

Rodghara abi ekfasli.

Similarly the outturn of abi ekfasli wheat, which makes 17·5 per cent. of the total cropped area in this circle, was found to be :—

By Settlement Naib Tahsildar on 4·7 acres area, 4 to 11½ maunds per acre.

My experiments on 1·4 acres area gave 12½ maunds per acre.

Average outturn on 6·1 acres area amounts to 8½ maunds per acre.

I have assumed 8 maunds per acre, as this class of cultivation is carried on either on newly reclaimed areas in the bed of the river or on tracts above the high bank, where water-supply is inadequate.

Rodghara chashmai dofasli.

The average of experiments on 3·6 acres gave 11½ maunds yield per acre, and I have assumed 10 maunds, which was approved by the Revenue Commissioner.

Rodghara chashmai ekfasli.

or this class of crop, which forms 2·8 per cent. of the total harvested area in this circle, no experiments were made, but an average of 7 maunds per acre is a moderate estimate.

Daman chashmai dofasli.

This tract was the first to come under measurement in Rabi 1904, and experiments made at that time on an area of 15·2 acres give an outturn of 11½ maunds per acre. The results obtained by different officers were as follows :—

The Naib Tahsildar on 2 acres found 9 maunds yield per acre.

The Tahsildar on 4·4 acres found 8½ to 13 maunds yield per acre.

The Naib Hakim, Upper Kurram, on ·8 acre found 9½ maunds yield per acre.

My own experiments on 8 acres gave 11½ to 13½ maunds yield per acre.

The experiments made by the Tahsildar and the Naib Hakim in Rabi 1905 did not prove satisfactory, as none of them reported an outturn higher than 7½ maunds per acre. The yield ascertained by me in that harvest ranged between 9 to 10 maunds. I have therefore assumed 10 maunds per acre, which was approved by the Revenue Commissioner.

Daman chashmai ekfasli.

The crop on this soil is grown either in the glens, where it lies covered under snow for months, or in tracts at the tail end of the irrigation. In both cases the results are poor, and the average outturn of all experiments on 10·5 acres in Rabi 1904 amounted to 8 maunds per acre. The average yield ascertained in Rabi 1905 was 7½ maunds per acre. I have assumed 7 maunds per acre. Thus, so far as outturn on chashmai class is concerned, the averages adopted agree with each other in the Rodghara and the Daman circles—a result which is also corroborated by actual facts.

Sahra chashmai ekfasli.

I made two experiments in this circle with the following results :—

Rabi 1904	...	... 7·2 acres area—8 to 9 maunds per acre.
„ 1905	...	... 2 acres area—5½ maunds per acre.

As this crop is usually a good one, an average rate of 7 maunds per acre has been adopted.

Barani in all the three circles.

Experiments in the Sahra Circle give an outturn of 5½ maunds per acre, but 4 maunds an acre will be a suitable rate, which was approved by the Revenue Commissioner.

No experiments were made in the other two circles, as barani wheat occupies 3 and 4 per cent. of the cropped area of the Rodghara and Daman circles respectively. An outturn of 4 maunds per acre in the Daman and 3 maunds in the Rodghara Circle will be fair averages.

Maize.—Maize comes next in order of importance, and occupies 11·4 per cent. of the total cropped area of the valley.

The detail by circles is :—

Koh-i-daman	..	16·7	per cent. of the area matured in that circle.
Rodghara	...	8·2	" " " "
Sahra	..	5·2	" " " "

58 per cent. of the crop is supported by springs and snow water, 33 per cent. by the Kurram River, and 9 per cent. is unirrigated. Most of the unirrigated and ekfasli cultivation is confined to the Sahra Circle and the glens. The chief varieties grown are two, as shown below :—

MAIZE.	
Garma or local. (The grain is both white and yellow.)	Sarda or foreign. (Imported from Ningrahar and Peshawar. The grain is white.)

The American maize has also been introduced in places. The average outturn per acre, both the result of experiments and assumed, has been shown below :—

Circle and soil.	Outturn by experiments per acre.	Outturn per acre assumed.
<i>Koh-i-Daman</i> —	Maunds.	Maunds.
Chashmai dofasli ...	13	12
„ ekfasli ..	16½	15
<i>Sahra</i> —		
Ekfasli	10	9
<i>Rodghara</i> —		
Chashmai dofasli ..	13½	14

The chashmai ekfasli crop chiefly grown in the buffer hamlets is always manured, and is sown on fallow land. The outturn is consequently higher than elsewhere.

On the chashmai lands of Rodghara I have adopted an outturn equal to that on similar soil in the Daman circle.

Mung and barley.—The statistics about mung and barley are summarised below :—

<i>Mung.</i>	<i>Barley.</i>
(1) Occupies 9·9 per cent. of the cropped area of the valley.	(1) Occupies 3·5 per cent. of the cropped area of the valley.
(2) Irrigated 25·4 per cent. by springs and snow water; 73 per cent. by Kurram River; 1·6 per cent. unirrigated.	(2) Irrigated 25·8 per cent. by springs and snow water; 69·3 per cent. by Kurram River; 4·9 per cent. unirrigated.
(3) Raised 82·3 per cent. on dofasli land; 16·1 per cent. on ekfasli land; 1·6 per cent. on barani land.	(3) Raised 83 per cent. on dofasli land; 7·1 per cent. on ekfasli land; 4·9 per cent. on barani land.

Both of these crops are pre-eminently grown on dofasli lands. Mung as an ekfasli crop is to be found more in the Rodghara and the Sahra circles than in the Daman Circle, though ekfasli barley is divided half and half between Daman and Sahra on one side and Rodghara on the other.

It is interesting to note that about nine-tenths of the total mung crop and three-fourths of the barley crop is produced in the Rodghara Circle.

The average outturn per acre of each of these crops as ascertained from experiments and assumed has been noted as follows:—

	MUNG.		BARLEY.	
	Outturn per acre by experiment	Outturn per acre assumed	Outturn per acre by experiment.	Outturn per acre assumed.
<i>Rodghara—</i>	Maunds.	Maunds		
Chashmai dofasli	4	3½		...
Abi dofasli	3½	4		..
			<i>Rabi—</i>	
			1904 .. 9½ mds	} 13
			1905 . 17½ „	

As a rule mung on abi land is more productive than that on chashmai land, and my rates have been framed accordingly. And as the outturn of barley is always heavier than that of wheat on the same soil, I have allowed greater consideration to the latest results of Rabi 1905.

There are three important agricultural inferences which follow from these experiments:—

- (1) The outturn of crops irrigated from the Kurram River is always heavier than that of crops supported by the springs and snow water.
- (2) The productive capacity of springs in the Daman and Rodghara circles is alike.
- (3) The barani outturn of the Daman and Sahra circles is better than that of Rodghara.

The non-official experiments on account of their deliberately low results have required no comparison anywhere. But I may mention one experiment made on barani wheat in Daman by Mir Akbar Miyan of Tirah and leader of the Mian Murids, who reports an outturn of 9½ maunds per acre. Though coming from such a high authority, I regret to say the result is too flattering to be incorporated in assessment calculations. Casual reference may be made here to the difficulty of making experiments owing to the complete absence of previous records of soils and crops grown thereon, to which are mainly due any shortcomings that may have crept in here and there.

The next important crops are shaftal and kurkha, both of which being purely fodder crops have been left out of the produce estimate.

Shaftal, which is a rabi crop, is grown 10 per cent. in the Daman and 3·5 per cent. in the Rodghara Circle.

Kurkha, which is a kharif crop, is produced 5·5 per cent. in the Daman and 3 per cent. in the Rodghara Circle.

Other food crops are not important enough to require special notice, and their outturn has been fixed with reference to the rates adopted in the Kohat Settlement.

Garden fruits.—A description of the Kurram agricultural products without an account of its fruits must necessarily be incomplete, as the latter, though not forming even 1 per cent. of the total cropped area, constitute a famous and valuable product of the valley, and have a great commercial future before them.

The grapes are chiefly confined to Shalozan where thick vines clustering over trees like trellis-work have converted the whole village into a garden of beautiful shady bowers.

The following eight varieties are commonly recognized amongst the people :—

- (1) Lal Begi, being the best and thick and long in appearance, sells at 5 seers per British rupee.
- (2) Tor. Not to be found in abundance. Resembles Kabuli raisins. Sells at 6 seers per British rupee.
- (3) Khurma. Pinkish in appearance. Sells at 8 seers per British rupee.
- (4) Karangani. Ripens late and lasts longer. Sells at 9 seers per British rupee.
- (5) Bedana, without seed, sells at 10 seers per British rupee.
- (6) Husaini, resembling the variety generally exported from Kabul to India, sells at 10 seers per British rupee.
- (7) Kishmish, small and without seed, sells at 10 seers per British rupee.
- (8) Spin, white and round, sells at 10 seers per British rupee.

One bed of vine creeper called "taq" in Kabul and "khumba" in Kurram occupies a space of about one marla, and sells for Rs. 10 or Rs. 12 British. This makes a good garden of one acre of vines worth Rs. 200 or Rs. 240, but I have adopted the moderate estimate of Rs. 50 per acre. •

Apples.—Apples abound in both the villages of Shalozan and Peiwar and are classed into the following five varieties :—

- (1) Badshahi, or white ; best, and ripens last of all. But full harvest is gathered only every second year. Sells at 25 seers per British rupee.
- (2) Samarkandi, or red, is the next important variety ; is also late in ripening, but precedes the badshahi, and sells at 32 seers per British rupee.
- (3) Garma, pinkish in colour, ripens first of all and sells at 40 seers per British rupee.
- (4) Katosai, sour in taste, sells at 30 seers per British rupee.
- (5) Piazi, half red and half yellow, sells at 32 seers per British rupee.

One first class apple garden containing 25 trees, and each tree occupying a space of one marla apiece, is said to have sold for Rs. 80 British, which is a tremendous price. But I have assumed a liberal estimate of Rs. 50 per acre for an average garden.

Shalil.—Shalil, the characteristic fruit of the valley and imported from Ningrahar, grows in the Kirman Valley and in the village Basu in the Rodghara Circle. It is spreading to other villages, such as Zeran, Parachinar garden, &c., and during the harvest of 1905, which was a bumper one, it sold 40 in number per British rupee.

Apricots.—Apricots grow in Tappas Peiwar, Shalozan, Sadarai, Samir (including Bisattu and Mahura) and Hakimi Killa in Tappa Ahmadzai. It is of three kinds, and sells at 20 seers per British rupee.

Pomegranates.—Pomegranates are found in Bughakki, Kunj Alizai, Bisattu, Topakki and Ibrahimzai. They sell at 16 seers per British rupee.

Walnuts.—The tall walnut trees with their far spreading trunks are found chiefly in Zeran, Malana, Shalozan and Peiwar, and their fruit sells at 1,000 in number per British rupee.

Amlok.—The amlok tree is common in Shalozan and Bughakki and Zeran only, and its fruit is imported by the Ghilzais, Malli Khels and Kuchis to Khost, where it is sold as "tor mamiz." It sells in the valley at 64 seers per British rupee.

Water melon.—The crop of water melons is raised in Bassu, Shingak, Nasti Kot, Boshera and Agra, and also in most of the Lower Kurram villages. One average water melon sells for $2\frac{1}{2}$ annas, and single harvests are known to have been sold for 50 to 100 British rupees.

Quinces.—Quinces grow only in Kirman Tappa, and are sold at the rate of 20 seers per British rupee.

Ever since the Durani times, when it was more profitable to eat the fruit unripe rather than allow it to ripen, the people have been careless about the disposal of the produce of their orchards, and their easy life has never allowed the idea of preservation of grapes, apples, &c., for sale in the Punjab to enter into their heads. But with the advance of time and contact with civilisation the people have begun to look into things about them, and it may be safely predicted that with the extension of the railway into this valley the Turis and Bangashes, who disdain to ply the shopkeepers' business, will distinguish themselves as first class fruit merchants, and will fill the markets of the Punjab with the produce of their gardens and their own purses with the wealth of the Punjab.

For the present I have adopted the following rates for fruit gardens :—

Daman Circle—

Shalozan	...	Rs. 50	per acre.
Peiwar	...	" 40	"
Kirman	...	" 20	"
Zeran and Malana	...	" 15	"

Rodghara—

Bassu	...	Rs. 30	per acre.
Hakimi Killa	...	" 20	"
Rest of the circle	...	" 10	"

These will be borne in mind in the distribution of assessment by villages, but as general rates Rs. 35 per acre for the Daman and Rs. 10 for the Rodghara and Rs. 5 for the Sahra gardens will be quite suitable.

81. The record of prices of the Parachinar bazar is available from 1894 up to date. During this period of 11 years export trade has been brisk from 1896-97 to 1901-02, but particularly so in the years 1896-97 and 1900-01, when famine rates were prevailing in Northern India. The Tirah Expedition in 1897-98 and the poor harvests of 1899-1900 and 1902-03 were also among the causes that kept the prices high. Food stocks were selling dear for part of the year 1903-04. Thus for the greater part of the period under consideration—8 out of 11 years—some cause or other has always been at work to more or less inflate the prices. But to exclude from these causes one or two, such as war or famine, which might have influenced the market for a limited time, and to leave the rest, though equally potent in their operation in raising the prices,

was not at all an easy task when all of them considered together have differently affected the different staples in different years. How this discretion has been exercised in each case will appear from subsequent discussion.

For purposes of commutation prices, rates prevailing at the harvest time (in the month of July for the spring crop and in the month of December for the kharif crop) have been abstracted from the English files and Vernacular registers and arranged in tabular form in Appendix E. Comparison has been made as far as possible with the entries in money-lenders' books. In order to arrive at village rates, a liberal deduction of 25 per cent. from the prices at the head-quarters has been allowed for the hire of mules and donkeys (which is the only transport available) and octroi charges and other miscellaneous expenses. By actual calculation the difference between the village and Parachinar prices does not exceed 21 per cent. (see Appendix E). To take up rice first of all. The year 1902 appears to have been one in which prices were unusually high, and must be excluded from the account. During the remaining 10 years the price has fluctuated between two different limits—49 annas to 53 annas and 58 annas to 69 annas per maund of husked rice. The decennial average amounts to 56 7 annas, which with the deduction of 25 per cent. stands at 42 5 annas per maund of husked rice. Experiments made about the proportion of unhusked to husked rice show it to be 4 to 3 in the case of white variety and 16 to 9 in the case of black variety. The resulting average in integral numbers has been taken as 5 to 3, which was approved by the Revenue Commissioner. Allowing for the expenses of "pekoh," amounting to $\frac{1}{10}$ th of the total produce of rice, which are borne by the owner, and converting the price of husked into that for unhusked rice, we arrive at the net result of 24 $\frac{1}{2}$ annas per maund of the latter commodity. There are two kinds of husked rice sold,—"khoraki" (meant for domestic use) and "kharchi" (meant for sale). The quotations in the English files refer to the former, which is clear of all waste, but the agriculturists of the valley deal in the latter, which contains some dust and refuse of the "pekoh." But still the difference between the prices of the two does not exceed 1 $\frac{1}{2}$ annas per rupee.

The prices entered in the Government records are attested by the Treasury Officer, and the prices entered in the money-lenders' books were supplied to me by the local Treasurer. The former relate to sales in the bazar, whereas the latter are the rates at which the Treasurer makes purchases at the head-quarters for his stocks. I have carefully calculated that the difference between the two sets of prices in case of husked rice should not exceed 4 to 5 annas per maund. But considering the close connection between the Treasury Officer and the Treasurer, and the fact that both of them were recording prices prevailing in the same station, it is inexplicable how the difference between their respective entries was allowed to go up to 9 annas per maund in 1899 and to 20 annas per maund in the following year. This discrepancy is only another comment upon the condition of vernacular records kept in past years.

However, leaving some margin for—

- (a) the food given to workers at "pekoh,"
- (b) the difference between the prices of Spin and Tor varieties (the latter being always cheaper) and of "kharchi" and "khoraki" rice,
- (c) and the co-efficient of error between the entries of Treasury Officer and his Treasurer,

I would assume 22 annas per maund of unhusked "kharchi" rice as a fair rate.

The price of wheat in the Government records was expressed for the first few years in flour, in which the money-lenders' prices have been stated throughout. But the price of grain during the last eight years has averaged 42 annas per maund, and has ranged between 31 and 49 annas. It has been ascertained that the difference between the prices of wheat and flour ought not

to exceed $6\frac{1}{2}$ to 9 annas per maund, but the appendix will show that in some years it has risen to 13 annas and even to 14 annas per maund. After a deduction of 25 per cent. the average village price comes to $31\frac{1}{2}$ annas, but I would assume 30 annas per maund.

The money-lenders' prices for maize are not available, and even in the English files no information is forthcoming previous to 1898. The average of the last seven years' prices is 33 annas, and this with the deduction of 25 per cent. gives 25 annas per maund as the village harvest rate, which I would assume as a suitable price. During the past years the Parachinar rate has fluctuated between 21 and 38 annas per maund.

Barley seems to have been unusually dear in the year 1897, which must be excluded from the account. During the remaining 10 years prices have varied between 21 and 34 annas per maund, and the decennial average works out to 26 annas per maund. After the deduction of 25 per cent. as the cost of transport from the village to the market it stands at $19\frac{1}{2}$ annas per maund. The money-lenders and the official prices in the same station ought not to show a difference of more than $2\frac{1}{2}$ to $3\frac{1}{2}$ annas per maund, but in later years it goes as high as 5 and even 6 annas per maund. Bearing this in mind I would assume a price of 18 annas per maund.

As regards mung, the prices in English files refer to "dal," whereas those in money-lenders' books relate to whole grain. However, the difference between the two ought not to exceed $10\frac{1}{2}$ annas to $14\frac{1}{2}$ annas per maund, but it is very astonishing that in three successive years—1898, 1899 and 1900—the divergence runs as high as 20, 21 and even 30 annas per maund. The year 1897, which seems to have been the dearest, may be excluded from calculations. During the remaining years the prices have fluctuated between 49 annas and 71 annas per maund. The decennial average amounts to 62 annas per maund of dal, from which must be deducted 12 annas per maund to convert the price for dal into that for whole grain. With a further deduction of 25 per cent. the resulting village price stands at $37\frac{1}{2}$ annas per maund. Considering the differences in the Treasurer's and Treasury Officer's figures, I would assume 34 annas per maund of whole grain as the village rate.

The prices quoted about mash in the English files are highly incredible. Omitting from calculations the dearest years, 1896 and 1897, the prices are found to range between 52 annas and 71 annas per maund, and the average for nine years comes to 64 annas per maund, which is absurd. Unfortunately the rates of this staple are not to be found in money-lenders' books, hence no comparison can be made. But with the deduction of 25 per cent. the resulting village price is 48 annas or Rs. 3 per maund, which is too high to be adopted in the produce estimate. Mash is grown only in Tappa Samir, and is not much used in the valley, but the greater part of it is exported to Kohat. In market value mash is considered equal to mung or only a little dearer than the latter. I think a rate of Rs. 2-4-0 per maund will be quite fair.

The prices of other staples do not require detailed discussion. Kangni and china have been taken as worth Re. 1 per maund, as they sell at about the same rates as barley. Lobia and mash have been considered as equal in value. Uncleaned cotton is dearer here than at Kohat, and has to be imported for winter equipment. Hence it has been priced at Rs. 4 per maund. The price of fruits has been discussed before. And as more valuable vegetables are grown in kharif than in rabi, their sale value has been estimated at Rs. 10 per irrigated acre in the autumn and Rs. 7 in the spring. The rates of unirrigated vegetables have been put at half of those for the irrigated crop. Rs. 10 per acre would be enough for tobacco, as the area under this crop is very limited, and most of it is consumed locally and very little sold. Turnips, carrots and onions have been valued at Rs. 10 per acre and chillies at Rs. 7 per acre. The price of water melons has been estimated at Rs. 15 per acre and that of other cereals at Rs. 5 per acre.

32. The following table compares the rates of yield and prices assumed in this Settlement with those of the Kohat and Tochi Settlements:—

Yield per acre.

	Kurram-Daman Circle.	Kohat-China Circle.	Tochi.
	Maunds.	Maunds.	Maunds.
Rice, chashmai dofasli	18	18	} 16
„ „ ekfasli	14	14	
Wheat „ dofasli	10	13	} 8, 10, 12
„ „ ekfasli	7	12	
Maize „ dofasli	12	16	} 16
„ „ ekfasli	15	16	
Mung „ dofasli	3½	5	} 7
„ „ ekfasli	2½	5	
Barley „ dofasli	12	11	} 8, 11, 12
„ „ ekfasli	8	12	
Fruits (price per acre)	Rs. 5 to Rs. 35	Rs. 80	Rs. 15
	Maunds.	Maunds.	
Maize, barani	6	6	...
Wheat „	4	6	

				KURRAM-RODGHARA.		KOHAT-TOI CIRCLE.	
				Abi.	Chashmai.	Abi.	Chashmai.
				Maunds.	Maunds.	Maunds.	Maunds.
Rice	dofasli	..	...	22	18	16	18
„	ekfasli	...	...	18	14	12	14
Wheat,	dofasli	..	...	11	10	9	12
„	ekfasli	..	...	8	7	7	9
Maize,	dofasli	...	...	14	12	14	14
„	ekfasli	...	...	10	9	10	12
Mung,	dofasli	...	...	4	3½	5	5
„	ekfasli	...	...	3	2½	5	5
Barley,	dofasli	...	..	13	12	9	9½
„	ekfasli	...	...	10	8	10½	11
Fruits (price per acre)		...	...	Rs. 5	Rs. 5	Rs. 100	Rs. 120

Prices in annas per maund.

				Kurram.	Kohat.	Tochi.
Rice	...	..	..	22	21	32
Maize	.	...	..	25	24	24
Mung	...		..	34	32	32
Wheat	...	.	...	30	28	28
Barley	...	...	..	18	17	20
Mash, lobia, &c.	...		..	36	...	Sugarcane, cotton, gardens, melons, kurkha, carrots, turnips and vegetables Rs. 15 per acre.
Kangni, china .:	...		...	16	27	
Cotton	...	...	...	Rs. 4	Rs. 3-5-0	
Prices per acre—						
Fruits	...	.	...	Rs. 5 to 35	Rs. 80 to 120	
Vegetables		.	..	„ 5 to 10	„ 20 to 60	
Tobacco	...	..	.	Rs. 10	Rs. 15	

As might have been seen from the description of the system of cultivation rice is the only crop over which the Turis take some trouble, and therefore the outturn compares very favourably with that of other tracts. As regards the remaining crops, the people do not spend sufficient labour on them, otherwise with excellent soil and abundant irrigation the yield per acre instead of being less would have been higher than that of neighbouring settlements. Similarly this valley is rich in fruits, but in the absence of any market, specially since the withdrawal of the regular force in 1902, the prices have ruled very low, and with the introduction of the Railway are expected to rise high above the Kohat rates. But even with the moderate outturn and prices now assumed the half net assets demand comes out so much more than Government can take or people can pay that further comment about differences on the figures of the other two settlements is not required.

PART V.

TENANCIES AND RENTS.

Cultivating occupancy.

33. The detail of cultivating occupancy in the valley has been shown below :—

		Daman.	Sahra.	Rodghara.	Total.
Total cultivated area 1904-05	...	16,022	3,279	18,197	37,498
Percentage cultivated by owners	...	71.1	87.0	64.0	69.0
Percentage cultivated by tenants free of rent	...	.7	1.4	2.3	1.5
Percentage cultivated by occupancy tenants	...	2.5	...	1.1	1.6
Percentage of area cultivated by tenants-at-will.	(a) Paying batai	11.6	7.7	13.9	12.4
	(b) Paying at revenue rates with or without Malkana.	12.2	.9	15.4	12.8
	(c) Paying other cash rents	1.9	3.0	3.3	2.7

About 70 per cent. of the cultivation is directly in the hands of the proprietors, which is the highest proportion in the Province. The percentage of self-cultivating proprietors in other districts is 34.3 in Dera Ismail Khan, 43.5 in Hazara, 47.3 in Peshawar, 51.8 in Bannu, 59.6 in Kohat and 64.8 in Tochi. The provincial average in the North-West Frontier Province Land Revenue Administration Report for 1903-04 is 46.4. And if villages held by sole proprietors—27 in number—and other Crown lands and area in possession of mortgagees be excluded from the account, the percentage of cultivation carried out by proprietors themselves rises as high as 81.6 per cent. Area free of rent (1.5 per cent. of total cultivation) is small and is mostly held by tenants who have reclaimed wastes, and under the local custom are exempt from charge of rent for three years. Part of the land is in possession of men who enjoy similar concessions on account of relationship, religious regard or menial service. In a few cases the people of independent territory have let their possessions here free of rent to tenants, who have made themselves responsible for all “kar begar” in the absence of their masters.

There are no occupancy tenants in the Sahra Circle, and in the Daman Circle the relations between the parent villages and their tributary hamlets on the slopes and in the glens of the Sufed Koh were inquired into and settled in this Settlement with the result that the Mangal, Kharoti, Alisani and Para Chamkanni tenants, who paid kind or lump sum rent in cash, and had been for generations in possession of 2.5 per cent. of the cultivated area, were found entitled to occupancy rights which were conferred on them. Similarly in the Rodghara Circle in the Muqbil villages tenants paying fixed cash rent and of old standing were given the same status. In the villages of Gharbina and Ahmadi Shama the tenants under Mian Mir Akbar and the Crown respectively had been declared occupancy tenants before the Settlement. Thus the total area under this class of tenants amounts to 1.1 per cent. in this circle. There may be a few more deserving of being classed as occupancy tenants, and their claims

will be considered as soon as the remaining disputes of title are enquired into and village assessment notes written up in my next tour.

With the exception of Ahmadi Shama, occupancy rights have not been granted so far in any other village under the Crown. About 13 per cent. of the cultivation is in possession of tenants-at-will paying at revenue rates with or without malikana, a vast majority of whom are settled on Crown lands. Some of these Government tenants are no doubt entitled to occupancy rights, but this point will form the subject of a separate reference. Of the area held by these tenants in each circle only one-eighth in Daman, one-third in Sahra, and one-thirty-eighth in Rodghara is cultivated under owners other than Government. Most of the latter area has been given to them for protecting the village approaches in Zeran, and the remaining part is held at this privileged rent, either because the tenant was a relation or hamsayah of the landowner, or because the land was inferior or in excess of the owner's requirements.

34. The *sharik*, who simply supplies labour and works with the capital of the landlord (such as seed, plough and oxen), has been omitted from the class of tenants, as strictly speaking he is a private farm servant, and gets one-fourth without food or one-fifth with food of the produce as his wages. This class of labourer is in great requisition in Kurram, which shows that the self-cultivating proprietary body is comparatively well off.

Rents in kind paid by the tenants-at-will are regulated by custom and not by competition.

Two-thirds of the produce is a rare rent, and is paid on 10 acres of land only either on highly productive plots round the villages of Zeran and Malana or on a few fields in Bilyamin, Sadda and Tapu Killa by mortgagors, who in consideration of heavy mortgage money raised on a comparatively smaller area have agreed to pay a higher rate to make up for the interest.

One-half produce is the prevailing rent, and is paid on about three-fourths of the batai paying irrigated area without any distinction between chashmai and abi cultivation. In a few villages of the Rodghara Circle, such as Agra to Hassan Ali Killa, Sadda and Balish Khel half of the land revenue is also paid in addition by the tenants, who are either self-cultivating mortgagors or belong to independent territory, and are badly in need of land to make a living.

Two-fifths rate is confined to 8 per cent. of the batai paying irrigated area held by mortgagors, who cultivate the land themselves and pay the land revenue, and after deducting one-fifth of produce out of the common heap as the wages of the *sharik* entertained by them divide the remainder in equal shares with the mortgagee.

Kind rent, three-eighths on a very small area in Chashi and Arawali, is also paid by mortgagors, who after deducting one-fourth produce as the wages of the *sharik* divide the balance equally with the mortgagee. Next to one-half, one-third produce is the prevailing rent which is paid on about 15 per cent. of the batai paying irrigated area. This is the rate of inferior land, such as ekfasli on the skirts of the Peiwar and Shalozan cultivation, Crown land in the Rodghara Circle, and ekfasli area in the glens and the Sahra Circle.

The remaining low rates of one-fourth, one-fifth and one-sixth produce are particularly found on small inferior irrigated tracts either in Malana, Shalozan or Peiwar, or in the Sahra Circle.

As regards unirrigated land, only a small part of it has been let out on kind rent in the Daman and Rodghara circles. One-half produce is certainly a high charge for unirrigated lands, but three-fourths of the area fetching this high rent lies in the Daman Circle. And the explanation is that all these fields are situated in the glens or on the slopes of the Sufed Koh, where frequent

rainfall from the neighbouring heights and plenty of manure yielded by large flocks of goats and sheep enhance the value of the land, which is in great requisition amongst the hill men, Mangals, Alisanis, &c.

Another evidence of the fact that in the buffer hamlets there are more men than there is land for them is afforded by the fact that in addition to kind rent they have agreed to pay for their tenancy, including irrigated and unirrigated areas, part of the land revenue and other miscellaneous products, such as produce of turnip crop (sarsham), one or two loads of chiragh wood (used in place of lamp at night), and coals or some honey, fruits, vegetables or bags of manure. Some tenants are also required to go up the hill and hack cherai shrubs (zhobal) for the landlords, who make their own arrangements for conveying them home in bundles. The Khan of Bughakki takes in addition to kind rent some loads of wood and a few ploughs and a couple of days' *begar* on his fields in the year.

In the Sahra Circle only 9 acres of land in the two villages of Burki and Lalmi has been let on one-half produce rent for special reasons. In one case the mortgagor is bound by the custom of the circle to divide the produce equally with his mortgagee. In the other case the tenant is under agreement to pay the same rent—half produce—for his tenancy consisting of irrigated land in the Rodghara and unirrigated land in the Sahra Circle under the same owner. Otherwise the prevailing rent on batai paying unirrigated cultivation, two-thirds of which lies in the Sahra Circle, is one-third or one-fourth.

The total cultivated area in possession of tenants-at-will paying kind rent is :—

11·6 per cent. of cultivation in the Daman Circle.

13·9 " " " Rodghara "

77 " " " Sahra "

The detail of areas on which different rates of kind rent are paid has been given in Statement VII, and average rent rates worked out in Appendix G are as follows :—

			OWNERS' SHARE.		GOVERNMENT SHARE.	
			Irrigated.	Unirrigated.	Irrigated.	Unirrigated.
Daman	...	...	·46	·41	·23	·205
Sahra	...	...	·43	·28	·215	·14
Rodghara	...	...	·47	·33	·235	·165

It will be of interest to note the fact that the proprietary body of the Daman Circle has got a strong hold over its tenancy. But quite contrary is the case with that portion of the Rodghara Circle which on the right bank of the river extends from Gidara to Chardiwar, and where the Turi, Bangash and Sayad proprietors are at the mercy of their Jaji and Khostwal tenants, who far outnumber their masters.

35. The grazing season of the valley divides itself into two well-marked periods,—the close and the open seasons, ^{Fodder and straw.} During the former the cattle are stall fed, but during the latter they are led out on the hills to graze. In the coldest part of Kurram the close season lasts from 15th December to the end of April or the middle of May, but in the Lower Kurram, which is warmer, the cattle are stall fed for not more than three or four months—January to end of March or April.

There is plenty of natural fodder available in the open season—more abundant in the Rodghara than in the other circles—which is supplemented by two principal fodder crops, shaftal and kurkha. During the close season cattle are chiefly fed on wheat bhusa or rice straw and maize stalks and a little of dry kurkha and bhusa of mung (kati). Barley and maize are the only food crops that are offered, but to a very limited extent, while green in the months of May and September respectively. The system of feeding cattle in each month of the year has been given in the tabular form in Appendix F.

The distribution of fodder and straw between the landlord and his tenants is governed by a peculiar custom, which provides that the tenant is entitled to the whole of the straw and fodder, and will divide it equally with his landlord only, when the latter supplies him with all the seed required for the tenancy. This arrangement is not at all advantageous to the landlord, and hence income from fodder and straw has been omitted from assessment calculations. However, as the number of self-cultivating proprietors here is far higher than elsewhere in the Province, they get enough fodder of their own. Excepting some limited sale at Parachinar and on the tonga line and in the country in the months of January to March, when in season of prolonged snowfall stocks run short, sales of fodder on any important scale are unknown in the valley.

36. There are three principal farm servants or kamins,—the blacksmith, the carpenter, and the crop-watcher. In some villages the owners themselves do the ordinary carpenters' work, and in a few others the functions of both the blacksmith and the carpenter are combined in one and the same man.

The system of payment of their dues is very complicated, as in some cases they are paid per house and in others per plough. But the prevailing custom is that tenants who own proprietary lands also do not pay these dues out of their tenancy, and tenants cultivating in more than one village, but served by the same kamin, make only one set of payments and not two. A tenant with two ploughs would pay double and with three ploughs three times the usual dues.

The kamins are paid by a wooden measure called tatti, which is 50 per cent. larger than the one used by zamindars in transactions of grain.

The hill men in the glens pay the kamins 3 to 10 tattis maize or 1 seer ghi once a year. Payments in cash are also made sometimes.

The standard dues paid in the three circles are:—

	<i>Daman.</i>	<i>Sakra.</i>	<i>Rodghara.</i>	
Blacksmith ...	Rice 5 to 20 tattis and 1 bundle of sheaves; wheat 2 to 7 tattis and 1 bundle of sheaves.	Wheat 5 tattis and 1 bundle of sheaves and barley 3 tattis.	Blacksmith and carpenter, generally one and the same individual, gets rice 2 to 20 and wheat 2 to 12 tattis, with 1 bundle of sheaves of each.	Paid out of common heap, provided the tenant has no proprietary land of his own.
Carpenter ...	Rice 8 to 15 tattis, and wheat 2 to 6 tattis, with 1 bundle of sheaves of each.	Ditto ...		
Crop-watcher ...	Entertained in some villages only for the rice crop. He gets 2 tattis shali per jarib, or $\frac{1}{10}$ th, $\frac{1}{20}$ th or $\frac{1}{40}$ th of the total produce.			
Barber ...	Paid per house, but gets one bundle of sheaves weighing 3 tattis in case of wheat and 8 tattis in case of paddy.			

The proper course in order to make deductions for the meenias would have been to calculate the number of tenants who did not own land in the village or in the neighbouring tract, and paid the kamins out of the common heap.

But first of all the number of such tenants was small, and then no useful purpose could be served by making separate calculations for the 14 scattered villages in the whole valley, which according to the circle officers' attestation were paid out of the common heap, not exceeding $2\frac{1}{2}$ to 3 per cent. on the total outturn of wheat and 3 to 5 per cent. on the total outturn of rice.

The assessment proposed is so much below the theoretical standard that the omission to make deductions at 3 to 5 per cent. in 14 villages does not make much difference, and allowance for this charge can easily be made in the distribution of actual assessment over villages.

In summer a "laugar" or crop-reaper is also engaged for harvesting the wheat crop, and is paid $\frac{1}{10}$ th of the produce from the common heap. The only crops divided on the threshing floor are rice and wheat. Payments of mung, if at all, are made from the owner's share. Similarly a *galai band* (warder of hail) gets his due from the owner. Village menials are not given anything out of cotton pickings, and the rates framed exclude the wages, amounting to one-eighth of the produce paid to the labourers, before division between landlord and tenant. The expenses of nalgar, lalun, &c., (transplanting the rice nursery and weeding) are all borne by the tenant, but those of *pekoh* (charges for separating rice from paddy amounting to $\frac{1}{10}$ th of the produce) are paid by the landlord and tenant separately from their respective share after the division of the produce.

37. The area held on cash rents, though forming 2·7 per cent. of the total cultivated area, is mostly confined either to small colonies on the slopes of the Sufed

Cash rents.

Koh or to Crown villages in the plains of the Daman and Rodghara circles. In both cases special concessions were given to tenants by private owners and the Durani Governors to encourage colonization, and therefore lenient rents or leases fixed in lump sum years ago do not throw any light as to the actual letting value of the land. Only two instances deserve special notice. In the Sahra Circle in village Tutki, from which the area for the Cantonment was acquired on payment, and which has remained unassessed so far and has constituted the pasture ground of subordinate officials, Mira Khor, the leading Afghan greengrocer, has derived considerable profit from 97 acres of land next door to the Parachinar bazar, on which he has raised vegetables with the help of hired irrigation, but paid only 12 annas per acre to the owners. This state of things, due to absence of Government revenue and competition, will disappear now. Next, in the Rodghara Circle one minor's property in Ghamkot and Arawali consisting of 29 acres partly *dofasli* and partly *ekfasli* had some years ago been let officially owing to the keen rivalry of bidders at a rate of Rs. 3-12-9 per annum, which, considering the old revenue rates in Kurram, was certainly high, and is a clear indication of the effect of competition on cash rents. However, during the present assessment the old system of unduly favourable leases will be done away with and Crown lands will be assessed at their proper rates, and even private lands will rise in value and command better terms. The statistics of cash rents other than at revenue rates are given below by circles :—

Circles.	Cultivated area.	Rent.	Rate per cultivated acre.
	Acres.	Rs.	Rs. A. P.
Daman	... 305	238	0 12 4
Sahra	... 97	72	0 11 10
Rodghara	603	442	0 11 9

PART VI.

HALF NET ASSETS ESTIMATE.

38. As at the last Settlement no distinction had been made between spring and river irrigation, nor had any crop statistics been maintained there-
 after, the whole of the material for the produce estimate had to be collected during the period of this Settlement. During the progress of measurements, which extended over three harvests,—two Rabi of 1904 and 1905 and one Kharif 1904,—crops were recorded field by field by actual observation and arranged according to soils sanctioned at the very start by the Revenue Commissioner. The Kharif harvest of 1903 preceding the Settlement was ascertained at the same time by oral enquiry. The average cropped area during the years 1903-04 and 1904-05 forms the basis of the assessment proposals.

The total outturn of the agricultural products of the valley has been worked out by applying the rates of yield discussed in paragraph 30. The gross value of this produce has further been obtained at the prices assumed in paragraph 31. For reasons explained before, no deduction has been made for *kamins'* dues, nor has the value of fodder crops and other fodder and straw due to the landlord been incorporated in the produce estimate, detailed information about which will be found in Appendix II.

The value of owners' net share of the produce has been calculated according to the results of the average rent rates given in Appendix I.

Taking the limit of the Government demand as 50 per cent. of the landlords' rent (or owners' net share of the produce after deducting cost of production), the value of the Government share and the half net assets crop rates on each soil have been worked out in detail in Appendix I.

The moderation of the rates of yield and prices have already been commented upon in paragraph 32. So far as the cropped area is concerned, it may be explained here that it has been somewhat understated, but by no means overstated, in the produce estimate.

One harvest—Kharif 1903—in Upper Kurram and two harvests—Kharif 1903 and Rabi 1904—in Lower Kurram, where measurements could not be started till December 1904, had to be recorded by oral enquiry along with the crops on the ground, and from the divergence between the crops recorded and the prevailing system of cultivation there is every reason to believe that the agriculturists did not fully disclose the whole crop they had taken in the preceding years.

Long after the measurements were over some of the Mangals before resuming cultivation of the sarsham (turnips) crop actually did a journey to Parachinar to assure themselves whether the Patwaris intended returning to their villages to register the cultivation for purposes of assessment.

But the girdawari and diluvion of Kharif 1905, which will be taken up a fortnight hence, will give us a correct area for the distribution of the new revenue and at the same time provide data of four harvests—two Rabi 1904 and 1905 and two Kharif 1904 and 1905—actually inspected on the spot, which will be of great use in checking strictness of classification of soil.

The half net assets estimates, Rs. 1,76,417, which have been fully discussed in subsequent paragraphs amount to:—

- Rs. 62,249, or 5·3 times the existing revenue in British coin in the Daman Circle.
- „ 3,985, or 13·6 times the existing revenue in British coin in the Sahra Circle.
- „ 1,10,133, or 5·7 times the existing revenue in British coin in the Rodghara Circle.
- „ 1,76,417, or 5·6 times the existing revenue in British coin in the whole valley.

39. The tenures of Kurram, which are simple enough, have already been noted in paragraph 21. And in that connection reference has been made to the relationship of "Naik" and hamsayah, which, however, does not necessitate any allowance in assessment. Beyond this the status of superior and inferior proprietor is unknown in this valley. It was only recently that in one village,—Mulla Bagh,—owing to the complicated nature of long standing disputes, the rights of a superior proprietor with a malikana of $6\frac{1}{4}$ per cent. were conferred on the Isaf Khel Bangashes of Zeran with the sanction of the Revenue Commissioner conveyed in his letter No. 18-H. of 10th June 1905.

40. The principal sources of income other than land—such as profits from agricultural stock, carrying trade on mules and Government service—have already been discussed. It remains now to make a brief reference to the sundry gains of hill men—Mangal, Kharoti and Para Chamkannis—which they make by the sale of fuel, chiragh (wood used for light), coals, shisht (a kind of wild herb) and honey. During the summer a lot of snow is dug out of mountain recesses and sold in the Parachinar bazar. Ready made pekoh are sold in large numbers to villages in the plain. These people also go in for a great deal of farm service; for instance, the Mangals reap the crops and work at the pekoh taking $\frac{1}{10}$ th of the produce as their wages, and the Muqbils and Para Chamkannis do transplanting of nursery on payment of half rupee Kabuli with two meals per head per day. This miscellaneous income of these small proprietors is limited and serves them in place of ready cash, with which they do their occasional shopping and purchase cloth, salt and other necessities of the kind.

The sale of timber is a very important source of income to the people of Peiwar and its adjoining hamlets, and is expected to bring in still larger returns with the introduction of the Railway, provided the leading Maliks are sufficiently warned not to indulge in promiscuous cuttings, which can only result in the denudation of the hills.

The people of the Lower Kurram, on the right bank of the river from Gidara to Badshah Kot, have since the opening of the Thal Railway derived considerable benefit from the sale of mazri, which sooner or later must be destroyed, as rights in waste have not been defined, and at present anybody who marches through the mazri forest from Wali China to Ghamkot appropriates as much as he can without let or hindrance. The pity of it is that the Ghilzais, the outsiders, make themselves unquestioned masters of the greatest share of the mazri stock at Sreghurga and Shabak during their winter encampments. Assets from sale of timber and mazri have not been taken into consideration in formulating assessment proposals, as by express orders of the Government of India all waste and its products were excluded from the operations of this Settlement.

A most promising industry, now quite in its infancy, but with a bright future before it, is the rearing of the silk worm. The people of the Daman Circle are more fond of it than those of the Rodghara, although batches of worms are to be found also in the riverain villages and all along the line from Peiwar to Alizai. They understand very well the class of mulberry leaves that are best liked by the caterpillars but their ignorance on other important points—light, ventilation, cleanliness and temperature of air of the rearing house and diseases to which the worms are subject—is great. And then the whole duty of collecting leaves and looking after the stock of moths is left to women. They badly require the advice of an expert before sericulture in the valley can be expected to attain to the standard of a profitable trade. At present the little silk obtained by crude methods is used for domestic purposes.

Against these miscellaneous profits must be put down different kinds of expenses which fall on the proprietary body, but have not been accounted for anywhere before. First of all menials' dues amounting from 3 to 5 per cent. of the gross produce have not been deducted on the assumption that, though payable out of the common heap, they are at present in the majority of cases

paid by tenants from the produce of their proprietary lands, who by a peculiar combination of circumstances happen to be self-cultivating owners also.

Next, many owners have to engage a "laugar" or crop-reaper, who is paid $\frac{1}{10}$ th of the produce. This class of labourer is in great requisition during the month of Har (June and July) both by small as well as big proprietors, as within that short interval transplanting of rice, harvesting of wheat, and ploughing for mung and kurkha all come together, and it is impossible to attend to them single-handed. This is the busiest time for the zamindars of this valley.

The charges for converting paddy into rice (pekoh) have been allowed for in the price assumed.

5 per cent. of the grain is given at the mill for grinding wheat and maize into flour.

The share of mung crop and the crop-watchers' and *galai bands'* dues paid by the owner have already been noted in paragraph 36. The priestly class, mostly Sayads, the extent of whose influence has been described before, come in for their share of the produce, which they call "gardun," "nazr" or "shuk-rana" according to the occasion of the demand. The managers of shrines and orphans also go about begging for some charity doled out to them out of the common heap. The expenses in connection with the clearance of channels and repairs of embankments are small. The whole work is done by village labour under the directions of a "mirab." Ordinarily the last village (Pain Warakh) is bound by local custom to look after the embankment and the channel; but in cases of unusual damage all villages benefiting from joint irrigation turn out for assistance. But no payments have to be made beyond the crop-watcher's due mentioned before.

Some of the border villages in Kirman and round Sadda have to part with some of their food stock in the way of accommodating tribal jirgas. This old custom of keeping an open house to neighbours arises from their political situation and notions of Pathan hospitality, and, though not connected with agriculture in any way, is still a factor which requires to be borne in mind in determining the assessment of the valley.

All these points have received ample consideration in the subsequent proposals, in which the new demand has been kept well below the half net assets standard.

41. The half net assets crop rates resulting from the process described in paragraph 38 are arranged in tabular form below :—

Half net assets rates.

Soil.	Daman.	Sahra.	Rodghara.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Chashmai dofasli	4 11 8	...	4 7 10
„ ekfasli	3 9 9	2 7 5	3 12 6
Abi dofasli .. ..	...	...	5 0 11
„ ekfasli ... ..	...	...	4 4 4
Barani	1 10 0	0 15 5	0 14 2
Average incidence	4 4 8	1 14 8	4 12 4
Resultant revenue	62,249 0 0	3,985 0 0	1,10,183 0 0

42. The following figures showing for each circle the value per acre of cropped area are useful in comparing the relative productive capacities of different soils:—

Annual Value of a cropped acre (excluding fodder crops) on each soil.

Circle.	Chashmai dofasli.			Chashmai ekfasli.			Abi dofasli.			Abi ekfasli.			Barani.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Koh-i-Daman ..	20	9	0	15	11	0	...	...	...	...	...	...	7	12	0
Sahra ...	...	...	...	11	7	0	.	.	.	..	..	..	6	10	0
Rodghara ...	19	2	0	16	1	0	21	8	0	18	8	0	5	5	0

Evidently the unirrigated soil of the Daman Circle is the best of its kind, as, though comparatively small in area, about 89 per cent. of it is under crop in the year, half of which is occupied by maize and one-fourth by wheat. Its renting value is also higher than that of similar land in other circles. In the Sahra Circle the unirrigated area is the largest in extent, but only 57.7 per cent. is annually cropped, chiefly under wheat, which gives fairly good results. The same percentage in the Rodghara Circle is 47.2, and although wheat is the principal crop, the outturn is poor.

The chashmai ekfasli soil of the Daman Circle on account of its rocky nature is not so suited for rice, and yields a variety of other products,—wheat, maize, fruits and fodder,—the cultivation of which is very much restricted on the corresponding soil of the Rodghara Circle. But the latter owing to its moist and soft nature is largely sown with rice, which is a crop of much higher value. And as the percentage cropped under rice in the Rodghara Circle is larger than that under equally valuable crops in the Daman Circle, the value per cropped acre on chashmai ekfasli of the former slightly exceeds the corresponding value of the latter. Another evidence of better water-supply in the Rodghara Circle is afforded by the higher percentage of cropping on chashmai ekfasli soil, which is 88.7 against 63.3 on the corresponding soil of the Daman Circle.

The chashmai ekfasli land of the Sahra Circle, depending on borrowed irrigation as it does, stands last of its class in the valley, though on account of the good wheat crop raised every year the value per acre is pretty fair.

The proportion of fodder crops to total cropped area on chashmai dofasli land in the Daman Circle is almost double of that in the Rodghara Circle. Excluding the fodder crops, the proportion of rice and maize, which are more valuable, to the remaining cropped area in the Daman comes out higher than a similar proportion in the Rodghara Circle, although the percentage of mung, which is much cheaper, in the latter circle considerably exceeds that in the former. This explains why the value per cropped acre of the chashmai dofasli land in the Daman is somewhat in excess of that in the Rodghara Circle. But for these variations attending the cropping of different staples the soils irrigated by springs in the Daman and the Rodghara circles are of about equal productive capacity. As regards abi dofasli land in the Rodghara Circle, it is distinctly superior to abi ekfasli, most of which lies on the right bank in Lower Kurram. And although deficiency in outturn varies from 18 to 29 per cent., the value per cropped acre of ekfasli land falls short of that on dofasli land only by 14 per cent., chiefly owing to the fact that in proportion to the cropped area more rice is grown on ekfasli than on dofasli soil. It is interesting to note that in the Rodghara Circle the value per cropped acre of chashmai ekfasli land is less than that on dofasli land by 16 per cent., whereas in the Daman Circle this difference is as high as 22 per cent., mainly for the reason explained before that more

valuable crops, such as rice, are grown on Rodghara ekfasli than on the corresponding soil of the Daman Circle, which is occupied by crops of lesser value.

43. The following arrangement of villages according to the mode they have elected for the distribution of the new revenue will show how well the people have come to understand and appreciate the distinction in soil classification observed in this Settlement :—

Distinction recognized in Bachh.

- (1) 37 villages have asked for differential revenue rates according to the quality of different veshes in the same village.
- (2) 52 villages have expressed their desire that assessment should be distributed by soil rates.
- (3) 45 villages, each consisting of only one vesh, will not require any differential rates in the same village.
- (4) Only 30 villages, each consisting of more than one vesh, want summary rates, but they are situated either in the insufficiently irrigated Shiblan Tappa or poor Dal Tappa or are scattered about along the river line.
- (5) 4 villages wish to distribute their revenue by "bakhra," three of which are Crown estates held by Hamza Khel tenants, who between themselves have divided their possessions on shares.
- (6) The Parachinar Cantonment formed into a separate estate will not be assessed to revenue.

Thus out of 169 villages only 30, or about 18 per cent., with indifferent land have been found in favour of summary rates.

PART VII.

THE ASSESSMENT.

44. The Durani system of assessment, which formed the basis of the last Settlement, was a fixed one, with the exception of the demand on Crown lands managed by the State officials direct, from which one-third of the gross produce was realized harvest by harvest as the Government share. Mr. Merk maintained the fixed assessment on Tawani lands, but commuted the assessment in kind on Government lands into an assessment in cash with the addition of malikana as 25 per cent. On some backward Crown villages he imposed a progressive assessment at favourable rates for one to four years, after which the demand was to be realized in full as on other lands. Thus it will be seen that Mr. Merk's assessment was throughout a fixed one. But the first unfortunate mistake made was that the rate of malikana, though in principle 25 per cent., was calculated at $33\frac{1}{3}$ per cent., as can be seen from the following figures taken from Mr. Merk's report:—

	<i>Revenue.</i> Rs.	<i>Malikana.</i> Rs.	
Crown lands measuring 4,090 acres assessed at	5,754	Kabuli	—
Progressive assessment on 1,213 acres, to be realized in full after 4 years	2,775	,,	—
	<u>8,529</u>	<u>925</u>	<u>—</u>
Total	8,529	,,	—
		2,843	,, = Rs. 11,372 Kabuli.

Next, no list of villages from which this progressive assessment was to be realized was forthcoming in the office. To remedy this defect and not to disappoint expectations raised in Mr. Merk's report, two unconstitutional methods were introduced. The first was the annual assessment of the Crown lands according to existing cultivation, by which cultivated area fallen waste was struck off the rent-roll and new area reclaimed was brought on to it and assessed according to village rates. Next, takavi loans were given out for reclamation of village lands, which even after recovery of the grant were entered as possessions of the Government instead of the people. But in spite of these devices the whole scheme has miserably failed, as the demand on Crown lands even to-day falls short of the amount entered in Mr. Merk's report, although the area in Government possession has increased by 2,600 acres and five new Crown villages have been colonized since Summary Settlement.

This deficiency in demand, notwithstanding the fact that the fluctuating rate was kept the same as the fixed rate and considerable additions were made since last Settlement, points to some error in account in the revenue statements of the Summary Settlement. Besides, owing to the inadequacy of the establishment, it could not be reasonably expected that the annual assessment of one-seventh of the cultivated area of the valley would be properly carried out. Cases have come to notice where cultivation fallen waste has not received the remission that was due for years, nor has the revenue on reclaimed area been properly accounted for. As Crown lands are as a rule poor and the chances of further reclamation are limited and Government does not own any large irrigation canals here, and considering the harassment involved to the people and the doubtful nature of gain to the Government, I would recommend the discontinuance of both the unconstitutional systems referred to, which would restore the assessment of the valley to the lines originally intended by Mr. Merk and sanctioned by the Government. Proposals about assessment made in subsequent sections proceed on this assumption.

The principles observed in assessment are the same as given in Appendix I-D of the Settlement Manual. Under instructions from the Government of India referred to in paragraph 15, the reassessment operations have been confined to the cultivated area only.

In the following paragraphs the following points have been discussed for each soil in the circle as well as for the whole circle:—

- (a) Assessment by half net assets crop rates.
- (b) Proportion of the assessment which under the circumstances can be taken from each circle.
- (c) The crop rates and soil rates which bring out the proposed assessment.

45. The chief statistics bearing on the assessment of each circle and the whole valley are summarized below:—

	Koh-i-Daman.	Sahra.	Rodghara.	Whole valley.
<i>Cultivation.</i>				
Percentage of cultivated to total cultivation of the valley.	42.7	88	48.5	100.0
Percentage of irrigated to cultivated area.	94.8	58.5	97.1	92.7
Percentage of average matured to cultivated area.	107.2	67.9	135.7	117.6
Percentage of average crops harvested last two years—				
Chashmai dofasli	73.1	...	16.1	37.5
„ ekfasli	22.6	64.7	3.9	14.3
Abi dofasli ... ..	...	...	66.1	37.0
„ ekfasli ... ..	...	...	12.9	7.2
Barani	4.3	35.3	1.0	4.0
Kharif percentage of cropping	54.1	25.2	62.3	57.2
Rice	27.0	...	35.3	30.3
Maize	16.7	5.2	8.2	11.4
Mung	2.5	4.8	15.5	9.9
Rabi percentage of cropping	45.9	74.7	37.7	42.8
Wheat	32.8	69.4	29.2	32.6
Barley	1.9	2.7	4.8	3.5
Percentage of kharaba on sowings	3.5	3.0	.7	1.9
Increase or decrease per cent. in irrigated area.	+ 35.8	+ 255.4	+ 39.7	+ 42.7
Increase or decrease per cent. in unirrigated area.	— 58.4	— 31.4	— 1.1	— 39.9
Increase or decrease per cent. in total cultivation.	+ 21.8	+ 30.0	+ 38.0	+ 29.7

	Koh-i-Daman.	Sahra.	Rodghara.	Whole valley.
<i>Population, holdings, &c.</i>				
Population per square mile of cultivation ...	903	946	951	922
* Average cultivated area per holding 1904-05.	2.4	3.9	2.8	2.7
* Average cultivated area per owner ...	1.4	2.6	2.0	1.7
* Percentage of cultivation cultivated by owners.	81.3	87.5	79.2	81.0
Percentage of cultivated proprietary area under mortgage.	9.4	7.6	16.3	12.4
Percentage of cultivated proprietary area sold since last Settlement.	5	2.6	5.2	4.8
Percentage of cultivated proprietary area sold to money-lenders.	.4	.2	.3	.3
<i>Revenue (excluding mills and malikana).</i>				
	Rs.	Rs.	Rs.	Rs.
Revenue assessed at Settlement ...	19,008	471	23,402	47,881
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Incidence on area then cultivated ...	1 7 0	0 3 0	2 2 6	1 10 6
	Rs.	Rs.	Rs.	Rs.
Revenue demand 1904-05 ...	11,805	294	19,336	31,435
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Incidence on area now cultivated ...	0 11 9	0 1 5	1 1 0	0 13 5
Incidence on average cropped area ...	0 11 0	0 2 1	0 12 6	0 11 5
	Rs.	Rs.	Rs.	Rs.
Half net assets estimate ...	62,249	3,985	1,10,183	1,76,417

* See paragraph 22.

Proposed assessment, Koh-i-Daman Circle.

46. The half net assets of the Koh-i-Daman Circle and the resulting crop rates are as follows:—

Soil.	Average area of crops in last two years, excluding fodder crops.	Half net assets estimate.	Half net assets crop rates.
	Acres.	Rs.	Rs. A. P.
Chashmai dofasli ...	10,153	47,997	4 11 8
„ ckfasli ...	3,610	13,038	3 9 9
Barani ...	746	1,214	1 10 0
Total ...	14,509	62,249	4 4 8

The assessment of the circle at the Summary Settlement, when the Kabuli rupee was valued at 12½ annas British, was Rs. 19,008, but at present when the rate of exchange has gone down to half a British rupee, it is Rs. 11,805. The half net assets estimate, therefore, gives an increase of Rs. 50,444, or 4.3 times the present demand and 2.3 times the revenue demand of the Summary Settlement.

This is the pleasantest, though not equally the most fertile, part of the valley. Its picturesque situation so vividly impressed itself on the romantic imagination of the Durani rulers that they have immortalised its leading characteristics in a well termed Persian expression, which means that there are five good things in Kurram, *viz.* the rice of Kirman, the springs of Zeran, the stone quarries of Malana, the timber of Peiwar, and the beauty of Shalozan. Two of the Amirs of Afghanistan contracted matrimonial alliances with two leading families in this circle. And long before them even the Bangashes on their first occupation of the valley were similarly struck by the luxurious natural scenery of this tract, and after the fashion of the names of important centres in Persia, from whence they had migrated, they coined new names ending in "án" for the prominent parts of this circle, such as Shalozan, Zeran and Kirman.

With the exception of part of the Kirman, Shiblan and Dal tappas, which are exposed to the raids of the Para Chamkannis and Jajis respectively, this circle is the most secure, as the lofty mountains of the Sufed Koh constitute the Chinese wall of defence against foreign attacks.

Again, in respect of the variety and wealth of its resources this tract stands by far the foremost of other circles, so that the old phrase of the Duranis, so expressive of its *poetic grace*, in order to serve as a faithful representation of the improved economic utility of the country in recent times, would require to be modified as follows :—

"The shalil and rice of Kirman, the springs and milk of Zeran, the fuel and stone quarries of Malana, the fruits of Shalozan, the timber and mule trade of Peiwar, and the Militia of the last four villages."

With a suitable market and locomotive traffic the sale of fruits alone, at any rate at Kohat rates, would suffice to pay off between one-third and half of the half net assets estimate. And the income from Militia service amounts to about $1\frac{1}{2}$ times the half net assets estimate in the year.

At present 91·8 per cent. of the cultivation and 95·7 per cent. of the cropped area are irrigated, and every 100 acres of irrigated land produce 108·2 acres of crops, and the percentage of cropping to cultivation on all soils is 107·2. As can be seen from the system of cultivation, the dofasli lands are capable of yielding higher proportion of double crops than has been shown by the statistics. The kharif and rabi both are important harvests, though the former is the principal. Wheat, rice, maize, clover, mung, fruits, barley and kangni are the staple crops. The outturn of maize in the buffer hamlets is the highest in the valley, and the soil and the climate are eminently fitted for the culture of potatoes, of which very little was sown during the present Settlement from fear of assessment. The kamins' dues are paid by tenants, who are as a rule self-cultivating proprietors as well. Irrigation is fairly abundant for dofasli lands, and irrigated area mostly dofasli has increased since the last Settlement by 35·8 per cent. and total cultivation by 21·3 per cent. The average proprietary holding is 2·4 acres and average cultivation per owner is 1·44 acres (see paragraph 22). The percentage of area cultivated by owners themselves is 81·3, and average cultivated area per plough is 5·8 acres. Of the total proprietary cultivation 9·4 per cent. has been mortgaged and 5 per cent. sold, and only 1·4 per cent. alienated to money-lenders both by sale and mortgage. The mortgage value of the land has risen from Rs. 90 Kabuli per cultivated acre at last Settlement to Rs. 238 Kabuli per cultivated acre now, and the sale value has also gone up from Rs. 138 Kabuli to Rs. 202 Kabuli per cultivated acre.

The incidence of present land revenue on cropped area is 11 annas per acre, but the half net assets estimate is Rs. 4-4-8 per acre.

There are many points which require consideration in determining the pitch of assessment of this circle :—

- (a) Occasional failure of snowfall and rains in summer.
- (b) Frequent occurrence of hail, which sudden atmospheric changes above the snow line may bring on any time to the detriment of the ripening crop at the foot of the Sufed Koh. Remission for the damage can never compensate the zamindar for the

loss of the harvest, and even in cases of partial injury the damage in the green crop is not visible for remission, but it makes itself felt all the same in deficient outturn.

- (c) Insufficiency of manure, a considerable quantity of which is left rotting at Shabak.
- (d) Excessive cold in winter, on account of which grazing of cattle on the hills and course of trade have to be stopped for months.
- (e) Minuteness of individual possession and pressure of population consisting mostly of Bangashes and Sayads rendered lazy by humid climate and their calling.
- (f) Water-supply amounting to one-eighth of irrigation in Malana and about one-fourth to one-sixth irrigation in Zeran has been taken for cantonment requirements without any adequate return, and this has very much affected the ekfasli cultivation in these two villages.
- (g) First assessment of hamlets that have never paid any revenue so far.
- (h) This is the nearest circle to the head-quarters of the valley for occasional calls for service.

After giving due weight to the advantages and disadvantages attaching to this circle I propose to reduce the half net assets crop rates by 40 per cent., and then to suggest the rates according to conditions of different soils which should be adopted in determining the assessment of the circle. The total revenue and the rates resulting from this method have been shown below :—

Soil	Half net assets crop rates reduc- ed by 40 per cent.	Proposed crop rates	Resultant revenue.	Arithmeti- cal soil rates.	Proposed soil rates.	Resultant revenue.
	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.	Rs. A. P.	Rs.
Chashmai dofasli	2 13 5	2 15 0	29,824	3 4 8	3 4 0	29,452
„ ekfasli	2 2 8	2 1 0	7,416	1 3 6	1 5 0	8,081
Barani	0 15 7	1 0 0	746	0 14 2	0 11 0	578
Total	2 9 2	2 9 11	38,016	2 6 0	2 6 0	38,061

The chashmai ekfasli lands of Zeran and Malana for want of water-supply, part of which is taken up for the Parachinar Cantonment, are no doubt poor, and the percentage of cropping on them does not exceed even 40. But the corresponding soil in the villages of Shalozan and Peiwar yields better crops, the percentage of matured to cultivated area being over 70. Besides, 327 acres of chashmai ekfasli area are occupied by valuable gardens, and the crops in the Mangal hamlets are above the average. Hence chashmai ekfasli rate has been raised to 21 annas per acre. Similarly to balance the good barani crops of the western glens against the ordinary and in places poor crops of the eastern glens and the north-west plain of Kirman Tappa, the unirrigated rate has been lowered to 11 annas per acre.

The chashmai dofasli rate requires no explanation.

The total demand of Rs. 38,061 resulting from these rates is 61 per cent. of the half net assets estimate, but 3·2 times the existing revenue and twice the demand of the Summary Settlement.

The soil rates on corresponding soils in the China Circle of the Kohat District are much higher than those proposed in this circle, which is far superior to the former, but considering all the circumstances it will not be safe or proper to take more than the suggested assessment, which is the first regular demand that is being made in the valley, whereas in Kohat the present Settlement has been preceded by many others before.

Proposed assessment, Sahra Circle.

47. The half net assets of the Sahra Circle and the resulting crop rates are as follows :—

Soil.	Average area of crops in last two years, excluding fodder crop.	Half net assets estimates.	Half net assets crop rates.		
	Acres.	Rs	Rs.	A.	P.
Chashmai ekfasli	1,323	3,259	2	7	5
Barani	754	726	0	15	5
Total	2,077	3,985	1	14	8

The assessment of the circle at the Summary Settlement, when the Kabuli rupee was worth $12\frac{1}{2}$ annas British, was Rs. 471, but at present, when the value has fallen to 8 annas per Kabuli rupee, it is Rs. 294. The half net assets estimate, therefore, gives an increase of Rs. 3,691, or $12\frac{1}{2}$ times the present demand and $7\frac{1}{2}$ times the demand of the Summary Settlement.

It is impossible to take anything like the increase brought out by the half net assets estimate. This circle at the last Settlement was no doubt grossly underassessed, but still it is not so rich in its resources as to bear such a heavy enhancement. The tract lies in the north-western portion of the valley on a stony plateau with its cultivation dependent on the drainage from the hills or borrowed irrigation. One village lies close to the border, and the majority of the owners—Duperzais—are a turbulent class of people, who are not so well off, and in two villages have so far been conciliated by the grant of inams far exceeding their revenue. Profits from stock and income from service are very limited, and there is not much miscellaneous income for meeting emergencies. The cultivable waste amounting to 26.5 per cent. of cultivation consists of dry stony soil and requires continued hard labour and some expense before it can yield any profit to the owners. The idea of sinking tanks to catch drainage running down the slope, and thus serve as reservoirs of irrigation, though excellent in itself, has not yet found favour with these people. All these facts point out to some consideration in assessment. But the old assessment was so unduly low and so unequal in its incidence that statistics collected in this Settlement amply justify a fair increase on the old demand.

The chashmai ekfasli rate at the Summary Settlement was $1\frac{1}{2}$ to $2\frac{1}{2}$ annas British per acre, whereas unirrigated rate per acre amounted to $4\frac{1}{2}$ annas British. Then 202 acres chashmai ekfasli land in Totaki and 337 acres unirrigated area in villages Totaki and Shinai had been kept out of assessment altogether. Now 58.5 per cent. of the cultivation and 64.7 per cent. of the cropped area are irrigated, and every 100 acres of irrigated land produce 75 acres of crops, and the percentage of cropping to cultivation on all soils is 68. The rabi is the principal harvest, and wheat, kangni, maize, mung, and barley are the chief crops. The outturn of wheat and maize is fair, as the drainage of hill torrents is conveyed on to fields by channels for the benefit of the crops. The kamins' dues in this circle are all borne by tenants. Since the last Settlement the irrigated area has considerably increased by 255.4 per cent. and the total cultivation has gone up by 30 per cent. The holdings in this circle are the biggest in the valley, with 3.94 acres cultivated per holding and 2.58 acres cultivated

per owner (see paragraph 22). The average cultivated area per plough is 11·8 acres. The percentage of area cultivated by owners—87·5—is also the highest. Of the total proprietary cultivation 7·6 per cent. has been mortgaged and 2·6 per cent. sold, and only 1·8 per cent. alienated to money-lenders both by sale and mortgage. The mortgage value of the land has gone up from Rs. 55 Kabuli per cultivated acre at last Settlement to Rs. 78 Kabuli per cultivated acre now, and the sale value has similarly increased from Rs. 47 Kabuli to Rs. 78 Kabuli per cultivated acre.

The incidence of the present land-revenue on cropped area is Re. 0·2-1 per acre, but half net assets estimate is as high as Re. 1-14-8 per acre.

The Mastu Khels and Hamza Khels, who escaped assessment at the last Settlement in consideration of their having given land for the Parachinar Cantonment, are not entitled to further exemption now, as they are in good circumstances, and were besides paid at the rate of Rs. 64 per acre for the land acquired.

Taking all these matters into consideration, I propose to reduce the half net assets crop rates by 50 per cent., and to further modify the resulting rates according to individual circumstances of soils. The total revenue and the rates connected therewith according to this method work out as follows :—

Soil.	Half net assets crop rates reduced by 50 per cent.	Proposed crop rates.	Resultant revenue.	Arith-metical soil rates.	Proposed soil rates.	Resultant revenue.
	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.	Rs. A. P.	Rs.
Chashmai ekfasli	1 3 8	1 1 0	1,406	0 11 9	0 12 0	1,439
Barani	0 7 8	0 9 0	425	0 5 0	0 5 0	425
Total ...	0 15 4	0 14 1	1,831	0 8 11	0 9 1	1,864

. Considering the uncertainty of borrowed irrigation, about which disputes constantly arise, the crop rate has been lowered to 17 annas per acre. But as the unirrigated area consists of ombanked fields with channels connected with the ravines, and thus corresponds to dagoba and bandiza soils of the Kohat District, I have raised the crop rate to 9 annas per acre.

The total demand of Rs. 1,864 thus obtained is 47 per cent. of the half net assets estimate, though $6\frac{1}{2}$ times the existing revenue and 4 times the assessment of the Summary Settlement.

The proposed soil rates are much below those on corresponding soils in the neighbouring Miranzai Valley, and it is impracticable to make any further reduction.

Proposed assessment, Rodghara Circle.

48. The half net assets of the Rodghara Circle and the resulting crop rates are as follows :—

Soil.	Average area of crops in last two years, excluding fodder crops.	Half net assets estimate.	Half net assets crop rates.
		Rs.	Rs. A. P.
Chashmai dofasli	3,551	15,937	4 7 10
ekfasli	946	3,576	3 12 6
Abi dofasli	15,280	77,260	5 0 11
ekfasli	3,089	13,197	4 4 4
Barani	241	213	0 14 2
Total	23,107	1,10,163	4 12 4

The assessment of the circle at the Summary Settlement, when the exchange value was 12½ British annas per Kabuli rupee, was Rs. 28,402, but at present when two Kabuli rupees are taken as equivalent to one British rupee, it is Rs. 19,336. The half net assets estimate therefore gives an increase of Rs. 90,847, or 4·7 times the present demand and 3·2 times the revenue demand of the Summary Settlement. The measurement records show that 97·1 per cent. of the cultivation and 99 per cent. of the cropped area are irrigated, that every 100 acres of irrigated land produce 138·4 acres of crops, and that the percentage of cropping to cultivation on all soils is 135·7.

The kharif is the leading harvest, and the principal crops are wheat, rice, maize, clover, mung and barley. Like the Daman Circle, irrigation for dofashi cultivation is abundant, as the springs and the swamps along the banks help to maintain a continuous stream in the river. The general custom is that the water-supply of a channel is utilized at the same time from the head to the tail (sar-i-warq to pain-i-warq) by all the villages irrigated by it. In cases of some channels with limited water-supply the irrigation for rice cultivation is divided over villages concerned by turns. Since the Settlement the increase in the irrigated area entirely under the dofash class has been 39·7 per cent. and in the total cultivation 38 per cent. The average proprietary holding is 2·8 acres and the average cultivation per owner is 2 acres. The percentage of area cultivated by owners themselves is 79·2 and the average cultivated area per plough is 3·1 acres. Of the total proprietary cultivation 16·3 per cent. has been mortgaged, 5·2 per cent. sold, and only 1·4 per cent. transferred to money-lenders both by mortgage and sale. The mortgage value of the land has risen from Rs. 142 Kabuli per cultivated acre at last Settlement to Rs. 278 Kabuli per cultivated acre now, and the sale value has also increased from Rs. 254 Kabuli to Rs. 282 Kabuli per cultivated acre.

The incidence of the present land revenue on cropped area is Re. 0-12-6 per acre, but the half net assets estimate is Rs. 1-12-4 per acre. This is the largest and the richest circle in the valley. The central belt called Sanger constituting a little more than two-thirds of the total cultivation in this circle possesses the best soil, consisting of fertile loam annually enriched by fresh deposits of silt, and is highly productive, as crops grown on it have been known to yield as much as 40 maunds rice and 20 maunds wheat per acre. The soil in the Lower Kurram is very well suited for the cultivation of sugarcane, which awaits a trial to make it a successful and remunerative crop. Profits from stock and income from service together can pay off a little more than one-half of the half net assets estimate. This excludes from account gains from the sale of mazri. The holdings are somewhat larger than those of the Daman Circle, and there is ample grazing and fodder for the cattle. Difficulties of manure and liability to damage by hail do not exist here at any rate to the extent they are found in the Daman Circle. Water-supply too never fails to the degree it does in the latter tract. Thus the Rodghara Circle is superior to the Daman in better quality of soil, better stock of cattle and manure, and comparative immunity from hail and drought; and perhaps the sale of mazri might some day overtake the sale of timber, but the latter circle far outdistances the former in the way of miscellaneous sources of income—particularly in regard to its fruits and service in the Militia. Nor can the plain river match the romance of the forest and the snow-clad hills. But apart from this comparison there are other counter balancing circumstances which affect the assessment of this circle, and have been considered below one by one:—

- (1) This circle has got the longest border line, touching the country of the independent tribes and the territory of the Amir, and is therefore as compared with the other circles exposed to greater risks of raids from the Para Chamkannis and Massuzais on the east and Jajis of Khost on the west. The towered hamlet not found in Sahra and rare in Daman is the characteristic type of the village house in this circle, and is a visible mark of the insecurity of life here. The people of this tract have therefore to play the rôle of the Wardens of the Marches in protecting the right and the left of the valley, and are as such entitled to liberal consideration.

- (2) The heavy indebtedness of the Wattizai Zaimusht owners in connection with the Chinarak episode mentioned before.
- (3) The entertainment of tribal jirgas in and about Sadda.
- (4) The helpless condition of the owners on the right bank of the river from Gidara to Ghardiwar, who for want of energy in themselves and help from their brethren have to depend entirely on Khostwal tenants. The latter do not own any land nor have any other stake in the valley. Hence they take advantage of their position and extort better terms from their masters. This is the only part of the circle where kamins' dues are paid to any extent out of the common heap, and deductions for which from the Government share, even including the crop-watchers' and crop-reapers' rates, will fall at rates varying from 2 to 3½ per cent.
- (5) Against the excessive cold of the Koh-i-Daman Circle there are the severe biting cold winter winds which considerably interfere with the progress of agricultural operations.
- (6) The cattle in the swamp of Bushahra do not last long, and frequent renewal of stock is a great drain on the resources of the people of this tappa.
- (7) The closure of the Kharlachi Canal, which has deprived 234 acres of the Duperzai lands of irrigation.
- (8) The frequent breaches in embankments caused by river floods and in water channels on the left bank by hill torrents rushing down with force.

Making allowance for all these factors I propose to reduce the half net assets crop rates by 45 per cent., and then to work out suitable rates according to circumstances of different soils to arrive at a proper assessment of the circle. The total revenue and the rates resulting from this method are :—

Soil.	Half net assets crop rates reduced by 45 per cent.	Proposed crop rates.	Resultant revenue.	Arithme- tical soil rates.	Proposed soil rates.	Resultant revenue.
	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.	Rs. A. P.	Rs.
Chashmai dofasli	2 7 6	2 9 0	9,099	3 10 0	3 4 0	8,154
„ ekfasli	2 1 3	1 15 0	1,833	1 10 9	1 5 0	1,440
Abi dofasli ...	2 7 10	2 12 0	42,020	4 0 3	4 2 0	43,185
„ ekfasli .	2 5 7	2 4 0	6,965	1 15 0	2 0 0	7,198
Barani ..	0 7 10	0 8 0	121	0 3 9	0 3 0	98
Total .	2 10 0	2 9 7	60,038	3 4 9	3 4 10	60,075

The productive capacities of different soils in this circle have been discussed in paragraphs 30 and 42, and hence any detailed discussion of rates is not called for here. The barani soil is the poorest, and has been assessed at a low rate. The rates of chashmai lands for reasons given in the same paragraph have been kept the same as in the Daman Circle. And although there are not many fruit gardens on chashmai ekfasli land in the Rodghara Circle, the comparative permanence of water-supply and greater area cropped under rice justify the rate imposed. The abi dofasli soil has been assessed at the highest rate adopted in the valley. And

considering the crops taken and their rates of outturn, the rate of abi ekfasli soil has properly been kept a little under one-half of the dofasli rate. And in view of the chashmai ekfasli lands in Bushahra Tappa and Zeran and Malana and the chashmai dofasli lands in Tappas Ahmadzai, Sultan and Shalozan and Zeran, the proportion of rates between these two classes of soils agrees with one's impression of their respective capacities and seems quite suitable. The Toi Circle of the Kohat District is the only tract that makes a nearest approach to the conditions of this circle, but the soil rates proposed in the latter are much below those adopted in the former, except on abi ekfasli soil, which area for area yields more and much better crops.

49. The following two tables give for purposes of convenient comparison the crop and soil rates now proposed for sanction :—

Summary of rates.

Crop rates.

Soil.	Koh-i-Daman.	Sahra.	Rodghara.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Chashmai dofasli ...	2 15 0	...	2 9 0
„ ekfasli ...	2 1 0	1 1 0	1 15 0
Abi dofasli ...	...	...	2 12 0
„ ekfasli ...	...	...	2 4 0
Barani ...	1 0 0	0 9 0	0 8 0
Average incidence ...	2 9 11	0 14 1	2 9 7
Resultant revenue ...	38,016 0 0	1,831 0 0	60,038 0 0

Soil rates.

Soil.	Koh-i-Daman.	Sahra.	Rodghara.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Chashmai dofasli ...	3 4 0	...	3 4 0
„ ekfasli ...	1 5 0	0 12 0	1 5 0
Abi dofasli ...	...	...	4 2 0
„ ekfasli ...	...	...	2 0 0
Barani ...	0 11 0	0 5 0	0 3 0
Average incidence ...	2 6 0	0 9 1	3 4 10
Resultant revenue ...	38,061 0 0	1,864 0 0	60,075 0 0

50. Without going into elaborate calculations, the following estimate has been prepared on broad lines showing the outturn of food grains as given in Appendix H, the extent of local consumption, and the surplus available for export or sale in the valley :—

Surplus produce estimate.

Infants under two years as non-consumers of food grains and the regular force transferred from the valley in 1902 have been excluded from the figures of population; which include the small number of Ghilzais, who are constant visitors and have made this valley their home as it were for the winter.

The Kurram people eat three times in the day, and their staple food is "khichri" (rice and mung cooked together), with some ghi and curd or buttermilk. On account of the good climate and an active out-door life they eat a great deal more than other people in the Province, and the annual consumption would not in any case be under 7 maunds per head.

The quantity of seed sown per acre on irrigated area, which forms a little more than nine-tenths of the total cultivation, is also larger and has been estimated at 8 per cent. of the total production.

The kurkha and the shaftal are exclusively fodder crops, and as they form $\frac{1}{10}$ th of the total cropping, the necessity of using other green crops for consumption by cattle does not arise here. The mules, the donkeys and the horses are the only animals that are given an allowance of barley, and as they are stabled in the snow season, the total consumption under this head has been estimated at 8 per cent. of the total outturn. Wastage has been calculated at 5 per cent. of the production and rice has been taken in its husked form throughout the account.

Population according to census of 1901, excluding the regular force transferred and infants under two years ..		50,666 souls.
Total matured area under food grain		39,217 acres
Total outturn of food grains		492,307 maunds or 17,225 tons.
Consumption.	Food at 7 maunds per head per year	12,666 tons.
	Seed at 8 per cent. of total production	1,378 tons.
	Cattle at 8 per cent. of total production ..	1,378 tons.
	Green fodder ..	Nil.
	Wastage at 5 per cent. of total production ..	861 tons.
Total ..		16,283 tons.
Surplus available for sale and export		942 tons, chiefly rice, worth Rs 63,467-4-0 at 38½ annas per maund.

NOTE.—The percentages of consumption adopted above are based on those reported by the North-West Frontier Administration to the Government of India in their letter No 197 G, dated 29th January 1904.

Thus the valley is not only self-supporting, but can afford every year a surplus of 942 tons consisting entirely of rice, which is the only staple that is extensively grown and can be exported. Leaving out of account the exceptional year 1903-04, when large quantities of maize were brought up to this valley and transported to Afghanistan, imports of grain are very rare. The trade accounts of the last five years on the other hand show an average annual export of 263 tons of husked rice, the remaining surplus having been used by the trans-border tribes. At the price of 38½ annas per maund of husked rice the total value of the surplus would amount to Rs. 63,467-4-0. Profits from sale of timber, maize and fruits and from stock and carrying trade and income from Militia service are additional sources whereby the valley is made prosperous, and this makes it clear that, notwithstanding their rough and risky frontier life, the people have got enough and to spare for extravagant expenditure on marriages and jirgas.

51. In a country of such marked gradients and abundance of water-supply, water mills have naturally formed a valuable source of State revenue ever since the Durani times. They are used mostly for grinding wheat and to

Water mills.

a less extent maize, but the application of water-power for working the *pekoh* (a mechanical arrangement for separating rice from the paddy), as is done in the Manshra Tahsil, has never been attempted here so far and deserves a trial. New mills cannot be constructed without the previous sanction in writing of the Political Agent, and permission is withheld or granted according as enquiry might show whether rights in existing mills and system of irrigation in force will in any way be prejudiced or interfered with thereby or not.

In this valley the site and the mill including the hut, the wooden duct and other accessory structures all belong to one and the same man, who pays for the material, such as stone and wood work, &c., as well as the charges for building. The mill is generally worked by a servant (called *mazdur* or *barigar*), and ordinary repairs are carried out by the carpenter. Each of the two by way of remuneration is allotted in equal shares a certain proportion of the assets,—say 1 out of 4, 5 or 6 days' income according to the capacity of the mill,—and the remaining is appropriated by the owner, who is solely responsible for all other expenses connected with the clearance of the channel and periodical renewal of old appliances. There are a few exceptional tenures in respect of small mills, which are briefly summarized as follows:—

- (a) In a few villages the mills are leased with the rest of the village for one consolidated lump sum of money.
- (b) In some villages the owner himself attends to the mill and does not engage any *mazdur*.
- (c) In others the owner does what little repairs are required, and does not engage a carpenter.
- (d) In a few more villages the owner does both duties—those of the “*barigar*” and the carpenter—and appropriates the whole profit to himself.

These peculiarities are found much more in the Daman than in the Rodghara Circle.

The grinding charges are $\frac{1}{20}$ th share for wheat and $\frac{1}{8}$ th for maize. The common form of tenure is that out of 5 days' income 2 days' earnings are shared by the *barigar* and the carpenter equally, and 3 days' assets are taken by the owner. In some cases carpenters are paid these wages in cash annually, or each time their services are called into requisition.

At the last Settlement there were 230 mills as shown in Appendix J, of which only 195 had been assessed at Rs. 3-8-0 Kabuli or Re. 1-12-0 British each, and the revenue of 17 mills amounting to Rs. 59 Kabuli had been remitted and 18 had been left out of assessment altogether.

But during this Settlement the number of mills has been found to be:—

196	assessed at Rs. 3-8-0 Kabuli each :	total revenue Rs. 686-0-0 Kabuli.	
12	ditto Re 1-12-0 „ „	ditto „ 21-0-0 „	
1	ditto „ 1-8-0 „ „	ditto Re. 1-8-0 „	
5	ditto lump sum rate	ditto Rs. 15-12-0 „	
27	ditto Rs. 3-8-0 Kabuli each :	ditto „ 94-8-0 „	the revenue of which is remitted by the Political Agent for 10 and by Government for 17 mills.

60 mills not assessed at all though at work.

301, of which 28 are not at work.	Total	...	Rs. 818-12-0
-----------------------------------	-------	-----	--------------

A record of rights has now been drawn up for each mill, which shows the interests of different persons concerned in the working of the mill and the assets and liabilities of the owner. A register in English has also been drawn up. It is proposed to impose differential assessment according to the capacity of each mill, and the result of the enquiries made by circle officers about the profits of the owners has been arranged below by circles :—

Assessment circle.	Number of mills	Revenue	Gross income as reported by circle officers	DIVISION OF INCOME		Net profit
				Miller and carpenter.	Clearing channel and cost of instruments	
			Rs	Rs	Rs	Rs.
Daman in 32 villages	Former 110	Rs 379 Kabul	..			.
	Present 111	Assessed at Rs 967	} 17 319 (British)	} 5 554 (British)	} 1 013 (British)	} 10 752 (British)
	51	Unassessed				
	Average per mill	Rs 3-5-0 Kabul	106 14 6	34 4 7	6 4 1	66 5 11
			Rs	Rs	Rs.	Rs.
Rodghara in 48 villages	Former 85	Rs 300 Kabul	..			
	Present 102	Assessed at Rs 357	} 10 404 (British)	} 3 613 (British)	} 672 (British)	} 6 209 (British)
	9	Unassessed				
	Average per mill	Rs 3 8 0	94 8 8	32 8 10	6 0 10	55 15 0 (British)
Total net income to owners			..			Rs 16,961

The standard of assessment adopted in Peshawar was $\frac{1}{4}$ th of the estimated income in kind and $\frac{1}{4}$ th of the gross income in cash, but the actual assessment was well below this limit. The assessment on the Kohat and Hangu mills approved by the Hon'ble the Chief Commissioner in his review amounted to a maximum of $\frac{1}{3}$ th of the gross income, but $\frac{1}{4}$ th of the net profits to the owners. In a country like Kurram, where the former assessment on each mill does not exceed Re. 1-12-0 British and the total assessment on all mills is a little over Rs. 400 British, it will be impossible to take more than Rs. 2,000 or $\frac{1}{4}$ th of the total net profits. In the Kohat Settlement the proportion of the increment on the demand of the regular settlement was about 300 per cent., and in assessing the mills of this valley it is suggested that power might be given to defer the increase above 300 per cent. for the period of 5 to 10 years according to individual circumstances. Some of the mills have already been inspected and others will be seen when the remaining village assessment

notes are written up. Besides the supply of grain and water-power available, the following points will be borne in mind in judging the capacity of each mill:—

Length of the wooden duct, which in this valley varies from	7 to 30 feet.
Breadth of the wooden duct, which in this valley varies from	4 to 14 inches.
Diameter of the stone which varies from	1 foot 1 inch to 4 feet.
Depth of the stone which in this valley varies from	2½ to 8 inches.
Grinding capacity in one hour which varies from	1 seer to 37½ seers.
Working period which varies from	3 to 12 months.

An average mill costs Rs. 40 to Rs. 75 British, and the materials last for 5 to 7 years. Spreading the cost over this duration the expenditure on renewal of appliances, including annual repairs and clearances, varies between Rs. 8 to Rs. 20 according to the position and capacity of the mill. The net owners' profits for the same reasons fluctuate between Rs. 2 and Rs. 281 British per year.

some instances of these amiable virtues. It is indeed fortunate, that religion has penetrated these fastnesses, impervious to human power, and spread her influence over solitudes where human laws are of no avail; that where precaution is impossible, and resistance useless, she spreads her invisible Ægis over the traveller, and conducts^{*} him, secure under her protection, through all the dangers of the way. In fact, while rapidly skimming the edge of a precipice, or winding cautiously along under the loose masses of an impending cliff, he trembles to think that a single touch might bury him under a crag precipitated from above, or the start of a horse, purposely alarmed, hurl him into the abyss below, and give the ruffian a safe opportunity of preying upon his plunder. When in such situations the traveller reflects upon his security, and recollects that these mountains, so savage, and so well adapted to the purposes of murderers and banditti, have not in the memory of man, been stained by human blood, he ought to do justice to the cause, and gratefully acknowledge the beneficent influence of religion.

Impressed with these reflections, he will behold with indulgence, perhaps even with interest, the crosses which frequently mark the brow of a precipice, and the little chapels hollowed out of the rock where the road is narrowest: he will consider them as so many pledges of security, and rest assured, that as long as the pious mountaineer continues to adore the* *Good*

* *Pastor bonus, Mater dolorosa*; such are the titles often inscribed over those rustic temples; sometimes a whole sentence is subjoined, as, *Pastor bonus qui animam suam dat pro ovibus suis*. Under a crucifix on the brow of a tremendous crag, I observed some lines taken from the *Dies Iræ*, a funeral hymn, which, though

The light assessment of the Duranis, lightened still by Mr. Merk's under-assessment, makes it impossible to take the proposed assessment in full, although it is only a little over one-half of the half net assets estimate. Considering the increase in irrigated area, total cultivation, and especially in double cropped area, increased facilities of communication, establishment of peace and order, general development of the country from what it was on the first occupation of the valley 13 years ago, and designedly light summary assessment on a most fertile tract, which was indispensable at the time for settling a disorganized people, the enhancement now proposed is, I think, justified. The half net assets estimate has been based on fairly moderate factors, from which fodder crops have been entirely excluded, and even from this demand the people have been let off 43 per cent. for several considerations noted before. There is no reason for showing further leniency, as the Government has hitherto spent considerable sums of money, far exceeding the receipts from land revenue, and the people must now be expected to share in part the cost of the administration of the valley.

But the assessment proposed is so much in excess of the present demand that the most important question is how to make the burden of the people easier for them and to adjust them to their environments. The position is exactly what it was in the reassessment of the adjoining Bar Miranzai Valley. In both the local Khans or Maliks had for long had the practical governing power centred in their hands, and it was about the same time (1892, *i.e.* with the occupation of Samana) that both the valleys quite recently were brought under proper control. The reassessment had been preceded by a Summary Settlement there as well as here, and former assessments had intentionally been kept low in both the tracts. The results of the reassessments of both the valleys are shown below :—

	Old demand.	Half net assets estimate.	ACTUAL DEMAND REALIZED.		
			At once.	5 years after.	10 years after.
	Rs.	Rs.		Rs.	
Bar Miranzai ...	7,318	34,588	Rs. 16,000, or 46 per cent. of net assets and 66 per cent. of actual assessment.	20,000	Rs. 24,000, or 69 per cent. of net assets.
Kurram Valley ..	31,435	1,76,417	Rs. 70,000, or about 40 per cent. of net assets and 70 per cent. of actual assessment.	85,000	Rs. 1,00,000, or 57 per cent. of net assets.

The resemblance in the political and financial aspects is so close that, following the precedent of Bar Miranzai, I have to propose, as shown above, the remedy of progressive assessment to temper the pitch of the enhancement, portions of which might be deferred for a period of five to ten years. Thus the initial demand of Rs. 70,000 will be 40 per cent. of the half net assets estimate, 70 per cent. of actual assessment, and a little more than $2\frac{1}{2}$ times the existing revenue, and the final demand will be nearly $\frac{2}{3}$ ths of the net assets.

My arguments in support of this proposal are :—

First.—The progressive assessment will by previous notice enable the people to curtail their extravagant expenses according to their new requirements. To convert the prodigal Turis in a day into economical "riyaya" would be as hopeless as to

expect them to start an independent Republic after generations of subjugation to Afghanistan. To build any schemes on the former idea will be to court failure, and would result in the fulfilment of the latter idea, as proved by the well known course of events from 1880 to 1885.

Second.—The Kurram Valley is in the early stages of being opened out to outside influences, and it is expected that with the introduction of the railway in the near future trade will develop and prices of agricultural produce will rise. Thus deferred enhancements will come into effect at a time when the resources of the people will have been strengthened by additional assets, and the increased demand of $3\frac{1}{2}$ annas and 2 annas per rupee of land revenue falling due at the quinquennial stages of prosperity will not be felt by the people.

Third.—If the progressive assessment proposed be spread over a period of 25 years, it will amount to 91 per cent. of the proposed full assessment, or a sum of Rs. 91,000, instead of one lakh of rupees in the year and about 52 per cent. of the half net assets estimate. Of the alternative whether to take progressive assessment or Rs. 91,000 a year all at once, both of which in final results amount to the same thing, the former appears to be advantageous to the people in the way of gradual increase insisted on by the Government of India in their Land Revenue Policy Resolution (see paragraph 34 of Land Revenue Policy Resolution, January 1902) and to the State in providing a better starting point for the next Settlement. The latter alternative raises the demand to nearly 2.9 times the existing revenue, and brings it nearer to one lakh than to Rs. 70,000. The people, ignorant of compounding progressive payments and wanting in foresight to judge of future benefits, would not look to insecurity of life and property and other irregularities prevailing in neighbouring countries, but would compare in their minds their immediate high revenue with the freedom from assessment in Yaghistan and light cash charges on land commonly quoted as Rs. 2 Kabuli per jarib in Afghanistan. This is a frame of mind to which they should not be driven as far as possible, and should be left to gradually prepare themselves for their eventual responsibilities.

Fourth.—The fact that the people require time to arrange their transactions in the British rupee may also be taken into consideration.

The suggestions made for progressive land revenue assessment may be held to apply to mill assessment as well.

53. The fruit trees are to be found more or less in 74 villages,—35 in the Daman, 5 in the Sahra, and 34 in the Rodghara,—and the area occupied by gardens is 400 acres, of which only 4 acres are barani and the rest chashmai or abi ekfasli. But the most important orchards are confined only to four villages,—Shalezan, Peiwar, Zeran and Malana,—with area varying from 20 to 157 acres. The gardens in the remaining villages are between 1 to 8 acres in extent. At the last Settlement they were assessed at 8 annas to Rs. 3 per acre, but during this Settlement gardens now in existence will be assessed with the soil, and according to their respective values a fair share of assessment will be put on them in the village distribution, and young and old plantations will receive consideration at the same time.

54. The system of protective leases in the strict sense of the term has not been in force in this valley. But concessions to improvements made with the help of takavi loans or outlay of private expenditure have been given

in the shape of exemption from assessment for one or two years, and of favourable assessment thereafter for a couple of years only. But this limited grace for a short term has acted very harshly on some deserving cases. With the re-assessment, which, though well below the theoretical standard, is still considerably above the existing demand, it will be advantageous to the Government and the zamindars to protect reclamations from waste and improvements in irrigation for a longer period and on a more liberal scale than has been the custom heretofore. I would suggest that sanction might be given for the grant of protective leases for periods varying from 10 to 20 or 25 years according to the nature of improvements. The number of villages where such concession may be required will be very few,—Sangina, Bagan, &c.,—but the principle will be very much appreciated by the people and will have a re-assuring effect. The amount of revenue to be postponed under this head cannot be exactly determined now, but will not be above Rs. 500.

55. The question of frontier remission at a certain percentage of the land revenue assessed to some of the villages that more than others have to look after the accommodation of the tribal jirgas, or on account of their exposed position have to undertake the duties of repelling raids and guarding their crops and cattle, is under consideration, and will form the subject of a separate reference.

Takavi loans.

56. Since last Settlement the following amounts have been granted in takavi loans :—

	<i>For land improvement.</i>	<i>For seed and cattle.</i>
	Rs.	Rs.
1893—1900	23,886 Kabuli	420 Kabuli.
1900—1905	5,201 „	12,041 „

Four-fifths of the sum under land improvements has so far been spent on building hamlets or “ Killai,” and the remaining one-fifth has been devoted to objects connected with irrigation, such as the construction of water channels and embankments and their repairs. During the first two years of the British administration, when Lower Kurram was lying a blackened mass of ruins, the rebuilding of hamlets was a very important object, and a little more than one-half of the total amount granted under this head during the last twelve years was given away during the first two years.

As regards the amount under seed and cattle, nothing whatever was paid in the first four years. But the subject has received much greater attention during the last three years, and the principal part of the grant has been devoted to loans for cattle. Now that most of the hamlets have been built and irrigation channels and embankments constructed, the plough oxen seem to be the chief necessity of the valley. They die in such large numbers that the Government has now sanctioned the establishment of a Civil Veterinary Dispensary and the appointment of a Civil Veterinary Assistant. The only other improvements required are that much larger sums should be lent for purchase of bullocks; that the rate of interest charged be made a little lenient; that applications should be disposed of with greater promptitude by Revenue Officers after personal enquiry and visit to the village, on proper surety without the intervention of Maliks or Patwaris and without summoning agriculturists to head-quarters. The combined charge of the Treasury and revenue work has hitherto interfered with this desideratum, but the appointment of a Naib Tahsildar will remove all difficulties from the way.

Applications for loans for bullocks should as a rule be decided within one month, and at least Rs. 3,000 British should be distributed under this head. A separate reference will be made on the subject of interest.

57. The Government is the sole proprietor of 13 villages and owns lands in 75 villages jointly with other proprietors. As regards the origin of possessions of the Crown, it has been stated in paragraph 11 that in Durani times the State acquisitions mostly consisted of over-assessed areas abandoned by the people. This will also serve to explain the general inferiority of the Government land, which is chiefly ekfasi. Since then other additions have been made by the following causes:—

- (1) Lands forfeited to Government in punishment for heinous crimes.
- (2) Lands escheated to Government in cases of succession to property.
The Dandar case, in which Sunni and Shiah reversioners were concerned, is a typical instance of such acquisition.
- (3) Waste land reclaimed with the grants of takavi advances.
- (4) Lands acquired by purchase for Government purposes.

The total cultivated Government area measuring 5,330 acres is held as follows:—

	Acres.	Rs.
Leased for lump sum rent in cash ...	765	1,815 Kabuli.
Leased at revenue rates—		
(a) With malikana ...	2,932	8,664 „
(b) Without malikana ...	1,565	235 „
Held without any rent in consideration of reclamation of waste ...	61	...
Held on fixed produce rent in kind in Dandar ...	7	..
Total ...	5,330	10,714 Kabuli.

The total cash assessment, including malikana, is Rs. 10,714 Kabuli against Rs. 11,372 Kabuli of the last Settlement. Five new villages—Wali China, Maidani, Chapri, Khapianga and Ahmadi Shama—were colonized since last Settlement. Only one occupancy tenant has so far been created on Government land in Ahmadi Shama, but Messrs. Merk and Barton have left notes from which it appears that they wanted to confer such rights on other tenants also. Such cases will be reported on separately along with the revised list of Crown lands and their tenures, and proposals will be made for striking off scattered and isolated small plots from that list, which through the mischief of Abdul Hadi, an Afghan official, had erroneously been shown as Government possession.

Under instructions from the Revenue Commissioner passed in the case of Mulla Bagh, the occupancy tenants will be charged a malikana of 25 per cent. and the tenants-at-will a malikana of 50 per cent. in addition to land revenue.

58. Miscellaneous taxes levied by the Duranis in addition to land revenue have been mentioned in paragraph 11. After correspondence contained in—

- (a) paragraph 21 of letter No. 64-P., dated 29th November 1892, from Mr. Merk, the Officer on Special Duty, to the Commissioner and Superintendent, Peshawar Division;
- (b) letter No. 300-P. of 29th January 1893, from Sir Richard Udny, Commissioner, Peshawar Division, to the Punjab Government;
- (c) letter No. 113 of 24th February 1893, from the Punjab Government, to the Government of India;
- (d) letter No. 639-F., dated 20th March 1893, from the Government of India, to the Punjab Government,

it was decided to abolish all but the following Durani taxes:—

- (1) Water mills assessed at Rs. 8-8-0 Kabuli per mill. These, though not mentioned in Mr. Merk's letter, had been included in the Commissioner's proposals.

- (2) Tax on artisans at the rate of Rs. 3 Kabuli per shop. These also had not been referred to in Mr. Merk's original letter, although the Commissioner had suggested their assessment at the rate of Rs. 3-8-0 Kabuli per head.
- (3) The poll tax on Hindus based on religious differences was converted into a tax on shopkeepers, whether Hindus or Muhammadans, at the rate of Rs. 2-8-0 Kabuli per shop. Mr. Merk had suggested a rate of Rs. 2 Kabuli, which was supported by the Punjab Government, but the Commissioner was in favour of a rate of Rs. 3-8-0 Kabuli. The idea underlying these proposals was to assess the income of those people who did not pay any land tax.
- (4) The tolls were afterwards abolished in 1902-03 and replaced by grazing dues (turni) on Ghilzai cattle.
- (5) Octroi duty on the lines of the Punjab system.

Mr. Merk noticed the first three taxes only in paragraph 16 of his Settlement Report and left the remaining two to be dealt with administratively.

The question of water mills on a system modified from uniform to differential assessment has already been discussed. The other charges being taxes on profession, cattle or trade, strictly speaking do not form part of the land revenue, and have therefore been omitted from the proposals in this report.

The taxes on artisans and shops have hitherto been levied in Kabuli rupees, but in future will, it is presumed, be levied in British rupees at the rate of exchange. It is not proposed to levy any other cess or tax at present. For convenience of reference a detailed account of shop and artisans' taxes mentioned in Mr. Merk's report has been given in Appendix J.

59. The current assessment expired with the kharif harvest 1903. On

Introduction and term of the Settlement.

receipt of orders on this report the new assessment will be introduced from

Kharif 1905. The question of the term of the Settlement requires careful consideration. The prospect of further extension of cultivation is very limited. The percentage of culturable waste to total cultivation in the valley as compared with similar figures of the Bar Miranzai Valley has been shown below :—

		Banjar jadid.	Banjar kadim.	Total.
Koh-i-Daman	..	1.4	6.1	7.5
Sahra	...	.3	2.0	2.3
Rodghara	...	1.7	5.1	6.8
Total	...	3.4	13.2	16.6
Bar Miranzai Circle in Hangu Tahsil	..	3.6	61.2	64.8

Much of this waste is of poor description, and is to be found in area exceeding 50 acres in—

the Daman Circle in villages Peiwar, Shalozan, Malana, Zeran, Mirdo Killa, Yardeh, Maidanak, Yusaf Khel ;

the Sahra Circle in villages Shinai, Totki, Bughdi, Kaohkina, Kara Khel, Safdar Sahra ;

the Rodghara Circle in villages Kharlachi, Nasti Kot, Kunj Alizai, Shakh, Taida, Malli Khel, Ahmadzai, Agra, Topakki, Ibrahimzai, Sangina, Balish Khel, Durani, Sadda, Ahmad Shah Killa, Bilyamin, Manduri, Chardiwar, Jalmai, Bagan and Thal.

The only other tracts which can be brought under cultivation are either stony Sahra by means of excavation of tanks, or waste stretches mentioned in paragraph 13 by taking out new canals at Mahum or other suitable places.

But all these schemes and projects have not passed the experimental stage, nor does the reclamation of culturable waste strike one as a profitable concern. Hence none of these can be counted upon as a basis for future enhancement. The development of timber, mazri, fruit and silk trade, rise in prices of agricultural produce, introduction of valuable staples such as sugarcane and turmeric, and improved cultivation of crops other than rice will be the chief grounds for the next revision of assessment.

During the first ten years from this Settlement, if the progressive system is approved, the enhancement in revenue and the development of local resources will keep pace with each other. And after the next ten years the people will consider it an inquisitorial proceeding if they are involved in the harassing operations of another Settlement. For these considerations the term of the Settlement should be at least 25 years, so that as compared with Bar Miranzai the people of this valley may gratefully see the regard shown to them, and at the same time, after the final enhancement, may have 15 years' breathing time to benefit from the increased prosperity of the valley. The dates at present in force for payment of the instalments of the revenue are—

Kharif—1st January to 30th June.

Rabi—1st July to 31st December.

This arrangement is very defective, as the process of recovery extends over the whole year, and not only wastes the time of the establishment, but has a very demoralizing effect on the zamindars.

Considering the time when grain is available for disposal by sale in both Upper and Lower Kurram, I recommend the following dates :—

Kharif—1st January to 31st January.

Rabi—15th July to 15th August.

60. That it is the first Assessment Report of the valley dealing with a revenue of Rs. 1,02,000, excluding malikana on Crown lands, based on the half net assets standard, is the only apology for the length of the report.

Matters on which orders are required.

Orders are solicited on the following points :—

- (1) Exemption from assessment of reclaimed area in river bed, which under local custom is held by tenants free of rent for three years, as recommended in paragraph 13.
- (2) The system of assessment sketched in paragraphs 44, 46 to 48, 52, 53 and 55 and the crop rates and subsidiary soil rates proposed in paragraph 49.
- (3) Assessment on mills (see paragraph 51).
- (4) The introduction of the system of protective leases (see paragraph 54).
- (5) Assessment of Crown lands (see paragraph 57).
- (6) Cesses (see paragraph 58).
- (7) The introduction and term of Settlement and the instalments (see paragraph 59).

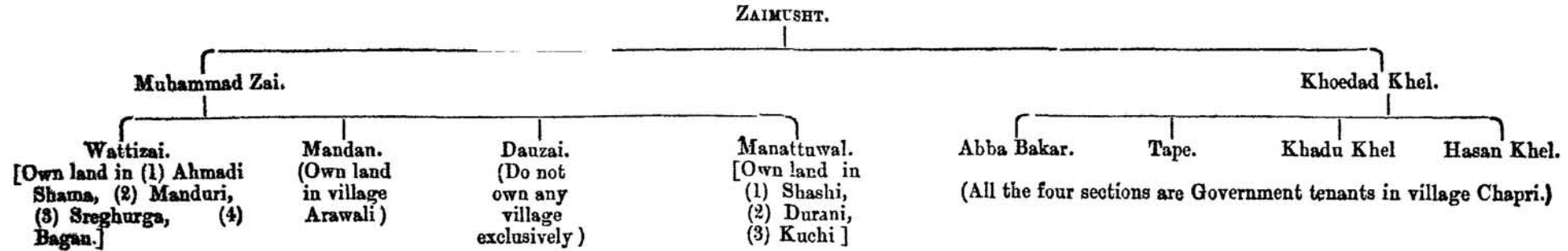
KURRAM VALLEY :
The 3rd October 1905. }

GANGA SAHAI, EXTRA ASST. COMMR.,
Assistant Settlement Officer, Kurram Valley.

I.

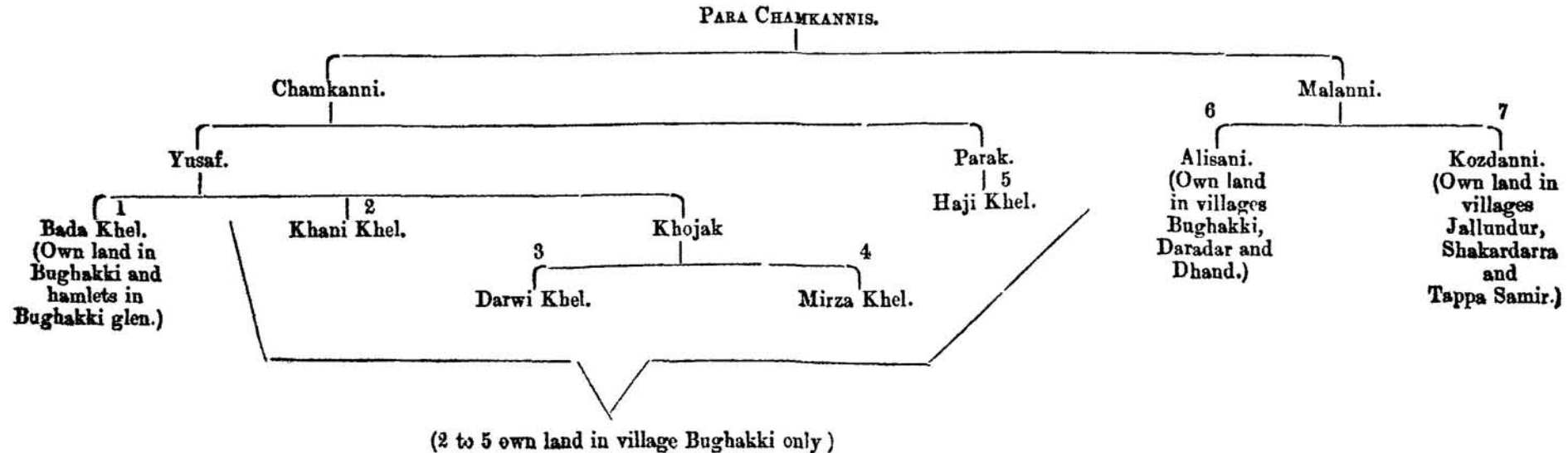
Divisions of the Zaimusht tribe and their proprietary villages.

[See paragraph 16.]



II.

Divisions of the Para Chamkannis and their proprietary villages.



III.

List of Political Officers of the Kurram Valley with periods of their charge.

[See paragraph 28.]

No.	NAMES.	From	To	REMARKS.
1	W. R. H. Merk, Esquire, C.S.I., LL. D.	29th Septr. 1892	25th April 1894.	
2	J. S. Donald, Esquire, C.I.E.	25th April 1894	8th March 1896.	
3	C. G. W. Hastings, Esquire, C.I.E.	8th March 1896	19th Septr. 1897.	
4	Major G. O. Roos-Keppel, C.I.E.	19th Septr. 1897	10th Augt. 1899.	
5	W. P. Barton, Esquire, C. S.	10th Augt. 1899	23rd Decr. 1902	F. P. Rennie, Es- quire, officiated for three months.
6	S. S. Waterfield, Esquire	23rd Decr. 1902		S. E. Pears, Es- quire, officiated for three months.

IV.

Glossary of Vernacular terms.

Vernacular.	English.
Abadi	Inhabited village site.
Bakhra	Share.
Bhusa	Wheat or barley straw.
Bori	Embankment or dam.
Bozghala	Rice nursery.
Cheri	A kind of hill shrub.
Chinar	Plane tree.
Chunda Wand	Division of land according to number of wives.
Dal	Pulse.
Ghujara .. .	A kind of wild plant used as fertiliser.
Hamsayah	Dependent.
Jam .. .	The limits of Malik's revenue responsibilities.
Kaba	A customary due paid by hamsayahs to their Naiks on births, betrothals, marriages, &c.
Kar begar	Customary service rendered by villagers.
Kurut .. .	Curdled milk.
Lalun	Weeding.
Mafi	Revenue-free grant.
Malik	Headman.
Mirab	An official who looks after irrigation arrangements.
Naik	Feudal lord.
Plarina	Ancestral rights in land.
Siyaha	Durani revenue account.
Spanda	(As in case of ghujara.)
Tappa	Tract.
Toi	Ravine or stream.
Vesh	Periodical redistribution of land or sub-division of village land.
Yaghistan	Independent territory.
Zamindar	Agriculturist.

APPENDICES.

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• APPENDIX A.

Calendar showing Correspondence of months.

No.	Christian year.	Sambat year also in use amongst zamindars of Kurram.	Pashtu year in common use amongst zamindars of Kurram.	Turkish year.
1	1st March ...	About 15th Phagan ...	Ashur ...	Mubarram.
2	„ April ...	Ditto Chetar ...	Safar ...	Safar-ul-Muzaffar.
3	„ May ...	Ditto Visakh ...	Neki or Awal Khor ...	Rabi-ul-Awal.
4	„ June ...	Ditto Jeth or Jauza ...	Dawayam Khor ...	Rabi-ul-Sani.
5	„ July ...	Ditto Har ...	Driyam Khor ...	Jamadi-ul-Awal.
6	„ August ...	Ditto Sawan or Wasa ...	Chalorum Khor ...	Jamadi ul-Sani.
7	„ September ...	Ditto Bhadon or Gup ...	Khudai Meashta ...	Rajab-ul-Marajab.
8	„ October ...	Ditto Assu ...	Rasul Meashta ...	Shaban-ul-Muazam.
9	„ November ...	Ditto Katik ..	Roza ...	Ramzan-ul-Mubarak.
10	„ December ...	Ditto Maghar ...	Wara Id Meashta ...	Shiwal-ul-Mukarram.
11	„ January ...	Ditto Poh ...	Khali or Tash Meashta ...	Zwil-kada.
12	„ February ...	Ditto Magh ..	Astar Id Meashta ...	Zwil-haj.

APPENDIX B (a).

Return of Rainfall, Kurram Valley, by Parachinar rain gauge.

Months.	1896-97.	1897-98.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	Average.
April .. ..	..	5.68	1.38	.45	3.73	1.34	8.12	4.69	2.40	1.79	2.46
May	1.10	2.27	2.44	1.18	2.20	5.13	1.52	4.21	1.94	2.95	2.49
June	1.50	2.73	1.58	.56	.76	1.42	1.34	1.60	1.30	.60	1.34
July	2.25	2.97	6.42	3.63	3.78	1.60	2.45	3.31	4.56	1.82	3.28
August	3.12	3.29	2.58	.99	2.86	2.21	1.24	1.88	2.65	...	2.31
September . .	3.79	.40	8.97	.53	2.23	2.88	.48	1.30	3.48	...	2.11
October .. ..	...	.08	.03	.48	1.35	.64	2.42	.44	1.92	...	.82
November	2.81	...	...	.42	2.03	...	.20	.41	1.78	...	.86
December .. ..	...	1.10	.11	1.55	1.18	.04	...	...	1.26	...	.58
January	2.03	.49	...	...	.07	...	...	.82	1.41	...	.54
February	1.47	1.04	2.51	1.81	.54	.54	.20	.06	.30	...	1.05
March	3.85	5.04	6.09	3.66	5.59	4.09	3.23	5.14	4.33	...	4.60
Total	21.42	26.89	27.11	15.26	26.32	19.89	16.29	23.86	27.34	7.16	22.44

APPENDIX B (b).

Return of Snowfall by Parachinar Meteorological Station.

Months.	1896-97.	1897-98.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	Average.
November	9	...	...	...	...	...	...	...	...	1'
December ... ..	...	19	45	1	7.12	...	...	.41	...	3.56
January	41.5	...	5	30	30	...	2.09	3.18	4.58	12.42
February	15	2.5	2.5	2	9.23	...	...	.15	.73	3.57
March	1	.25	.25	...	...	...	3.25	.86	3.17	.86
Total	63.5	21.75	7.75	33	48.35	...	5.32	4.55	7.48	21.41

APPENDIX C.

Statement of Remissions and Suspensions granted for damage done by hail and drought.

1	2	3	4	5	6	7	8	9	10
YEAR.	REMISSION.				SUSPENSION.				REMARKS.
	Koh-i-daman Circle.	Sahra Circle	Po ghara Circle	Total.	Koh-i-daman Circle	Sahra Circle	Po ghara Circle	Total.	
1895-96 ..	1,044 836 H	23 18 D	19 15 H	1,086 569 { 15 D 551 H					
1896-97 .	512 384 H	123 92 H	1,144 858 H	1,779 1,314 H	.		..	...
1897-98 ...	..		.		.	.
1898-99 ..	65 41 H		..	65 41 H					
1899-1900 ..	289 151 { 74 D 107 H		603 377 H	892 558 { 74 D 454 H		.	.	.	
1900-01 ...	..	103 64 H	86 54 H	189 116 H					
1901-02 ...	...	..	208 130 H	208 130 H	.			...
1902-03 ...	...	...	183 114 H	183 114 H	75 47 D	183 114 D		258 161 D	
1903-04 ...	270 135 H	8 4 H	706 883 H	1,044 522 H	...	.		..
Total ...	2,180 1,577 { 74 D 1,566 H	257 178 { 18 D 160 H	3,009 1,931 H	5,416 3,636 { 93 D 3,594 H	75 47 D	183 114 D		258 161 D	

NOTE.—Figures in Italics denote corresponding value in British rupees. H refers to hail and D to drought.

APPENDIX D.

Results of Crop Experiments and other Data on which estimates of outturn are based.

Crop.	Soil.	Circle.	OFFICIAL EXPERIMENTS.		NON-OFFICIAL EXPERIMENTS.		ASSUMED AT OTHER SETTLEMENTS.		Outturn now assumed.
			Area in acres.	Outturn of grain in seers per acre.	Area in acres.	Outturn of grain in seers per acre.	Kohat.	Techi.	
Rice	Chashmai dofasli	Koh-i-daman	6.2	870	1.2	538	12	16	18
	Abi dofasli	Rodghara	15.1	966	2.2	551	16	16	22
	„ ekfasli	Do.	1.2	760	...	...	12	16	18
Maize	Chashmai dofasli	Koh-i-daman	5.9	522	...	...	16	16	12
	Ditto	Rodghara	1.6	581	...	...	14		12
	Chashmai ekfasli	Koh-i-daman	3.7	658	...	...	16		15
	Ditto	Sahra	...	397	...	...	...		9
	Abi dofasli	Rodghara	...	...	1.9	402	14		14
Mung	Chashmai dofasli	Do.	1.8	161	...	...	5	7	2
	Abi dofasli	Do.	2.6	143	...	...	5		4
Wheat	Chashmai dofasli	Koh-i-daman	15.2	464	...	...	18	8, 10 & 12	10
	Ditto	Rodghara	3.6	450	...	...	12		10
	Chashmai ekfasli	Koh-i-daman	10.6	326	...	...	12		7
	Ditto	Sahra	9.3	813	...	...	...		7
	Abi dofasli	Rodghara	21.1	473	11.1	353	9		11
	„ ekfasli	Do.	6.1	343	...	...	7		8
	Barani	Sahra	3	314	...	...	6		4
	Do.	Koh-i-daman	...	...	4.5	372	3		4
Berdy	Abi dofasli	Rodghara	12.5	470	...	...	...	8, 11 & 12	12

APPENDIX E.

Statement showing Harvest Prices in annas per maund prevailing at Parachinar in past years.

Year.	IN THE MONTH OF DECEMBER.										IN THE MONTH OF JULY.							
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
	Rice.			Maize.			Mung.			Masli.		Wheat.			Barley.			Zamindar's estimate, made.
	English Pile.	Money-lender's book.	Zamindar's estimate, made.	English Pile.	Money-lender's book.	Zamindar's estimate, made.	English Pile.	Money-lender's book.	Zamindar's estimate, made.	English Pile.	Money-lender's book.	English Pile.	Money-lender's book.	English Pile.	Money-lender's book.	English Pile.	Money-lender's book.	
1894	56	8 tatts shali or 8½ tatts husked rice per Kabuli rupee or 80½ British annas per maund.	..	..	5½ tatts per Kabuli rupee or 32 annas British per maund.	..	Dal.	58	Not available.	..	Same as mung or a little dearer.	Ata.	38	20	Not available.	20	10 tatts per Kabuli rupee or 16 annas British per maund. Tatti = 2 seers.
1895	49	Shali tatti = 2 seers and rice tatti = 2½ rupees.	..	..	..	..	49	58	..	..	..	43	43	23	..	23	..
1896	64	..	..	..	..	..	71	71	Not available.	..	..	43	43	27	..	27	..
1897	58	..	..	..	..	..	80	80	..	..	..	49	49	47	..	47	..
1898	49	..	..	..	..	..	68	68	..	..	..	32	32	26	..	26	..
1899	68	..	..	..	..	..	61	61	..	..	..	31	36	21	19	21	..
1900	69	..	..	..	..	..	69	69	..	..	..	44	58	34	32	34	..
1901	53	..	..	..	..	..	64	64	..	..	..	43	56	34	29	29	..
1902	86	..	..	..	..	..	60	60	..	..	..	45	48	25	23	25	..
1903	50	..	..	..	..	..	64	64	..	..	..	49	51	27	21	27	..
1904	51	..	..	..	..	..	56	56	..	..	..	40	46	23	20	23	..

Note I.—Prices excluded from consideration are shown in italics.

Note II.—The Hindus generally purchase from zamindars, and bring the produce to Parachinar on mules or donkeys. Besides the cost of grain they have to pay in case of—

	Males carrying 4 maunds of grain.	Donkeys carrying 2 maunds of grain.
Cost of wheat grain	Rs. A. P. 8 0 0	Rs. A. P. 4 0 0
Hire for average distance	1 4 0	0 10 0
Octroi charge	0 2 0	0 1 0
Dharwai's dues	0 4 0	0 2 0
Dharwal	0 1 0	0 0 6
Total extra charge	1 11 0 on Rs. 8 or 21 per cent.	0 13 6 on Rs. 4 or 21 per cent.

APPENDIX F.

Statement showing Feeding of Cattle in each month of the year.

[See paragraph 35.]

(a) Open season.	(b) Close season.
<p>1. Jauza (May-June).—Cattle fed on natural fodder, green barley and shaftal.</p> <p>2. Har (July).—Cattle fed on natural fodder and shaftal.</p> <p>3. Sawan (August).—Cattle fed on natural fodder.</p> <p>4. Bhadon (September).—Cattle fed on natural fodder, kurkha and green maize.</p> <p>5. Assu (October).—Cattle fed on natural fodder.</p> <p>6. Katik (November).— Ditto.</p>	<p>7. Maghar (December).—Cattle fed on wheat, barley and rice straw, and maize stalks.</p> <p>8. Poh (January).— Ditto ditto.</p> <p>9. Magh (February).—Cattle fed on wheat, barley and rice straw, and maize stalks, as well as dry kurkha or kati.</p> <p>10. Phagan (March).—As in Maghar.</p> <p>11. Chetar (April).— Ditto.</p> <p>12. Visakh (May).— Ditto.</p>

APPENDIX G.

Calculation of Average Rent Rates in kind.

Circles.	Soil.	Average rent rates.																	
		Area.	Share.	Area.	Share.	Area.	Share.	Area.	Share.	Area.	Share.	Area.	Share.	Area.	Share.	Area.	Share.	TOTAL.	
Koh-i-daman	Irrigated	9	6	1,315	658	249	100	...	...	169	56	80	20	6	1	...	1,828	841	.46
	Unirrigated	...	...	33	16	...	...	...	...	1	...	5	1	4	1	...	43	18	.42
Sabra	Irrigated	...	...	83	41	...	...	...	...	49	16	...	...	...	...	...	132	57	.43
	Unirrigated	...	...	9	5	...	...	...	...	31	10	78	20	4	1	4	126	37	.29
Rodghara	Irrigated	1	1	1,046	973	118	47	6	2	439	146	2	...	...	...	...	2,512	1,169	.47
	Unirrigated	...	...	...	...	...	...	...	...	9	3	...	...	...	...	...	9	3	.33

Produce Estimate, Buñam Valley.

[illegible]

(1)

APPENDIX I.

Half Net Assets Crop-rate calculation.

Circle	Soil.	Value of gross produce.	Percentage of owners' share.	Value of owners' share.	Government share.	Area of crops, excluding fodder crops.	Rate.
		Rs	Rs	Rs.	Rs	Rs.	Rs A. P.
Kollam	Chashma: dofasli	2,08,683	46	95,994	47,997	10,153	4 11 8
	„ ekfasli	56,686	46	26,076	13,088	3,610	3 9 9
	Barani	5,781	42	2,488	1,214	746	1 10 0
	Total	2,71,150		1,24,498	62,249	14,509	4 4 8
Salra	Chashma: ekfasli	15,158	43	6,518	3,259	1,328	2 7 5
	Barani	5,007	29	1,452	726	754	0 15 5
	Total	20,165		7,970	3,985	2,077	1 14 8
Rodghara.	Chashma: dofasli	67,820	47	31,875	15,937	3,551	4 7 10
	„ ekfasli	15,215	47	7,151	3,576	946	3 12 6
	Abi dofasli	3,28,769	47	1,54,521	77,260	15,280	5 0 11
	„ ekfasli	56,156	47	26,393	13,197	3,089	4 4 4
	Barani	1,290	33	426	213	241	0 14 2
	Total	4,69,250		2,20,366	1,10,183	23,107	4 12 4

APPENDIX J.

Statement showing Taxes on Artisans' Shops and Mills in the Kurram Valley.

[See paragraph 51.]

1	2	3	4	5	6	7	8
YEAR.	Rs 3 ARTISANS.		Rs 2 8-0. HINDUS.		Rs. 3-8 0 WATER MILLS		TOTAL.
	Number	Amount	Number	Amount.	Number.	Amount.	
		Rs		Rs. A. P		Rs. A. P.	Rs. A. P.
Settlement demand—							
1893-94	272	816	212	604 8 0	230	678 8 0	2,099 0 0
1894-95	259	777	235	587 8 0	227	670 4 0	2,034 12 0
1895-96	242	726	230	557 8 0	223	642 4 0	1,965 12 0
1896-97	256	768	254	635 0 0	228	655 12 0	2,058 12 0
1897-98	239	717	248	620 0 0	234	675 8 0	2,012 8 0
1898-99	245	735	262	655 0 0	228	646 0 0	2,036 0 0
1899-1900	228	684	271	677 8 0	223	666 12 0	2,026 4 0
1900-01	219	657	269	672 8 0	241	693 0 0	2,022 8 0
1901-02	231	693	417	1,042 8 0	244	701 12 0	2,437 4 0
1902-03	215	645	406	1,015 0 0	247	710 4 0	2,370 4 0
1903-04	211	633	415	1,037 0 0	201	724 0 0	2,044 0 0
1904-05				Old demand recovered without change.			

APPENDIX K.

List of Mr. Merk's Tappas for purposes of Distribution of Tawani Revenue.

No.	Name of tappa.	No.	Name of tappa.
1	Peiwar.	21	Alam Sher.
2	Shalogan.	22	Shiblan.
3	Malana.	23	Agra.
4	Shekhalo.	24	Sultan.
5	Kharlachi.	25	Amalkot.
6	Shingak.	26	Samu.
7	Nastikot.	27	Basatu.
8	Basu.	28	Balish Khel.
9	Shakh.	29	Sangina.
10	Kunj Alizai.	30	Sadda.
11	Haj Khel (Boshera).	31	Darani.
12	Ahmadzai.	32	Shashi.
13	Sargalla Kirman.	33	Makhizai.
14	Yusuf Khel.	34	Ghamkot.
15	Ziarat Killi.	35	Bilyamin.
16	Kirman.	36	Alizai.
17	Bughakki.	37	Bagzai.
18	Gram.	38	Mahura.
19	Zaida.	39	Ibrahimzai.
20	Dangila.		

APPENDIX L.

Statement showing a few Instances of Discrepancies in Revenue Returns.

	Rs.	A.	P.	
I.—(a) Total demand (excluding jezia) for the first year according to Mr. Merk's report . .	61,493	14	0	(Kabul).
(b) Total demand (excluding jezia) for the first year according to rent-roll . .	60,244	0	0	(Do).
(c) Total demand (excluding jezia) for the first year according to Tahsildar's returns .	59,752	0	0	(Do).
II.—(a) Total Tawani revenue according to rent-roll for 1896-97. .	41,072	0	0	(British).
(b) Total Tawani revenue according to Tahsildar's returns. .	40,355	0	0	(Do).
(c) Total Tawani revenue according to rent-roll, 1900-01 . .	32,219	0	0	(Do).
(d) Total Tawani revenue according to Tahsildar's returns .	32,101	0	0	(Do).
	<i>Khalsa revenue.</i>		<i>Malikana.</i>	
	Rs.		Rs.	
III.—Total Khalsa demand, 1898-99 and Malikana, 1899-1900 . .	6,079	British.	986	British.
According to rent-roll, 1900-01 .	5,471	„	1,033	„
IV.—Malikana on Crown lands as entered in Mr. Merk's report . .	5,375	„	1,040	„
Malikana on Crown lands as entered in rent-roll of 1904-05 . .	6,823	„	2,274	„
	4,491	„	866	„

STATEMENT No. I.

Milan Rakba, or Yearly Register of Area of Kurram Valley.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
YEAR.	Total area.	Forests.	UNCULTIVATED OTHER THAN FORESTS.			CULTIVATED.				Total area of crops grown in each class of soil shown in column 7 irrespective of irrigation.	Total area of crops by jinswar return.	MILLS.		
			Not available for cultivation.	Available for cultivation.		Detail.	Total cultivated area.	Area included in previous column, which bore no crops this year.	Balance which was sown once or more than once.			Newly made or brought into use this year.	Fallen in or become otherwise unfit for use during the year.	Total in use.
				Unappropriated Government waste.	Other.									
KOH-I-DAMAN CIRCLE.														
1894-95 ...	14,452 2,426	..	98 14	..	1,150 665	Chashmai dofasli .. " ekfasli .. Abi dofasli .. " ekfasli .. Barani ... Total ...	.. .. 4,438 445 6,745 976 2,021 326 13,304 1,747	.. .. .. .. .. .. ..	.. .. .. .. .. .. ..	.. .. .. .. .. .. ..	.. .. .. .. .. .. ..	.. .. .. .. .. .. ..	.. .. .. .. .. .. ..	141
1904-05 ...	21,992 2,457	...	8,164 210	...	2,806 430	Kadim 2,301 354 Jadid 505 46 Chashmai dofasli ... " ekfasli ... Abi dofasli .. " ekfasli ... Barani .. Total ...	9,062 732 6,119 1,059 841 56 16,022 1,847	213 2,818 173 3,204	8,849 8,301 669 12,818	12,848 3,801 775 17,424	12,848 3,801 775 17,424	1 ..	18	101
SAHRA CIRCLE.														
1894-95 ...	2,502 20	...	15	...	54	Chashmai dofasli ... " ekfasli ... Abi dofasli .. " ekfasli ... Barani ... Total ...	.. .. .. 540 1 1,983 19 2,523 20	..............	..............	..............	..............	..............	..............	..
1904-05 ...	4,930 530	...	782 508	...	869 6	Kadim 768 6 Jadid 111 Chashmai dofasli ... " ekfasli ... Abi dofasli ... " ekfasli ... Barani .. Total ...	.. 1,919 21 1,300 3,278 21	485 1,484 403 3,277	1,484 1,628 586 3,302	1,628 1,628 780 3,308	1,628 1,628 780 3,308	..............	..............	..

Milan Rakba, or Yearly Register of Area of Kurram Valley—concluded.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Year.	Total area.	Forests	UNCULTIVATED OTHER THAN FORESTS.			CULTIVATED.				Total ar a of crops grown in each class of soil shown in column 7 irrespective of irrigation	Total area of crops by janswar return.	MILLS.		
			Not available for cultivation.	Available for cultivation.		Detail.	Total cultivated area.	Area included in previous column, when bore no crops this year	Balance which was sown once or more than once.			Newly made or brought into use this year	Fallen in or become otherwise unfit for use during the year.	Total in use.
				Unappropriated Government waste.	Other.									
RODGHARA CIRCLE.														
1894-95	14,435.		29	80	1,146	Chashmai dofasli ..	..	..	..	..	..	..	..	80
						„ ekfasli ..	..	..	..	..	..	..	..
						Abi dofasli ..	6,677	..	..	..	..	..	..
						„ ekfasli ..	5,974	..	..	..	..	..	..
						Barani ..	529	..	..	..	..	..	..
						Total	13,180	..	..	..	..	..	..
1904-05	20,913 4,936	..	6164 741	2,552 713	<div><div>Kadim 1,598 458 Jadid 654 713</div><div>2,552 713</div></div>	Chashmai dofasli ..	2,509 186	26	2,483	4,237	4,237	..	..	111
						„ ekfasli ..	1,007 495	137	960	1,023	1,023	..	..
						Abi dofasli ..	10,169 1,004	61	10,408	17,577	17,577	1	15	
						„ ekfasli ..	3,599 1,490	576	3,023	3,258	3,258	..	..
						Barani ..	523 267	233	290	303	303	..	..
						Total	18,197 3,462	1,033	17,164	26,398	26,398	..	..
TOTAL KURRAM VALLEY.														
1894-95	81,470 6,220		142 19	80 80	2,850 1,215	Chashmai dofasli ..	..	..	..	..	..	..	..	2
						„ ekfasli ..	..	..	..	..	..	..	..
						Abi dofasli ..	11,115 884	..	..	..	..	..	..
						„ ekfasli ..	13,279 2,076	..	..	..	..	..	..
						Barani ..	1,533 577	..	..	..	..	..	..
						Total	28,907 3,926	..	..	..	..	..	..
1904-05	65,385 7,598		10,110 2,454	6,327 1,169	<div><div>Kadim 4,957 843 Jadid 1,270 821</div><div>6,327 1,169</div></div>	Chashmai dofasli ..	11,571 918	230	11,332	17,085	17,085	2	23	273
						„ ekfasli ..	9,135 1,575	3,440	5,695	6,452	6,452	..	..
						Abi dofasli ..	10,489 1,004	61	10,408	17,577	17,577	..	..
						„ ekfasli ..	3,599 1,490	576	3,023	3,258	3,258	..	..
						Barani ..	2,724 343	898	1,526	1,888	1,888	..	..
						Total	37,498 5,330	5,214	33,284	48,210	48,210	..	..

STATEMENT No. II.

Jinawar Return for Kharif, Kurram Valley.

(xiv)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
Year.	Description of cultivation.	CEREALS AND PULSES.												Cotton.	Kurma.	Fruits.	Vegetables.	Turnips and carrots.	Others.	Total crops harvested.	Area of crops failed.	Total area sown.	Deduct double cropped area.	Balance correct area cropped.	Area of land under khali.	Total cultivation.
		Rice.	Bajra.	Maize.	Kanauj.	China.	Other cereals.	Mung.	Moth.	Maab.	Tobia.	Total cereals and pulses.														
Kharif 1903.	Chashmai dofaali	4,461	..	1,553	70	1	..	230	..	..	..	6,321	..	968	..	3	2	2	..	7,299	..	7,299	..	7,299	1,763	9,062
	" ekfaali	333	..	692	25	2	..	27	..	4	..	1,082	..	117	111	..	..	..	..	1,310	..	1,310	..	1,310	4,809	6,119
	Abi dofaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	" ekfaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Barani	414	86	3	..	5	508	..	1	2	2	513	..	513	..	513	838	841
	Total	4,794	..	2,559	181	5	..	271	..	4	..	7,914	..	1,086	113	5	2	2	2	9,122	..	9,122	..	9,122	6,900	16,022
Kharif 1904.	Chashmai dofaali	4,108	..	1,865	144	..	..	40	..	..	..	6,577	3	603	..	9	2	2	3	7,200	759	7,959	..	7,959	1,103	9,062
	" ekfaali	378	..	789	80	2	..	124	..	4	..	1,377	..	211	111	7	..	..	..	1,706	81	1,787	..	1,787	4,332	6,119
	Abi dofaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	" ekfaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Barani	..	..	428	115	3	..	3	..	..	..	..	519	..	..	2	2	..	..	553	7	560	..	560	291	841
	Total	4,486	..	3,082	339	5	..	557	..	4	..	8,503	3	817	113	18	2	2	3	9,159	847	10,006	..	10,006	5,716	16,023
Kharif 1905.	Chashmai dofaali	8,569	..	3,418	214	1	..	699	..	..	..	12,901	3	1,574	..	12	4	5	5	14,459	759	15,258	..	15,258	2,866	18,124
	" ekfaali	711	..	1,481	105	3	..	151	..	8	..	2,459	..	328	222	7	..	..	..	3,016	81	3,097	..	3,097	9,141	12,238
	Abi dofaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	" ekfaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Barani	..	..	842	201	6	..	8	..	..	..	..	1,057	..	1	4	4	..	..	1,066	7	1,073	..	1,073	609	1,633
	Total	9,280	..	5,741	630	10	..	858	..	8	..	16,417	3	1,903	226	23	4	5	5	18,581	847	19,428	..	19,428	12,616	32,044

	4,254	1,708	107	1	...	349	...	...	6,450	1	787	...	0	2	3	7,249	980	7,039	...	7,029	1,439	9,063
Chashmai dofaali
" ekfaali
Abi dofaali
" ekfaali
Barani
Total	4,610	2,870	259	5	...	429	4	...	8,207	1	952	113	12	2	3	9,200	424	9,714	...	9,714	6,308	16,032
SAHRA CIRCLE.																						
Chashmai dofaali
" ekfaali
Abi dofaali
" ekfaali
Barani
Total	2	54	13	...	...	105	...	...	254	...	97	...	1	...	...	352	...	352	...	297	...	9,279
Chashmai dofaali
" ekfaali
Abi dofaali
" ekfaali
Barani
Total	...	178	363	1	...	112	...	...	654	...	119	...	3	...	...	776	...	776	...	2,503	...	3,279
Chashmai dofaali
" ekfaali
Abi dofaali
" ekfaali
Barani
Total	2	232	456	1	...	217	...	...	909	...	216	...	4	...	...	1,128	...	1,128	...	5,430	...	6,558

Wingway Return for Kharif, Kurram Valley—continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
Description of cultivation.		CEREALS AND PULSES														Fruits.	Vegetables.	Turnips and carrots.	Others.	Total crops harvested.	Area of crops failed.	Total area sown.	Deduct double cropped area.	Balance correct area cropped.	Area of land under khali.	Total cultivation.
		Rice.	Maize.	Kangul.	China.	Other cereals.	Mung.	Molli.	Mash.	Lobia.	Total cereals and pulses.	Cotton.	Kauka.													
Two years' average, 1902 and 1903.	Chashmal dofsali	386
	" ekfali	...	87	170	...	...	52	...	...	...	...	39	...	77	...	...	...	...	...	...	...	...	...	...	...
	Abi dofsali	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	" ekfali	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Barani	1	...	29	53	1	...	56	...	...	...	145	...	31	...	2	...	...	...	178	...	...	...	...	...
	Total	1	116	238	1	...	168	...	...	...	...	454	...	108	...	2	...	...	...	564	...	...	...	...	...
Kharif 1902.	Chashmal dofsali	1,545	...	223	1	572	...	1	...	2,347	2	68	...	1	1	2,419
	" ekfali	597	...	27	...	...	...	85	...	...	...	659	1	5	...	...	...	...	635	...	...	...	...	...	...
	Abi dofsali	5,805	...	1,310	12	...	2	2,949	...	...	...	9,578	...	408	...	2	...	...	9,988	...	...	...	...	...	...
	" ekfali	1,657	...	76	4	...	...	346	...	...	...	2,083	2	102	...	...	...	...	2,187	...	...	...	...	...	...
	Barani	1	4	...	...	...	12	5	...	...	...	23	...	5	...	...	...	...	25	...	...	...	...	...	...
	Total	9,105	1	1,615	16	...	15	3,907	...	1	...	14,690	5	584	...	3	1	...	...	15,287	...	...	...	...	...
Kharif 1903.	Chashmal dofsali	1,178	...	463	1	530	2,305	8	207	...	1	1	2,418
	" ekfali	531	...	47	1	...	...	94	...	...	...	673	2	16	...	...	...	...	691	...	...	...	...	...	...
	Abi dofsali	5,240	...	1,720	9	...	...	2,402	...	2	1	9,371	8	531	...	3	1	...	...	9,907	...	...	...	...	...
	" ekfali	1,891	...	179	1	...	3	680	...	...	...	2,254	20	78	...	...	...	...	2,552	...	...	...	...	...	...
	Barani	...	...	19	7	...	7	12	...	...	...	45	...	7	...	...	...	...	52	...	...	...	...	...	...
	Total	8,895	...	2,428	19	...	10	3,757	...	2	1	14,562	33	889	...	4	2	15,480

(14)

Jinnar Return for Kharif, Kurram Valley—concluded.

Description of cultivation.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
CEREALS AND PULSES.													Kharif.	Fruits.	Vegetables.	Turnips and carrots.	Others.	Total crops harvested.	Area of crops failed.	Total area sown.	Deduct double cropped area.	Balance correct area cropped.	Area of barabandi and kharif.	Total cultivation.
Rice.	Barley.	Maize.	Kharif.	Moth.	Mash.	Lobia.	Total cereals and pulses.	Cotton.																
Chashmal dofaali	11,287	..	4,109	215	1	1	1,840	..	1	..	17,154	8	1,849	..	14	6	5	19,396	759	20,095	..	20,095	3,017	23,112
ekfaali	1,940	..	1,720	446	8	..	384	..	8	..	4,410	3	502	222	8	1	..	5,145	81	5,226	..	5,226	13,044	18,270
Abi dofaali	10,545	..	3,980	21	2	1	5,351	..	2	1	18,952	8	989	..	5	..	..	19,955	123	20,080	..	20,080	858	20,938
ekfaali	2,016	..	255	5	..	..	1,026	..	..	..	4,337	22	180	..	7	..	..	4,539	..	4,539	..	4,539	2,559	7,198
Shamir	2	1	923	324	7	19	138	..	..	..	1,414	..	76	4	7	..	..	1,501	7	1,508	..	1,508	3,940	5,448
Total	28,772	1	10,046	1,011	11	25	8,739	..	11	1	43,507	41	3,596	226	34	7	5	50,476	972	51,448	..	51,448	23,548	74,996
Chashmal dofaali	5,643	..	2,035	107	1	..	920	..	1	..	8,727	4	921	..	7	3	3	9,668	350	10,045	..	10,045	1,523	11,571
ekfaali	920	..	861	223	2	..	192	..	4	..	2,405	1	251	111	4	..	..	2,572	41	2,613	..	2,613	6,522	9,135
Abi dofaali	5,273	..	1,516	10	..	1	2,575	..	1	1	9,476	4	495	..	2	1	..	9,978	62	10,040	..	10,040	429	10,469
ekfaali	1,521	..	127	3	..	1	513	..	..	..	2,169	11	90	..	4	..	..	2,269	..	2,269	..	2,269	1,330	3,599
Shamir	1	..	463	162	3	10	69	..	..	..	707	..	38	2	4	..	..	751	3	751	..	751	1,970	2,724
Total	13,331	..	5,023	506	6	12	4,969	..	6	1	23,283	20	1,708	113	17	4	3	25,233	486	25,724	..	25,724	11,774	37,498

(Max)

STATEMENT No. III.

Jinwar Return for Rabi, Kurram Valley.

Year.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Description of cultivation.	CEREALS AND PULSES.					DRUGS		Fodder crops.	ORCHARDS AND GARDEN FRUITS					Total of all crops harvested.	Area of crops failed.	Total area sown.	Deduct area that has borne two crops this harvest.	Balance correct area.	Area of land under khali.	Total cultivation.
	Wheat.	Barley.	Total cereals.	Tobacco.	Others.	Fruits.	Melons.		Vegetables.	Onions.	Chillies.									
1904	Chashmai dofaali	2,382	254	3,736	4	1,406	19	3	1	1	4,970	84	5,054	5,054	4,008	9,062	..	5,054	4,008	9,062
	" ekfaali	2,367	34	2,401	3	31	197	4	..	..	2,536	28	2,664	2,664	3,455	6,119	..	2,664	3,455	6,119
	Abi dofaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	" ekfaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Barani	201	6	207	..	..	..	..	..	..	..	..	..	207	634	841	..	207	634	841
	Total	5,850	294	6,144	7	1,137	216	7	1	1	7,813	112	7,925	7,925	8,097	16,023	..	7,925	8,097	16,023
1905	Chashmai dofaali	3,513	288	3,796	..	1,829	18	3	1	1	5,648	87	5,735	5,735	3,327	9,062	..	5,735	3,327	9,062
	" ekfaali	1,685	44	1,729	..	170	193	3	..	..	3,095	216	2,811	2,811	3,808	6,119	..	2,811	3,808	6,119
	Abi dofaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	" ekfaali	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Barani	305	16	321	..	1	..	..	..	..	..	2	224	224	617	841	..	224	617	841
	Total	5,403	348	5,746	..	2,000	211	6	1	1	7,966	305	8,270	8,270	7,732	16,023	..	8,270	7,732	16,023

Jinwar Return for Rabi, Kurram Valley—continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR.	Description of cultivation.	CEREALS AND PULSES.			DRUGS		Rotten crops.	ORCHARDS AND GARDEN FRUITS					Total of all crops harvested.	Area of crops failed.	Total area sown.	Deduct area that has borne two crops this harvest.	Balance correct area.	Area of land under khali.	Total cultivation.
		Wheat.	Barley.	Total cereals.	Tobacco.	Others.		Fruits.	Melons.	Vegetables.	Onions.	(Chillies.							
		KOH I DAMAN CIRCLE—CONCEDED.																	
	Chashmehi do-fali	6,795	537	7,332	4	...	3,335	37	..	6	2	2	10,618	171	10,789	...	10,789	7,335	18,124
	" el-fali	4,033	78	4,130	8	..	2,011	330	..	7	..	..	4,731	214	4,975	...	4,975	7,263	12,238
	Ali do-fali	...	...	...	...	..	..	...	..	..	..	..	..	..	..	...	...	..	..
	" el-fali	...	...	...	...	..	..	...	..	..	..	..	..	..	...	...	...	..	..
	Barani	408	22	428	..	..	1	..	..	..	..	..	429	2	431	...	431	1,251	1,683
	Total	11,333	637	11,900	7	..	3,137	427	..	15	2	2	15,774	417	16,195	..	16,195	15,819	32,044
	Chashmehi do-fali	8,398	208	8,600	2	..	1,619	18	..	3	1	1	5,309	85	5,394	...	5,394	3,668	9,063
	" el-fali	2,023	39	2,065	2	..	100	195	..	4	..	..	2,306	122	2,428	...	2,428	3,631	6,119
	Ali do-fali	...	...	...	...	..	..	...	..	..	..	..	..	..	...	...	...	..	..
	" el-fali	...	...	...	...	..	..	...	..	..	..	..	..	..	...	...	...	..	..
	Barani	203	11	214	..	..	..	..	..	..	..	..	214	1	215	...	215	696	941
	Total	5,637	318	5,945	4	..	1,718	219	..	7	1	1	7,839	28	8,097	..	8,097	7,925	16,023