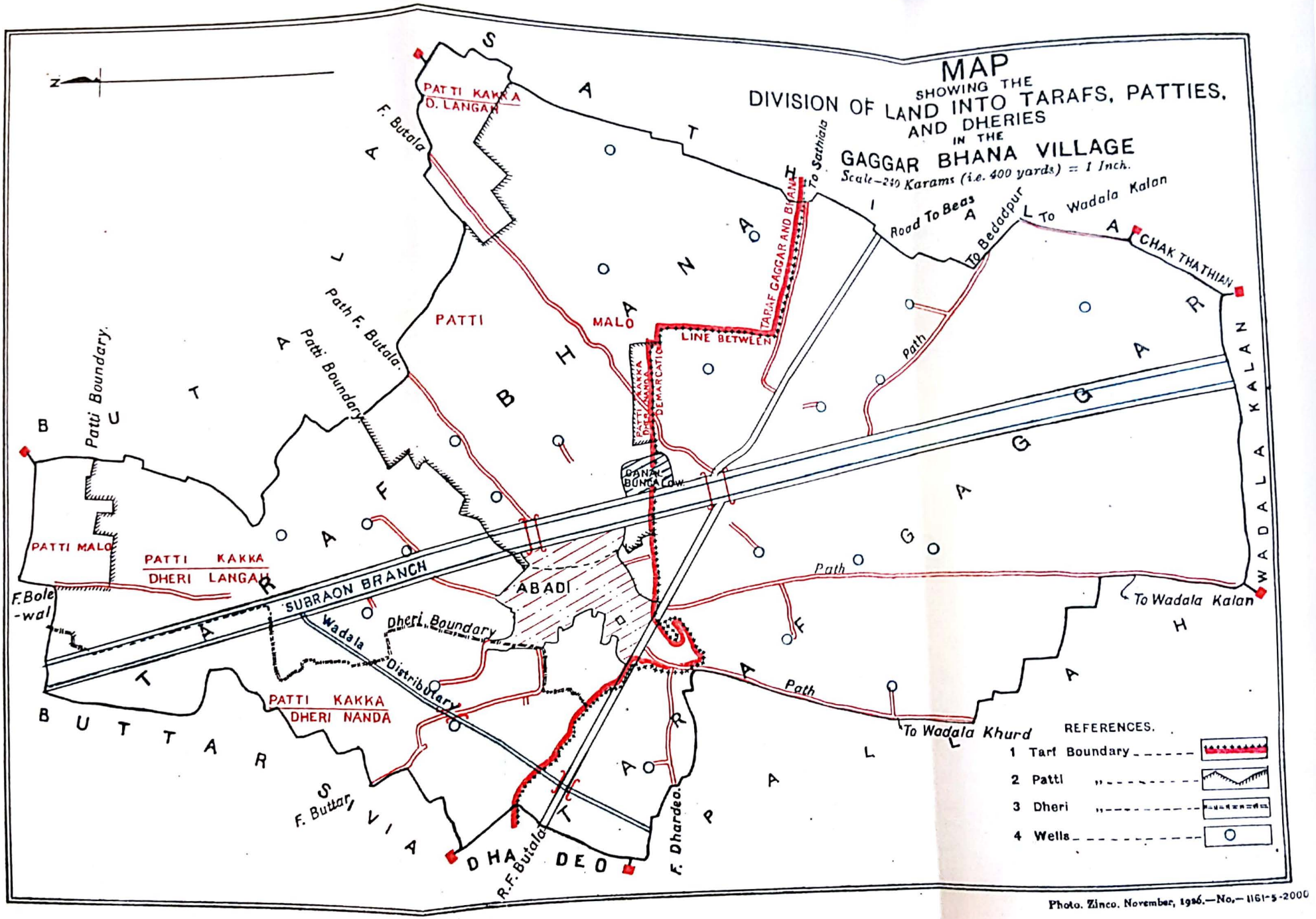


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