

**GOVERNMENT OF HARYANA**



**REPRINT**

**OF THE**

**SETTLEMENT REPORT**

**OF THE**

**KARNAL-AMBALA (1891)**

**By**

**J. M. DOUIE, Esq., C.S.,**  
*Settlement Officer*

**GAZETTEERS ORGANISATION**

**Revenue and Disaster Management Department, Haryana**  
**CHANDIGARH (INDIA)**

**2013**

The present Settlement Report was published in 1891 during British



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SETTLEMENT REPORT

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## FOREWORD

In revenue terms, settlement means assessment of land revenue and the liability of a person to pay it. The other objective is framing of record of rights (*Jamabandi*) on a piece of land. Such a settlement is not entirely final or free but has to undergo relaxation/remission owing to natural calamities and destruction of crops by vagaries of weather causing serious loss of capital, and revision due to change in the cropping pattern and the apparent improvement in the sources of irrigation resulting into increase in material prosperity of the landholders and the tenants.

The Settlement Reports pertaining to the British period contain valuable data and give vivid description of a district, its former fiscal history, scope of settlement, statistical and economical examination of the existing conditions, measurement, remeasurement, revision of records etc.

This Settlement Report of Karnal-Ambala, 1891 written by Mr. J. M. Douie, Esq., C.S., Settlement Officer, is more than 120 years old and being a rare document, has been got reprinted for its easy availability. It would serve as a guiding note to the revenue officials and is of immense use for research scholars, teachers and administrators as well.

**KRISHNA MOHAN, I.A.S.**

Additional Chief Secretary and Financial  
Commissioner to Government Haryana,  
Revenue and Disaster Management Department

Chandigarh  
April, 2013

## PREFACE TO THE REPRINTED EDITION

Land revenue which was the prime source of income to fill the empty coffers of a State has a long history. During the time of Sur Dynasty, the job of land measurement, sources of irrigation, kind of land, fixation of land revenue, recording the rights of landowners and the right-holders, payment of compensation for the lost crops due to natural calamities, vagaries of weather, destruction due to movement of armed forces and enemy action etc. were determined by Diwan Todar Mal. Keeping in view his generous efforts, Mughal Emperor Akbar assigned him the same jobs, ignoring the fact that he was previously in the employment of their rebel Sur Kings. The policy and system devised by Diwan Todar Mal guided not only the Mughal Emperors but the same was adopted by the Britishers with minor changes here and there which then suited to a foreign ruler.

After acquiring a rich experience in revenue administration with the permanent settlement of Bengal and having taken over the control of revenue collection in the Avadh, the Britishers made inroads in the Cis-Sutlej territory after the Treaty of Sirji Arjengaum in 1803 whereby Daulat Rao Sindhia ceded to the East India Company and its allies all the territories, notably comprising the then districts of Gurgaon, Delhi, Rohtak, Hissar, tahsil Panipat and *pargana* Karnal in the Karnal district.

For many years after annexation Mr. Thomason's directions for Settlement Officers in the North-Western provinces was the authoritative text book in the Punjab as regards all matters connected with land revenue settlements. The first attempt to write a handbook specially adapted for the use of Punjab officials was made by Mr. Robert Cust whose Revenue Manual was issued in 1866. This manual deals with rights in land and the principles and methods of land revenue settlements.

After the passing of the first Punjab Tenancy Act-1868, the first Land Revenue Act-1871 and the issuance of rules under the latter, the duty of revising the directions was entrusted to Mr. D. G. Barkley. With passage of time of over twenty years, the methods of assessment were modified, especially in the direction of adapting the demand in insecure tracts to the varying yields of good and bad seasons and the great importance of the distribution of the village assessment over holdings has at length been appreciated. The cumulative effect of these changes was so great that Mr. Barkley's work became obsolete and the job of preparing a new Settlement Manual for Punjab was assigned to J. M. Douie by the then Lieutenant Governor, Sir Dennis Fitzpatrick, who successfully completed this tedious job in October, 1899.

The history of settlement in the composite Punjab has been divided into five periods, firstly from 1846 to 1863 which began in the Cis-Sutlej and Trans-Sutlej territories. After the mutiny of 1857, Hisar was re-settled and Sirsa settled for the first time. In the second period (1863-71), no settlement in the present districts of Haryana was made. However, in the third period (1871-79), revised settlement of the greater part of old Delhi territory Rohtak, Gurgaon, Delhi and a *tahsil* and a half of Karnal was effected. Also, in the fourth period (1879-89),



revised settlement of Ambala and parts of Karnal was made and reassessment of Hisar was undertaken.

The ten years beginning with 1879 were marked by great changes in the settlement procedure culminating in the system embodied in the Land Revenue Act of 1887. The fifth settlement started from 1889 and continued up to 1943 resulting into publication of summary settlement, first settlement, second settlement, revised settlement, final settlement report etc. of various districts and the work was stopped just a couple of years prior to independence.

The object of a settlement is two-fold. To assess the land revenue is the primary object of a settlement and framing of a record of rights (*Jamabandi*) is secondary. In the primary object, it is necessary at the same time to decide who shall pay the sums assessed or, in technical language, with whom the settlement shall be made. To permit an individual to contract to pay the land revenue is usually an acknowledgement that he possesses a proprietary right in the soil, and the drawing up of lists (*khewats*) showing the landowners in every estate, the extent of each man's right, and the amount of revenue for which he was primarily responsible. It soon became evident that there were other persons who had rights in the soil besides those who could claim the offer of a settlement, and the advisability of making a complete record of all rights and liabilities connected with the land, including even those of tenants from year to year, was recognized.

Though, this Reprinted Edition of Settlement Report of Karnal-Ambala, 1891 written by Mr. J.M.Douie, Esq., C.S., Settlement Officer, is more than 120 years old, every care has been taken to maintain its originality while reprinting.

I extend my appreciation to S/Shri Surinder Singh Sewal, Assistant Editor and Surender Kumar, Assistant Editor who have handled the work with efficiency and care in the reprinting of this report.

I am thankful to the Controller, Printing and Stationery, Haryana and his staff in the press for expeditiously completing the work of reprinting.

**RAM KISHAN**

Joint State Editor, Gazetteers,

Revenue and Disaster Management Department,

Haryana, Chandigarh

Chandigarh

April, 2013

SETTLEMENT REPORT  
OF  
KARNAL-AMBALA.

BY  
J. M. DOUIE, Esq., C. S.

*Settlement Officer.*

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Published by Authority.

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*Contractors to the Punjab Government.*

1891.

SETTLEMENT REPORT

BY

KARINAI-AMBALA

IN

A. M. BOUTER, Esq., C. B.

Settlement Officer

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Printed by the Government

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LONDON:

THE "CIVIL AND MILITARY ENGINEER" PRESS,  
COURT OF COMMONS, LONDON.

1891

No. 821, dated 3rd June 1901.

From—Colonel L. J. H. Goss, C.S.I., Commissioner and Superintendent, Delhi Division.

To—J. M. DAVIS, Esq., Senior Secretary to Financial Commissioner, Punjab.

In reply to your No. 2,753, dated 27th April last, the enclosure of which is herewith returned, I beg to forward my Review of the Karnal-Amballa Settlement Report therein called for.

ALL INFORMATION CONTAINED HEREIN

IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE

DATE 11-11-2001 BY 60322 UCBAW/STP

In reply to your letter No. 2758, dated 27th April 1961, the enclosed which  
is herewith returned, I beg to forward my review of the Kumbh-Mela  
Bottleneck Report therein called for.

No. 535.

FINANCIAL COMMISSIONER'S OFFICE.

*Dated Lahore, 9th August 1891.*

FROM

J. M. DOUIE, ESQUIRE,  
*Senior Secretary to Finl. Commr., Punjab,*

TO

R. G. THOMSON, ESQUIRE,  
*Revenue Secretary to Government, Punjab.*

SIR,

I am directed to submit, for the orders of Government, the Settlement  
C. M. RIVAZ, Esquire. Report of Karnál-Umballa together with the Commissioner's and Financial Commissioner's reviews. A map of the tract to which the report relates is enclosed.

2. I am also to forward the text of the revised edition of the Karnál District Gazetteer, which has not yet been published, as it may be required for reference.

I have, &c.,

J. M. DOUIE,  
*Senior Secretary to Finl. Commr., Punjab.*





## Review of the Settlement Report of Karnal-Umballa.

1. The tract of country which was comprised in this settlement consists of the two southern tahsils, Jagádhrí and Pípli, of the Umballa district, and the Kaithal tahsil and Indri pargana of the Karnál tahsil of the Karnál district. Pípli, Indri, and Kaithal formed the old Thánesar district, which was broken up in 1862 and divided between Umballa and Karnál. It stretches west and south-west from the Sirmur Siwálíks and the Jamna to the dry and sandy Jangal country of Patiála, and its various portions differ widely in their physical and agricultural conditions. Jagádhrí, for instance, represents the features of an ordinary sub-montane tract, with a generally fertile soil, and an abundant rainfall averaging 40 inches in the year; while in the southern uplands of Kaithal the average rainfall does not exceed 16 or 17 inches, and the great depth of water renders irrigation from wells impracticable. The tract under consideration contains 1,502 estates, and its total area is 2,703 square miles, somewhat more than half being under cultivation.

2. At the census of 1868 the population amounted to 683,950, and in 1881 to 693,631, there having been between these two periods an increase of 6 per cent. in Kaithal and of 4 per cent. in Jagádhrí, and a decrease of 3 per cent. in Indri and 2 per cent. in Pípli. It is now by the census of the present year 717,436. The increase since 1881 has been almost entirely in Kaithal. In Jagádhrí, Pípli, and Indri, the population has remained practically stationary, there having been a trifling decrease in Jagádhrí, and a slight increase in Pípli and Indri.

3. The spring harvest is generally the more important where there are good facilities for irrigation from wells, or where the land is liable to floods, and the autumn harvest in the dry uplands. Wheat occupies about  $\frac{1}{4}$ th of the cultivated area in Jagádhrí, Pípli, and Indri, but only about  $\frac{1}{12}$ th in Kaithal, where gram is the principal spring crop. Rice, mostly of coarse kinds, accounts for 12 per cent. of the cultivation in Jagádhrí, 9 per cent. in Pípli, 6 per cent. in Indri, and 7 per cent. in Kaithal; maize for 10 per cent. in Jagádhrí, 8 per cent. in Pípli, and 8 per cent. in Indri. In Kaithal maize is replaced by bajra, which occupies 16 per cent. of the cultivated area. Fodder crops take up 11 per cent. of the cultivation in Jagádhrí, 13 per cent. in Pípli, 19 per cent. in Indri, and 27 per cent. in Kaithal. From 3 to 5 per cent. of the cultivated area is under cotton in the different tahsils, and from  $1\frac{1}{2}$  to 3 per cent. under sugar-cane, except in Kaithal where it is very little grown.

4. The proportion of the cultivated area which is irrigated from wells and canals, or by lift from tanks, and hill streams, amounts to 6 per cent. in Jagádhrí, 13 per cent. in Pípli, 21 per cent. in Indri, and 8 per cent. in Kaithal. The main branch of the Western Jamna Canal passes through Jagádhrí, Pípli, and Indri, but the irrigation derived from it is insignificant, only a little over 3,000 acres in all 3 parganas having received canal water in 1889-90. The Hánsi branch of this canal supplies water to 12 villages in the south of Kaithal, in which some 9,000 acres were irrigated in the same year. The Sirhind Canal has commenced to irrigate some of the outlying Powádhi and Budláda villages of Kaithal, but canal irrigation is a doubtful boon to the former circle, where water is near the surface and wells are numerous. The new Sirsa branch of the Western Jamna Canal, which will shortly be opened, has been carried through the dry uplands of Indri and Kaithal, and is designed to supply water to a large portion of the latter tract, thereby materially changing its present condition.

5. The tract under notice is not very fortunate in the material of its agricultural population. Rájpúts, who are mostly Muhammadans, and poor cultivators own about  $\frac{1}{4}$ th of the land in all four parganas, and Hindu and Sikh Jats, who, except in parts of Kaithal, are generally inferior in industry and thrift to their brethren in other parts

of the Punjab, 25 per cent. of the land in Jagádhrí, 38 per cent. in Pípli, 20 per cent. in Indri, and 43 per cent. in Kaithal. The really good agricultural tribes are Rors, Kamboh, Aráms, and Máls, and these own between them 9 per cent. of the total area in Jagádhrí, 10 per cent. in Pípli, 22 per cent. in Indri, and 7 per cent. in Kaithal. The immigration of Máls from the northern parts of the Umballa district and Patiála territory into Pípli and Indri, and their considerable purchases of land within the last 20 years, which is noticed by Mr. Douie in para. 31 of his report, is an interesting and encouraging circumstance.

6. The average amount of cultivated land possessed by each landowner, whether tilled by himself or by tenants, is about 10 acres in Jagádhrí, 9 acres in Pípli, 8½ acres in Indri, and 9 acres in Kaithal. Of the cultivated area, the proprietors cultivate themselves 56 per cent. in Jagádhrí, 74 per cent. in Pípli, 65 per cent. in Indri, and 78 per cent. in Kaithal; occupancy tenants 11 per cent. in Jagádhrí, 4 per cent. in Pípli, 8 per cent. in Indri, and 3 per cent. in Kaithal; and tenants-at-will 33 per cent. in Jagádhrí, 21 per cent. in Pípli, 27 per cent. in Indri, and 19 per cent. in Kaithal. A considerable proportion of the tenants-at-will are also owners or occupancy tenants of other lands which are insufficient for their maintenance. True cash rents are only paid on a comparatively small area everywhere, and fixed grain rates only in a portion of Pípli. The commonest form of rent taken is a share of the produce, which varies considerably, from ½ down to ¼th in all the parganá and their different portions, according to the nature of the soil and the conditions of agriculture.

7. Transfers of land have taken place to a very large extent in Jagádhrí, where as much as ⅓rd of the whole area has been sold or mortgaged since the last settlement, the great bulk of both classes of alienations having been to money-lenders. This unsatisfactory state of things is not due to the assessment being too severe, but to the extravagance and poor quality of the agricultural classes, and to the value of the land, making it eagerly sought after by the money-lenders of Jagádhrí and other towns. The result of these wholesale alienations is that the proportion of the area of this tahsil owned by self-cultivating proprietors has decreased since last settlement from 67 to 56 per cent., while the proportion in the occupation of tenants-at-will has risen from 13 to 33 per cent. In Pípli about ⅓th of the whole area has changed hands by sale or mortgage, the proportion of transfers to agriculturists being, however, larger than in Jagádhrí; and in Indri about ¼th of the land has been sold or mortgaged, the chief purchaser and mortgagee having been the late Nawáb of Kunjpura. In Kaithal, where the land is still mostly of little value, the amount alienated is as yet unimportant.

8. The country included in this settlement, with the exception of a few villages which have been transferred by river action, under the deep stream rule on the Jamna, from the Muzaffarnagar district of the North-Western Provinces to Indri, formed part of the Cis-Satluj territories which were taken under British protection in 1809. By subsequent lapses, consequent on families becoming extinct, the greater portion of this tract has gradually become khálsa, while, with the exception of the Sardár of Kalsia, whose villages adjoin and are intermixed with the Jagádhrí villages, the once semi-independent chiefs have since the Sikh wars been reduced to the status of ordinary jágirdárs. The number of khálsa and jágír villages, and those in which the revenue is shared between Government and jágirdárs, is at present—

	Khálsa.	Jágír.	Shared.
Jagádhrí	161	151	74
Pípli	334	73	107
Indri	128	96	20
Kaithal	291	58	5

9. As escheats occurred, summary settlements, which for the most part were extremely severe, were effected of the lapsed estates. Regular settlements, the particulars of which are fully detailed in Chapter II of Mr. Douie's Report, followed in all four parganá between 1848 and 1856; but the assessments fixed were again excessive in most circles, the settlements broke down, and revisions had to be made and the revenue demand

considerably reduced throughout the greater portion of Pípli and Indri, and in the Jamna Khádir of Jagádhri. Relief was thus afforded; but, even afterwards, Pípli and Indri continued to suffer from revenue mismanagement, the demand being rigidly collected in good and bad years alike. The officers charged with the settlement and revenue administration of this tract failed to realize how extremely precarious the crops are in the stiff uplands and the parts subject to inundation by the hill streams which intersect Pípli and the north of Kaithal, and how immensely the area both of sowings and of crops successfully harvested varies according to the character of the season. In the Government orders on the assessment reports of Pípli and Kaithal attention was directed to the necessity for granting timely and well-considered suspensions of the land revenue in seasons of calamity and failure of crops, and recovering such arrears gradually and judiciously in subsequent favorable harvests. It cannot be too emphatically repeated, that the successful revenue administration of the parganás included in the settlement under notice depends entirely on the degree to which these orders receive the constant vigilant attention of the district officers of Umballa and Karnál in dealing with the revenue collections of the insecure tracts above-mentioned.

10. The settlement now under consideration was commenced in May 1882 and concluded in April 1889. Mr. Thomson was first placed in charge, but Mr. Douie relieved him in December 1882, and conducted the operations till their conclusion. The settlement comprised both a re-assessment of the revenue and a revision of the record of rights, and the whole tract was re-measured.

The great variety of soils and agricultural conditions which, as already noticed, prevails throughout this country necessitated the formation of an unusually large number of assessment circles, namely, 6 in Jagádhri, 7 in Pípli, 3 in Indri, and 6 in Kaithal. In considering the new assessments, however, the whole tract may be regarded as falling into seven natural sub-divisions, as follows:—

11. First comes the small strip of country under the Siwálíks in the north of the Jagádhri tahsíl which constituted the Kandi and Som Khádir assessment circles, 40 villages being included in the former and 54 in the latter. The conditions of these two circles differ materially, as a large proportion of the cultivated area in the Kandi consists of uneven land cut up by ravines or poor sandy soil, while in the Som Khádir villages, which lie mostly between the Som and Boli hill streams, the land is, as a rule, level and fertile; but both circles may conveniently be considered together on account of their geographical situation. The agricultural population is of a very mixed character in either circle, but Gujars prevail in the Kandi, and Jats and Gujars in the Som Khádir. The population increased by 22 per cent. between 1855 and 1881 in the Kandi, and in the latter year the density per square mile of cultivation amounted to 555, while in the Som Khádir there was a falling off of 2 per cent.; but still in 1881 there were 747 persons to each square mile of cultivation. Only 1 per cent. of the cultivated area is irrigated in the Kandi; in the Som Khádir there is a good deal of canal irrigation; and the irrigated area amounts to 16 per cent. of the whole. Cultivation had increased by 6 per cent. since the previous settlement in the Kandi, but had fallen off in the Som Khádir by  $4\frac{1}{2}$  per cent. owing to the encroachments of hill torrents. Wheat and gram are the principal spring crops in both circles, and maize, bájra, jowár, and cotton in the Kandi, and rice and maize in the Som Khádir the chief autumn staples. The crops are secure from drought in either circle, but exposed to damage by wild beasts. The existing demand was Rs. 9,880 in Kandi, with a rate of 13 annas 1 pie per cultivated acre, and in the Som Khádir Rs. 28,358, with a rate on cultivation of Re. 1-7-1. The Settlement Officer's half assets estimate came to Rs. 12,424 in Kandi and Rs. 32,835 in the Som Khádir. He proposed an all round rate of Re. 1 per acre of cultivation in Kandi and Re. 1-6-6 in the Som Khádir, in addition to owner's rate on canal irrigation. Mr. Douie's rates were accepted for the Kandi, but were considered somewhat too lenient for the Som Khádir, and he was desired to reconsider them for this circle. The new assessments in the Som Khádir were eventually enhanced by nearly Rs. 2,000 above the Settlement Officer's original



proposals, and the new demand actually imposed amounted to Rs. 12,163, including Rs. 93 as owner's rate, in the Kandi, and Rs. 32,785, including Rs. 3,215 as owner's rate, in the Som Khádir, giving an enhancement of 23 per cent. on the previous revenue in the former, and of 16 per cent. in the latter, circle.

12. The second natural sub-division consists of the country between the Jamna and the Western Jamna Canal, which was divided into the four Khádir assessment circles, namely, Northern and Southern Jagádhri, containing, respectively, 32 and 60 villages, Pípli (29 villages), and Indri (99 villages). The Northern Jagádhri Khádir, which lies above the confluence of the Som torrent with the Jamna, is a poor, sandy, stony tract. The Khádir of Southern Jagádhri and Pípli is a more favored tract, the soil being generally a fertile loam, though liable to be overrun with weeds. The Indri Khádir is again inferior. The Jamna sailáb is not fertilizing, and the best lands throughout the Khádir are those which lie beyond the reach of the river floods. The material of the land-owning classes is not good. Gujars prevail in the Northern Jagádhri Khádir, in Southern Jagádhri only about one-quarter of the land is owned by industrious cultivators, and in Pípli and Indri little more than one-third. Population increased between 1855 and 1881 by 18 per cent. in the Northern Khádir of Jagádhri, and by 5 per cent. in the Southern Khádir, but declined by 1 per cent. in Pípli and 6 per cent. in Indri. The incidence per square mile of cultivation in the latter year amounted to Rs. 524, 615, 617, and 538, respectively. Cultivation slightly decreased in all circles except the Southern Jagádhri, where it increased by 8 per cent. since the previous settlement; but this increase was chiefly due to gains by alluvion, which had been already assessed, in a few river villages. Wells increased by 33 per cent. in the Southern Jagádhri Circle, 57 per cent. in Pípli, and 4 per cent. in Indri, and the proportion of the cultivated area irrigated at present is 1 per cent. in the Northern Jagádhri Khádir, 6 per cent. in Southern Jagádhri, 18 per cent. in Pípli, and 19 per cent. in Indri. Wheat and barley are the chief spring crops in the Jagádhri Khádir, and wheat in Pípli and Indri. Maize and jowár are the chief autumn staples throughout the tract, and a fair amount of sugar-cane is grown, but of poor quality.

Both the Jagádhri circles were over-assessed at the first regular settlement, and reductions, amounting to 19 per cent. in the Northern and 11 per cent. in the Southern Circle, had to be subsequently given. The demand in each circle, with the rate per acre of cultivation, stood as follows before revision by Mr. Douie:—

	Revenue.	Rate.		
		Rs.	Rs. a.	p.
Northern Jagádhri ... ..	13,352	1	1	2
Southern Jagádhri ... ..	35,361	1	7	9
Pípli ... ..	25,784	1	5	1
Indri ... ..	89,319	1	7	3

Mr. Douie's half assets' estimate came to Rs. 18,146 in the Northern Jagádhri Circle, Rs. 43,824 in Southern Jagádhri, Rs. 36,805 in Pípli, and Rs. 78,662 in Indri. He proposed rates which brought out an enhancement of 14 per cent. in the Northern and 6 per cent. in the Southern Jagádhri Circle, and 8 per cent. in Pípli, but in Indri a decrease of 9 per cent. on the existing demands. These rates were accepted for Indri and Pípli, though they were considered low in the latter circle; but they were pronounced as unduly light in both the Jagádhri circles, and Mr. Douie was desired to revise his proposals in these two circles, with the result that his original assessments were enhanced by about Rs. 700 in the Northern and Rs. 2,000 in the Southern circle. The revenue actually imposed, including a trifling sum as canal owner's rate in the Jagádhri Khádir, with the new rate per acre of cultivation, and the percentage of increase or decrease on the former demand, was—

	Demand.	Increase or decrease.	Rate.		
			Rs.	Rs. s.	p.
Northern Jagádhri ... ..	16,108	+ 19½	1	4	8
Southern Jagádhri ... ..	39,620	+ 11	1	10	11
Pípli ... ..	27,960	+ 8½	1	6	11
Indri ... ..	82,664	- 7½	1	5	7

13. The third tract consists of the remainder of the Jagádhrí tahsil, which formed the two assessment circles of Dahr (74 villages) and Bangar (126 villages), and the portions of Pípli and Indri which are situated between the Western Jamna Canal and the uplands, and constitute the Bangar circle of either pargana, containing, respectively, 50 and 83 villages. The soil is generally a fertile and easily worked loam, but there is a considerable amount of hard rice land (*dahr*) in the south-west of Jagádhrí, and some in the Pípli Bangar along the Rakshí stream. The depth to water varies from under 20 feet in Jagádhrí to 25 feet in the Indri Bangar, and well irrigation is extensively practised in the Pípli and Indri circles. In Jagádhrí, where the rainfall is abundant, wells are much less needed. The tract contains one good sized town,—Jagádhrí,—the population of which was 12,300 in 1881 and 13,029 in 1891, and three small towns—Búria, Ladwa, and Radaur—with a population under 10,000. The material of the agricultural classes is fair, especially in the Pípli Bangar, where two-thirds of the land is in the hands of good cultivators. Population increased by 14 per cent. between 1855 and 1881 in the Jagádhrí Dahr circle, but remained stationary in the Jagádhrí Bangar, and declined by 5 per cent. in the Pípli and 2 per cent. in the Indri Bangar. The incidence per square mile of cultivation in 1881, excluding the town population of Jagádhrí, Búria, Ladwa, and Radaur, was 573 in the Dahr and 525 in the Bangar circle of Jagádhrí, 442 in the Pípli, and 541 in the Indri Bangar. Since the previous settlement, cultivation had increased by 8 per cent. in the Dahr and by 3 per cent. in the Bangar circle of Jagádhrí, by 5 per cent. in the Pípli, by 2½ per cent. in the Indri Bangar, but there was a decrease of 5 per cent. in this circle in the number of wells. The increase of wells in the other 3 circles was, Dahr 12 per cent., Jagádhrí Bangar 25 per cent., and Pípli Bangar 8 per cent. The proportion of the cultivated area which is irrigated is only 6 per cent. in the Jagádhrí circles, but amounts to 30 per cent. in the Pípli, and 32 per cent. in the Indri, Bangar. Wheat and rice are the principal crops in the Jagádhrí circles; wheat, maize, jowár, cotton, and sugar-cane in the Pípli Bangar; and wheat, gram, maize, jowár, and cotton in Indri.

The demand to be revised, with its incidence per cultivated acre, was—

	Demand.	Rate.		
		Rs.	Rs.	a. p.
Jagádhrí Dahr	43,337	1	2	6
Jagádhrí Bangar	75,068	1	3	9
Pípli Bangar	39,323	1	5	11
Indri Bangar	50,446	1	3	8

The half assets estimates came to—

	Rs.
Jagádhrí Dahr	50,292
Jagádhrí Bangar	87,039
Pípli Bangar	38,942
Indri Bangar	45,104

The rates proposed by the Settlement Officer brought out an enhancement of 18 per cent. on the existing revenue in the Jagádhrí Dahr, of 14½ per cent. in the Jagádhrí Bangar, 5 per cent. in the Pípli Bangar, and 2 per cent. in the Indri Bangar. They were approved for the Pípli and Indri circles, but were pronounced inadequate in the two Jagádhrí circles, and accordingly revised by Mr. Douie, with the result of a further enhancement of Rs. 1,400 and Rs. 4,000 in them respectively.

The new assessments actually imposed, including Rs. 41 as canal owner's rate in the Jagádhrí Bangar and Rs. 904 in the Indri Bangar, with the percentage of increase on the former demand, and the new rate per acre of cultivation, were:—

	Revenue.	Increase.	Rate.		
			Rs.	a.	p.
Jagádhrí Dahr	52,820	21	1	6	8
Jagádhrí Bangar	90,874	20	1	7	10
Pípli Bangar	41,570	5	1	7	2
Indri Bangar	51,504	2	1	4	4



14. The fourth natural sub-division consists of the northern portions of the The Bet Márkanda and Pípli and Kaithal tahsils which formed the Bet Márkanda Naili. (113 villages) and Pehowa Naili (53 villages) assessment circles of Pípli, and the Naili (98 villages) and Andarwar (16 villages) circles of Kaithal. The Bet Márkanda, which constitutes the upper portion of this country, is a rich and highly cultivated alluvial tract, where artificial irrigation is little needed, and the chief danger to the crops is from floods. Lower down comes the Pehowa and Kaithal Naili, a low-lying unhealthy plain with a stiff soil, which is exposed to destructive floods from the Sarústi, Umla, and Ghaggar streams in wet years, and to drought in seasons of deficient rainfall. The Andarwar is a small circle on the water-shed between the Sarústi and Ghaggar, with a strong loam soil, and water sufficiently near the surface to admit of irrigation from wells, which are consequently numerous and protect nearly one-half of the cultivated area. A project for regulating and utilizing the water of the streams which flood the Naili with such mischievous effect is at present under the consideration of Government, and will, it is hoped, be shortly carried out, with the result of improving the condition of this malarious and insecure tract. The Bet Márkanda contains the town of Shalúbad, with a population of 11,500, and the Pehowa Naili, the small and decaying town of Pehowa, which is a well known place of pilgrimage. The material of the agricultural population is not very good except in the Andarwar, where most of the land is owned by sturdy and industrious Jats. Rájputs are the principal landowners in the Bet Márkanda, and Rájputs, Jats, and Gujars in the Naili; but the Jats of the Naili are wanting in physique and energy, owing to the malarious climate. Population increased between 1855 and 1881 by 9 per cent. in the Bet Márkanda, 4 per cent. in the Andarwar, and only 1 per cent. in the Kaithal Naili; while in the Pehowa Naili it declined by 6 per cent., the decrease being, however, almost entirely accounted for by the decay of the town of Pehowa. The incidence per square mile of cultivation in 1881 was 458 in the Bet Márkanda, 597 in the Andarwar, 443 in the Pehowa Naili, and 362 in the Kaithal Naili. Cultivation increased between the two regular settlements by 9 per cent. in the Bet Márkanda, but the number of wells decreased by 32 per cent. in this circle; by 18 per cent. in the Andarwar with a decrease of 3 per cent. in wells; by 18 per cent. in the Pehowa Naili, wells decreasing by 29 per cent.; and by 20 per cent. in the Kaithal Naili, where wells also increased by 5 per cent. The present proportion of the cultivated area which is artificially irrigated amounts to only 2 per cent. in the Bet Márkanda, to 46 per cent. in the Andarwar, 10 per cent. in the Pehowa Naili, and 11 per cent. in the Kaithal Naili. The Rabi harvest is the more important in all four circles. Wheat and gram are the principal spring crops, and maize, jowár, and rice those of the autumn harvest.

The revenue of these four circles before revision, with the rate per cultivated acre, was—

	Revenue.	Rate.		
		Ra.	Rs.	a. p.
Bet Márkanda	84,302	1	0	3
Andarwar	15,712	1	4	7
Pehowa Naili	21,233	0	14	6
Kaithal Naili	46,601	0	14	10

Mr. Donie's half assets estimates amounted to—

	Ra.
Bet Márkanda	1,36,056
Andarwar	10,403
Pehowa Naili	14,299
Kaithal Naili	26,856

The proposed rates, including a light rate on grazing lands in the two Naili circles, which brought out an enhancement of 15 per cent. in the Bet Márkanda, 3 per cent. in the Andarwar, a slight decrease in the Pehowa Naili, and a trifling increase in the Kaithal Naili. The grazing rate in the Kaithal Naili was somewhat raised. The Settlement Officer's proposals for the other three circles were allowed to stand, though they were pronounced too light in the Bet Márkanda.

The new assessments actually imposed, with the percentage of increase on the former demand, and the new rate per acre of cultivation, were—

				Revenue.	Increase.	Rate		
				Ra.	p. c.	Ra.	a.	p.
Bot Mārkaṇḍa	...	...	...	95,120	13	1	2	4
Anderwar	...	...	...	16,380	5	1	5	7
Pehowa Naili	...	...	...	21,510	1	0	14	9
Kaithal Naili	...	...	...	48,100	...	0	15	3

Most of the villages in the two Naili circles were offered, as an alternative to the fixed demand above noted, a modified fluctuating assessment, the terms being that—

- (a). Grazing grounds would be assessed at fixed sums.
- (b). The area irrigable from wells would be given a fixed assessment in respect of that advantage, varying from Re. 1-4-0 to Re. 1-8-0 per acre, according to situation.
- (c). Successful crops would pay, equally on irrigated and unirrigated lands, a fluctuating assessment of Re. 1-4-0 per acre, no demand being made on account of crops which failed. None of the villages to whom this offer was made accepted it, all preferring a fixed assessment. They have been allowed, however, the option of throwing up their fixed engagements at any time, during the currency of the new settlement, on giving six months' notice to the Deputy Commissioner, and with the Financial Commissioner's sanction in each case, and to accept instead a fluctuating assessment on the above conditions. Also, with reference to the Settlement Officer's remarks on the subject in the 45th para. of his report, the orders in para. 3 of the Government letter sanctioning the Pipli assessments are clear, that, with the Financial Commissioner's sanction, this system may be introduced compulsorily in the case of any village which falls into arrears of revenue, with or without suspensions, and cannot pay up in a reasonable time. A special safeguard has thus been provided, in accordance with the views expressed by His Honor the Lieutenant-Governor, against any arbitrary extension of the fluctuating system to villages which declined to accept it at the time of settlement.

15. The fifth natural sub-division consists of the central portion of the Pipli tahsil which formed the two assessment circles of the Northern and the Southern Cháchra, containing, respectively, 127 and 108 villages, a tract with a stiff soil and an abundant growth of *dhák* jungle, and intersected by several hill streams, whose influence is mostly injurious, especially in the lower circle. The Northern Cháchra has a fairly good soil, water is sufficiently near the surface to admit of easy irrigation from wells, and the parts beyond the reach of floods are fairly healthy. It cannot, however, be said to have prospered since the last settlement. The Southern Cháchra, which contains the decayed town of Thánesar, is a very unfortunate tract, exposed to floods which are most capricious, with an exceedingly unhealthy climate, and with a soil which, where the floods from the hill streams do not reach, requires an abundant rainfall, which it too often fails to obtain. This tract was also much over-assessed at the last settlement and has never recovered itself. The principal landowners are Jats, Kambohs, and Mális in the Northern, and Jats, Rors, and Rájpúts in the Southern, Cháchra. Population remained stationary between 1855 and 1881 in the Northern Cháchra, owing to the immigration of Mális, which has been already noticed, but decreased by 27 per cent. in the Southern circle. The incidence per square mile of cultivation in 1881 was 522 in the Northern and 492 in the Southern Cháchra. Cultivation had increased in the Northern Cháchra by 12 per cent. since the last settlement, but diminished in the Southern by 26 per cent. The number of wells had decreased in both circles, in the Northern by 4 per cent. and in the Southern by 32 per cent. The present proportion of irrigation to cultivation is

20 per cent. in the Northern and 21 per cent. in the Southern circle. The autumn harvest is somewhat the more important in either circle. Wheat, gram, and coarse rice are the chief crops.

The revenue, and its rate per acre of cultivation, stood before revision at—

				Revenue.		Rate.		
				Rs.	Rs.	a.	p.	
Northern Cháchra	...	...	...	46,401	1	1	6	
Southern Cháchra	...	...	...	32,860	1	6	0	

The Settlement Officer's half assets estimates amounted to Rs. 47,154 for the Northern and Rs. 16,839 for the Southern Cháchra. His assessment proposals for both circles were approved, and the revenue actually imposed, as compared with the former demand, was—

				Revenue.	Increase or decrease on former demand.	Rate per cultivated acre.
				Rs.		Rs. a. p.
Northern Cháchra	...	...	...	51,110	+ 10 per cent.	1 3 4
Southern Cháchra	...	...	...	28,390	— 13 per cent.	1 3 1

Most of the villages in the Southern Cháchra were offered a fluctuating assessment on the same terms as the Naili villages, but none accepted it. They have the same option, subject to the same conditions, of exchanging their fixed for a fluctuating demand during the term of the new settlement, and the same orders apply to the introduction of the system compulsorily in any village which may fall into arrears of revenue.

16. The sixth sub-division consists of the high uplands, stretching west and south-west from the Indri Bangar, which constituted the four assessment circles of the Indri Nardak (62 villages), the Bangar Pehowa of Pípli (28 villages), and the Kaithal Nardak and Bangar, containing, respectively, 96 and 92 villages. It is a healthy tract, except parts of the Indri Nardak, but the soil is hard and stiff; irrigation from wells is scanty owing to the great depth of water, and the crops are consequently extremely precarious. The conditions of the Kaithal Nardak and Bangar will, however, be materially altered shortly, as the new Sirsa branch of the Western Jamna Canal passes through these two circles and will afford irrigation to most of their villages. At present, only 12 villages in the south of this tract obtain canal water from the Hási branch. Rájpúts and Rors are the chief landowners in the Indri Nardak, Jats and Rors in the Pehowa Bangar, Rájpúts in the Kaithal Nardak, and Jats in the Kaithal Bangar. This last circle contains the town of Kaithal, with a population which has increased from 14,582 in 1881 to 15,768 in the census of the present year. Population increased between 1855 and 1881 by 10 per cent. in the Indri Nardak, 20 per cent. in the Bangar Pehowa, 45 per cent. in the Kaithal Nardak, and 27 per cent. in the Kaithal Bangar; and the average incidence per square mile of cultivation in the latter year was 447, 514, 359, and 270 in the four circles respectively, the low incidence in the Kaithal Bangar being due to the exclusion of the population of the town of Kaithal. Cultivation had increased by 5 per cent. in the Indri Nardak since the previous settlement, but wells decreased by 16 per cent., and it had increased by 46 per cent. and wells by 1 per cent. in the Bangar Pehowa, by as much as 103 per cent. with a decrease of wells by 3 per cent. in the Kaithal Nardak, and by 73 per cent. and wells by 20 per cent. in the Kaithal Bangar. The proportion of the cultivated area which receives irrigation amounts to 12 per cent. in the Indri Nardak, 10 per cent. in the Bangar Pehowa, 7 per cent. in the Kaithal Nardak, and 4 per cent. in the Kaithal Bangar. The autumn harvest is the more important in all four circles. Gram, coarse rice, jowár, and bájra are the principal crops.



The revenue, and its rate per cultivated acre, stood before revision at—

	Revenue.		Rate.		
	Rs.		Rs.	a.	p.
Indri Nardak ... ..	24,743		0	13	4
Bangar Pehowa ... ..	11,413		0	9	4
Kaithal Nardak ... ..	34,031		0	6	3
Kaithal Bangar ... ..	49,268		0	5	4

The half assets estimates amounted to—

	Rs.
Indri Nardak ... ..	16,391
Bangar Pehowa ... ..	12,510
Kaithal Nardak ... ..	34,861
Kaithal Bangar ... ..	62,988

The Settlement Officer's assessment proposals were sanctioned, except that his rates on grazing lands in the Kaithal circles were somewhat raised for the 12 canal villages above mentioned; the owner's rate was fixed at one-half of the occupier's rate, instead of one-third as proposed by Mr. Douie.

The new assessments as actually imposed, including Rs. 5,612 canal owner's rate in the Kaithal Nardak and Rs. 7,660 in the Kaithal Bangar, with the percentage of increase or decrease on the former demand, and the new rate per acre of cultivation, were—

	Revenue.	Increase or decrease.	Rate.		
	Rs.	p. c.	Rs.	a.	p.
Indri Nardak ... ..	23,589	—5	0	12	8
Bangar Pehowa ... ..	14,230	+25	0	11	7
Kaithal Nardak ... ..	54,728	+61	0	10	0
Kaithal Bangar ... ..	76,780	+55	0	8	4

In the Indri Nardak, 22 villages, where the cultivation is specially precarious, were placed experimentally under a mixed fluctuating and fixed assessment, a fixed demand being imposed on the well and grazing lands, and a fluctuating assessment, at the rate of one rupee per acre on all successful crops, on unirrigated and *abi* cultivation. An alternative fixed demand was framed for these villages, and in the Government orders sanctioning the scheme it was suggested that if, after a few years' experience of its working, they wished to revert to a fixed assessment, this might be allowed. So far the experiment has worked well, the total receipts in four years having been nearly Rs. 3,000 in excess of the alternative fixed demand, and it would be a pity to allow any of the villages in question to alter their present system of assessment during the term of settlement unless a very strong case was made out for the change. Most of the other villages in the Indri Nardak were offered the option of a fluctuating assessment on similar terms, but none accepted it. The extension of the system to any of these villages during the term of the new settlement, either on their application or compulsorily, will be subject to the same conditions as above mentioned in the case of the two Naili Circles and the Southern Cháchra.

Since the introduction of the new assessments, the 81 villages of the Pehowa Naili and Bangar Pehowa Circles and 8 villages of the Southern Cháchra have been transferred from the Pípli tahsil of the Umballa district to the Kaithal tahsil of Karnál.

17. The seventh and last sub-division comprises the out-lying villages of the Kaithal tahsil which were contained in the Powádh and Jangál assessment circles. The Powádh villages, 37 in number, which lie mostly to the north of the Ghaggar, are intermixed with Patiala villages. The soil is a light sandy loam, water is near the surface, and a quarter of the cultivated area is irrigated by wells. The Jangál circle contained 15 villages, known as the Badláda iláka, which form an island in the heart of Patiala territory, and are, with one exception, held in *jágir* by a representative of the old Kaithal family. They are 30 miles west from the Kaithal border, and have since their assessment been transferred from the Karnál to the

Hissár district. The soil is of the same quality as in the Powádh villages, but the rainfall is much more scanty, and water is too deep and brackish to admit of well irrigation. The Sirhind Canal has recently commenced to supply some water to both circles. The extension of canal irrigation will be a great boon to Budláda, but of doubtful advantage to the Powádh villages, which are already fully protected by wells. The agricultural population in either circle consists mainly of industrious Jats. Population increased by 10 per cent. in the Powádh between 1855 and 1881, and by 79 per cent. in Budláda; and the incidence per square mile of cultivation was 466 and 259 in the two circles respectively in the latter year. Cultivation had increased by only one per cent. since the previous settlement in the Powádh, but by 34 per cent. in Budláda. Wheat, gram, jowár, and moth are the principal crops in the Powádh; gram, jowár, and bájra in Budláda.

The revenue, with its rate per acre of cultivation, stood at—

	Revenue.		Rate.	
	Rs.		Rs.	a. p.
Powádh	25,626		1	2 10
Budláda	8,021		0	4 4

The half assets estimates came to Rs. 23,653 in the Powádh, and Rs. 16,143 in Budláda. The rates proposed by the Settlement Officer were accepted for the Powádh, but slightly enhanced for Budláda. The revenue imposed was—

	Revenue.	Increase.	Rate.	
	Rs.	p. c.	Rs.	a. p.
Powádh	28,510	+11	1	4 11
Budláda	12,700	+58	0	6 11

18. The result of the new assessments for the whole tract included in this settlement was an increase of Rs. 1,09,036, or 13½ per cent. on the former revenue, some Rs. 90,000 of such increase being khálsa, and the remainder jágir. In the forecast made before the settlement was commenced an enhancement of Rs. 1,85,000 was anticipated, but Mr. Douie explains in the 78th para. of his report why the increase actually taken fell so far short of this too sanguine estimate. He admits that some five or six thousand rupees more might have been taken without undue pressure in the Bet Márkanda and Khádir circles of Pípli, but otherwise the new assessments, considering the general character of the whole tract and the unfavorable agricultural conditions in large portions of it, certainly cannot be regarded as too lenient. It will be seen that in several circles the new demand is considerably in excess of the half assets estimate. This is due partly to the produce estimates being affected by the general prevalence of low rent rates, and partly to their not including profits from cattle breeding which form a considerable addition to the income derived from agriculture in many parts of Pípli and Kaithal. Moreover, where the existing demand was in excess of the prescribed standard, yet the people had been accustomed to pay it for many years, the necessary relief was afforded by moderate reductions and adjusting inequalities in the distribution of the revenue.

The average incidence of the new assessments per acre of cultivation came to Re. 1-7-6 in Jagádhri, Re. 1-2-7 in Pípli, Re. 1-3-1 in Indri, and Re. 0-10-11 in Kaithal. The initial new demand was reduced by Rs. 9,392 on account of progressive assessments and protective leases of wells.

19. The expenditure on this settlement, after deducting the share paid by jágirdárs, amounted to a little under 5 lakhs of rupees, which will be recovered by the increase to the khálsa revenue in about 5½ years. The cost was by no means excessive, considering the peculiar difficulties of the operations.

20. The account in para. 80 of Mr. Douie's report of the way in which the new revenue was distributed shows that this important portion of the work was effected with much care and judgment. The 1st chapter of the report shows, too, that great attention was paid to securing accurate measurements and to the preparation of the new records.

21. The method adopted for assessing well lands throughout the whole tract under settlement is described in para. 36 of the report. The areas fairly assessable as *chāhī* having been ascertained, a *chāhī* rate was framed for each circle, and the total irrigated demand was fixed accordingly. The revenue of each village containing wells was divided into a dry assessment, which was distributed over the whole cultivated area, and an *ābīnā* or water-advantage assessment, which was distributed as a lump sum over the wells according to the irrigating capacity of each. The Settlement Officer proposed that this *ābīnā* should be remitted on wells falling permanently out of use during the currency of the settlement. This proposal was approved by the Financial Commissioners, but was only sanctioned provisionally by Government, a doubt being expressed whether such a system might not tend to encourage cultivators to allow their wells to go out of work, and to sink new wells in their place in order to escape that portion of the assessment which was put on the land in its irrigated aspect. In the Financial Commissioner's opinion Mr. Douie has shown clearly, in para. 37 of his report, that, if any well owner was influenced by such a motive, he would lose pecuniarily by the transaction. The system in question might therefore be now definitely sanctioned, an exception being made, however, as suggested by the Settlement Officer in para. 84 of his Kaithal Assessment Report, in regard to wells in the Powādh circle which may be intentionally abandoned when canal water is taken.

22. As already noticed, the amount of revenue assigned to *jāgīrdārs* in the tract included in this settlement is very considerable. Of the whole number of 1,502 estates, 378 are entirely *jāgīr* and 206 are shared between *jāgīrdārs* and Government, and of the present revenue of Rs. 9,19,295 the amount assigned to grantees is Rs. 3,22,922. In Chapter IV of his report, Mr. Douie gives a full and useful account of the various tenures connected with these revenue assignments, and the rules which govern successions and lapses in respect of them. The proposal that life *māfis* in a shared estate, in which the *jāgīrdārs* enjoy more than half of the revenue, may be continued on the death of the present holders, if the *jāgīrdārs* so desire, without report to the Financial Commissioner or Government, might be sanctioned.

23. Rules for the periodical measurement and assessment of lands affected by the action of the river, canal, torrents, or ravines in Jagādhri, Pipli, and Indri, have been framed on the same lines as the Jullundur and Hoshiarpur di-alluvion rules, and have been approved by the Financial Commissioner. They will be found in Appendix A to Mr. Douie's report, and require the formal sanction of Government.

24. The question of tenant right is noticed in paras. 103 and 104 of the report. Tenants with rights of occupancy are most numerous in Jagādhri and Indri, where they hold 11 per cent. and 8 per cent., respectively, of the cultivated area. In Pipli they only hold 4 per cent., and in Kaithal 3 per cent. On the passing of the Tenancy Act of 1887, a good deal of rent litigation, in the shape of suits by landlords for enhancement of rent, took place in Jagādhri and Pipli, but was satisfactorily disposed of; the line of action taken in the matter, as described in para. 104, having been arranged by Mr. Douie in concert with Mr. Kensington, the Settlement Officer of the remaining *tabāds* of Umballa.

25. Government has had on its hands a considerable number of estates in Kaithal, Indri, and Pipli, which, in the first instance, had either been abandoned by their original owners or had been formed out of areas of excess village waste. The history of these Government estates, and their management from time to time, is fully described in paras. 105—113 of Mr. Douie's report. Under the arrangements now made about 10,000 acres have been retained as the property of Government, and in the remainder of the lands in question rights of ownership have been conferred on the former lessees, subject to a useful provision that nearly 8,000 acres are to be reserved as village pasture land. Some of the estates still retained by Government will be commanded by the new Sirsa Canal. With



reference to the remarks in para. 16 of the Commissioner's review of Mr. Douie's report, it seems desirable to utilize, as far as possible, the few estates still owned by Government as fuel and fodder reserves.

26. The new assessments came into force in Indri from the Kharif of 1886, in Pipli from the Kharif of 1887, and in Jagádhrí and Kaithal from the Kharif of 1888. In Indri they were sanctioned definitely by Government for 20 years, and engagements taken for that term from the village headmen. In Pipli and Jagádhrí the term of the new settlement was fixed provisionally at 20, and in Kaithal at 18 years, except as regards 16 villages of Pipli, where, for the reasons stated in para. 82 of the report, the assessments have only been announced for five years. It is a question whether the two Naili circles, now both in the Kaithal tahsil, ought not to be treated similarly. A proposal which was made by the Financial Commissioner, in submitting the Assessment Report of Kaithal, to fix the term of the new settlement for the whole tahsil at 10 years only, was negatived by Government; but since then the scheme for improving the drainage and irrigation of the Naili has been worked out as a definite project, and is likely to be shortly taken in hand. The effect will probably be that the existing conditions of this tract will be very materially changed, and its present system of assessment will be no longer suitable. It seems desirable, therefore, to limit the term of settlement in the two Naili circles to 5 years, that is, up to the Rabi of 1893. With these exceptions, the term of settlement in all four parganás might be fixed at 20 years. There is no reason for giving Kaithal a term of 18 years as compared with 20 years in Indri, for the settlement of the rest of the Karnal district runs until the Rabi of 1909. The term in Jagádhrí and Pipli should be the same as in the other four tahsils of Umballa settled by Mr. Kensington, and 20 years seems suitable for the whole district. The 15 Budláda villages are now part of Hissár, so their term should be fixed in passing orders on the final settlement report of that district.

27. Mr. Douie's proposals regarding the revenue instalments, contained in para. 83 of his report, will be dealt with under section 63 of the Land Revenue Act, after obtaining the opinions of the local officers in the matter.

Concess.

28. The cesses are—

	Rs. a. p.
Local rate	10 6 8 per cent.
Lambardári	1 0 0 "

and Patwári cess, varying from Rs. 4-11-0 per cent. in Jagádhrí and Kaithal to Rs. 5-6-8 in Pipli and Rs. 5-7-6 in Indri.

29. Zaildárs have been appointed in this whole tract, except in certain jagir villages and the towns of Shahábad and Thánesar. In Indri and Kaithal they are remunerated by a deduction of 1 per cent. from the revenue of their circles, while in Jagádhrí and Pipli they receive fixed cash ináms of Rs. 120 or Rs. 90 per annum. There are no chief lambardárs, but a few zamindári ináms have been sanctioned for influential agriculturists.

30. The Commissioner has bestowed well-merited praise on Mr. Douie for his work in this settlement. The task was an unusually complicated and difficult one, and its successful prosecution was due to the intimate local knowledge which Mr. Douie acquired of the whole tract, as evidenced in his assessment reports, and to the close personal attention which he gave to all details. The services rendered by the officials who are mentioned in the concluding paragraph of the report also merit acknowledgment.

Concluding remarks.

## **Review of the Karnal-Amballa Settlement Report, by Colonel L. J. H. Grey, C.S.I., Commissioner and Superintendent, Delhi Division.**

The tracts of which the Karnal-Amballa Settlement Report treats are the Jagadhri, Pipli and Kaithal Tahsils, and the Indri Pargana.

2. Their physical features and statistics have been fully given in the assessment reports. They are by no means flourishing. The Jagadhri Tahsil has every advantage which nature can afford, and these have been abused. The soil is over-worked, and the produce consequently poor, and the people, moreover, are generally much in debt and out of heart. The causes of this are sufficiently stated in para. 20 of the Report.

3. That the depressed condition of the Pipli Tahsil results on the character of its population comes out, I think, clearly from the success of *Mali* immigrants on estates which the original owners could not work to profit. The facts are given in para. 31 of the Report. It is very instructive to inspect one of these estates, beautifully tilled and profitably worked, in the middle of other estates of the same class, regarding which the owners, with the example of the *Malis* before their eyes, persist in declaring that the land is sour, and nothing can be done with it.

4. This is in the Northern Chachra. In the Southern Chachra a more industrious and united population would have trained and utilised the flood shutting them out where they are not wanted, and leading the water to where it would be useful, as is being done in Gurgāon. There is no reason why the tract should have come to its present pass, except the dissensions and laziness of the owners of the estates. As it is, however, this tract cannot recover till the Pehowa drainage and irrigation scheme is carried out, and then it ought to prosper exceedingly, for the land is strong and will produce largely with irrigation.

5. The last remark applies also to the Naili. The remaining tracts, the Bangar, Khadar and Markanda Bet, are good, the last named excellent. Moreover, the Markanda Bet is, as a whole, very thriving, the only part of the Tahsil which is so, for the Khadar, notwithstanding its natural advantages, is unprosperous, owing to its worthless population.

6. The Indri Pargana is a poor tract, whether river, valley or high land. The former is really poor. The latter seems so, but I doubt not that good tillage would show a very different state of things. I have seen the hardest black clay by industry turned into a tilth fine as light loam; where this is done a light rainfall gives results which in Karnal the people suppose can only be obtained from ample downpours.

7. The Kaithal Tahsil is a very fine tract, and fairly prosperous, except in the Naili circle. This will, however, be restored by the Pehowa Drainage scheme, if carried out in its integrity. The whole Tahsil, with its good soil and population, and the Sirsa Canal running through it, has a great future before it.

8. All the abovenamed tracts have no doubt suffered by our fiscal mistakes, not so much, I think, in over-assessment as in hard realisation. Undoubtedly we could have demanded what the preceding Native Governments demanded, that is to say, an average based on their realisation in kind for a period of years, had we been easy and judicious in our realisation. For, in Mr. Douie's words, "a heavy assessment, collected with discretion, suspensions being given whenever a really bad season came round, would be less oppressive than a very moderate one collected without any regard to the extraordinary fluctuation of the harvests" in Kaithal, Pipli and Indri. As a fact, we reduced the demand, but "the transition from grain to cash payments came at a particularly unlucky time," and this, with a rigid system of collection, broke the first assessments down.

9. On the subject of assessment I have nothing to add to my remarks on the Assessment Reports. In Jagádhri and Pipli, they are, in my opinion, too low for so long a period as 20 years. The method of well assessment adopted by Mr. Douie (para. 35) is good, and I am adopting it in the Settlement of Native States of this agency.

10. Mr. Douie refers in para. 51 to a serious matter affecting the Som-Khadir Circle of the Jagádhri Tahsil, namely, the encroachment of the hill torrents. Mr. Kennedy has recorded a strong note on this subject, which is a part of the general question known as that of the Hoshiárpur *Chos*. There is no remedy while denudation of the foot hills is permitted to continue.

11. Regarding the Indri fluctuating assessments Mr. Douie remarks, (para. 63) that "its success depends entirely on the work of the Patwáris being closely and honestly supervised." This is the difficulty. It is one not to be solved without an undue tax on the time and strength of a Collector: for his energy alone can secure such supervision. I have a vivid recollection of the efforts which this system required of me in Baháwalpur.

12. Mr. Douie's remarks in para. 69, regarding the benefit to the cultivators, of the advance in the price of grain, are worthy of close attention. I have discussed them with competent persons. They are, I think, absolutely true in the case of zamindárs who are in debt and live from hand to mouth. But the zamindár who can keep clear of the *Banis* reaps a very fair share of the profit from advance of prices. If, therefore, the country at large is to profit by our development of its trade, the zamindárs must be cleared of debt, and must be kept out of it in future. The former is possible as regards existing debt. The latter is not so, I believe, under existing conditions of light assessment with consequent high value of land, and the unlimited power of alienation conceded to the zamindárs.

13. The rise in the price of live-stock referred to in the above quoted para. has certainly much benefitted the graziers of Kaithal and Pipli. Taken generally, however, it has adversely affected the agricultural interest. The loss of his bullocks is now a terribly serious thing to the zamindár, and this is a danger always hanging over him, for his constant need of money leads him to sell off his fodder, and the first drought leaves his cattle without food. The storage and transport of fodder is a pressing question for solution in the interest of agriculture.

14. In para. 80 Mr. Douie refers to a matter most material to the success of an assessment, the *bachh*, or internal distribution of the demand on the estate over the shareholders, especially the allotment of the *ábiana* on the wells. With the light assessment imposed, and the care taken by him to prevent injustice in its distribution, every thing possible has been done on our part to permit of recovery of prosperity in Jagádhri. But in Pipli and part of Kaithal more is needed, as stated in para. 86 of the Report. Free and prompt suspensions must meet the precarious conditions of agriculture, though such suspensions should always be recovered from the bumper harvest which is certain to be reaped eventually. But, above all, the action of the hill torrents has to be controlled, which is so destructive to the productiveness of the soil and the health of man and beast, and which the people have not the energy or union to remedy.

15. The provisions of the Tenancy Act, regarding rent of occupancy tenants, have been very tenderly applied in Amballa, and with reason. "In Amballa the occupancy tenants are the best cultivators in the District." The case so common elsewhere, that of one sturdy peasant ousting another peasant, equally sturdy, from a part of the small patrimony now required by the latter for his rising family, does not arise in Amballa. In that case the provisions referred to remedy in some degree a grievance keenly felt.

In Amballa, however, the owners so ousted are generally Rájpút, Sayads, and such like persons who would never cultivate, but would rack-rent if they could.

16. The story of the leased estates, as told in paras. 106-113 of the Report, is a common one in the Punjab. In the early days, the object was to get land cultivated, and thus obtain revenue. We now view, with regret, the wholesale alienations of what would be invaluable as reserves for fuel and fodder, which are

so much needed at the present time when every inch of available land has come under the plough. But engagements, made in former days, had to be liberally interpreted. Though the conditions of the leases had nowhere been fulfilled generally, not even approximately fulfilled, within the prescribed time, still where substantial progress had been made the lessees were declared owners.

17. In conclusion, I may remark that this Report describes succinctly and modestly, a great task of which much more might have been made. The more I saw of it, the more I was impressed with the great difficulty of dealing with tracts of such diverse character, diverse not only from circle to circle, but from village to village. The closest attention was required, and great labour was entailed in the performance of this task, and very thoroughly was it done. That (in my opinion) Mr. Douie did not get as much revenue as he might perhaps have got, does not affect the credit due to his zeal and skill. For a Settlement Officer, living for years amid the appeals *ad misericordiam* of the peasantry, it is natural to form a somewhat low estimate of their resources.

18. There were three heavy additions to Mr. Douie's task which do not generally fall on Settlement Officers, and which deserve special notice. The Jagir and Mafi inquiry described in Chapter IV. was exceedingly intricate and laborious in Amballa. The disposal of the leased estates, Chapter V., was also a very troublesome matter. Finally, the rent litigation (Chapter V.) was mainly disposed of before the Settlement was closed, and with the best effects, though it entailed heavy additional work on Mr. Douie and his Assistant.

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## ERRATA.

### IN TABLE OF CONTENTS.

- Para. 25, for "Kailthal" read "Kaithal."  
 " 111, for "leases" read "lessees."

### IN REPORT.

- Page 3, para. 6, line 3, for "any" read "my."  
 " 6, " 10, " 16, for "their" read "the."  
 " 7, " 12, in title, for "Rivisjám" read "Riváj'ám."  
 " 9, " 14, in table, for "577,002" read "57,002."  
 " 13, " 22, " for "Bhanga Singh's  $\frac{3}{4}$ th share" read  
     "Bhanga Singh's  $\frac{3}{4}$ ths share."  
 " 16, " 24, in third line from end, for "31" read "3 $\frac{1}{2}$ ."  
 " 27, in heading of column 11, for "1885" read "1855."  
 " 29, in column 6, opposite Khádir, for "20,060" read "28,060."  
 " 29, " 6, " Naili, for "1-2-7" read "0-14-4."  
 " 30, para. 43, in second line from end, for "Rs. 16" read "16."  
 " 32, " 48, line 15, for "jangals" read "jangal."  
 " 34, in heading of column 10 of table, for "1853" read "1855."  
 " 35, para. 51, in fourth line from top of page, for "last" read "east."  
 " 41, in column 10 of table, opposite Nardak, for "1-12-8"  
     read "0-12-8."  
 " 43, para. 64, line 8, for "most" read "more."  
 " 45, in column 5 of table, opposite Naili, for "510" read "11."  
 " 52, " 11, of " " " strike out "+ 3."  
 " 53, para. 75, line 5, for "increase" read "decrease."  
 " 68, " 102, " 3, for "amount" read "amounts."  
 For Appendix B read Appendix B.

## ERRATA



# KARNAL-AMBALA SETTLEMENT REPORT.

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# KARNAL-AMBALA SETTLEMENT REPORT.

## CHAPTER I.

### THE REVISION OF THE RECORD OF RIGHTS AND THE REORGANIZATION AND TRAINING OF THE SUBORDINATE REVENUE STAFF.

1. The tract included in the Karnal-Ambala Settlement embraced the Jagádhrí and Pípli Tahsils of the Ambala District, and the Kaithal Tahsil and Indri Pargana of the Karnal Tahsil of the Karnal District. It comprised 1,502 estates, covering an area of 2,703 square miles, of which 1,387 or rather more than half were cultivated. The tahsil details are given below :—

Tahsil.	Number of estates.	Total area in acres.	Cultivated area in acres.
Jagádhrí ... ..	386	388	260
Pípli ... ..	518	773	376
Kaithal ... ..	354	1,129	545
Karnál, pargana Indri ... ..	244	413	206

The charge was a large and straggling one, stretching from the point where the Jamna leaves the hills to the neighbourhood of Sirsa, and embracing an extraordinary variety of soils and agricultural conditions. The Jamna forms the eastern boundary of Jagádhrí, Pípli, and Indri, and divides them from the Saháranpur and Muzaffarnagar Districts of the North-Western Provinces. Indri is bounded on the south and Kaithal on the south-west by the Karnal Pargana. The territories on the other sides of Kaithal belong to the Jind and Patiala States. Jagádhrí is bounded on the north by Kalsia and Náhan, and on the west by the Naríngarh and Ambala Tahsils. The last also adjoins Pípli on its northern and western borders. Kaithal included a number of estates to the north of the Ghagar scattered among Patiala villages, and a compact block of 15 estates, known as the Budláda Háka, some 40 miles from Sirsa, and forming an island in the centre of Patiala and Jind territory (*see para. 114*). These outlying estates are nearly all included in the jágírs of the Bháís of Arnauli and Siddhuwál, who are the only surviving representatives of the Kaithal house.

2. Jagádhrí is a submontane tahsil, with a light loam soil, abundant rainfall, and fairly secure crops. The neighbourhood of the Jamna makes cultivation easy and its fruits not very precarious in the Khádírs of Pípli and Indri. A narrow strip of Baúgar to the west of the river valley is abundantly supplied with wells, and, in the north at least, enjoys a sufficient rainfall for the raising of wheat without artificial means of irrigation. A strip of land in the north of Pípli along the border of the Ambala Tahsil is equally favoured, and there is a rich alluvial tract in the north-west of the tahsil flooded by the Márkanda and the Umla. The small Powádh Circle of Kaithal to the north of the Ghagar is also well watered, and has a



sandy but productive loam soil. The country in which the harvests are comparatively secure corresponds roughly with that in which wheat can be sown in unirrigated land with fair hopes of success, and covers nearly two-fifths of the area put under Settlement.

To the south and west of it a great plain of stiff loam and hard rice land stretches away towards the arid Hariāna and Bagar tracts of Hisār and the Jangal country of Patialā. Going southwards and westwards the rainfall becomes more and more scanty and uncertain, and the water level sinks rapidly, till in the south of Kaithal the yearly fall averages only 16 or 17 inches, and water is reached at a depth of 130 feet. With severe labour and the help of expensive oxen, industrious Rors work wells where the water-level is as low as 50 or even 60 feet. Where it falls still lower the sturdiest peasant finds that irrigation will not pay, and the harvests depend on what the heavens send them. Under these circumstances the crops consist in the kharif of millets and pulses, and in the rabi of rape and gram. The people look much to their cattle for their means of livelihood, and in good seasons the pasture is abundant. Where the rainfall exceeds 24 or 25 inches the cultivable waste is covered with strong dhak jangal, and, where it is less, with a sparser growth of jand and jal. The whole of this thirsty plain is liable to severe droughts, the harvests are most precarious, and failure reaches the level of famine every seven or eight years. Herds of starving cattle are driven off to the Jamna and the Siwālīks. Many die there, and the mortality among those which remain behind is enormous. In the north indeed the Chautang, the Sarusti, the Ghagar, and the Umla in its lower reaches after it has dropped its fertilizing silt, overflow part of the plain in the rainy season, but the floods are most capricious, and the inundated tracts fluctuate between drought and drowning, while their population is scourged with fever and pneumonia, and between disease and uncertain harvests is in a very depressed condition. The uplands lying beyond the flooded zone are healthy, and have a sturdy and not unprosperous population. Budlāda is an integral part of the Jangal country, and has a light sandy soil, which yields wonderfully good crops considering the scantiness of the rainfall.

3. A full account of the physical features of the country, the conditions under which its husbandry is conducted, its agricultural statistics (soils, crops, rents, and transfers) its population at various periods, its tribal organization, its means of communication, and the course of its trade, will be found in the Assessment Reports of the different tahsils and in the revised editions of the Ambala and Karnāl Gazetteers prepared by Mr. Kensington and myself. Any further information on the subject which appeared necessary to explain the nature of the Settlement has been given in the paragraphs of this report which deal with the assessment of each tahsil, and the grounds on which it was based. I therefore proceed without further preface to give a short account of the operations of the recent Settlement.

4. After the completion of the Settlement of the part of the Karnāl District included in the old Delhi territory Mr. Ibbetson was put on special duty to prepare a preliminary report on the necessity for, and financial prospects of, a re-settlement of the rest of Karnāl and the Pipli and Jagādhri Tahsils of Ambala. His report was submitted in January 1880. The general conclusions at which he arrived were summarized by the late Colonel Wace (Settlement Commissioner's No. 117 C., dated 12th March 1880) as follows:—

"In Kaithal the records, maps, and annual papers are all equally bad; every description of error abounds. In Indri, Pipli, and especially in Jagādhri, the state of affairs is better, but many changes have occurred, and imperfections are not unfrequent. The distribution of the assessment between villages urgently calls for re-adjustment; and no less that between the holdings of each village. Large portions of these tahsils are subject to the fickle action of rivers and hill torrents; and the drainage of the country has been materially altered during the past 30 years by new canals and by the embankments of the trunk road and railway. Lastly, the Sikh jagārdārs are many of them much in need of the increased assessment now fairly claimable. I have no doubt whatever that

Reference to Assessment Reports and Gazetteers for fuller account of physical features, crops, &c.

Mr. Ibbetson's Preliminary Report on the necessity and financial prospects of re-settlement.

throughout these 3½ tahsils a re-assessment and revision of the record is required. And considering the length of time that has elapsed since the last Settlement was made, the fact that not even the best of the maps are drawn to scale, and the extensive changes of all kinds which have occurred, a re-survey is evidently unavoidable.

Mr. Ibbetson considered the financial prospects of re-settlement good. He anticipated that an increase of Rs. 1,84,773 might be secured on the revenue of the year 1877, which he stated at Rs. 8,17,068. The khālsa share of the enhancement was estimated at Rs. 1,31,533, and the jāgīr share at Rs. 53,240. I shall explain later on why this forecast was not realized.

5. Colonel Wace, who was then Settlement Commissioner, anticipated that the work might be completed in four or five years at a cost of Rs. 5,35,000, of which Rs. 90,000 would be payable by the jāgīrdārs. After some discussion it was decided that the re-assessment must, as originally proposed by Mr. Ibbetson and Colonel Wace, be accompanied by a complete re-measurement and revision of records. In sanctioning this course the Government of India (Government of India, Revenue and Agricultural Department, No. 283 R., dated 12th December 1881) directed special attention "to the necessity of maintaining a correct agricultural record," and added:—"It is hoped that in these and other districts, where the records are being, or have been, revised at considerable expense, measures are being taken for their proper maintenance by the patwāri staff." By a notification issued on 17th May 1882 the tract was put under settlement. Mr. E. G. Thomson was gazetted as Settlement Officer, and he assumed charge on 1st May (*see* Appendix). An Extra Assistant Settlement Officer was appointed, and to each of the three tahsils and the Indri Pargana a Superintendent was posted with a staff of Deputy Superintendents and Munsifams according to the liberal scale then allowed. The establishment which became available by the completion of Settlement operations in Sirsa and the Una Tahsil of Hoshiarpur was gradually transferred to Karnāl-Ambala, and in December 1882, when I relieved Mr. Thomson, I found my Settlement staff almost complete. It proved quite impossible to manage the unwieldy Kāthāl and Pipli Tahsils as single Superintendent's charges, and in August 1883 Alam Shah was gazetted as Superintendent of the country included in the old Gula Tahsil, which on its abolition in 1866 had been divided between the two tahsils just mentioned.

6. I brought to my task no previous knowledge of Settlement work, and, if the interests of Government did not suffer very severely from any lack of experience, this is to be ascribed to the counsel and guidance which I received in the early stages of the settlement from the late Colonel Wace.

In pursuance of the policy laid down by the Supreme Government in the letter quoted in the last paragraph, he impressed upon me the necessity, as regards all re-measurement and record work, of making it my chief aim so to train the patwāri staff as to ensure the maintenance after Settlement of annual records accurate enough to preclude the necessity of any general revision when the tract should again come under assessment. He drew up a complete set of instructions for the conduct of measurements and crop inspections, and the preparation of annual and Settlement records, in the Karnāl and Ambala Districts. For the first time an attempt was made to ensure that harvest returns should give real information by providing that the area over which the crops had failed should be noted. In Karnāl and Ambala this is a matter of very great importance; indeed it is not too much to say that in many parts of both districts crop statements prepared on any other principle are not only useless but positively misleading. Colonel Wace's instructions embodied in many respects a new departure in settlement and revenue procedure. They became the foundation of the patwāri manual issued in 1885, which in its turn has been reproduced, with some important changes, in Part I of the Rules under the Land Revenue Act of 1887.

7. A number of outsiders had been employed at the beginning of Settlement as shajra-kashes, and really in many cases did the measurements. They were now dismissed, and all the patwāris were made to do the work themselves. They were at first extremely

Reasons of slow progress in early stages of the Settlement.

inefficient. Above one-third of them kept their records in the Nāgri character, and were unable to write Urdu. The girdāwari had often been done in the village rest-house; and indeed there was some excuse for this practice, for in many cases the circles were so large and included such an enormous number of fields that an accurate crop inspection was well-nigh impossible. The new jamabandi had sometimes been made by simply repeating the entries as to cultivation contained in that of the previous year. Some patwāris, I believe, paid the superior revenue establishment the compliment, which was probably undeserved, of supposing that this simple device might be detected, and only made the jamabandis of alternate years copies of each other. Such being the character of the staff and of the records to be revised, and the principle laid down for my guidance being that the aim of my operations should be to carry out all the ordinary routine of district revenue work in addition to the special work of re-measurement and the preparation of new records, it was inevitable that progress should at first be very slow. The programme of work laid down by Colonel Wace allowed five months for the crop inspections, the preparation of the annual papers, and the copying of the new records, and seven months for measurements. But during the period allowed to the latter, the alluvion and diluvion assessments had to be made and other miscellaneous district work to be disposed of. It proved impossible to carry out the programme in its entirety without unduly prolonging the Settlement, and in certain years no jamabandi was prepared.

8. Mr. Wynyard's record of rights was evidently framed with great care, and was the best part of his settlement work. But

Measurements.

for years no serious effort had been made to keep it up to date, and the preparation of a jamabandi sufficiently accurate to form the basis of the settlement record had to be undertaken before any real progress could be made. This proved to be a very laborious task. Between 15th March 1883 and 30th March 1884 nearly 49,000 mutations were attested, and about one-fifth of these ought to have been brought to book from 10 to 25 years previously. Measurements, therefore, only began in earnest in December 1883. According to Colonel Wace's instructions a chain of  $47\frac{1}{2}$  feet consisting of 10 kadam of 57 inches was used, and the measure of area adopted was a bigah consisting of the square of 20 of these kadam, and supposed to be equal to  $\frac{1}{16}$ th of an acre. Our bigah, however, did not exactly correspond to this fraction. To secure this the length of the kadam should have been not 57 but 57.157 inches, and of the chain not  $47\frac{1}{2}$  but 47.631. Roughly it may be said that there was an error of  $\frac{1}{2}$  of an inch in every 50 feet, which is nearly equivalent to one yard in a mile. The local kacha bigah in Karnal and Ambala is usually  $\frac{1}{16}$ th of an acre, and all cash rents are calculated according to this standard. At the Regular Settlement the Shahjahanī bigah of 3,035 square yards, commonly known as the *pakka bigah*, was used. It is equal to four of the local bigahs, and I think it is a pity that it was not retained, as the landowners were quite familiar with the difference between it and their own measure. The new unit had not the advantage of corresponding either with the one previously employed in Government records or with that in use among the people themselves, and I doubt whether the zamindars will ever accept it. An accurate skeleton for the field survey was secured by laying down with the aid of the cross staff and chain squares of 200 kadam all over the village area, the corners of the first square being indicated by more or less permanent marks. The patwāris soon learned to measure these squares with great accuracy. The field measurements of the Regular Settlement had been made on what is known as the "kiāriwār" system, that is to say, any plot of land enclosed by permanent or semi-permanent boundary ridges or "dauls" was considered the unit of measurement. In the rice tracts and in the light sloping soils in the south-west of the Kaithal Tahsil, where the land is minutely subdivided by "dauls" for the purpose of controlling rain water, this led to an extraordinary multiplication of khasra numbers. Hence the labour of recording the crops field by field at each girdāwari was greatly increased, and the annual jamabandi became a very lengthy document. The field as defined in Colonel Wace's instructions was "an area of which the ownership is separate and the occupation separate." The following table shows what a marked effect the change had in reducing khasra numbers:—



Tahsil or Pargana.	Total area.	Former cultivated area and jaidid.	Present cultivated area and jaidid.	Former field numbers.	Present field numbers.	Decrease per cent.
Pipli ... ..	Acres. 494,777	Acres. 229,594	Acres. 243,782	474,012	284,112	40
Jagádhrí ... ..	348,424	161,868	167,598	271,067	219,188	19
Indri ... ..	264,463	132,204	134,060	230,487	136,757	41
Kaithal ... ..	722,522	228,469	354,723	523,165	181,258	65
Total ... ..	1,730,186	752,135	900,163	1,498,721	821,315	45

Some of the new fields in cultivated land in Kaithal are inconveniently large, and cover areas of 50 acres. But it was necessary to adopt some rule, and it was difficult to invent any *via media* between the old system and that prescribed by Colonel Wace to meet special cases. As measurements progressed it was found convenient to give each square in large blocks of waste a separate field number. The extension of canal irrigation in the south of Kaithal, when the new Sirsa Branch of the Western Jamna Canal is opened, will lead to the subdivision of many of the larger fields, and the increase of field numbers to meet the requirements of the Irrigation Department. In Indri measurements were finished in the last quarter of 1885; in Jagádhrí, Pipli and Gula they were completed in 1886, and in Kaithal early in 1887. The maps are on the scale of 40 kadam to the inch, which is nearly equivalent to 28 inches to the mile. In some of the large estates in Kaithal a smaller scale was employed. The Pipli and Jagádhrí maps after reduction are being utilized by the Survey Department in the preparation of the new topographical survey map of the Ambala District, their accuracy having first been tested by making a skeleton village traverse.

9. At the Regular Settlement the soil classification which our first Revenue officers brought with them from the North-Western Provinces was followed. The primary division was into *cháhi*, *ábi*, and *bárání*, under each of which four classes *niai*, *rausti*, *dakar* and *bhur* were recognized. Some confusion prevailed as to the meaning of the term *ábi*, which was not only applied to lands irrigated by lift from tanks or streams, but often to flooded, and sometimes apparently to canal-irrigated soils. Lands subject to river inundation were occasionally entered as "*serábi*," but the bulk of the flooded soils were recorded as *bárání*. There is a good deal to be said for the old classification, though the attempt to distinguish manured (*niai*) from unmanured land was perhaps a mistake. The local names for soils vary in different parts of the tract, and for particulars I must refer to the Assessment Reports.\* But, if Jagádhrí and the outlying Kaithal villages are excluded, it may be said broadly that the people recognize two descriptions of soil, *magra* and *dahr*. The former term is used to describe the loam soils, on which the rain water does not lie, and the latter to denote the low-lying stiff rice lands. I was at first instructed to abandon the attempt to make any record of soils, and to base my classification on the presence or absence of irrigation. The irrigated lands were divided into *cháhi*, *ábi*, and *nahri*, according as the source of irrigation was a well, a tank, or the canal. Fields watered from streams by lift were also entered as *ábi*. The unirrigated lands were divided into those which were flooded or naturally moist on account of their position near streams (*sailába*), and those depending entirely on rain (*bárání*). But I soon found that it would be useful to record the *dahr* lands separately. It would have been well if, in doing so, the term had been confined to the hard "*kalar dahr*," which yields a precarious crop of rice, and, failing that, nothing. These "*kalar dahr*" soils are the worst of all, and nine-tenths of the rice lands of the tract are of this description. In the outlying Kaithal villages included in the Powádli and Jangal Circles, where

\* Pipli, para. 16; Jagádhrí, para. 17; Indri para. 8; Kaithal, paras. 8 and 9.

the soil is light and sandy, I classed the land by the local names of "niwán" and "tibbi." The former consists of level light loam, and the latter of very uneven and sandy land. The distinction between the two was often badly observed by the patwáris, and in assessing I could make little use of it, and had to trust to my own notes as to the soil of each estate. An attempt was made to classify land according to the system of tillage in vogue. At first the following nomenclature was adopted:—

- Ekfasli sáwani, or land put yearly under kharif crops only.
- Ekfasli hári, or land put yearly under rabi crops only.
- Dofasli dosála, or land in which a rabi crop is followed by a kharif crop, and the land then lies fallow for one year.
- Dofasli harsála, or land cropped twice in each year.
- Sifasli harsála, or land cropped thrice in each year.

It was found that the third of these terms was not understood by the people, who were frightened by the sound of "dofasli," and pointed out that they only raised one crop in each agricultural year (kharif, rabi). To meet their objections the five classes were re-named sáwani, hári, ekfasli, dofasli, and sifasli. The entry of these terms was a needless refinement, and no use was made of this classification in assessing, although very great attention was paid to the cropping of land as evidenced by the recorded results of the harvest inspections.

10. There are two complete copies of the new Settlement Record of each estate: one in the custody of the district kánungo and one in that of the patwári. The documents included in the records in the case of Pípli, Jagádhrí and Kaithal are:—

- (a). Preliminary Rabakár.
- (b). Shajra kishtwár or field map.
- (c). Khasra or field register.
- (d). Shajranashb or genealogical tree of landowners.
- (e). Final jamabandi.
- (f). Naksha chábát or list of wells.
- (g). Fard lákhiráj or list of revenue free assignments.
- (h). Wájib-ul-arz or village administration paper.

A third copy of the jamabandi was filed in the tahsíl. Prefixed to each jamabandi is a brief note explaining how the new revenue was distributed over holdings. Fuller particulars are of course to be found in the "Misl bachh." The entries of ownership and cultivating occupancy in their final jamabandi do not always agree with those in the field register, as the latter was often prepared several years earlier than the former. The reason of any change as regards owners or occupancy tenants can easily be traced by referring to the mutation register, a reference to which was inserted in such cases in the remarks column of the jamabandi. The wájib-ul-arz is a short document containing only 12 clauses, all elaboration having been carefully avoided. The only fact regarding it calling for special notice is the entry of a provision excluding a certain amount of the common land from division in the case of a future partition. This was inserted with the approval of the Financial Commissioner in cases where such a condition appeared desirable, and where the people themselves agreed to the entry. No special area was selected or demarcated, as to do so would have caused delay and probably led to many disputes. But demarcations should be made when partition is applied for, after which the summary proceeding provided by Section 150 (1) of Act XVII of 1887 will prevent encroachments on the part of the village common reserved for pasture. Much harm has been done in the past by reckless partitions of the shámífát, into which the landowners have often been forced by the encroachments of a few of the co-sharers. The rights of Government in kankar have of course been carefully reserved by an entry in the wájib-ul-arz. Besides the Settlement records, the district kánungo has in his custody a revenue basta for each estate, which contains the khatauni prepared at measurement, the jamabandís for some



years previous to Settlement with such mutation papers as could be found, the jamabandis and mutation registers prepared during settlement, except the final jamabandi, and the misal bachh showing how the new revenue was distributed over holdings. The half assets estimate of the village and a statement showing the area irrigated by each well during four years (see para. 80) are filed with the misal bachh. As each new jamabandi is received it will be put in the basta, the jamabandi which under the rules should be destroyed being at the same time removed. In villages subject to river action, the annual alluvion and diluvion papers will also go into the revenue bundle. Each basta contains a register showing the documents included in it and those which have been destroyed. The Settlement records of Indri were filed in the district office before Act XVII of 1887 and the rules under it came into force. But they contain the same documents as those in the other tahsils, with the exception of the preliminary rubskér. No note explaining how the revenue was distributed over holdings is prefixed to the jamabandi, but a note of the same character is contained in the first clause of the village administration paper. Mutation registers and certain statistical statements are appended to the jamabandi. The wájib-ul-arz is short, but, as it was drawn up before the new rules on the subject were issued, it is perhaps rather more elaborate than the corresponding paper prepared for the estates of the other tahsils.

11. The English village note-books in the district office contain my own remarks describing the circumstances of the landowners, the resources of the estate, and the grounds on which the new assessment was based. I believe that in Ambala it has been found possible to go on filling up the statistical statements, though this is not actually required by the rules, except while a district is under Settlement. The vernacular copy of the village note-book in the tahsil contains a report on the condition of the estate prepared under my orders by the Superintendent during Settlement. I think an attempt should be made to add brief notes both in the English and Vernacular copies from time to time, and that the Tahsildárs should be encouraged to enter additional remarks in the Vernacular note-books. It should at least be a rule that, whenever a suspension is given, the fact should be entered, with a brief statement of the circumstances which made relief necessary.

12. Records of the customs regulating rights in land and the devolution of property were prepared for the principal tribes, for an account of which I may refer to the volumes relating to the Ambala District and the part of Karnál embraced in the recent Settlement, which are included in the series devoted to the description of the customary law of the Punjab.

13. I have already alluded to the inefficiency of the patwáris at the beginning of Settlement. Before operations began a patwári school had been started for Jagádhri and Pipli under an excellent Deputy Superintendent, Narsin Dás, and through his exertions something had been done to train the staff. But the Indri and Kaithal patwáris had received no practical instruction, and the certificates which they held of having passed through the district patwári school were described by Mr. Thomson as all alike utterly untrustworthy and worthless. The crop inspections were a farce, and the annual papers a fraud. A curious practice prevailed in Ambala by which the patwáris were themselves allowed to record mutations in their jamabandis in red ink, in the sanguine hope apparently that a revenue officer would at some future date find time to attest the alterations. But the patwáris were not only guilty of leaving the things undone that they ought to have done, too many of them had done divers things which they ought not to have done. The majority were baniás, and not a few had purchased land or held mortgages in their own circles. A cautious man made out the transfer in the name of his infant son, or of his elder brother who had charge of the family shop in a neighbouring village. In Jagádhri especially many of the patwáris were simply agents of money-lending relatives. I do not for a moment mean to imply that knavery was universal. The class of half-educated men who now become village accountants have no hereditary connection with the estates of their circles, and would be to the full as corrupt as their predecessors but for the

much stricter supervision that is now exercised. Great forbearance was shown in the hope that the men would learn their work, but even so many of them were got rid of by Mr. Thomson before I joined in December 1882; one-sixth of the whole staff resigned or was dismissed during 1883-84, and, as the Settlement proceeded, the worst workmen among the rest were gradually weeded out. Three-fifths of the patwáris could only write Nágri. It was decided to retain these men when they could be taught to survey, and to give them khasra writers till they could themselves learn to write Urdú. Of course many failed to qualify and had to go. Urdú-writing relatives being appointed in their places where possible. A fair number learned to use the Persian character, and by the close of Settlement operations the class of "Hindi-khwán" patwáris had practically ceased to exist.

Efforts were made to weaken the bania element in filling up vacancies, but great difficulty was met in obtaining candidates of sufficient education from the landowning class, and, where a patwári is not a bania, he is pretty sure to be a Brahman or a Shekh.

At the beginning of Settlement I found that not only were the patwáris untrained, but that even efficient men would find it very difficult to carry out the work expected of them, unless their numbers were increased and a fair distribution of labour was secured by a remodelling of existing circles. According to the arrangements made at the Regular Settlement patwáris were paid by a percentage of Rs. 3-2-0 on the land revenue plus a stationery allowance of Rs. 0-4-0 per cent., and each man received the income derived from this cess in the villages of his own circle. The result of this plan was that in fertile and well cultivated tracts the circles were of moderate size and sometimes needlessly small, while in the more arid parts of the two districts they were so large as to be quite unmanageable. Two hundred and sixty-seven patwáris had to record the crops and prepare annual papers for 1,500,000 fields, giving an average of 5,500 per man. In Pípli 19 of the 80 circles contained more than 8,000 fields, and one had as many as 18,500, while several of the old Kaithal circles exceeded the latter figure, and one contained more than 22,000 khasra numbers. During Settlement the cess was funded and the patwáris arranged in grades according to the quality of their work. I made proposals, which the Settlement Commissioner sanctioned, for the reorganization of the patwáris' staff, involving an increase of 41 in the number of circles in Pípli, Indri, and Kaithal, and a redistribution of the villages among the different circles in all four tahsils. This gave me 81 patwáris in Jagádhri, 100 in Pípli, 57 in Indri, and 70 in Kaithal. The territorial changes made at the close of Settlement (para. 114) involved the transfer of 18 circles from Pípli to Kaithal and of 4 from the latter tahsil to Hissár. The great reduction in field numbers alluded to in para. 8 has made it possible for the Deputy Commissioner of Ambala to propose a reduction of the Jagádhri circles by twelve and of the Pípli circles by eight. These proposals, if sanctioned, will take effect after the census, and will be gradually carried out as vacancies occur. According to the latest agricultural statistics the number of patwáris and the average number of fields and holdings in each circle are as follows:—

Tahsil.	Number of patwáris.	Average number of fields.	Average number of khatauni holdings.
Jagádhri ... ..	81	2,775	679
Pípli ... ..	81	3,088	680
Karnál ... ..	100	2,331	579
Kaithal ... ..	84	2,750	730

The returns do not give figures for Indri apart from the rest of the Karnál Tahsil. Some reduction of circles may be possible in Karnál, but none

should be attempted in Kaithal, where the fields are often very large and where a great extension of canal irrigation will shortly take place. The patwari staff when handed over to the district had reached a very fair standard of efficiency. According to a scheme introduced by Colonel Wace the men are grouped in three grades, receiving, respectively, Rs. 13, 11, and 9 per mensem, and a small number of assistant patwaris on Rs. 6 is kept up to fill vacancies. In order to provide for the greatly increased expenditure which these arrangements entailed the cess was raised concurrently with the introduction of the new assessments to Rs. 4-11-0 per cent. in Jagadhri and Kaithal, Rs. 5-6-8 in Pipli, and Rs. 5-7-6 in Indri.

14. In 1885 the kánungo establishments in the Punjab were enlarged and greatly strengthened. Under the new scheme Pipli and Kaithal were each allotted one office and four field kánungos, while Jagadhri and Karnal (including Indri) got one office and three field kánungos. Owing to the transfer of Pehowa to Kaithal, the number of field kánungos in Pipli has been reduced to three. According to the last agricultural returns the number of field kánungos and the average number of fields and holdings in their circles are as follows:—

Tahsil.	Number of field kánungo.	Average number of fields.	Average number of khataani holdings.
Jagadhri ... ..	3	74,922	18,343
Pipli ... ..	3	83,199	18,362
Karnal ... ..	3	87,704	19,309
Kaithal ... ..	4	577,002	15,327

Most of the kánungos are promoted patwaris.



## CHAPTER II.

### REVENUE HISTORY BEFORE THE REVISED SETTLEMENT.

15. The whole area put under Settlement, with the exception of a few villages transferred by river action from Muzaffarnagar to Karnal, formed part of the territories of the Cis-Sutlej Chiefs, whom the British Government took under its protection by the proclamation of 3rd May 1809. Jagadhri was in great part held by the Sardars of Kalsia, Buria, and Jagadhri; Pipili and Indri by the Lūdwa and Thānesar Chiefs, and the Muhammadan Nawāb of Kunjpura, while almost the whole of the present Kaithal Tahsil (see para. 114) was the appanage of the powerful family of the Bhāis of Kaithal, and of their near relative the Bhāi of Arnauti. But besides these important rulers there were a number of minor Chiefs, and a considerable part of the country was parcelled out among confederacies of Sikh horsemen, each holding a very petty share in one or more villages. The tenures of these fraternities were afterwards known as "pattidāri jāgirs." Under the larger Chiefs, and holding the same relation to them as the pattidārs did to the British Government, was a class of sub-feudatories known as zaildārs.

16. When the proclamation of 1809 was issued, the vaguest ideas existed as to the state of the territory to whose rulers we guaranteed "the full exercise of the rights and authority in their own possessions which they enjoyed before they were received under British protection." Nine years later "Sir David Ochterlony frankly owned to the Marquis of Hastings that his proclamation of 1809 had been based on an erroneous idea. He thought that a few great Chiefs only existed between the Jamna and the Sutlej, and that on them would devolve the maintenance of order." (Cunningham's History of the Sikhs, page 152). It was impossible that the engagements made in 1809 should be literally fulfilled. The history of the gradual modification, during the forty years which elapsed between 1809 and the conclusion of the 2nd Sikh War, of the relations between the suzerain and the protected Chiefs, and of the curtailment of the powers of the latter, until finally all but Kalsia were reduced to the status of simple jāgirdārs, is told in the 2nd Chapter of the *Karnal Gazetteer* and in Mr. Kensington's Settlement Report of Ambala. The British Government claimed to be the heir of all families which became extinct. No exact principles were ever laid down as to the circumstances under which the larger States should be held to lapse to the Crown. In the case of pattidāri jāgirs it ultimately "became the general rule to allow the succession of any one who could trace his descent in the male line from the possessor of 1808-9, and to exclude more distant relatives," and the Government of India finally prescribed this practice in the orders issued in its Secretary's letter No. 461, dated 12th February 1851, to the Board of Administration.

Character of the rule of the Sikhs and of their revenue system.

17. The character of the rule, or rather misrule, of the Sikhs is noticed in the 2nd Chapter of the *Karnal Gazetteer*.

Their revenue system consisted in squeezing the weak and getting as much as they could out of the strong. They took a share of the total produce,  $\frac{1}{4}$ th,  $\frac{1}{3}$ rd,  $\frac{2}{3}$ ths, and even  $\frac{1}{2}$ , by appraisement for some crops; for others, such as poppies, tobacco, cotton, cane, and chari, cash bigah rates were charged. In Kaithal in the parts "where the rabi crop is unknown, and, indeed, in others where it promised unfavorably, an arbitrary assessment was fixed, which, in addition to the numerous taxes, was collected by the zamindārs by a bachh on cattle,

polls, hearths, and ploughs."\* The Sikh demand absorbed the whole of the rent, and an owner who had more land than he could cultivate himself had to be content with some trifling payment from the cultivator such as one sér per maund of produce as an acknowledgment of proprietary right. Even where the State's nominal share was not heavy, the demand might be excessive owing to a dishonest estimate of the outturn and the exactions of the Chief's underlings. This was the case in the villages of the Thánesar State in the Indri Khádir. The rate there was nominally one-fourth, but the appraisement was very severe. In addition to a share of the produce, numerous cesses were levied. Captain Abbott gives a formidable list of these, but it is too long to quote. In the Ládwa State he estimated the total to amount to a charge of 16½ per cent. over and above the revenue demand. Every Sikh took as much as he was able, but the smaller men could not squeeze the people so effectually as the more powerful Chiefs. The Ládwa Rája was strong enough to exact 4 sér per maund, or ten per cent. in addition to his share by appraisement, on the ground that he must be insured against loss from errors in weighing, wastage, &c. The leading men in each village were given an allowance of 3, 5, or 10 per cent. on the revenue collections, the highest rate being given to the strongest villages. In a few exceptional cases a much larger share of the demand was remitted to powerful communities, and this is the origin of the chaharāmi tenures described in a later paragraph. The leading zamíndárs were treated with a greater show of liberality than under our rule. They were fed at the Chief's expense when they went to his head-quarters, and presents were sometimes given on the occasion of marriages in their families. Hence the headmen sometimes speak in a tone of regret of the old system. Time has softened the recollection of its worst evils, and, with all its irregular exactions, it no doubt pressed less heavily on the people than our early cash assessments, collected rigidly without regard to the fluctuations of the seasons. The Sikhs dealt as they pleased with the waste. Grass and game preserves were formed, and many new villages located in lands carved out of old estates, and peopled with low class, but industrious, cultivators. There was one check on the exactions of the Chiefs. If the villages were pressed too far, they abandoned their lands, and the revenue disappeared with them. The sturdier peasants of a few of the larger Kaithal villages in like circumstances shut their gates and defied their master.

18. I shall now endeavour to unravel the tangled skein of the fiscal

*Complexity of revenue history of tract owing to territorial changes.*

history of the tract before the recent Settlement. The matter is complicated because two of the tahsils belong to Ambala, while the Kaithal Tahsil and Pargana Indri form part of Karnál.

Moreover, down to 1862, Pípli and Indri were in the same (the Thánesar) District, and Pípli and Jagádhri in different districts, and Kaithal was for some time after annexation treated as a separate charge from that of Thánesar. Thus three independent settlements have to be considered, that of Jagádhri made by Mr. Wynyard and Mr. Melvill as part of the Ambala Settlement, that of Thánesar by Mr. Wynyard and Captain Larkins, and that of Kaithal by Captain Larkins. When the Thánesar District was broken up in 1862 the present Indri Pargana and the Kaithal and Gula Tahsils were annexed to Karnál and the rest of the district added to Ambala. Gula included the parganas of Chika, Kularan and Pehowa. It was broken up in 1866, Chika and Kularan going to Kaithal, and Pehowa to Pípli. It will conduce to clearness if I describe the revenue history down to 1862 of (a) Jagádhri, (b) Pípli and Indri, and (c) Kaithal separately.

*Escheats and Summary Settlements in Jagádhri.*

19. The principal escheats in Jagádhri before the Regular Settlement are shown below, and a fuller list will be found in the Assessment Report :—

\* This four-fold distribution (cheubscáda) only prevailed in the upland circles, elsewhere the bechh was on polls, hearths, and ploughs.



State.	Date of lapse.	Number of villages.	Summary Settlements.
Bilāspur ... ..	1819	16	Held khām for 3 years, settled by Captain Murray for 3, and Mr. (afterwards Sir) G. Clerk, first for 2, and secondly for 20, years.
Jagādhri ... ..	1829	36	Three Settlements.
Daria Megh Singh ...	1836	28	Two Settlements, first by Captain Murray and second by Mr. Vansittart.
Milak ... ..	1841	15	Settled by Mr. Greathead.
Diālgarh ... ..	1851	16	Do. Mr. Bowring.

As each State lapsed, its villages were assessed for short periods. With one exception the summary settlements were extremely severe, and Mr. Wynyard remarks that Mr. Greathead's assessment of Milak was the only fair settlement he had seen in the Ambala District.

20. The Regular Settlement was made by Mr. Wynyard in 1849-52; but 104 jāgīr estates, which had not been assessed when he left the district in 1853, were settled by Mr. Philip Melvill. There are two jāgīr villages now included in the tahsil which were transferred from Patiala 27 years ago, when they were assessed by Captain Busk. Mr. Wynyard's assessments became lighter and lighter as his work proceeded, and nearly the whole of Jagādhri had the good fortune to be assessed at the end of his settlement. Except in the Jamna Khādir, where reductions had to be given, the demand was not heavy, and its distribution was fair. Mr. Melvill adopted Mr. Wynyard's rates in assessing the jāgīr villages.

The tahsil was divided into 19 circles.\* To give all the circle rates would merely confuse the mind, but I have drawn up a table which shows with sufficient accuracy the rates at which Mr. Wynyard assessed my circles:—

CLASS.	KANAL.		DAHL.		BANGAR.		SOUTHERN JAMNA KHADIR.		NORTHERN JAMNA KHADIR.		SOM KHADIR.	
	Per cent. of area.	Rate.	Per cent. of area.	Rate.	Per cent. of area.	Rate.	Per cent. of area.	Rate.	Per cent. of area.	Rate.	Per cent. of area.	Rate.
	Rs. s. p.		Rs. s. p.		Rs. s. p.		Rs. s. p.		Rs. s. p.		Rs. s. p.	
Kāli Chābi and Nahri ...	...	...	2 3 4 0	3 3 9 0	4 3 10 0	4 3 14 0	4 3 9 0	...	...	...	...	...
Rausli ditto ... ..	8 1 0 0	...	...	2 3 6 0	4 2 12 0	10 3 8 0	9 2 1 0	...	...	...	...	...
Nāli Bārfāni ... ..	8 1 8 0	7 1 10 0	9 1 14 3	10 2 3 0	10 2 10 0	13 2 0 0	...	...	...	...	...	...
Rausli ditto ... ..	70 1 0 0	66 1 8 0	67 1 6 0	68 1 14 0	69 1 14 0	69 1 5 0	...	...	...	...	...	...
Dakar ditto ... ..	...	...	22 1 2 0	8 1 2 0	14 1 8 0	8 1 6 0	7 1 3 0	...	...	...	...	...
Bhur ditto ... ..	12 0 7 0	...	...	9 0 11 0	5 1 3 0	15 0 15 0	5 0 12 0	...	...	...	...	...
Rate on cultivation of	...	0 15 10	...	1 8 5	...	1 8 0	...	1 14 7	...	1 12 9	...	1 9 2
Rate on cultivation of	...	0 15 0	...	1 5 0	...	1 5 7	...	1 14 10	...	1 9 5	...	1 8 4
revenue by rates.												
Rate on cultivation of												
revenue assessed.												

His actual assessments were much below his rates in the greater part of the tahsil. The irrigated rates were very moderate, but they were applied to too large an area, especially in the Southern Jamna Khādir. The dry rates in the

Khádir were severe, and experience soon showed that they could not be paid. For the first eight or nine years of the currency of the Settlement the people were tried by an extraordinary fall of prices. In 1859, just before the turn of the tide, we find Mr. Melvill writing in his Annual Revenue Report:—"I fear the truth is that, unless prices become considerably higher, the zamíndárs will year by year find greater difficulty in paying the revenue."

21. The assessment of the Northern Jamna Khádir had been made in 1849 and was marked by the over-estimate of the powers of the land and the resources of the people which characterised all Mr. Wynyard's earlier work. The thriftless Gujar land-owners broke down at once. They had depended largely on their herds, but their cattle and household property were sold to meet the Government demand, and in 1855 Mr. Melvill found it necessary to revise the settlement. The revision affected 25 out of the 32 estates, and caused a reduction of 19 per cent. in the demand for the whole circle. The revenues of two of the Khádir Som villages were lowered at the same time.

As early as 1855 Mr. Melvill had realized the fact that similar measure must be adopted in the Southern Jamna Khádir. But unfortunately the revision there was only effected in 1859. In jagír estates the jagírdárs were allowed to claim the right of collecting in grain, if they objected to the reductions, and the zamíndárs, who declined this arrangement could elect to continue to pay the revenue originally imposed. As a matter of fact only one village accepted batái, while two or three preferred to pay the old exorbitant rates. In the end reductions amounting to 19 per cent. were made in 31 villages. The total assessment of the circle was lowered by 11 per cent. Altogether Mr. Melvill reduced the revenue of the tahsíl from Rs. 2,14,639 to Rs. 2,06,334. In the great famine of 1860-61 suspensions aggregating Rs. 22,369 were sanctioned. Of this amount Rs. 14,062 were finally remitted, and the recovery of the balance was spread over several years.

Rechnants and Summary Settlements in Pipli and Indri.

22. The chief lapses which contributed to form the khálsa part of the old Thánesar district are shown below\* :—

STATE.	Date of lapse.	NUMBER OF VILLAGES.			Summary Settlement.
		Pipli.	Indri.	Total.	
Radaur ... ..	1828	46	6	52	Three Settlements, second by Captain Murray.
Thánesar (Bhág Singh's $\frac{1}{3}$ th share.	1832	26	17	43	Three Settlements, first by Captain Murray and last by Mr. Vansittart.
Kaithal ... ..	1843	86†	10†	96†	Two Settlements by Major (afterwards Sir) Henry Lawrence and Captain Abbott.
Ládwa ... ..	1846	117	20	127	Settled by Captain Abbott.
Thánesar (Bhanga Singh's $\frac{1}{3}$ th share.	1850	16	29†	45†	Do. do Larkins.

The Summary Settlements were, with the exception of Captain Larkins' assessment of Thánesar, most oppressive. Captain Murray's system was to fix the revenue "by deducting pachotra, an allowance of about 5 per cent. from

\* For a fuller list see Pipli Assessment Report.

† Most of these villages were transferred in 1889 to the Kaithal Tahsíl.

the average collections of preceding years." Thus he imposed a fixed cash demand estimated at the average value of the grain collections of the previous ruler, which fluctuated with the character of the seasons. In Ládwa Captain Abbott had for most villages returns of the Rája's realizations for the previous five years. He struck off the extra cesses, which he calculated to amount to  $16\frac{1}{2}$  per cent. on the receipts by appraisement of crops and zabti rates, and took a cash assessment nearly equal to the balance. As the batái rate was one-third in some villages and one-fourth in others, which are the existing rent rates, Captain Abbott's assessment took for Government the whole of what we now call the owner's assets. Lambardára received an allowance of 5 per cent. deducted from the revenue. Captain Larkins followed the same process, but he seems to have arrived at less immoderate results.

23 The lapsed villages of the Kaithal State, afterwards included in Pípli and Indri, were assessed by Captain Larkins when he made the Regular Settlement of Kaithal. The rest of Pípli and Indri, with the exception of one estate settled by Mr. Philip Melvill, was included in the Thánesar Settlement begun by Mr. Wynyard in 1848, and finished by Captain Larkins in 1856. The majority of the villages had been assessed before Mr. Wynyard left the district in 1852. The circles were very numerous, and the rates were founded on more minute distinctions of soil than we now think it worth while to make. A list of the rates for the circles now included in the Pípli Tahsil will be found on the 33rd page of the Assessment Report. Mr. Wynyard states that the end of all his enquiries was "to ascertain as nearly as possible the true rental, to leave one-third of that for the zamindár's profits, and to fix the remaining two-thirds as the Government jama." It is quite clear that he intended to make a lenient assessment. He wrote himself: "I have always borne in mind that a Settlement, to be paid with ease, must be a light one, and I have never forgotten the constant injunctions that the assessment should be moderate. My remissions from the old jama are heavy." He inveighed against the incredible severity of some of the summary settlements, and the rigorous manner in which an exorbitant demand was wrung from the people by the revenue officers.

Nevertheless his own settlement, except in the Bet of the Márkanda, which was the last tract that he assessed, broke down utterly, and had to be revised by four different officers in the first ten years of its currency. The chief causes of the failure appear to have been four, for three of which the Settlement Officer was responsible, while the fourth arose from circumstances over which he had no control and which he could hardly have foreseen. These were:—

- (1). An over-measurement of well irrigated land.
- (2). An exorbitant assessment of the waste.
- (3). The severity of the rates imposed on the precarious dry cultivation.
- (4). The great fall of prices which began in 1851 and lasted till the famine of 1860-61.

In the parts of the district which he first settled Mr. Wynyard recorded and assessed as cháhi all land commanded by wells without any regard to the fact that, except close to the homesteads, only about half of the cháhi area is watered yearly. The number of wells in use was also over-estimated. When the waste area was large, heavy progressive assessments were imposed in the hope of forcing the landowners to rapidly extend cultivation, which they had not the means or the inclination to do. Mr. Wynyard's cháhi rates were not in themselves exorbitant, though in practice they became so in consequence of the over-measurement of well lands, but his dry rates, especially for the poor dakar soils, were very severe, considering the precariousness of the crops.

In the annexed table his assumed prices for the principal grains are compared with the average prices received by zamindára for the six years 1854 to 1895:—

	Wheat.	Gram.	Maize.	Jowar.	Bajra.	Coarse Rice.
Mr. Wynyard's assumed prices.	37	40	43	42	42	55
Average prices received by zamindars between 1854—1859 .. .. .	45½	62½	53½	54	50	59½

Many of the villages had never been summarily settled, and the transition from grain to cash payments came at a particularly unlucky time.

The unfinished work of Mr. Wynyard's Settlement was made over for completion to Captain Larkins, Deputy Commissioner of Thanesar, in the end of 1852, but it was soon found that, in very many instances, the villages already settled could not pay the revenue assessed upon them, and in March 1853 Captain Larkins was ordered to revise all Mr. Wynyard's assessments and to give relief where required. He reported on his work early in 1856.

24. In the next six years three other revisions followed, and ten years after Mr. Wynyard left the district there were few estates settled by him outside the Mārkanda Bet in which the original assessment had stood the test of experience. The result of the different revisions is shown below, but I do not pledge myself to the perfect accuracy of the figures, which have been collected with much difficulty from various sources. To facilitate comparison, I have entered separately the revenues of the villages which were settled for the first time by Captain Larkins. The few estates in Indri which he assessed as part of the Kaithal Settlement are included, while 81 villages in the Bangar and Naili of Pehowa which have lately been transferred to Kaithal, and all but one of which were originally assessed with that tahsil, have been excluded. The figures do not include revenue on numerous petty rent-free plots which were not assessed till after the last revision:—

Tract.	Regular Settlement by whom made.	Number of estates.	DEMAND OF REGULAR SETTLEMENT.		DEMAND RESULTING FROM REVISIONS BY		
			Initial.	Fall.	Captain Larkins.	Captain Bask.	Captains Ephra- stone and Davies.
			Rs.	Rs.	Rs.	Rs.	Rs.
Piphi (5 circles) {	Wynyard ... ..	376	2,28,208	2,45,424	...	...	...
	Larkins ... ..	61	22,668	22,509	...	...	...
	Total ... ..	437	2,50,876	2,70,933	2,50,839	2,35,082	2,23,535
	Rate on cultivation ...	...	1 6 0	1 7 9	1 6 0	1 4 9	1 3 8
Indri ... .. {	Wynyard ... ..	162	1,45,706	1,55,130	...	...	...
	Larkins ... ..	75	44,678	35,529	...	...	...
	Total ... ..	237	1,90,384	1,90,659	1,90,423	1,65,069	1,59,113
	Rate on cultivation ...	...	1 9 0	1 10 5	1 9 0	1 7 0	1 6 1

The original revenue of the Pehowa Bangar and Naili was Rs. 33,030, and a few reductions were afterwards given in the last circle.

Generally speaking, Captain Larkins confined himself to striking off the heavy progressive assessments imposed on account of waste. He also reduced the demand when a comparison of the irrigated area recorded with the number of wells seemed to show that there had been an over-measurement of well lands.



He failed to realize that the dry rates were much too high. His total demand was less than Mr. Wynyard's by  $6\frac{1}{2}$  per cent. His returns were inaccurate, and his successor, Captain Busk, was ordered to revise them, and also to give further reductions where required. He reported the result in March 1857, but he appears to have given further relief in 1859. He clearly perceived that Mr. Wynyard's rates were too high, and he put the assessment in many circles considerably below that brought out by their application to the cultivated area. His revenue was lower than Captain Larkins' by nearly 7 per cent. Two revisions had left the demand 13 or 14 per cent. below that fixed by Mr. Wynyard. But distress in Thánesar appeared to be chronic, and the revenue continued to be realized with the greatest difficulty, coercive measures were constantly adopted, and farms and transfers of revenue paying land, and even of whole villages, were frequent. The work of revision was again undertaken by Captain Elphinstone in 1860. The Commissioner doubted the sufficiency of the relief granted; but before further action was taken the famine of 1860-61 occurred. After the famine a fresh revision was carried out by Captain (now Sir W. G.) Davies in the cold weather of 1861-62, and his proposals were sanctioned by Government two years later. Very large balances had occurred in the famine, and most of these were on his advice remitted. The result of four revisions was the lowering of the original full demand by Rs. 79,000 or 17 per cent. The reductions were least in the Márkanda Bet, where they only amounted to 31 per cent., and highest in the poor Southern Chachra Circle, where 37 per cent. of Mr. Wynyard's assessment was remitted.

25. The state of disorder to which Kaithal had been reduced under the harsh rule of the last of the Bháis is fully described in the *2nd Chapter of the Karnál Gazetteer*. Soon after annexation, Major (afterwards Sir Henry) Lawrence, Assistant Agent to the Governor-General, North-Western Frontier, was sent to Kaithal, and remained in charge for six or seven months. He threw himself with characteristic zeal into the work of establishing order. A partial disarmament was carried out, the restoration of stolen cattle was enforced, and notorious offenders were put on security. Not a road, except the ordinary village tracks, existed; but Lawrence set himself at once to the task of laying out highways, and a good deal was accomplished in this direction before his transfer to the Nepál Residency. His firm and vigorous rule had a marvellous effect. The country settled down at once, and, encouraged by the return of order and a favourable rainy season, many who had deserted the district flocked back to it, and the increase of ploughs in seven months was estimated at 44 per cent.

26. Kaithal was occupied in April 1843, and in the November following Lawrence had completed a summary settlement for three years. His interesting report is printed in the "Extracts from Reports on the Settlement of the Parganas formerly included in the Thánesar District." He got statements which he considered "tolerably correct" of the Sikh collections from 1828 to 1837. He says that he made this ten years' average the basis of his assessment; but, in fact, he did not follow his figures at all closely, but trusted a good deal apparently to his personal inspection of villages. The revenues he fixed were in most cases a good deal heavier than those paid before the recent revision. No doubt the assessment, like all the summary settlements made in the lapsed Sikh States on this side of the Sutlej, was too severe. At the expiry of the three years it was continued for another year by Captain Abbott, the cases of some villages which objected to renew their leases on the old terms being considered, and a few reductions granted.

27. Lawrence believed that the tahsil would develop rapidly, and somewhat rashly prophesied that when his three years' settlement was over an enhancement of 60 per cent. would be realizable. As a matter of fact progress was slow. The seasons were unfavorable both as regards health and crops; and men's minds were disturbed by the fear that Kaithal would be handed back to Bhai Ude Singh's widow, or to his nearest collateral relative, the Bhái of Arnali. When Captain Abbott made his



regular settlement in 1847 he did not enhance the total demand to any great extent, but he altered the distribution a good deal, relieving the estates he considered weak. He failed to see that Lawrence's revenue was far too high. Captain Abbott assessed few of the Jangal or Powadh villages. The demand he fixed was collected for eight or nine years without the accrual of very heavy balances; but his record and assessment were both considered so bad that the settlement was not reported to Government for sanction.

28. The settlement which I revised was made by Captain Larkins. His operations lasted from 1853 to 1856. It would be fruitless to give a list of his numerous circles and rates, but the following table shows with approximate accuracy the average rates which he used in assessing the chief classes of land in the villages included in the circles into which I divided the Kaithal Tahsil, as it existed when I revised its assessment:—

CLASS.	NARDAK.		BANGAR.		ANDARWAR.		NAILI.		JANGAL.		POWADH.	
	Per cent. of area.		Per cent. of area.		Per cent. of area.		Per cent. of area.		Per cent. of area.		Per cent. of area.	
	Rate.		Rate.		Rate.		Rate.		Rate.		Rate.	
	Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.	
Niás Cháhi ...	...	...	...	...	7	2 12 0	3	2 4 11	...	...	10	2 5 9
Ranshi ..	...	...	...	...	30	2 2 0	7	1 12 5	...	...	13	1 12 9
Dakar Shi ...	...	...	...	...	...	...	4	1 5 6	...	...	...	...
Ranshi báráni ...	62	0 11 2	91	0 11 3	58	1 1 0	36	1 0 8	72	0 6 0	42	1 2 5
Dakar ..	30	0 10 2	6	0 11 11	...	...	46	1 3 2	...	...	2	1 1 9
Bhur ..	...	...	...	...	...	...	...	...	24	0 4 7	29	0 10 5
Rate on cultivation of revenue by rules ...	...	0 11 8	...	0 11 8	...	1 7 11	...	1 3 10	...	0 6 1	...	1 3 6
Rate on cultivation of revenue as assessed ...	...	0 14 1	...	0 10 3	...	1 10 3	...	1 4 10	...	0 6 1	...	1 4 1

For Pebowa his rates were approximately:—

Class.	Naili.	Bangar.
	Rs. a. p.	Rs. a. p.
Niás cháhi ...	2 8 0	2 8 0
Ranshi ..	1 14 0	1 14 0
" báráni ...	1 1 0	1 0 0
Dakar ..	1 1 0	0 15 0
Rate on cultivation of revenue as assessed ...	1 5 5	1 1 9

The demand for the seven circles \* of the present Kaithal Tahsil, which include two villages assessed by Mr. Wynyard, and for the Jangal Circle transferred at the close of the recent Settlement to Hissár, was Rs. 2,11,000, and the average rate on cultivation was almost exactly 15 annas. This was in excess of the revenue brought out by the rates given above, because in some circles considerable additions were made on account of waste.

\* Eight villages of the Southern Chachra of Pipili transferred to Kaithal in 1859 which were settled by Mr. Wynyard are excluded. Mr. Wynyard settled one estate in the Pebowa Naili and one in the Powadh.

Captain Larkins reduced Captain Abbott's demand by about one-fifth, and his settlement worked well.

I do not think the Bangar and Nardak rates were too heavy, considering the boundless room for expansion then existing. It must be remembered that large areas were recorded as *jadid*, which under our present system would now be assessed as cultivated. When allowance is made for this the Bangar dry rate did not exceed eight-and-a-half annas. The Andarwār dry rate was certainly heavy. There is nothing to justify the wide distinction made between the assumed value of unirrigated soil in the Andarwār and Bangar. But here, too, there was a good deal of land to be broken up. The Naili assessment appears to me to have been severe, but it was far lower than that made by Captain Abbott. The Powādh and Jangal were leniently treated. It is curious to find that the hard sailāb of the Naili (mostly classed by Captain Larkins as *dakar bārāni*), which yields crops whose precariousness cannot be exaggerated, was assessed at higher rates than the light productive loam of the Powādh. We see the same undervaluation of the lighter soils in the fact that the soft loam of the Jangal was charged annas 6½, and the stiff loam of the Bangar annas 11½, per acre. Neither Captain Abbott nor Captain Larkins grasped the fact that, given a scanty rainfall and no irrigation, it is the lighter loams that are the best soils. Of course where all the land is hard, as in the Nardak, the position of the stiffest soils may make them the best, but that is due to the fact that rain water drains into them off the higher lands. Some trifling reductions were given by Captain Elphinstone and Captain Davies when they revised the Thānesar Settlement.

29. The revenue history of Jagādhri and Pipli since the transfer of the

Revenue management of Jagādhri and Pipli from the breaking up of the Thānesar District in 1862 to the beginning of the settlement in 1882.

latter tahsil to Ambala in 1862 has not been a happy one. After 1859 no part of Jagādhri can be said to have suffered from a heavy assessment, but the landowners have become deeply involved in debt, and nowhere in the Punjab has the money-lender a stronger grip on the land. The revision of settlement effected by Captain Davies in Pipli was coincident with a great and permanent rise of prices, and since then the tahsil, with the important exceptions of the Pehowa Naili, the Southern, and part of the Northern, Chachra has enjoyed a moderate degree of prosperity. The unprosperous tracts occupy about two-fifths of the whole area. They have suffered because they are unhealthy, and, while their harvests are most precarious, they have been subjected to a rigid revenue system, under which the full demand has been collected in good and bad seasons alike.

The history of the large Southern Chachra Circle is especially melancholy. Its resources have been steadily declining, its population lessening, and the Government demand shrinking ever since annexation, and revenue mismanagement must bear no small part of the blame. In the famine of 1868-69 Rs. 4,334 were suspended in Jagādhri, and Rs. 2,400 in Pipli. Considering how widespread the distress was, and how long it lasted, so petty a measure can have done little good in the latter tahsil. In the Southern Chachra only Rs. 532 were suspended out of a revenue demand of Rs. 33,000. In the famine of 1877-79 no suspensions or remissions were made.

30. I have already alluded to the extent to which the land in Jagādhri

Transfers in the two tahsils.

is passing out of the hands of the peasant owners. The matter attracted notice as early as 1868, when the Deputy Commissioner alluded to it in his revenue report. About one-third of the tahsil has been transferred, half by sale and half by mortgage, and the great bulk of both classes of alienations has been to money-lenders. Half the sales and a fourth of the mortgages are in favour of the bankers of the town of Jagādhri. The worst feature of all is the rapid increase of alienations decade by decade.\* Details of transfers by tribes are given in the Assessment Report. Between Rājput, Gujars, and Jats there is little to choose as regards the fatal facility with which they get rid of their land,

\* See statement in para. 39 of Jagādhri Assessment Report.

and these three tribes at last settlement owned nearly two-thirds of the whole tahsil, and still own above half of it. The Jagadhri Jat is a very different man from the sturdy Jat of the Central Punjab. He works harder as a rule than his Rájput neighbour, but if he has the misfortune to live near a small town he gets into debt nearly as easily. The state of some of the Jat estates near Jagadhri is deplorable. Even the thrifty Kamboli has not held his own. Raiens and Mális have stood their ground, but their stake in the tahsil is a small one.

I do not think that the assessment had anything to do with the amount of the transfers. Since the revision of the Khádír settlement the demand had nowhere been heavy. The largeness of the holdings has had a bad effect in some parts of the tahsil. It has tempted the people into extravagance because they knew they could get rid of part of their land without being reduced to beggary. The mass of the agricultural population is ignorant, unthrifty, and unenterprising. They do not spend much on food, but the expenditure on clothing has risen greatly, because the people have largely given up their coarse home-spun for inferior English cloths. The cost of marriages has also increased. Every man marries, and nearly every man borrows to do so. The Jats here do not, like those in Ludhiána, recoup themselves for the cost of their sons' brides by selling their daughters. The price of plough-oxen has more than doubled. Once the zamindár is deep in the bania's books there is no escape for him, and our judicial system undoubtedly helps him to his ruin. It may be said that it is a good thing that such weaklings should go to the wall. But the banias who are taking their place are greedy and unimproving landlords, and the future of the tahsil seems to me a dark one, unless some radical measures, such as have been adopted in part of the North-Western Provinces, are taken to arrest the progress of decay.

In Pípli the money-lenders are less eager to acquire land; but even there above one-fifth of the tahsil has changed hands by sale or mortgage. But agriculturists have secured a much larger proportion of the transfers than in Jagadhri.

31. The immigration of Mális of late years into Pípli from the northern tahsils of Ambala, and even from Patiala, is a very hopeful movement. Their first large purchase was made in 1869, when they bought about 2,000 acres in Bir Babain from a member of the Kunjpura family. This estate, which was mostly waste when bought, is now the best village in the Northern Chachra. The next purchase was in 1873, and since then scarcely a year has passed in which Mális have not made large investments in land belonging to broken-down zamindars or to non-resident proprietors, money-lenders and others, who would never have extended cultivation. The number of purchases from the latter class is very satisfactory. Altogether since 1869 about 8,500 acres have been bought, and the prices entered in the deeds of sale aggregate Rs. 1,18,000. A division on ploughs of the land purchased is speedily effected, and the waste rapidly disappears. The first purchases were in the Northern, but the movement has now extended to the Southern, Chachra, and even to the Indri Nardak, where Mális from Kharar have recently bought a small estate from non-resident landlords. Only last year Mális of the same tahsil and of Naráingarh purchased the whole of Devidáspur from a bania of the Ambala Tahsil and half of Ratgal from non-resident Banias of Kunjpura. Both these estates are near Thánesar. The prices paid are sometimes extraordinarily high. Thus in the case of Devidáspur an area of 389 acres was purchased for Rs. 20,000. It was all waste; but the land is good, and there are some old wells which can again be put in order.

32. Indri is not fortunate in its physical conditions. The rains are capricious. When they fail the harvests are very scanty, and when they are heavy there is a great deal of disease. Owing to the rise of prices which began after the famine

Revenue history of Indri  
and Káthál between 1862  
and 1883.

\* See very striking statistics of births and deaths for the whole Karnál District in para. 83 of the Karnál Gazetteer. The death-rate of the district averages 40 per thousand.



of 1860-61 the reduced revenue was paid; but population fell off, and the tract as a whole did not prosper. On the transfer of the pargana to Karnál after the breaking up of the Thánesar District, the difficulties of the Jat villages in the north of the Khádír and Bangar were aggravated by the ill-considered prohibition of poppy cultivation. Between the kharif of 1861 and the rabi of 1866 the harvests were generally good, though the Autumn crops failed once or twice. In 1866-67 the rainfall was very deficient and both harvests were bad, but the revenue was collected in full. In 1868-69 and 1869-70 the district was visited with a famine, which, severe throughout the province, was nowhere so severe as in Karnál. In January 1870 wheat was selling at 9½ and gram at 8½ sérs the rupee, prices which have never since been equalled or even approached. Famine works were started; and gratuitous relief was also given. In such a protracted drought the people depend for their daily bread on the village traders; but the folly of diminishing their credit by also forcing them to borrow the amount of the Government revenue was not recognised, and the suspensions granted apparently only amounted to about Rs. 1,000. Though the crops failed very badly in 1877-78 and 1878-79 prices never rose to the height they had reached in previous famines, for grain poured into the district from the Jangal country to the west. But the fodder famine was complete, and the cattle perished in great numbers. Large advances were made for the purchase of seed grain and bullocks. In Kharif 1877-78 Rs. 4,925 were suspended in the Bangar and Rs. 7,193 in the Nardak. In the next two harvests, further suspensions, amounting to Rs. 8,780, were sanctioned in the Nardak. Between 1877-78 and the beginning of settlement operations in 1882 almost all the harvests failed, more or less, in the drier parts of Indri; and in rabi 1881 and 1882 the collection of part of the demand was deferred. Outside the tract flooded by the Ghagar and Sarusti Kaithal prospered, thanks to a healthy climate, a fair assessment, and the large field which existed for the extension of cultivation. Suspensions were given in the famines of 1868-69 and 1877-78 and, I think, in some other years.

33. Statistics collected during Settlement operations showed that 9 per cent. of the area of Indri had been sold since the regular settlement, and that about 4 per cent. was burdened with usufructuary mortgages. The mortgage debt exceeded two lakhs, or about 1½ times the annual revenue of the pargana, but this cannot be considered heavy judged by a Punjab standard. About half the sales appear to date before 1868. The largest purchaser and mortgagee was the late Nawáb of Kanjpura. His ambition was to convert his jágir, as far as possible, into a zamindári estate, and his power of direct collection doubtless helped him in carrying out his wishes. In Kaithal the subject of transfers is fortunately still one of little importance; but the amount of unsecured debt in many villages is large. In a great part of the tahsil the money-lender looks more to the debtor's cattle than to his land, and has no wish to make a risky investment by taking the latter on mortgage and becoming responsible for the payment of the revenue.

34. The character of the harvests during the recent revision of Settlement is discussed in the four Assessment Reports. The figures there given must be studied in order to realize how extraordinary is the shrinkage of the sowings in the insecure parts of the tract in a bad year, and how great a proportion of the crops sown never ripen. There was severe drought throughout 1883-84, followed by two excellent harvests 1884-85. The kharif and rabi of 1885-86 were fair, the kharif of 1886 poor, and the rabi of 1887 very bad. The policy was adopted of suspending freely when the harvests failed and realizing arrears gradually in better seasons. Thus in Kaithal between 1883-84 and 1887-88 Rs. 1,13,528 were suspended, and in December 1888 I was able to report that only Rs. 2,805 remained uncollected, and that of this amount only Rs. 993 should be remitted, most of which had accrued in over-assessed estates, in which I had to give reductions. Parts of the Southern Chachra of Pípli and the Kaithal and Pehowa Naili Circles were in such a depressed state when the settlement began that I was ordered to make

proposals for giving a fluctuating assessment to any village which seemed to require and was willing to accept it. The rates adopted were:—

			Rs.	a.
Well-irrigated crops harvested, per acre	...	...	2	0
Other rabi crops	...	...	1	4
Other kharif crops except chari	...	...	1	0
Chari	...	...	0	12

In Pipli a small fixed grazing assessment was also imposed in most estates. In the end 27 villages in the Kaithal, and one in the Pehowa Naili, one in the Pehowa Bangar, and 16 in the Southern Chachra of Pipli, were put under the system. The fixed demand remained on the revenue roll, and the difference between it and the revenue by crops rates was treated as a remissible balance. That relief was required may be judged from the fact that in 27 Kaithal villages, paying a fixed demand of Rs. 12,955, which remained under the system for periods varying from one to five and half years, balances accrued to the amount of Rs. 26,445, which had to be remitted.

Year	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	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## CHAPTER III.

## THE ASSESSMENT.

35. The instructions issued for my guidance in assessment are quoted in the Appendix. Full particulars of crops, assumed rates of yield, prices, rents, and produce estimates will be found in the Assessment Reports. The half assets estimate was calculated on the average crop areas of three years in Pipli and four years in Jagádhrí and Kaithal.\* A similar produce estimate was framed for each estate, and in making my assessments I paid much attention to this and to the percentage which the average area of crops harvested bore to the recorded cultivated area. In fact, in the insecure tracts my assessment is founded far more on the crop returns than on the areas shown in the settlement records. The Government share of the value of straw was not included in the half assets estimate, and this accounts for part of the wide discrepancy between the amount of the estimate and that of the revenue actually imposed in the drier tracts, where the crops consist largely of millets and pulses. But I think the tendency of our assessments in all arid and half-developed tracts is to put too much on cultivation and too little on pasture, and that, where the grazing rate is low, a large excess of the revenue deduced from the rates on cultivation over the half assets estimate for cultivated land is the natural result. A note annexed to the Indri Report explains how I arrived at the prices assumed for assessment purposes; and the following table compares my prices in sers per rupee for the principal staples with those adopted by Mr. Wynyard in Thánesar:—

DETAIL.			Wheat.	Barley.	Gram.	Sirsam.	Maize.	Jowár.	Bájra.	Toria.	Coarse Rice
Last settlement	...	...	37	48	40	27	43	42	42	29	55
Present settlement	...	...	27	39	35	21	33	33	31	21	39

Calculations of the enhancement claimable on account of increase of cultivation and rise of prices, after making allowance for the lowering of the standard of assessment by one-fourth, usually lack reality, and in the present case would be worse than useless. Even assuming that Mr. Wynyard's demand was a fair two-thirds assets one at the scale of prices which he assumed, that scale disappeared with the extraordinary fall in the money value of agricultural produce, which began soon after he had announced his assessments, and the possibility of paying the revenue disappeared with it. The demand which I had to revise was fixed in 1862, when a rapid rise of prices set in, and since 1865 they have remained very much at the same level. The question to be answered as to each part of the area under settlement really was whether or not it had prospered under the existing assessment; and, if the answer was in the negative, it had further to be considered whether the lack of prosperity was due to a severe assessment or to some other cause. In a tract like the Southern Chachra, it was easy to see that the revenue was too high for its present resources, though the main causes of its decline were the prevalence of disease and fiscal mismanagement. In parts of Jagádhrí, on the other hand, it might fairly be argued that the lightness of the Government demand had positively injured the people. Except in Kaithal, the real increase in cultivation was usually small. My figures for cultivated area were indeed much larger than Mr. Wynyard's, but, as Mr. Kensington pointed out in the 27th paragraph of the Ambala assessment report, much of what was

\* As regards Indri, see para. 61.

recorded as jadid at last settlement, we would have classed as cultivated, and the fair comparison is between the cultivation and jadid of the two settlements.

The point is one of great importance, especially in the rice-growing tracts. Thus in the Indri Nardak the increase of cultivation appeared on paper to amount to 31 per cent., but that of cultivation and jadid taken together was only 5 per cent. Again, in the Northern Chachra of Pipli, where population had remained almost stationary, the recorded cultivation had increased by 23 per cent., but cultivation and jadid by only 12 per cent.

36. Before giving an account of the settlement of each tahsil, I will describe the method adopted for the assessment of well lands throughout the whole tract. I have already pointed out that one reason for the failure of Mr. Wynyard's settlement was his over-assessment of irrigation. It was not that he exaggerated the area commanded by the wells, but that he assessed that area as if it was all watered year by year. In Jagádbri well irrigation is of little importance, amounting only to about 3 per cent. of the cultivated area. In Pipli, Indri, and Kaithal, outside the Jamna Khádir and the flooded tracts, the system of cultivation followed on the "gora" or homestead and jangal or outlying wells is widely different. The former are those situated in the fields immediately surrounding the village. One reason for the fertility of such land is well known. But, besides, all the manure is expended on the homestead fields. The cultivation is, therefore, to a large extent, dofasli, though the autumn crop is not always watered. Where the people are very industrious and manure is plentiful, one finds double cropping all over the area watered from the wells. If the supply of manure is limited, the dofasli area is less. As a rule the inner belt of the gora lands is usually dofasli, while the outer belt is mainly ekfasli.

The outlying or jangal wells are cultivated on the ekfasli system. The fields attached to them are not manured, except where cane is grown. The object of the zamindár is to raise as much wheat as possible upon these wells; but experience has taught him that, even though the land is not cropped in the autumn harvest, it is impossible to put in wheat more than twice in succession without exhausting the soil. Provided the land is treated properly, the produce of the unmanured wheat on the outlying wells is supposed to be superior to that of manured wheat grown in the homestead fields. In order to restore the quality of the soil, unirrigated gram is substituted for wheat in the second or third year, or the wheat is followed immediately by cotton, urd, or chari, and the land is then left for a year, after which wheat is again sown. The cultivator always hopes to get through the hot weather without using his well, except to water cane before the rains break. If he has good luck, his maize and cotton will ripen without irrigation. The area attached to the well is often far larger than can be watered in any one year, and a considerable part of it will be found in any particular harvest under dry crops. In the parts of Pipli where the rainfall is sufficient to allow of cane being largely cultivated on the wells, the proportion of kharif irrigation is higher than elsewhere. In illustration of the above remarks, the following figures relating to the wells of the four upland circles of Pipli may be quoted:—

CIRCLE.	Average depth of wells to water.	AREA IRRIGATED FOR WELL WUCRET.										Yearly average.
		As entered in settlement record.	Kharif 1883.	Rabi 1884.	Total.	Kharif 1884.	Rabi 1885.	Total.	Kharif 1885.	Rabi 1885.	Total.	
Bangar	24	20½	6½	9½	16½	1	4½	5½	2	6½	8½	10
Northern Chachra	19	21	9½	13	22½	4½	4½	9½	2½	4½	7½	13
Southern Chachra	25	12½	3½	8	11½	1	4	5½	2	5½	7½	7½
Bangar Pelowa	20	9	1½	5	10½	—	7	7	4	7½	7½	8½

The first year was one of extreme drought, in which the wells were strained to the utmost; the second year was marked by an extraordinary rainfall, and irrigation may be said to have reached its lowest point; in the third year irrigation was little wanted in the autumn harvest, while in the rabi a preliminary watering had often to be given in the drier circles owing to drought at the sowing season, but afterwards the rains were very abundant and irrigation was not required. As cane is not grown, there is little kharif irrigation in the Pehowa Bangar. On the strength of such statistics I estimated in Pipli and Indri what I considered a fair number of acres per well bucket, and multiplied this by the number of buckets in use in order to obtain the assessable chahi area. In the four circles shown in the above statement the assumed areas were:—

	Acres.
Ladwa Bangar ...	14
Northern Chachra ...	16
Southern Chachra ...	9
Pehowa Bangar ...	10

In Kaithal and Jagadhri, where well irrigation is of much less importance, the chahi area adopted for assessment was the average area actually watered in four years. A chahi rate was framed for each circle, which, being multiplied by the assessable area ascertained in the manner explained above, gave the irrigated demand. In fixing the revenue of each estate, the average area of irrigation, which differs greatly even in adjoining villages, was of course carefully considered. The total village demand was divided into a dry assessment and an *abiána* or water-advantage revenue. The former was distributed over the whole cultivated area, irrigated and unirrigated, and the latter over the wells. Thus if a village had a cultivated area of 1,000 acres, of which 200 acres were on the average irrigated from 15 wells, and a revenue of Rs. 1,475 was imposed, the dry rate being Re. 1-2-0, Rs. 1,125 represented the assessment on the land in its unirrigated aspect, and Rs. 350 the water-advantage assessment or *abiána*. The rate of the *abiána* was therefore Re. 1-12-0. The *abiána* was distributed over the wells according to the irrigating capacity of each. This was ascertained by extracting from the crop returns the areas irrigated from each well for three or four years, and taking the average as the irrigated area for assessment purposes. It was a somewhat tedious process, but I thought it necessary because the work done by different wells in the same village is for various reasons very unequal, and the entries in our record of the area attached to each well was not a trustworthy guide. Another reason which led me to propose the imposition of an *abiána* on wells in the form of a lump sum was the fact that there is a good deal of irrigation by men who, according to the settlement papers, have no share in the wells they use. Sometimes water was admittedly taken only by permission of the owners; but in many cases the irrigators claimed a right to a regular turn of irrigation, and asserted that they had always enjoyed this. The fields of such men were recorded as well irrigated; but, if they had been assessed at wet rates and water had subsequently been refused, a grave injustice would have been done. On the other hand, when the irrigated part of the assessment took the form of a water-advantage revenue imposed in a lump sum on the well, the recorded owners of the well had to elect, when the demand was distributed over holdings, whether they would pay it all themselves, or divide it between themselves and the other irrigators.\*

37. In certain circles a falling off in the number of wells in use had

Remission of *abiána* during currency of settlement if a well falls permanently out of use.

occurred during the currency of the expiring settlement, due probably in part to the great increase in the cost of bullocks. In the Southern Chachra of Pipli my returns showed a third less wells than those of Mr. Wynyard's, settlement; but the actual diminution was a good deal less, probably not more than 20 or 25 per cent. To get rid of the hardship of a man having to pay *abiána* for his well when it had ceased to be workable, I proposed that when a well had fallen permanently out of use the *abiána* should be remitted. The Financial Commissioner approved of the proposal; but, in reviewing the Indri assessment report, the Punjab Government expressed some apprehension that its



adoption might encourage cultivators to throw existing wells out of use, and to sink new wells "in order to escape that portion of the assessment which is put on the land in its irrigated aspect." The proposal was, therefore, sanctioned provisionally, and I was ordered to notice the matter in my settlement report, as it would be necessary to satisfy Government that the system would not work to the detriment of the revenue in the manner apprehended. The fears expressed appear to me to be groundless. An ordinary well in the upland circles, with an assumed assessable area of 10 to 14 acres, pays an *abiána* of Rs. 15 to Rs. 20 in addition to the dry assessment on the land. The construction of a new well would cost Rs. 300 to Rs. 400, which would usually be borrowed. If the landowner takes *takávi* and obtains it on the easiest terms contemplated by the rules, payment beginning four years after the date of the loan and being spread over a further period of 16½ years, he will by the end of 20½ years have wiped out an advance of Rs. 300 by paying Government Rs. 586, while his total payments on account of *abiána* for the 20 years' period of settlement will be from Rs. 300 to Rs. 400. In the Khádir well-sinking is cheaper; but even there I do not think the temptation to throw out of work an existing well in order to make a new one will be at all of an alluring character, and the temptation, such as it is, will become weaker year by year. So far only one application for the remission of *abiána* has been received by the Financial Commissioner.

38. The order in which the assessment reports were submitted was Indri, Pípli, Jagádhri, and Kaithal. But, in discussing the tahsíl assessments, I will begin with the Ambala District and notice those of Pípli first of all. Compendious accounts of the assessment of each circle and the grounds on which it was based were given in the assessment reports, but these need not be reproduced here.

Reference to assessment reports for details of assessment of each circle.

Assessment of Pípli. Heterogeneous character of the tahsíl.

39. The Pípli Tahsíl as constituted at settlement was a tract of large extent (773 square miles) and very irregular shape, stretching from the Jamna to a point only a few miles distant from the town of Kaithal. No tahsíl in the province probably included a greater variety of soils and agricultural conditions, and this led to the formation of an unusually large number of assessment circles. In the extreme east the rainfall and soil are similar to those of the submontane Jagádhri Tahsíl, while the south-west corner has the land and climate of the most arid parts of Kaithal. Moreover, Pípli is traversed by four hill streams and their affluents, whose influence on the tracts through which they flow is widely different, while the action of two of them, the Umla and the Sarusti, in their upper courses is in striking contrast to their effects in the Pehowa Pargana.

40. Six strongly marked natural divisions can be recognized. Between the Jamna and the canal is a small flat river Khádir of the ordinary type. A narrow strip of Bangar, with good soil and abundant well irrigation lies between the canal and the Rakshi. The country between the upper course of the Umla and the Márkanda is a rich alluvial tract, in which almost every acre of land is under the plough, and where the crops, although raised without any artificial irrigation, are fairly secure. A lowlying flat plain with stiff soil, flooded by the Sarusti and the Umla, known as the "Naili," occupies the north of the Pehowa Pargana. The population has been degraded, physically and morally, by disease and the extreme precariousness of the harvests. The rest of the tahsíl, or about half of the whole, is marked by the abundant growth of jangal. Except in the south of Pehowa, the dhák is the great feature of the vegetation, and the whole tract in which it abounds is called the "Chachra." The high dry uplands in the south of Pehowa, in which the jal predominates, are known as the "Bangar." The Chachra which stretches from the border of Jagádhri on the one side and beyond that of the Pehowa pargana on the other, is by no means of a homogeneous character. The country lying between the Rakshi on the east, the Sarusti and the Ládwa and Shahabad Road on the south, and the Betan and Linda Nalas on the west, is a tract of good natural capacities, with a fairly fertile soil. Water is sufficiently near the surface to make irrigation easy. Cane is grown in nearly every village, and wheat can be raised without

Natural divisions and assessment circles.



artificial irrigation. The crops, especially the rice, which is a very important staple here, are certainly most uncertain, and the part of the tract which is flooded by hill streams is very unhealthy. It cannot be said to have prospered since last settlement, but I see no reason why it should not do so with proper revenue management. This part of the Chachra was formed into a separate assessment circle and called the Northern Chachra. The country to the south and west, with Thanesar as its centre, is cursed with an unhealthy climate, with hill streams whose floods are most capricious, and with a strong soil which requires an abundant rainfall, which it very often fails to get. Rice is the great autumn, and gram the great spring staple. Wheat can rarely be raised in unirrigated land, and very little cane is grown. This circle, which I called the Southern Chachra, was greatly overassessed by Mr. Wynyard. No subsequent revisions have put it right, and it has been a by-word for steady decay for the last thirty-five years.

The dry uplands of the south of Pehowa are healthy. They had the good fortune to be assessed with Kaithal, and the revenue had become light through the great expansion of cultivation. Population and cultivation had both increased since last settlement, and the people had held their own, though little or no help had been given them even in the worst years. This small tract I called the Bangar Pehowa Circle. Thus there were seven circles, the Khadir, the Ládwa Bangar, the Northern and Southern Chachras, the Márkanda Bet, the Naili, and the Pehowa Bangar.

Abstract of leading statistics.

41. I note below a few of the leading statistics of each—

Ouncle.	CULTIVATED AREA AND JADID.										IRRIGATED AREA.*					POPULATION AND HOLDINGS.					CROPS.					RENTS.	
	Per cent. on total area.		Increase or decrease since regular settlement.		Per cent. on cultivated area of recorded irrigated area.	Increase or decrease in number of wells since regular settlement.	Average depth to water in feet.	Average irrigated area per well (5 years).	Average irrigated area per well when or bucket measured for assessment.	Per square mile of cultivation of rural population.†	Increase or decrease of total population since 1885.	Percentage owned by good cultivators (Rate, Here, Kumbha, Malis, Raisons).	Average cultivated acres per owner.‡	Percentage of land cultivated by owners.	1883-84.	1884-85.	1885-86.	Average.	Percentage of Crops harvested to total cultivated area.‡	Percentage of Crops harvested under	Usual bottle rate.	Government half assets share.	CHAL.	Barin.			
	Per cent. on total area.	Increase or decrease since regular settlement.	Per cent. on cultivated area of recorded irrigated area.	Increase or decrease in number of wells since regular settlement.	Average depth to water in feet.	Average irrigated area per well (5 years).	Average irrigated area per well when or bucket measured for assessment.	Per square mile of cultivation of rural population.†	Increase or decrease of total population since 1885.	Percentage owned by good cultivators (Rate, Here, Kumbha, Malis, Raisons).	Average cultivated acres per owner.‡	Percentage of land cultivated by owners.	1883-84.	1884-85.	1885-86.	Average.	Percentage of Crops harvested to total cultivated area.‡	Percentage of Crops harvested under	Usual bottle rate.	Government half assets share.	CHAL.	Barin.					
	Per cent. on total area.	Increase or decrease since regular settlement.	Per cent. on cultivated area of recorded irrigated area.	Increase or decrease in number of wells since regular settlement.	Average depth to water in feet.	Average irrigated area per well (5 years).	Average irrigated area per well when or bucket measured for assessment.	Per square mile of cultivation of rural population.†	Increase or decrease of total population since 1885.	Percentage owned by good cultivators (Rate, Here, Kumbha, Malis, Raisons).	Average cultivated acres per owner.‡	Percentage of land cultivated by owners.	1883-84.	1884-85.	1885-86.	Average.	Percentage of Crops harvested to total cultivated area.‡	Percentage of Crops harvested under	Usual bottle rate.	Government half assets share.	CHAL.	Barin.					
Total area in square miles.																											
Bat Mirandis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Khadr	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Bangar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Northern Chachra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Southern Chachra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Pahowa Bangar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Nalis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Total	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			

\* Includes chibi, 431, and nahri.

† The rural population is obtained by deducting from the total population that of the five small towns of Shahabad, Thakoor, Ladoya, Radour, and Pahowa.

‡ See circle note-books, Statement VI. Holdings of million taken excluded.

§ For character of harvests see para. 68 of this report and para. 35-57 of assessment report.

Population has declined and cultivation expanded to a small extent. At last settlement the Pehowa Naili was in a very depressed state, owing to the severity of the settlement of 1847; and, when Government decided in 1853 that the assessment must be revised, the tract was on the road to ruin, and many villages were being deserted by their owners. The cultivated area of 1847 was far larger than that of Captain Larkins' settlement. In the Umla villages it was also greatly in excess of the present cultivated area; but in the south of the circle the floods have increased, and cultivation has been greatly extended. In the tahsil as a whole, there is a marked falling off in the number of wells. Since last settlement the need of irrigation has become less in the Bet and Naili on account of the increase of floods. The figure for the Southern Chachra is somewhat exaggerated, owing to inaccuracies in Mr. Wynyard's returns; but the contraction of irrigation is really very great, and is one of the most striking signs of the decay of that unfortunate tract. The population is pressing on the soil in the Khádír and in the northern part of the Bet, where the holdings are often very small. The crop statistics illustrate the great uncertainty of the harvests in the upland circles.

Assessment rates.

42. The assessment rates are shown in the following table:—

Circles.	Irrigated from masonry wells.	Irrigated from tanks and kucha wells.	Canal Sáláb.	Jamna Sáláb.	Dry and flooded by torrents except dahr.	Dahr.	Grazing.	Rate on cultivation.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Bet Márkanda ...	2 12 0	...	...	1 0 0	1 2 4	1 2 4	...	1 2 8
Khádír ...	2 8 0	...	1 12 0	...	1 5 4	1 5 4	...	1 7 0
Bangar ...	2 10 4	1 12 0	1 20 0	...	1 2 0	0 14 0	...	1 7 1
Northern Chachra	2 8 0	1 10 0	...	...	1 1 0	0 12 0	0 0 8	1 2 5
Southern Chachra...	2 4 0	1 12 0	...	...	0 12 0	0 12 0	0 0 9	1 1 6
Naili ...	2 0 0	1 12 0	...	...	0 12 0	0 12 0	0 0 6	0 14 4
Bangar Pehowa ...	2 0 0	...	...	...	0 8 6	0 8 6	0 0 4	0 11 8

The small area kept permanently moist by the Western Jamna Canal is rich land in which a great deal of cane is grown and the rates are light. On the other hand, the Jamna sáláb is very poor. In the rabi the crops are choked with weeds; and in the kharif they are always liable to be destroyed by floods. In the Bangar and Northern Chachra a distinction was made between the ordinary megra, which is clean loam, and the hard rice lands (dahr), the yield of which is extraordinarily precarious. The grazing rates are not so light as they appear, for a good deal of bad kalar land was wrongly recorded as culturable waste.

Assessment actually imposed.

43. Details of the assessment imposed are given in the following table:—

1	2			3			4			5	6	7			9	10	11			13
	Cosecia.	REVENUE BEFORE REDUCTION.			Half season estimate.	Revenue by rates with col- tivation.	REVENUE ACTUALLY IMPOSED.					Total with ratio to culti- vation.	DEFERRED REVENUE INCLUDED IN COLUMNS 7 TO 9.							
		Khalas.	Assigned.	Total with ratio on cultivation.			Khalas.	Assigned.	Total with ratio to culti- vation.				Khalas.	Assigned.			Total.			
		Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	
	Bel Marhanda	28,748	55,553	84,302	1,210,056	96,979	34,196	60,724	95,129	+ 13	381	79	1,172							
	Khadir	22,792	2,992	25,784	30,805	20,000	25,115	2,545	27,660	+ 84	643	5	651							
	Dangar	37,682	1,641	39,323	38,942	41,497	40,224	1,346	41,570	+ 5	210	60	270							
	Northern Chachra	32,105	14,235	46,341	47,154	51,440	35,443	15,667	61,110	+ 10	1,349	287	1,536							
	Southern Chachra	25,301	7,494	32,795	16,830	25,960	22,755	5,005	28,390	- 134	329	154	403							
	Forest Pothwa	11,307	99	11,413	12,210	14,905	14,108	67	14,230	+ 25	1,019	..	1,019							
	Kadi	19,808	1,295	21,103	14,209	21,064	20,151	1,359	21,510	+ 1	363	..	363							
	TOTAL	1,77,950	83,305	2,61,255	2,92,605	2,70,425	1,92,247	87,648	2,70,850	+ 7	4,147	1,297	5,444							



There is a very trifling amount of canal irrigation in one or two of the Bangar estates, for which owner's rate will be charged (*see* para. 55), but the amount is so petty that I have omitted it from the statement. Though the total revenue of the Naili Circle remained unaltered, its distribution was greatly changed. The Umla villages were paying much higher rates than the estates inundated by the Sarasti, though the latter had the benefit of far more certain floods. I reduced the demand in the former by Rs. 16, and raised that in the latter by 17 per cent.

44. In reviewing the Pipli report, after the assessments had been given out, His Honor the Lieutenant-Governor expressed an opinion that the enhancement taken in the Khádír and Bet Márkanda Circles was too small. Looking back on my own work, I have little doubt that I should have taken some Rs. 5,000 or Rs. 6,000 more than I did in these two circles. But the problem of their assessment was not an easy one. The distribution of the old demand in both was extraordinarily uneven. This was largely due in the Khádír to the piecemeal fashion in which Mr. Wynyard's assessments were revised, and in the Bet to the extraordinary changes caused by the action of the Umla and Márkanda since the regular settlement. Of the 39 Khádír villages, 16, including all the best estates of the circle, already paid more than my demand by rates. Nine villages, which contained between one-fourth and one-fifth of the total cultivated area, paid a revenue of Rs. 5,271, rate Rs. 0-12-2, while my soil rates would have given Rs. 5,631, or an increase of 72 per cent. The low rate in these villages was not the result of an extension of tillage. Their cultivated area was a good deal less than at last settlement, and, notwithstanding their light assessment, they were as a rule badly off.

As it was I took increases ranging from 23 to 67 per cent. in 11 of the villages; but I think I was too cautious in enhancing the demand of the best estates, which were already assessed much above rates. The inequalities in the Márkanda Bet were of a still more startling description. The villages may be divided into three groups.

DETAIL.	Number of villages.	Cultivated area.	Increase or decrease since regular settlement.	Revenue.	Rate on cultivation.
		Acres.	Per cent.	Rs.	Rá. s. p.
Cultivation decreased, or increased by less than 10 per cent. ... ..	67	50,175	-1	57,439	1 2 4
Cultivation increased by from 10 to 50 per cent. ... ..	28	20,743	+21	20,534	0 15 10
Cultivation increased by more than 50 per cent. ... ..	18	12,139	+112	6,425	0 8 4

The first group includes the best estates in the circle. The second consists chiefly of villages on the border of the Northern Chachra, estates which have benefited by a new channel running westwards from the Márkanda at Kalsana to the Umla, and some villages in the south of the circle. The soil of many of the estates in this is decidedly inferior to that of the villages in the first group. The estates of the third class lie mostly in the south of the circle. The extension of cultivation has been enormous in eight villages. The average increase was nearly 300 per cent., and the rate on cultivation had fallen to  $4\frac{2}{3}$  annas an acre. But the soil is much poorer than in the rest of the circle, the population is less dense, the cultivation is very inferior, and the crops are insecure. I should probably have included in the Naili Circle 14 villages which I put in the Bet. As a fact, I had to assess half of them below Naili rates, though in six of these the enhancements taken exceeded 75 per cent.

I raised the revenue of the first group of villages considerably, but I now think that I might safely have taken more.

45. There was much to be said in favour of a fluctuating assessment in the Southern Chachra and Naili Circles. But the objections of the landowners were strong. They admitted that the system described in para. 34 had worked to their advantage during settlement, but they refused to believe that it would be properly managed by the ordinary tahsil establishment. Moreover the size of the tahsil made it unlikely that the tahsildar would be able to devote a proper amount of attention to the subject. I therefore gave up the idea of introducing a fluctuating assessment compulsorily, and proposed that, when announcing the fixed demand, I should be allowed to give all estates in these two circles, except those owned by money-lenders or other non-resident landlords, the option of accepting it or of coming under a mixed fixed and fluctuating system, of which the principal features were—

- (a) Grazing lands and certain gardens to be assessed at fixed sums.
- (b) The acreage irrigable from wells to be given a fixed assessment in respect of that advantage at rates varying from Re. 1-8-0 or Re. 1-4-0 per acre, according to situation.
- (c) Successful crops, whether irrigated or unirrigated, to pay a fluctuating assessment of Re. 1 per acre, but nothing to be paid for crops that failed.

I also suggested that it should be a condition of the settlement in these estates that the proprietors should be allowed, at any time during its currency, to throw up their fixed leases, on giving six months' notice to the Deputy Commissioner, and to accept instead a fluctuating assessment. The Deputy Commissioner was also to have the power, with the sanction of the Commissioner and the Financial Commissioner, to cancel the settlement of any estate when one year's revenue was in arrears, and to introduce the system described above compulsorily. The Financial Commissioner approved of these proposals, but he considered that it would be enough to allow the Deputy Commissioner "to recommend the introduction of fluctuating assessments in the usual way if an estate should fall into difficulties, whether to the extent of one year's demand or otherwise." He asked Government to allow the Financial Commissioner to sanction the introduction of such assessments upon his own authority. As I expected, all estates preferred a fixed demand. Afterwards Sir James Lyall, when passing orders on the assessment report, raised the rate on unirrigated crops from Re. 1 to Re. 1-4-0, and expressed an opinion that "a proposal to compulsorily introduce a system of fluctuating assessments during the currency of a settlement, when Government is not prepared to impose such a system at the time of making the settlement, is one of doubtful propriety, unless it be specially guarded." Should the revenue authorities unfortunately have hereafter to cancel the settlement of any estate under the 73rd section of the Land Revenue Act, they will then be able to introduce any system which they think most likely to restore the landowners to prosperity.

46. The deferred assessments in Pipli were unusually large. Of the whole amount, Rs. 468 were on account of protective leases of wells and Rs. 4,976 on account of progressive assessments. The distribution of the old revenue over villages had become exceedingly unequal, and, though the enhancement taken in the tahsil as a whole was small, the rise in many villages was great. In some of the estates, on the other hand, which were so badly off that I had to give a large measure of relief, I did not think it necessary to make the whole of the reduction permanent. A good many of the progressive assessments were in villages acquired in whole or part by Mális. Where they had been settled for some time, an extraordinary increase of cultivation had already taken place; and where their settlement was very recent, speedy expansion was to be expected. I thought it wise to treat the Mális with liberality, for on the continued immigration of these industrious husbandmen the future of the two Chachra Circles depends. Of the progressive assessments, Rs. 3,320 will fall in in 1892 and Rs. 1,656 in 1897.

47. Jagádhrí is a much smaller and more compact tahsil than Pipli. Three great natural divisions can be recognized. The first, covering less than one-tenth of the whole surface,

consists of the sandy uneven "Kandi" along the skirts of the hills and the broken "Ghar" tract, honey-combed with ravines, on the borders of Naráingarh. The rest of the tahsil is about equally divided between Khádir and Bangar. The western boundary of the latter is the high bank of the Som Valley from Katgarh to Buria, and to the south of that town the canal.

48. Six assessment circles were formed. The Kandi and the worst Assessment circles of part of the Ghar were united in one circle, the whole Jagádhri: the Kandi. being called for convenience "Kandi." Except in the extreme east near the Jamna, the Siwálíks present to the south an abrupt front, pierced by long gorges from which sandy and boulder strewn torrents emerge into the plains. The hill area possessed by British villages is as a rule small. The Kandi estates proper have a poor, sandy, and uneven soil, and boulders often lie close to the surface. The torrents do much damage. The Ghar lying to the west of the high bank of Som valley, and traversed by the Sukhar, Sadadeni, Adáwa, and Sarusti streams, consists of sandy hills, sprinkled with boulders, torrent beds, and ravines, mixed with stretches of fairly level land. It is impossible without riding over the country to form any conception of its strange appearance. The flat lands are often productive, but they are year by year being encroached on by the ravines. Cultivation is carried on under great difficulties. The clearing of the dhák and karaunda jungals, which abounds near the hills, is a heavy task. Boulders often give much trouble to the ploughman, and in some villages water for man and beast is scarcely procurable after the torrents have run dry. Moreover, the wild animals manage to secure a large share of the crops. The population consists mostly of Gujars, who are in some of the villages hardworking and well-to-do.

49. The Khádir was divided into three circles: the Som Khádir, the Northern Jamna Khádir, and the Southern Jamna Khádir. The three Khádir Circles. The first includes the villages between the Som and Boli torrents, and 10 or 11 estates between the Boli and the canal. The soil is usually an easily worked fertile loam, mixed with dahr, which is sufficiently light to bear two crops in the year. To the east of the Boli there is a good deal of stiff dahr, but most of it is canal-watered, and yields fine rice in the autumn, and barley, gram, or masri, or mixed crops of these grains, in the spring harvest. The population is a miscellaneous one of Jats, Gujars, Kaláls, Máls, and Raiens. The part of the Jamna Khádir lying to the north of the Som and between the canal and the river is very inferior to the rest. The surface is cut up by wide river beds, and destructive floods are common. The soil is a very poor grey-coloured sandy loam, and there are often boulders close to the surface. Where it is not sandy and stony, it is too often damp and foul with weeds. The population consists of Gujars. The Southern Jamna Khádir is generally flat, and the soil is an easily worked productive loam. An exception must be made in the case of the lands flooded by the river, and of some low-lying estates near Buria, which are situated between the canal and a drainage channel, and are consequently liable to be water-logged. In an ordinary season all the best crops, but pot and vegetables, can be grown without artificial irrigation. Rájpúts form the bulk of the agricultural population; but there is a large admixture of Gujars, Jats, and Kambohs. The river for some years back has been steadily cutting into the best part of the circle.

50. The Bangar was divided into two circles: the Bangar and the Dahr. The first forms the backbone of the tahsil. In The Bangar and the Dahr. the north-west it runs up into the ravines of the Ghar; in the south-east the drainage into the canal is rapid, and the surface is often sloping and broken, and the land poor and sandy. On the other hand, some of the villages in the west of the circle near the Rakshi have a stiffish soil with a large admixture of clay. But, as a rule, the soil is a rich loam, containing a large but not excessive amount of sand, easily worked and yielding a good return to the husbandman. The land is not very level, except to the south of Jagádhri, but the slopes are gentle and do not interfere much with the success of cultivation. The Dahr lies to the west of the Bangar, and is traversed by the Chautang and the Sarusti. The surface is flat. The loam soils contain less sand than in the Bangar; but they are not difficult to work, and are very







Between the two settlements there was a small increase in the cultivated area, which has now about reached its limit, and a considerable addition to the number of wells. Irrigation is not much wanted, and the only circle with as much as 10 per cent. of its area irrigated is the Som Khádir, in the last of which a good deal of land is watered by the canal. The population has grown somewhat since 1855, and is as large as the tahsil can be expected to support. The influences of famine and disease, which have checked the natural expansion of population in Pipli, have operated in Jagádhri with much less rigour. Drought is seldom sufficiently severe to cause the first, and, though the rainfall is heavier, the drainage is much more rapid, and the people are therefore less liable to be decimated by fever. The decline in cultivation and population in the Som Khádir is due to the encroachments of the torrents. The material of the population is not nearly so good as in Pipli, for Rájputs, Gujars, and Banias own half, and Jats, Kambohs, Mális, and Raiens only one quarter, of the tahsil.

The crops are of course far more secure than in the upland circles of Pipli. An exception must be made in the case of the Dahr, where there is a great deal of precarious rice cultivation. The extraordinary fluctuations of this crop even in a submontane tahsil can be judged from the following figures relating to the Dahr Circle, and in considering them it must be remembered that the rice lands there yield nothing else:—

YEAR.						Fine rice harvested.	Coarse rice harvested.
						Acres.	Acres.
1883	...	...	...	...	...	727	1,459
1884	...	...	...	...	...	5,475	4,093
1885	...	...	...	...	...	1,552	2,250
1886	...	...	...	...	...	4,598	6,138

In the Northern Jamna Khádir the large amount of double cropping is a sign of bad, not of good, land, and of bad, not of good, tillage. There is always a temptation to take two poor crops off damp uncertain soils. As cultivation is easier and its fruits more secure in Jagádhri than in Pipli rents are of course higher.

52. An attempt was made in the assessment reports to compare the revenue demand of Pipli and Jagádhri with that in force in the adjoining parts of Saháranpur, but it is useless to repeat the figures here, as Saháranpur is at present under settlement.

53. The rates which I proposed are shown below. They brought out an enhancement of Rs. 27,479, including Rs. 3,477 on account of owner's rate, or 13½ per cent. on the old revenue:—

Circle.	Irrigated from wells.	Irrigated from tanks.	Canal Sáláb.	Jamna Sáláb.	Sáláb of torrents.	Dry except dahr.	Dahr.	Rate on cultivation.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Kandi ...	...	...	...	...	...	...	...	1 0 0*
Dahr ...	3 12 0	2 12 0	...	...	1 12 0	1 6 0	0 15 0	1 6 0
Bangar ...	3 12 0	2 0 0	2 0 0	...	...	1 6 0	0 15 0	1 6 9
Southern Jamna Khádir ...	3 12 0	2 0 0	2 0 0	1 2 0	...	1 2 4	1 2 4	1 9 3
Northern Jamna Khádir ...	...	...	...	1 0 0	...	1 4 0	1 4 0	1 3 10
Som Khádir ...	...	...	...	...	...	...	...	1 6 6†

Rs. a. p.  
 \* Or including owner's rate ... 1 0 1  
 † Or including owner's rate ... 1 9 1



Jagadhi Tahsil

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Circle.	REVENUE BEFORE REVISION.			Half assets estimate.	Revenue by Settlement Officer's rates with rate on cultivation.	REVENUE ACTUALLY IMPOSED.				Increase or decrease per cent.	DEFERRED REVENUE INCLUDED IN COLUMNS 7 AND 8.		
	Khafas.	Assigned.	Total with rate on cultivation.			Assigned.	Owner's rate.	Total with rate on cultivation.	Khafas.		Assigned.	Total.	
Kandi ... ..	Rs. 4,141	Rs. 5,739	Rs. 9,880 0 13 1	Rs. 12,424	Rs. 12,175 1 0 1	Rs. 5,053	Rs. 6,411	Rs. 93	Rs. 12,163 1 0 1	Rs. 421	Rs. 122	Rs. 78	Rs. 200
Dahr ... ..	16,561	26,808	43,369 1 2 6	53,202	51,582 1 2 0	20,502	22,618	...	52,420 1 6 8	421	...	200	200
Bangar ... ..	30,312	44,763	75,075 1 2 9	87,080	86,597 1 6 9	30,001	31,832	41	50,874 1 7 10	429	333	557	1,080
Southern Jamma Khadir ...	24,258	11,079	35,337 1 7 0	43,524	37,616 1 9 3	27,985	11,745	10	39,730 1 10 11	411	74	9	78
Northern Jamma Khadir ...	12,156	1,216	13,372 1 1 2	18,145	17,402 1 8 10	14,750	1,390	113	16,108 1 4 8	410	...	...	...
Sam Khadir ... ..	13,294	15,066	28,360 1 7 1	32,835	30,861 1 9 1	14,792	14,778	2,215	32,007 1 10 8	410	...	...	...
Total ... ..	1,00,733	1,04,053	2,05,886 1 3 9	2,44,550	2,34,104 1 6 6	1,22,513	1,16,377	2,477	2,44,870 1 7 6	410	720	937	1,636



Thus the result of the revision of assessment has been to enhance the demand by Rs. 38,394, or 19 per cent. The increase in the khálsa has been in a higher proportion. This is due in part to the lapse of a number of petty revenue free grants with the expiry of the past settlement. Government gets rather less than half of the owner's rate, the rest going to assignees of land revenue.

55. The canal irrigation is nearly all in seven estates of the Khádir Som Circle. Till 1850 water was given without any money charge, the irrigating villages being bound to supply a certain number of labourers to work on the canal. By Punjab Government Notification No. 154, dated 7th June 1889 (*see* Appendix), the owner's rate was introduced into Jagádhri, Pipli, Kaithal, and Indri, and it was ordered that the amount should be calculated at half occupier's rate. Experience in other districts makes it probable that the imposition of an owner's rate in place of an irrigated assessment rate will be followed by some contraction of the average area for which canal water is taken. The receipts for two years in the two Ambála tahsils have been:—

1888-89	...	...	...	...	Rs. 2,400
1889-90	...	...	...	...	" 3,064

Under rules sanctioned by the Government of India in 1880 (Punjab Revenue Circulars, page 570) the Sardár of Buria is entitled to the whole of the owner's rate in one Jagádhri village, and in six estates the proceeds should be divided between Government and numerous jágirdárs in proportion to their respective shares in the land revenue. In order to avoid the keeping up of the elaborate accounts which the annual division of the fluctuating amount leviable as owner's rate between Government and the jágirdárs, between the various pattis sharing in the jágir villages, and inside the pattis between the numerous pattidárs, would involve, it was decided to fix the sum payable to the jágirdárs for a period of seven years, on the basis of half the occupier's rate realized for the five years before settlement. This was found to amount to Rs. 1,787, which the jágirdárs will receive annually from the treasury (Government of India, Revenue and Agricultural Department, No.  $\frac{m}{m-1}$  R., dated 4th October 1889). At the end of seven years, when the present arrangement will be revised, the probable average receipts from owner's rate will be known, and there is little doubt that the jágirdárs will then have to submit to a reduction.

56. The sum of deferred jamas in Jagádhri is Rs. 1,656, of which Rs. 1,190 are on account of progressive assessments falling in in 1893-94, and Rs. 466 on account of protective leases for wells.

57. Indri is naturally divided into two tracts, the Jamna valley and the western uplands. The first forms the Khádir Circle. The soil consists generally of a grey-coloured loam, which is easily worked but is not productive. A good deal of reh is developed in it after rain. In the heart of the valley a belt of stiff bad land extends southwards as far as Biána. The lands flooded by the Jamna are usually very inferior. The surface is a good deal cut up by drainage channels, which receive the spill water of the river, and when they overflow their banks destroy the autumn crops. The population is of a very mixed character. The uplands were divided into two circles—the Bangar to the east and the Nardak to the west. The Bangar has generally a good loam soil with a fair proportion of sand, but near the Rakshi and in the south-west corner of the circle the loam is of the stiff Nardak type. Water is sufficiently near the surface to allow of well irrigation being largely practised. The material of the population is better than in the Khádir. Low-lying hard rice lands are found in all three circles, but in the Nardak they form 38 per cent. of the whole cultivated area. The higher lands consist of a strong loam, which yields heavy crops in the rare seasons when rain is abundant. But the risk of failure in ordinary years is great, and the water level is too far from the surface to allow of any large portion of the area being protected by wells. Rors hold the best part of the circle. They are very hardworking and in fair circumstances. Rájpúts own the villages in the south and south-west, where the rainfall is least and the water farthest from the surface. Jats hold a few estates in the north-west. Both Rájpúts and Jats are in poor circumstances.

Abstract of leading statistics.

58. Some of the leading statistics of these circles are given below:—

Circle.	CULTIVATED AREA AND YIELD.		IRRIGATED AREA.*						POPULATION AND HOLDINGS.						CROPS.						RENTS.													
	Total area in square miles.	Per cent. of total area.	Increase or decrease since regular settlement.	P. ch.	Per cent. on cultivated area of recorded irrigated area.	Increase or decrease in number of manure wells since regular settlement.	Average depth to water in feet.	Average irrigated area per well (wells or buckets (three years).	Acres.	Average irrigated area per well (wells or buckets assumed for assessment).	Per square mile of cultivation of rural population.†	P. ch.	Increase or decrease of total population since 1850.‡	Percentage owned by good cultivators (Rajp). Rajp (Rajp, Kumbha, Malla, Kumbha).	Average number of cultivated acres per owner.‡	Percentage of land cultivated by owners.	Percentage of crops harvested to total harvested area.]				Percentage of		Usual Ratal rate.	Government land assets share.	Chahal.	Raj. n. p.	Raj. n. p.	Detail.	Cash Area.					
																	1893-94.		1894-95.		1895-96.									1896-97.		Average.	Cereals, Cotton, Mesta, and other.	Wheat.
																	1893-94.	1894-95.	1895-96.	1896-97.	1893-94.	1894-95.								1895-96.	1896-97.			
Khadir ...	104	59	-1	10	44	10	0	10	538	+4	37	84	60	78	100	91	90	92	18	36	1	15	4	8	0	2	12	0	...					
Bangar ...	115	57	+2	30	-5	25	13	13	641	-2	35	83	95	51	103	87	83	91	16	22	1	18	3	12	0	2	0	0	...					
Wardak ...	124	35	+5	12	-15	45	0	10	814	+10	44	8	77	27	80	74	53	61	9	8	1	11	...	...	1	1	0	...	...					
Total ...	413	51	+1	214	-8	...	...	...	534	+3	30	84	95	58	103	87	91	93	13	27	...	...	...	...	...	...	...	...	...					

\* Includes chahli, shi, and noli.

† The whole population has been considered rural. Kuchipora was treated as a town at last census, as it then possessed a municipality; but the population is less than 5,000.

‡ Ten of the present Khadir villages were not in India at the census of 1850.

§ See Circle Note-books, Statement VI. Holdings of malkán kobsa excluded.

¶ For character of harvests see para. 68.

The trifling increase in the cultivated area is more than counterbalanced by the falling off in the number of wells. The census of 1855 did not include 10 estates now in Indri, and, allowing for them, population has declined by  $1\frac{1}{2}$  per cent. since last settlement. If the census carried out in 1855 was at all accurate, population increased with great rapidity in the Nardak between that year and 1868; but since then there has been a very marked falling off. The population is quite large enough for the resources of the tahsil, and it is not likely to grow much, for Indri shares in the general unhealthiness of the Karnál District,\* though it is not so fever-stricken as the Naili or the canal villages to the south of Karnál. The Indri Khádír is far inferior to that of Pípli and Jagádhri, a fact which is illustrated by the figures relating to crops. Grain rents throughout the pargana are low; and cash rents are not common, and where they occur are very moderate.

59. Some particulars of the assessments of the adjoining tracts in Sahárapur and Muzaffarnagar will be found in the 5th chapter of the Indri Assessment Report. The settlements of these districts were made between 1861 and 1866, and they are now under revision. For the Khádír and Nardak I had a much better guide in Mr. Ibbetson's rates for the corresponding tracts in the Karnál pargana. The Karnál Bangar is entirely commanded by the canal, and is quite unlike the circle of the same name in Indri. Mr. Ibbetson's rates in the Karnál Khádír were—

	Rs.	a.	p.
Irrigated ... ..	2	2	0
Dry dákar and rausli ... ..	1	4	0
Bhúr and sailáb ... ..	0	10	0
Average unirrigated rate ... ..	1	0	7

These rates applied to my Khádír would have given a demand of about Rs. 76,000, or Rs. 13,000 less than the revenue as it stood before revision.

The rates in the Karnál Nardak were—

	Rs.	a.	p.
Irrigated ... ..	1	14	0
Dry dákar ... ..	1	12	0
Dry rausli ... ..	0	9	0
Average unirrigated rate ... ..	0	9	8
Grazing ... ..	0	0	8

Had I followed these rates exactly in the Indri Nardak the demand as it existed before revision would have been lowered by about Rs. 800.

60. I only framed two rates, irrigated and unirrigated, for cultivated land in each circle. Irrigated included land watered from wells and tanks and a small area in the Bangar and Khádír kept permanently moist by the canal. The rates proposed and sanctioned by the Financial Commissioner and Government were—

CIRCLE.	Irrigated.	Unirrigated.	Grazing.	Rate on cultivated.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Khádír ... ..	2 4 0	1 1 6	...	1 5 3
Bangar ... ..	2 4 0	0 14 0	...	1 3 8
Nardak ... ..	2 0 0	0 10 0	0 0 6	0 12 11

The pasture land in the Indri Nardak is much less in extent and inferior in quality to that in the Karnál Nardak.

61. Details of the assessment actually imposed are given below. Twenty-two of the Nardak villages were put under a mixed fixed and fluctuating system of assessment, an alternative fixed demand being at the same time framed and entered in the village note-book to assist the district officer in re-assessing the estates, if the experiment of fluctuating crop rates proved a failure. This alternative demand

\* Some striking statistics will be found in the 83rd para. of the Karnál Gazetteer. They show that in the district, as a whole, the birth-rate and the death-rate are about equal, standing at 201 and 200 respectively.

is shown in the table, otherwise no proper comparison could be made between the old and the new assessment :—

1	REVENUE BEFORE REVISION.				5	6	REVENUE ACTUALLY IMPROVED.				11	DEFERRED REVENUE INCLUDED IN COLUMNS 7 AND 8.		
	2	3	4				7	8	9	10		12	13	14
CIRCLE.	Khilaa.	Assigned.	Total with rate on cultivation.		Half-assessable estimate.	Revenue by rates including owner's rate, with rate on cultivation.	Khilaa.	Assigned.	Owner's rate.	Total with rate on cultivation.	Increase or decrease per cent.	Khilaa.	Assigned.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Khidir ..	41,747	47,572	89,319		78,882	81,501	40,879	41,785	...	82,664	-71	600	447	1,056
			1 7 3			1 5 3				1 5 7				
			50,446			51,433				51,594				
Baagar ..	24,129	26,907			45,104		24,904	25,006	904		+2	48	350	407
			1 3 8			1 4 1				1 4 1				
			24,743			24,662				23,580				
Nardak ..	15,913	8,890			16,391		16,778	7,813	...		-5	70	75	154
			0 13 4			0 12 11				1 12 8				
Total ..	81,789	83,700	1,54,306		1,40,157	1,55,986	81,449	75,204	904	1,57,747	-4	735	881	1,617
			1 3 11			1 3 0				1 3 1				



The half assets estimate is the average of three years, Rabi 1883 to Kharif 1885, while in the area and jama statement appended to the assessment report that of two years only was shown. The owner's rate is the average collections of the four years since the new assessment was introduced. The four canal-irrigated villages are all *khālsa*, so the decrease is in the assigned revenue.

62. The reduction in the Khādir Circle was large. It fell chiefly on the jagirdārs, and especially on the Kanjpura Nawāb. It must be remembered that in a few estates in which reductions were given in the Khādir and Nardak, the demand shown in the revenue roll was purely nominal, as the jagirdār collected in kind. This arrangement has now come to an end. In his report on the probable fiscal results of re-settlement, Mr. Ibbetson wrote of the Khādir Circle:—

"In the Khādir also considerable reductions were given after settlement, but they have been insufficient. The land deteriorates rapidly from the Pipli border. The people are thriftless and bad cultivators. The floods do much harm, and, worst of all, the absolute removal of the collection of assigned revenue from the discretion of the revenue authorities, by giving to jagirdārs the very anomalous power of suing for arrears, has enabled the Nawāb of Kanjpura, a money-lender of the worst type, to get much of the land in his jagir into his own hands, while he holds several villages in direct management instead of on fixed demands. Substantial reductions are required in this tract."

I think the picture here drawn is perhaps a little blacker than the facts warrant. The northern half of the circle is mostly in the hands of Jats and Kamboh; and the Nawāb's villages are nearly all in the southern half. Direct collections by jagirdārs are not an unmixed evil; and the *khām* villages, if they have been subjected to much annoyance, have at least escaped some of the ills resulting from a fixed money demand collected without much regard to the fluctuations of the seasons. There is no manner of doubt that the Indri is very decidedly inferior to the Pipli Khādir. The injury done to the Jat villages by the prohibition of poppy cultivation must not be forgotten. The old canal was closed below Indri while the circle was under assessment, and with its closure a certain amount of irrigation and two-thirds of the rich canal *sailāb* disappeared. My rates in the Khādir were a trifle higher than those suggested by Mr. Ibbetson. In the Nardak, on the other hand, I went below his estimate. I think he rather overrated the capacities of that circle, and the years of drought which lasted from 1877 to 1883, reduced its resources considerably.

63. I made proposals for putting 22 estates in the west and south of the Nardak, where the irrigated area is small and the cultivation peculiarly precarious, under a mixed fluctuating and fixed system of assessment. The proprietors were mostly Rājputs and Jats, and were in difficulties. I thought the Ror villages were strong enough to pay a fixed assessment if it was reasonably worked and suspensions granted when necessary. I suggested that they should be given the option of a fluctuating assessment, if they preferred it to the fixed demand which I would announce. If they elected for the latter, as I expected them to do, they were further to be allowed, during the currency of the new settlement, to throw up their leases and come under the fluctuating system; and the Deputy Commissioner was to have authority, with the sanction of the Commissioner, to cancel the settlement of any estate of which more than one year's demand was in balance, and to collect the revenue at fluctuating rates. The power of cancellation would only be exercised where there was no prospect of realizing the arrears within a reasonable time. A kind of safety valve was thus provided, which could be opened if any village broke down. The system as finally sanctioned was as follows:—A fixed assessment of Rs. 2,247 was imposed on the recorded *chāhi* area and on the pasture land. On the *bārāni* and *ābi* area the revenue will be assessed, harvest by harvest, at the rate of one rupee per acre on all crops successfully cultivated. The total of the alternative fixed revenue (para. 6) is Rs. 10,905 as compared with a former demand of Rs. 11,378. In sanctioning the adoption of this plan, the Lieutenant-Governor (Sir Charles Aitchison) remarked:—

"The working of the system, however, must be very carefully watched, the special attention of the Deputy Commissioner being drawn to it, and special notice of it being required in the annual reports. If after experience of a few years of its effects, the people are

still opposed to the system, Sir Charles Aitchison thinks that they should be given the option of reverting to a fixed assessment with the usual system of suspensions and remissions."

In view of the orders passed in the case of Pipli, the parts of my proposal which allowed a compulsory power of introducing a fluctuating assessment during the currency of the settlement cannot be considered to have received the final approval of Government. Of course there has been some grumbling; but if the assessments are properly managed, every bad season will teach the people the advantage of a system by which, in a notoriously insecure tract, the demand really fluctuates with the character of the seasons. I think the plan should have a full and fair trial. Its success depends entirely on the work of the patwāris being closely and honestly supervised. So far Government has had no reason to regret the adoption of the proposals, as the following figures prove:—

YEAR.	RECEIPTS, INCLUDING ASSIGNED REVENUE.			Alternative fixed jama.	DIFFERENCE.	
	Fixed.	Fluctuating.	Total.		Plus.	Minus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1886-87 ...	2,247	6,800	9,047	10,905	...	1,858
1887-88 ...	2,247	14,599	16,846	10,905	5,941	...
1888-89 ...	2,247	15,951	18,198	10,905	7,293	...
1889-90 ...	2,247	9,220	11,467	10,905	562	...
Average ...	2,247	11,642	13,889	10,905	2,984	...

#### 64. The Kaithal Tahsil may be broadly divided into three tracts.

Physical features and assessment circles of Kaithal:—the Bangar, Nardak and Andarwār Circles.

The first, which covers more than two-thirds of the total area, consists of the dry uplands to the south of the Sarusti valley and the similar tract known as the Andarwār on the watershed between the Sarusti and the Ghagar. The prevailing soil here is a stiffish thirsty loam. In unirrigated lands the crops consist almost entirely of millets and pulses, and in the absence of irrigation the kharif is by far the most important harvest. I divided the tract into three assessment circles—the Andarwār, the Bangar, and the Nardak. As regards dry cultivation the Andarwār differs little from the other two circles; but it enjoys one great advantage—the water level is only about 30 feet from the surface, wells are numerous, and the tract is therefore fairly protected from the droughts which render farming in the Bangar and Nardak so risky. The Nardak occupies the eastern and the Bangar the western half of the southern uplands. The distinction is recognized by the people themselves. There is a real difference in soil, for there is far more rice land in the Nardak than in the Bangar; and the loam loses a little of its stiffness as one travels westwards, and in the extreme south-west corner of the Bangar becomes fairly light. But the tribal distinction is perhaps more important. The proprietors are mostly Jats in the Bangar and Rājputs in the Nardak. It is partly on this account, and partly because the soil of the Nardak is naturally more untractable than that of the Bangar, that two-thirds of the land in the former and only one-third in the latter circle are still untilled. In the north of both circles on the edge of the Sarusti valley there is a trifling amount of well irrigation, while a few estates on the southern border are irrigated from the Hānsi branch of the Western Jamna Canal.

#### 65. The second tract, which consists of villages inundated by the Sarusti and the Ghagar, forms the Naili Circle. It is unhealthy, and, owing to the capricious character of the floods,

the harvests are of a very fluctuating description. The floods are more favourable to spring than to autumn crops. One heavy flood in the end of the season is usually sufficient to secure the gram, which is much the most important staple. The dry lands do not differ in character from those in the circles already described. The health of the people is wretched, and the tract cannot prosper under present conditions.

66. The third division comprises all the outlying villages except a few, which, being flooded by a branch of the Ghagar, belong to the Naili. The soil is, for the most part, an easily worked level loam with a large admixture of sand, the local name of which is "niwán." But there is a good deal of uneven and very sandy land called "tibbi," which is distinctly inferior to the niwán, except in a year of very scanty rainfall. The bulk of the tibbi is of a light colour, and this variety is much more productive than one would at first sight expect, and it is surprising to see how cultivation has been carried up the sides of the sand hills. In places, however, the sand is red, and it is then nearly valueless. I arranged the outlying estates in two circles. The first, consisting of the 15 Budlāda villages, is called the Jangal; and the other, containing the rest of the estates, which lie mostly to the north of the Ghagar, the Powādh Circle. While these tracts are alike in soil, they are very different in other respects. In the Jangal villages the water level is 75 feet from the surface; the water-bearing stratum contains a great deal of salt; and irrigation from wells is practically non-existent. On the other hand, in most Powādh villages water is found at a depth of 20 feet or less, and wells are numerous. The rainfall in the Powādh is also much larger than in the Jangal. Unirrigated wheat is sometimes grown, and the chief dry spring crop is a mixture of wheat and gram. In the Jangal gram alone, or mixed with barley, is the great rabi staple.

67. There is no grazing land worth taking into account in the Andarwār, Powādh, or Jangal Circles. In the last the people have sometimes been restrained with difficulty from breaking up the small areas of poor land left to feed the tanks on which, until some distributaries of the Sirhind Canal were lately carried through the tract, they wholly depended for drinking water. In the Andarwār and Powādh nearly all the culturable land has been brought under the plough; but large stretches of barron kalar are found, and in many cases these have gone down in the settlement record as culturable. In the Naili there is abundant coarse dab and panni grazing, and in the worst seasons grass of a sort is to be got. In the Bangar, and especially in the southern half of the circle, most of the culturable land has been broken up. Here too the settlement figures as to culturable waste give a wrong impression, for much land entered at last settlement as barren has now gone down as culturable. It is true that land must be very bad indeed for a hard-pressed Jat to refrain from ploughing it, but in the south of the circle, where there are many estates in which there is practically no grazing left, I constantly found that the kalar which feeds the tanks had been put down as culturable. The jand, jāl, and kair are the bushes characteristic of the Nardak jangal. Often all three are found together; but it may be said generally that where kair greatly predominates the grazing is bad, where much jāl is mixed with the kair it is middling, and where jand grows freely it is excellent. A good deal of jhar will usually be found with the jand. The jangal in the Bangar is of the same character as that in the Nardak, but as a rule only high and dry land with poor grazing has escaped the plough. Fortunately jhar springs up abundantly in the cultivated fields. It is cut down in November and May, and its leaves, called "pāla," are much valued as a milk-producing fodder.

Abstract of leading statistics.

68. Some of the leading statistics of the assessment circles are shown below :—







Broadly one-third of the tahsil was under tillage in 1856 as compared with one-half at present, and the addition to cultivation and new fallow exceeds 50 per cent. Every circle shows a large increase except the Powádh, which in 1856 was already fully developed. The rise in the Naili is not nearly so great as it appears on paper. In Kaithal cultivation fluctuates so much with the character of the seasons that measurement statistics unchecked by the crop returns of a series of years are dangerously misleading. It is absurd to suppose that the area of cultivation and jadid advanced by 20 per cent. in the Naili, while the population remained stationary. When comparing the former and present maps of Naili villages in which my returns showed a large increase of cultivation, I often found that little or no improvement had taken place. All that had really happened was that fields thrown out of tillage for a time had again been brought under the plough. No doubt the tract was depressed in 1856 by the severity of Captain Abbott's assessment. But the very low cultivated area then recorded is probably due in part to some peculiarity in the year in which Captain Larkins' measurements were made, the fluctuations of the cultivated area in the Naili from year to year being, as the above table proves, extraordinary. The number of wells has scarcely increased at all; but there has been a considerable extension of canal irrigation in the south of the Bangar and Nardak. Irrigation from the Sirhind Canal has lately been given to a few estates in the Powádh, most of which would have been better without it. The crop statistics speak for themselves. The Jangal and Powádh villages do not suffer as much as the others when the rains fail, as they have a light soil. In 1883-84 the drought was very severe. In the kharif the sowings were far below the average. In the Naili 57, in the Nardak 62, and Bangar 72 per cent. of the crops sown failed. The wells saved the harvest in the Andarwár from complete destruction. In the rabi there was no harvest in the Bangar and Nardak, except in the 12 canal villages in the south and in the few estates in the north which have workable wells. In these circles a failure of spring crops is little regarded if there are grass and water for the cattle. But the failure of the summer rains produced a grass famine, and the kharif had yielded no fodder. All the tanks dried up. The cattle were driven off in great numbers to the Naili, Náhan, Dehra Dún, and the Ganges valley, and many never returned. In the Naili, which depends chiefly on the rabi, the failure was very severe, though the wells were worked with unusual diligence. The wells again saved the Andarwár villages, but the dry crops were lost. The kharif of 1886 was poor, and the spring harvest of 1887 was almost worse than that of 1884. There was a complete failure of rain at the sowing season, and the area sown in every circle was far below the average. In the seven months from September to March the total fall was one-fifth of an inch. In the Nardak and Bangar, with a cultivated area aggregating 235,000 acres, crops were reaped off 16,000 acres, and nearly half of the total is supplied by the canal irrigated lands of 12 estates in the south of these circles and the small cháhi areas in the northern villages. There were no dry crops in the Andarwár and in the Powádh and Jangal. Notwithstanding their lighter soil much of the harvest was lost entirely, and the yield of what remained was poor. The Powádh wells, unhelpt by rain, cannot secure good crops over a large area. Rents are very low. Occupancy tenants as a rule pay only the revenue and cesses, and half of the tenants-at-will give no more. In a tahsil with a cultivated area of  $3\frac{1}{2}$  lakhs of acres, only 29,000 acres, or one-twelfth of the whole, pay real rent in grain or cash. In the Naili the proportion rises as high as one-seventh; in the Powádh and Jangal it falls to one-eighteenth. One-fifth of the grain rents in the Bangar come from one of the pattis of Raithal; and in the southern half of the circle division of crop is unknown, except in one or two canal villages. The materials for a half assets estimate founded on grain rents were therefore slender, and cash rents are very rare.

Grounds for enhancement of the revenue.

69. The arguments for enhancement depended—

- (a) on the increase of cultivation, population, and ploughs;
- (b) on the rise in the prices of grain, ghi, and cattle; and
- (c) on the general improvement in the condition of the tahsil due to these and other causes.

Under the first head there was an increase in the cultivated area, including *jadid*, of 55 per cent., most of which was real, and a rise in the number of ploughs of 56 per cent. Population showed an advance of 25 per cent. Under this head, therefore, there were very solid grounds for enhancement. When we come to the second head, we are on more debateable ground. The prices of grain adopted in the produce estimate are 60 or 70 per cent. higher than those current at last settlement, and 30 per cent. above the average of the 11 years 1843-1853, while the prices of live-stock and ghi have been doubled in the past 30 years. I think in arguments about prices too much attention is often given to their high range immediately before the famine of 1860-61. A very high average can be brought out by taking the 10 years preceding 1860; but we are apt to forget that the period of very cheap food was really exceedingly short, extending in Karnál only from Kharíf 1854 to Rabi 1859, or for five years in all. In 1845, 1846 and 1847 all the principal spring staples sold in Kaithal at prices higher than those which I assumed for assessment purposes, while the price of *bājra* was very nearly the same as that which I adopted. The advance in the price of grain and the opening of new markets has been of immense benefit to the trading class. It has transformed many of them from small shopkeepers and village usurers into grain merchants. But I am very sceptical as to their beneficial effect on the cultivators of a *tahsil* like Kaithal. Given a tract where the harvests fluctuate, as they do in Kaithal and a large part of Pipli and Indri, we have a condition of things in which the cultivator is buying grain almost as often as selling it. He sells, moreover, when grain is cheap, and buys when it is dear, and purchasing on credit is mulcted in heavy interest. The surplus for export is generally small, and indeed the balance is often very much on the wrong side. But in former times, when most of the surplus of a really good harvest was not transported to other markets, the village land-owner stored much more grain in his own *hodge*, and was better fitted to face a year of deficient harvests. Now the *bania* gathers in most of the grain for present or future export, and, when a harvest fails, the *zamindár* has to resort to him immediately. He handles more money in good years now than he did formerly, but the increased use of money as a medium of exchange is of very doubtful benefit to an illiterate peasantry. The great, and perhaps the sole, advantage which the *zamindár* in the Kaithal Bangar or Nardak has derived from the increased briskness of the grain trade lies in the fact that he can obtain food in a famine with less difficulty and at less ruinous rates than formerly. These considerations led me in calculating prices for assessment purposes to cut out those ruling in certain years, but the seasons excluded do not nearly exhaust those in which the cultivator was mainly a purchaser, and not a seller, of grain. These considerations do not apply to the small Jangal Circle, where the rise in prices has been far greater than elsewhere, and where the land-owners often carry their own grain to distant markets. Nor do they apply in their full extent to the Powádh, where the harvests are fairly secure.

Land-owners have profited much by the rise in the price of ghi, and still more by the increased value of live-stock. As regards the latter, they are not in the *bania's* hands but deal directly with travelling merchants. The well-being of the people has increased considerably since 1856, when they were suffering from the effects of thirteen years of over-assessment. The Powádh, which Captain Abbott treated with exceptional lenity, is a doubtful exception. Its present condition is satisfactory, but I do not know that it is better than it was 30 years ago. A more certain exception is the part of the Naili dependent on the Ghagar.

70. The assessment of the twelve\* canal estates in the south of Assessment of canal vil- Bangar and Nardak was a difficult problem. Only seven leges. of them had any irrigation at the regular settlement, and the irrigated rates then imposed were extraordinarily light. Taking the difference between Captain Larkins' wet and dry rates as a water-advantage rate some Rs. 3,000 acres of *nabri* land paid a water-advantage revenue of only Rs. 1,272. In these seven estates irrigation had greatly increased, and it had been extended to five other villages. An owner's rate might have been applied from

\* There is a very trifling amount of irrigation in another village, Popra.

the first to the new irrigation, but this had not been done. There were loud complaints of the inconstancy of the water supply, and the people had much to learn as to the proper use of what water they got, the crops raised being often of an inferior class and manure being little used. Elsewhere on the Western Jamna Canal the owner's rate is calculated at half occupier's rate.

To introduce this proportion between the two into Kaithal involved the substitution of a fluctuating owner's rate, which, calculated on the average receipts from water-rates for five years, amounted to Rs. 13,272 for a fixed water-advantage rate of Rs. 1,272, and, assuming that the unirrigated rates of the two circles were applied to the canal villages, I calculated that the enhancements in the village demands for land revenue and owner's rate combined would range from 83 to 677 per cent., and would amount on the average to 167 per cent. I therefore advocated the reduction of the owner's rate to one-third of the occupier's rate. It was rightly pointed out that I ought not to have left the latter out of account in calculating the increased charges to be paid by the land-owners. Viewed in this light the enhancement to be taken on account of canal irrigation, if owner's rate was fixed at half occupier's rate, was not the difference between Rs. 13,273 and Rs. 1,282, but that between Rs. 39,819 (owner's rate Rs. 13,273 + occupier's rate Rs. 26,546) and Rs. 27,828 (water-advantage rate Rs. 1,282 + occupier's rate Rs. 26,546), or, in other words, the increased charge for irrigation would be rather less than 50 per cent. My proposal was therefore overruled, and the owner's rate was fixed at half occupier's rate. It may be hoped that the imposition of this new charge will lead to the more careful cultivation of a smaller area. The receipts for the two years during which the system has been in force have been—

						Rs.
1888-89	...	...	...	...	...	9,475
1889-90	...	...	...	...	...	12,441

71. A rough comparison of the revenue which I proposed for the different circles and of their resources with the revenue and resources of similar tracts in other tahsils and districts is made in the following table:—

Comparison of rates in similar tracts in British districts.



1	2	3	4	5	6	7	8	9	10	11	12	13	14
No.	Details.	Karnal Nardak.	Indri Nar- dak.	Pebowa Bangar.	Kalchal Nardak.	Kalthal Bangar.	Kalthal Andarwar.	Pekowa Nall.	Kalthal Nall.	Lodhika Powadh.	Kalthal Powadh.	Lodhika Jangal.	Kalthal Jangal.
1	Revenue rate on total cultivation before re-assessment ...	1 0 5	0 12 4	0 9 0	0 6 0	0 5 4	1 4 8	0 14 6	0 14 10	1 9 7	1 2 10	About	0 4 4
2	Ditto ditto after ...	0 14 0	0 12 11	0 11 7	0 8 8	0 7 4	1 5 3	0 14 8	0 15 0	1 15 10	1 4 11	0 10 4	0 6 6
3	Increase of cultivation and jaded per cent. after first regular settlement ...	12	5	46	100	73	10	18	20	18	1	18	34
4	Increase of decrease of revenue per cent taken at second regular settlement ...	— 0	— 5	+ 25	+ 60	+ 48	+ 3	+ 1	+ 1	+ 23	+ 11	+ 32	+ 49
5	Per cent. of recorded well irrigation on cultivated area ...	9	9	10	1	1	45	9	9	29	20	...	...
6	Average area of crops harvested per 100 acres of cultivation ...	60	61	73	50	64	75	66	63	96	88	103	76
7	Population per square mile of cultivation ...	542	514	447	252	343	607	515	436	610	455	313	259
8	Per cent. of cultivated land for which competition each year are paid ...	9	1	1	3	23	11	1	1	3	1	...	1
9	Cash rents { Irrigated ... Unirrigated ...	About 2 11 0	6 10 0	1 8 0	3 8 0	1 5 4	3 3 0	1 4 0	2 8 0	Es. 6 to 12	3 8 0	...	2 0 0
10	Owner's share of grain per maund in store ...	About 1 8 0	1 1 0	0 11 1	0 8 0	0 10 11	1 8 0	0 14 0	1 8 5	3 to 5	1 6 2	...	0 6 5
11	Average price per acre in rupees of land sold between first and second regular settlement ...	11½	9	9	9	9	9	9	9	12½	11½	14½	11½
		12	8	9	10	9	21	11	19	28	20	38	63

NOTE.—Under No. 2.—The rates shown are exclusive of owner's rate.

1.—The percentage shown in columns 11 and 12 is of increase of cultivation only. I have been unable to obtain figures for Jaded.

2.—The percentage shown in column 13 is of increase of revenue shown under the Kalthal Nardak and Bangar are inclusive of owner's rate. If that be excluded, the proposed increase in the Nardak was 28 and in the Bangar 38 per cent.

3.—The percentages for Powadh and Jangal Circles of Kalthal and Lodhika have been calculated by taking average of two years, Kharif 1885—Rabi 1887; those for the Pebowa Bangar and Nallin are the averages of three years, Kharif 1885—Rabi 1887; in the other circles the averages of four years, Kharif 1883—Rabi 1887, have been taken.



For the assessment of the Nardak, Bangar, Andarwār, and Naili, I had the advantage of comparing my rates with those which had previously been sanctioned for Indri and Pipli. For the Nardak I had also Mr. Ibbetson's rates for the adjoining circle of the same name in the Karnāl pargana. Mr. Ibbetson's Nardak lies to the east of mine, and actually includes villages within three or four miles of the Jamna. It therefore enjoys greater advantages as regards both well irrigation and rainfall than the Kaithal Nardak. If we take the estates bordering on Kaithal and exclude two of them which are canal irrigated, we get a tract with an area of 41,000 acres, of which 11,700 were cultivated at settlement. The well irrigated area was 2 per cent. of the total cultivation and the culturable waste was twice as large as the cultivated area. This group of villages, which may be fairly compared with my Nardak, was assessed at a sum falling at annas 10-5 per cultivated acre. As compared with similar neighbouring tracts the existing Nardak and Bangar assessment was undoubtedly light, and there was room for a large enhancement. But the Andarwār was already assessed decidedly higher than either the Pehowa Bangar or the Indri Nardak after allowing for the greater percentage of irrigated land which it contains. Its rainfall is certainly worse than that of the Indri Nardak, and it has much less good grazing land than the Pehowa Bangar. On the other hand, there is a smaller proportion of poor cultivators among the land-owning class. The existing assessment of the Kaithal Naili agreed very closely with the revised assessment of the Pehowa Naili. The similarity between the two tracts is striking, as the figures given in the tables in paras. 41 and 68 show. Some comparison was possible between the Powādh Circles of Ludhiāna and Kaithal. The system of cultivation is the same in both, but the well cultivation in the Ludhiāna Powādh is far better than in my circle, for twice as much cane and cotton and thrice as much maize are grown in proportion to the total cultivation. The amount of double cropping is also much larger in the Ludhiāna Circle. Taking the two years, Kharif 1885—Rabi 1887, for which I had the figures for both circles, I found in Ludhiāna 10,476 acres of well-irrigated crops as compared with a chāhi area of 7,891 acres, while the corresponding figures for Kaithal were:—Well-irrigated crops, 4,959 acres; recorded chāhi area, 5,610 acres. In the Kaithal Powādh, the population is less dense and less prosperous. The land-owners have got on and have generally nothing to complain of, but the overflowing prosperity described by Mr. Walker in paragraph 273 of the Ludhiāna Settlement Report is lacking. The difference between the Ludhiāna and Kaithal Jangal is probably less marked, for the Budlāda villages are, with one or two exceptions, most thriving. But as regards crops the Ludhiāna Jangal is superior, and it ought, from its position, to have a somewhat better rainfall. It yields a much greater proportion of mixed gram and barley, and this probably points to a larger amount of level land. A good deal of mixed wheat and gram, which is almost unknown in Budlāda, is also grown. The Mahrāj Circle of the Moga Tahsil of Ferozepore recently settled by Mr. Francis also forms part of the Jangal Des, and evidently resembles Budlāda pretty closely. The population is sparser, yet grain and cash rents are much commoner and much higher than in my circle. With an increase of cultivation amounting to 11 per cent. Mr. Francis enhanced the revenue by 50 per cent., raising the rate to 9½ annas per acre. But as three-fourths of the tract is held revenue free by the owners, the amount of the assessment was of comparatively little importance.

72. I was also able to make a general comparison between my proposed assessment of the Bangar, Nardak, Powādh, and Jangal Circles and the revenue paid in adjoining villages of Patiala and Jind. Details are given in the 60th paragraph of the assessment report. The Patiala assessments judged by a native standard are very moderate, and the general conclusion at which I arrived was that, except in villages containing a large area of waste, the Jat of the Bangar would, after my revised assessments were introduced, pay about as much as, and the Jat of the Powādh somewhat more than, his neighbour across the border. On the other hand, the Patiala villages near Budlāda pay much more than I proposed to take. The demand of the Jind State in Powādh villages is very severe, probably twice as large as our own or that of Patiala. Its Nardak villages have been leniently treated, considering how heavy the Jind assessments usually are.

Comparison of assessment with that paid in neighbouring tracts in Jind and Patiala.

73. The rates which I proposed for the different circles are shown below. Including owner's rate at one-third occupier's rate they brought out an enhancement of Rs. 48,695 or 27 per cent.

Circles.	Chahi.	Abi.	Sailáb.	Loam.	Dahr.	Tibbi.	Grazing.	Rate on cultivation.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Nardak ... ..	2 0 0	2 0 0	0 7 3	0 6 0	0 7 3	...	0 1 4	0 8 8
Bangar ... ..	2 0 0	...	0 7 0	0 7 0	0 7 0	...	0 0 6	0 7 4
Andarwar ... ..	2 12 0	...	0 12 0	0 12 0	0 12 0	...	...	1 5 3
Naili ... ..	2 12 0	...	0 14 0	0 9 0	0 9 0	...	0 0 3	0 15 0
Powádth ... ..	2 12 0	1 0 0	0 11 0	1 0 0	0 11 0	0 11 0	...	1 4 11
Jangal ... ..	...	...	...	0 6 6	...	0 6 6	...	0 6 6

The rate on cultivation is that of the land revenue proper excluding owner's rate. The rainfall in the Nardak is so scanty that the low-lying dahr lands have been classed as better than the loam. A good deal of the Nardak dahr is not "kalar," and will yield gram after rice in a very favourable season. There is little sailáb except in the Naili. The sailáb of the Powádth is very hard, bad land, which is only occasionally flooded. In the Naili jadid was assessed as cultivated land.

74. The rates which I proposed were accepted with some modifications. Rates sanctioned by Government. The rate on cultivation in the Jangal Circle was raised from  $6\frac{1}{2}$  to 7 annas and those on grazing in the Bangar, Naili and Nardak were increased to 1,  $1\frac{1}{2}$ , and  $1\frac{3}{4}$  annas, respectively. These alterations with the adoption of an owner's rate calculated at one-half instead of one-third occupier's rate involved an enhancement of the revenue which I had proposed by Rs. 11,859, making the total increase about Rs. 60,500.

Details of the assessment actually announced are given overleaf :—

Circles.	Chahi.	Abi.	Sailáb.	Loam.	Dahr.	Tibbi.	Grazing.	Rate on cultivation.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Nardak ... ..	2 0 0	2 0 0	0 7 3	0 6 0	0 7 3	...	0 1 4	0 8 8
Bangar ... ..	2 0 0	...	0 7 0	0 7 0	0 7 0	...	0 0 6	0 7 4
Andarwar ... ..	2 12 0	...	0 12 0	0 12 0	0 12 0	...	...	1 5 3
Naili ... ..	2 12 0	...	0 14 0	0 9 0	0 9 0	...	0 0 3	0 15 0
Powádth ... ..	2 12 0	1 0 0	0 11 0	1 0 0	0 11 0	0 11 0	...	1 4 11
Jangal ... ..	...	...	...	0 6 6	...	0 6 6	...	0 6 6

1	2	3	4		5	6	7				10	11	12			14		
			Circles.	Assigned.			Total with rate on cultivation.	Revenue by sanctioned rates (including owner's rate) with rate on cultivation.	Khalsa.	Assigned.			Owner's rate.	Total with rate on cultivation.	Khalsa.		Assigned.	Total.
			Khalsa.	Assigned.	Half assets estimate.	Revenue by sanctioned rates (including owner's rate) with rate on cultivation.	Khalsa.	Assigned.	Owner's rate.	Total with rate on cultivation.	Increase or decrease per cent.	Khalsa.	Assigned.	Total.				
Nardak	...	...	33,297	784	34,081 0 6 3	55,995 0 10 3	45,306	897	5,813	54,788 0 10 0	+ 61	75	25	100				
Bangar	...	...	46,844	2,424	49,268 0 5 4	77,914 0 8 5	65,434	2,686	7,680	76,780 0 8 4	+ 55	122	...	123				
Andarwār	...	...	15,271	441	15,712 1 4 7	16,123 1 6 3	15,337	443	...	16,380 1 5 7	+ 5	191	8	190				
Nall	...	...	43,183	2,443	45,626 0 14 10	48,453 0 15 5	45,290	2,940	...	48,180 0 15 3	+ 3	173	...	173				
Powāh	...	...	4,376	21,050	25,426 1 2 10	25,450 1 4 11	5,408	21,013	...	26,510 1 4 11	+ 11	36	40	76				
Jangal	...	...	649	7,972	8,621 0 4 4	12,893 0 7 0	950	11,750	...	12,700 0 6 11	+ 58	...	...	...				
TOTAL	...	...	1,43,750	35,519	1,79,309 0 8 3	2,30,383 0 11 0	1,52,347	41,696	18,273	2,37,318 0 10 11	+ 33	603	73	675				

The rates which I proposed for the different circles are shown in the following table. The rates are shown in the column headed "Proposed Rates" and the rates actually imposed are shown in the column headed "Actual Rates". The rates are shown in the column headed "Increase or decrease per cent." and the total rates are shown in the column headed "Total Rates".

75. The revenue as finally announced was less than that brought out by the rates by about Rs. 2,500, but part of the difference is accounted for by the resumption of certain leased estates (see para. 111). The owner's rate in this tahsil goes entirely to Government. The increase in the Naili was trifling, but the distribution of the revenue over the villages was greatly changed, the demand in the 47 Ghagar estates which were in a very depressed condition being lowered by 15, and that in the 51 Sarusti estates enhanced by 12 per cent.

76. Most of the Naili villages were offered a fluctuating assessment on the lines of that adopted in part of the Indri Nardak, the crop rate being, however, fixed at Re. 1-4-0 instead of Re. 1 per acre. Many of the Ghagar villages had experience of the practical working of a fluctuating demand, and had been benefited by its operation. But, as their fixed assessment was being lowered, they all elected to revert to the old system, fearing that that proposed in its place might be worked in a harassing manner. The Naili estates with a few exceptions have been given the same option of throwing up their fixed leases during the currency of the settlement as was granted to the landowners of the Indri Nardak. This provision is almost more needed in the Naili than in the Nardak, and it should be kept prominently before the minds of the people; for it is difficult to frame for the villages of such a tract an assessment which will certainly remain suitable for any lengthy period. However fair it may have been when it was imposed, it may become severe if a change in the action of the river deprives a village of the floods to which it has been accustomed, or if a more than usually virulent outbreak of fever decimates the population and makes the keeping up of the cultivation as it existed at settlement impossible.

Financial result of  
Karnal-Ambala settle-  
ment.

77. The financial result of the whole settlement is shown below:—

DISTRICT.	TAHSIL OR PARGANA.	Former revenue.	Present revenue, including owner's rate.	Increase.	Decrease.
		Rs.	Rs.	Rs.	Rs.
AMBALA	Pipli ... ..	2,61,256	2,79,850	18,594	...
	Jagādhrī ... ..	2,05,386	2,44,370	38,984	...
	Total ... ..	4,66,642	5,24,220	57,578	...
KARNAL	Indri ... ..	1,64,308	1,57,757	...	6,551
	Kaithal ... ..	1,79,309	2,37,318	58,009	...
	Total ... ..	3,43,617	3,95,075	51,458	...
	GRAND TOTAL ...	8,10,259	9,19,295	1,09,036	...

The increase of the khālśa revenue exceeded Rs. 90,000, to which must be added the increase in commutation due to the enhancement of jāgīr revenue. The figures for commutation are:—

TAHSIL.	Former.	Present.
	Rs.	Rs.
Pipli ... ..	8,901	9,180
Jagādhrī ... ..	10,022	11,491
Indri ... ..	7,852	7,254
Kaithal ... ..	2,197	2,614
Total ... ..	28,972	30,549



78. In the preliminary proposals for the reassessment of the tract, it was estimated that an enhancement of Rs. 1,85,000 would be secured, of which Government would receive Rs. 1,32,000 and the *jagirdars* Rs. 53,000. It is necessary to explain why the enhancement of revenue fell so far short of the careful forecast framed by Mr. Ibbetson. In collecting his statistics he was met by a great initial difficulty. His figures for present cultivation were those of 1877-78, a famine year, when a very large area of unirrigated land usually cultivated lay untilled. An enormous amount of land was consequently shown as lately thrown out of cultivation. The experience gained in Karnal had shown Mr. Ibbetson the remarkable extent to which cultivation shrinks in the dry uplands in a year of drought. It was clearly absurd to frame an estimate by proposing rates for the cultivated area of 1877-78. On the other hand, it was difficult to say how much of the new fallow should be assessed, and the problem was still further complicated by the untrustworthiness of the *patwari's* papers. At best, the determination of the portion of new fallow to be treated as cultivated was largely guess work.

In Jagadhri no serious mistake was made as to present areas, but the cultivation and *jadid* of the past settlement was underestimated by 12,000 acres, with the result of producing an apparent large increase of tillage. It may be said, roughly, that in Pipli the cultivated area was overestimated by 6,000, and in Indri by 9,000 acres. In Kaithal, on the other hand, the real area of cultivation and *jadid* turned out to be larger by 25,000 acres than that shown by Mr. Ibbetson. It is in Pipli that the actual results differ most widely from the estimate. An increase of Rs. 58,775 was anticipated, or Rs. 30,000 more than was actually secured. Looking back on my own work I think I could have taken Rs. 5,000 or Rs. 6,000 more than I actually obtained. But I am certain that Mr. Ibbetson overvalued the character of the soil and the cultivation. He wrote:—"It must be remembered that throughout the Jagadhri and most of the Pipli tahsil irrigation is confined to the very finest land and the most valuable crops, and that the large rainfall renders the yield of 'unirrigated land almost as certain as that of irrigated land in less favoured tracts.'" The facts embodied in the part of this chapter which deals with the assessment of Pipli show that this description is hardly accurate. The reason of the error into which, in my opinion, Mr. Ibbetson fell is stated by himself. "I am most conscious," he said, "that my estimates are the merest guesses. I rushed through the tract at a time when the crops were only just sprouting, and in a most hurried manner, and I am quite unaccustomed to such unirrigated cultivation as is practised in its northern parts, and may have been carried away by the unwonted sight of the finest crops growing without water." It is clear from some of his remarks that Mr. Ibbetson thought cane was grown in Pipli as an unirrigated crop to a far greater extent than is actually the case. He also appraised too highly the good done by the hill streams. No one could have been expected to realize as the result of a hasty visit how often they fail, and how frequently their floods do harm instead of good.

Mr. Ibbetson undoubtedly overestimated the well being of the people. The distressed tract round Thanesar covers a wider area than he supposed, and he describes the poor and fever-stricken population of the Pehowa Nali as being "as a rule exceedingly well off," and proposed an enhancement amounting to 45 per cent. in this circle, where I confined myself, with the approval of the Financial Commissioner and Government, to a redistribution over the villages of the existing demand.

With the preliminary report before him, but without any personal knowledge of the tract, the late Colonel Wace wrote in 1880:—"The (Pipli) tahsil is in a thoroughly prosperous condition" (Settlement Commissioner's No. 117C., dated 12th March 1880). Seven years later in the light of fuller knowledge acquired in part in the course of inspection tours, he noted that "a tahsil made up of heterogeneous elements and subject to such great physical vicissitudes must necessarily be difficult to assess to fixed land revenue, and the fiscal history of the tract has accordingly not been prosperous..... Many parts of the tahsil have enjoyed a moderate degree of prosperity. But others have been

subject to gradual decay not so much due to the weight of the assessment as to the combined pressure of untoward physical conditions and a rigid revenue collection."

Mr. Ibbetson wrote of the "enormous increase" in rents and the "fierce competition" for land in Pipli. There has been no marked general rise in grain or zabti rents since last settlement. Cash rents did not exist thirty years ago, and they are now exceedingly low compared with those paid in the districts of the Jullundur Doab. Emigrant Mālis have certainly paid large prices for land in the Chachra; but there is no local demand which could possibly be described as "fierce competition," and the prices obtained are generally low.

79. The expenditure on the settlement was in round figures 5½ lakhs, of which Rs. 80,434 will be repaid by assignees of land revenue. The cost will be recovered by the increase of khulsa revenue in 5½ years. The return for the labour and money expended in the shape of enhanced assessments may be considered disappointing; but it must be borne in mind that the gross inequality of the previous demand in different tracts and in neighbouring estates in the same tract made revision a duty, supposing its financial results to have been even less favourable. I have already pointed out that some of my assessments, though sanctioned by the Financial Commissioners (Colonel Wace and Colonel Gordon Young), were considered too low by Government. The closing years of the settlement fell at a time when the necessities of the administration and the doubts bred by a perception of the fact that a very light revenue under a system of free transfer has in no way checked, if indeed it has not stimulated, the expropriation of the peasant owner by the village usurer, combined to shake that policy of taking very moderate enhancements which had become a tradition in the province. But Colonel Wace's orders on the first two assessment reports (Indri and Pipli) had been based on the assumption that their agricultural conditions and the character of their previous assessment did not justify Government in demanding a heavy increase anywhere, and made it necessary to give substantial relief in certain tracts. And even later, in the last expression of his views on the assessment of Karnal and Ambala, which he asked the Commissioner of Delhi to communicate to Mr. Kensington and myself (demi-official letter dated 10th November 1887), he wrote:—"I think we cannot be too moderate and circumspect in our increases of assessment. And, so far as I know the country, the assumption that we can wisely increase our land revenue except to a very limited extent is not a sound one. I should like you to let the Settlement Officers know that I do not wish them to adopt in their remaining assessment reports less cautious estimates of what it is prudent to assess than they adopted in the reports already submitted."

80. The distribution of the revenue over holdings was made with great care. In Indri, Pipli, and Jagádhri the Superintendents were supplied with lists showing the new revenue of each estate, its distribution over soils where differential soil rates had been adopted, the amount fixed as ábíána or water-advantage revenue on the wells, and the grazing assessment. The owners everywhere were allowed to adopt an all-round unirrigated rate instead of the soil rates, or to divide on shares if they felt so disposed. In many villages they put a light rate on the culturable waste included in holdings, even when no special grazing assessment had been imposed on the estate as a whole. In villages subject to the action of the Janna, a rate of one anna an acre was applied to all culturable waste. Numerous petty revenue-free grants for village service were resumed, but the zamindárs were given an opportunity of excluding such land from assessment. Where they did so, and the grantees afterwards neglected to do the service for which the grant was made, the landowners will probably apply to have the land assessed, and their request should be granted without hesitation, the demand imposed being credited not to Government, but to the village malha. The distribution of the ábíána was a difficult business. I knew the average irrigation for three or four years of each estate, and on this basis I fixed the part of its total revenue to be classed as ábíána. Before the distribution over holdings was made, the Superintendent prepared a statement showing the area watered by each well during three or four years. He then calculated the rate per bigah of the ábíána by dividing the lump sum fixed for the whole village

by the average irrigated area of the estate. By applying this to the average area watered by each well, he obtained the well *abiána*. If a village had three wells, irrigating on the average 90, 80, and 50 kacha bigahs yearly, and the *abiána* was Rs. 60, the water-advantage rate was  $4\frac{1}{2}$  annas per kacha bigah, and the lump sums chargeable on the wells were Rs. 24, Rs. 22, and Rs. 14, in addition to which the dry rate was applied to the land recorded as *cháhi*. *Abiána* was assessed in whole rupees. When the owners showed cause the total *abiána* of the estate was reduced, the dry assessment being enhanced to make up for the deficiency. In the Pehowa Bangar the water is far from the surface, and the wells are worked at a great expenditure of labour. My irrigated rate was only Rs. 2 an acre; but the difference between it and the unirrigated rate was large, and the zamindárs in many villages lowered the *abiána* and increased the dry assessment. If the owners showed cause for altering the distribution of the *abiána* over wells, as fixed by the Superintendent on the basis of the lists mentioned above, it was changed. If persons other than the owners of the well had been in the habit of using it, the latter had the option of paying the whole *abiána* themselves, or of allotting a fair share of it to the other irrigators. They were informed that if they adopted the latter alternative, the non-owners would have a right during the term of the settlement to irrigation in proportion to their share of the *abiána*. In some villages *jágirdárs* owned large areas, known as "sir *jágir*," which they kept as grass preserves. In order to prevent disputes I fixed the part of the assessment to be charged for such lands myself. I scrutinized the village distribution papers with great care, paying special attention to the allotment of the *abiána*. Of course the adoption of a new system of assessing well irrigation often led to a considerable change in the distribution of the revenue over the village holdings. This caused me some anxiety; but on the whole the new distribution is probably fairer than the old.

81. The new assessment took effect in Indri from Kharif 1886, in Pípli from Kharif 1887, and in Jagádhri and Kaithal from Kharif 1888. Definite orders making the period of the settlement of the Indri pargana 20 years were issued in Punjab Government No. 99, dated 27th July 1887, and, as Act XXXIII of 1871 was still in force, this term was entered in the engagements taken from the village headmen. I recommended 20 years, because it appeared desirable that the settlements of all parts of the Karnál district should expire about the same time; and Mr. Ibbetson's assessment of Tahsil Pánapat and Pargana Karnál was sanctioned for 30 years from Kharif 1879. The term in Pípli and Jagádhri has been provisionally fixed at 20 and in Kaithal at 18 years. The enhancement taken in Kaithal was large; and I think the settlement might be allowed to run for the full term of 20 years. Even so it will expire one year before that of Pánapat and Karnál. The settlement of the 89 Pípli villages transferred to Kaithal in 1889 should extend to the same year as that of the rest of the tahsil, and that of the 15 Jangal villages which have been made over to Hissár should run for whatever period may be fixed for the five tahsils of that district now under settlement.

82. I proposed that the assessments of 16 estates in the Bet Márkanda and Southern Chachra circles, situated at the tail of the Márkanda and Umla irrigation, should only be announced for five years. Some doubts were expressed whether this measure was really necessary; but after I had explained the great changes that were taking place in the locality, owing to alterations in the course of these two streams and the probability that existed that some villages would deteriorate and others improve with great rapidity, my proposal was accepted, though the doubts originally expressed by Sir James Lyall were not entirely removed (Punjab Government No. 19, dated 16th January 1889).

83. The Jagádhri and Pípli villages, with one or two exceptions, elected to pay the revenue in equal instalments for the two harvests. The same plan was followed in Indri. But in the Bangar and Nardak circles of Kaithal, where the spring harvest is usually scanty, one-third is paid in the rabi and two-thirds in the kharif. In Jagádhri and Pípli



the revenue of each harvest is paid in two equal instalments, the dates for the rabi being 15th June and 15th July, and those for the kharif 1st December and 1st February. As all the important spring crops ripen about the same time, it is unnecessary to have two rabi instalments, and I think the whole demand might be realized on 1st June. It is best for the zamindár that Government should take its dues very soon after the garnering of the grain is finished. Wherever cane is an important staple two kharif instalments are necessary, and the present dates are suitable for the Jagádhri tahsil and the Khádir, Bangar, and Northern Chachra circles of Pípli. There is very little cane in the Bet or the Southern Chachra. In the former the time of the ripening of maize and cotton, and in the latter that of these two staples and coarse rice, should determine the dates. In both cases I think 1st November and 15th December would be suitable. It has already been decided that in Indri and Kaithal there shall be a single instalment at each harvest. Except in the Kaithal Nardak and Bangar, the rabi demand will be realized everywhere on 15th June; in the Nardak and Bangar, except in the 12 canal-irrigated villages, which will pay on 15th June, its collection will be postponed to 15th July. The reason for fixing so late a date in the Nardak and Bangar is that the instalment of the spring harvest is very often borrowed from the bania, who is repaid out of the proceeds of the ghi made in the rainy season. It is best in these circumstances that the landowners should not be forced to borrow until the rains have broken. In the Indri Nardak, a great rice-growing tract, the kharif revenue falls due on 1st December, and in Kaithal, except in the Powádh, a fortnight later. In the Kaithal, Powádh, and the Khádir and Bangar of Indri a good deal of cane is grown, and the kharif instalment is collected on 15th January. The date is rather late for the southern villages of the Bangar, which have little or no cane.

84. From the point where the Jamna leaves the hills to the border of the Karnál district, the boundary between the Punjab and the North-Western Provinces is the boundary of the villages of the Ambala and Saháranpur districts (Government of India Notification No. 1501, dated 11th September 1884), and Ambala includes lands, and even some whole villages, on the far side of the deep stream. It was found that the boundaries of the estates of the two districts as shown in the maps of the old settlements did not lock, measurements having usually only been carried up to the bank of the river as it existed at settlement. With the co-operation of Mr. L. S. Porter, Settlement Officer of Saháranpur, all land omitted from the maps was divided between the Saháranpur, and Ambala estates. The boundaries now coincide, and in case of dispute can easily be laid down with the help of the settlement maps. Under Government of India, Home Department, Notification No. 136, dated 12th January 1884, the deep stream of the Jamna has been declared to be the boundary between Karnál and the districts of Saháranpur, Muzaffarnagar, and Meerut. The District Officers are required to have the boundary verified year by year. By the operation of the deep-stream rule several estates have been transferred from Muzaffarnagar to Indri, the proprietary rights in the land remaining unchanged. But in cases of gradual accretion the land would be claimed by our villages.

85. Rules for alluvion and diluvion measurements and assessments on the lines of those adopted in Hoshiárpur and Ferozepore, which have received the approval of the Financial Commissioner, will be found in Appendix A. The only points in them which appear to require the orders of Government are—

- (a) the rates to be adopted; and
- (b) the provision that land not cultivated at settlement, but subsequently brought under cultivation, can be assessed.

During settlement operations similar rules were tentatively introduced and worked well. Those now drafted for Jagádhri apply to estates affected by the Jamna, the canal, torrents, and ravines. Between its head at Tájáwála and Indri, where the new main canal strikes off into the Bangar, the Western Jamna Canal runs in the Khádir, and in great part along old channels. Its action is therefore very similar to that of a river, and a good deal of harm is sometimes



caused to the adjacent lands. The great damage done in Jagadhri by the encroachments of ravines on the cultivated fields was pointed out in the 89th and 99th paragraphs of the assessment report. In Pipli ravines do little harm, and the only torrents which carry away or throw up land to any appreciable extent are the Umla and Markanda. Measurements will therefore be confined to these two streams. The Indri rules will apply to villages affected by the Jamna and its spill channels, the Western Jamna Canal, and the Buddhakhera E-cape. Separate rules have had to be framed for the Ambala tahsils and for Indri, because, while the villages of the former have fixed boundaries and alluvion and diluvion in the true sense of these terms cannot take place, those of the latter follow the deep-stream rule. The rates fixed for the Jamna villages are shown below:—

DETAILS.	SOUTHERN JAMNA KHADIR, JAGADHRI.		NORTHERN JAMNA KHADIR, JAGADHRI, AND KHADIR, PIPLI.		KHADIR INDRI.	
	Per katcha bigah.	Per acre.	Per katcha bigah.	Per acre.	Per katcha bigah.	Per acre.
Lowest ... ..	1½ annas	8 annas	1½ annas	8 annas	1½ annas	8 annas
Middle ... ..	3½ "	1 rupee	8 "	14½ "	3 "	14½ "
Highest ... ..	5 "	1½ "	4½ "	1½ rupee	4 "	1½ rupee

The directions in the rules as to the determination of the class to which land belongs are intended to guide but not to fetter the assessing officer; they point to the description of crops grown as the best indication of the quality of the soil. Some definite instructions were certainly required, for without them assessments had often been made in a very unequal and even oppressive manner. Uncultivated land was charged at cultivated rates on the ground that the inspecting officer thought it could be cultivated. As a rule the zamindár ploughs wherever he can do so with profit, and under the old system he sometimes found himself in the position of the Israelites when Pharaoh told them they were idle and ordered them to make bricks without straw. Both on the Jamna and on the hill torrents a rate of one anna will be charged on new land which is fit for grazing and on land once cultivated which has deteriorated but is still fit for grazing. In the case of fields injured by the canal, hill streams, or ravines, the original assessment will be remitted if the land has become unculturable, while it will be reduced to one-half if its productive powers have been seriously diminished but it is still capable of tillage. On the Jamna alluvion and diluvion measurements will be made yearly, elsewhere, except in special cases, they will only take place in the year when an estate comes under quadrennial attestation.

86. Throughout this chapter I have dwelt with what may seem wearisome reiteration on the extreme uncertainty of the cultivation which prevails over the greater part of the tract of which I had charge, and I have pointed out with some emphasis that the want of prosperity which is so apparent in a considerable portion of it is the result in great measure of two causes—the prevalence of disease and fiscal mismanagement. The latter was largely the result of a defective system which prevailed more or less throughout the province, and the nature of the country explains why its untoward results were so much more apparent in Karnál and Ambala than elsewhere. The Settlement Officer's work there is a small matter compared with that of the District Officer, and its success or failure depends entirely on the action of the latter. No revenue is light enough to be paid in good and bad seasons alike in the Nardak, the Naili, or the Southern Chachra. To assume that it is, is to court disaster. A heavy assessment collected with discretion, suspensions being given whenever a really bad season came round, would be less oppressive than a very moderate one collected without any regard to the extraordinary fluctuations of the harvests. To secure accurate crop returns and to

make proper use of them is the key to all successful revenue management of the two districts. Suspensions should very rarely become remissions, for the tracts, which suffer most from drought are the very ones that have the largest surplus in good years. The rule in paragraph 35 of revenue circular 31, requiring a revenue officer of higher grade than a tahsildar to visit every estate in which a suspension is proposed, is quite unworkable where the crops in a single tahsil may fail over an area of 1,000 square miles. It is no exaggeration to say that that contingency may easily arise in Kaithal. The Deputy Commissioner or one of his assistants can travel through the drought-stricken tract, and with the aid of the crop returns can make proposals for each estate. The condition of one village is very like that of another where the means of irrigation are very scanty or are entirely wanting. If an attempt is made to exact too much, the sure result will be that nothing will be done. Nor is it necessary in Karnal or Ambala to say that "Government will usually remit revenue that has been suspended for three years" (revenue circular 31, paragraph 24). There need be no hesitation in letting suspensions run on for longer periods if each harvest is carefully watched, and recoveries made from time to time whenever a good season provides the landowners with a sufficient surplus. To remove the other, and in my opinion still more potent, cause of poverty—the prevalence of disease—is a more difficult matter. If the outbreaks of fever, followed by pneumonia, in the flooded tracts, which keep down the population and, what is much more serious, ruin its physique, are preventible, a heavy responsibility is incurred by allowing the existing state of things to continue. It seems strange that the large Naili tract should be without a single dispensary. Of large schemes of drainage, or for the improvement of the present wasteful distribution of the flood-water, I am not competent to speak, but they certainly deserve a very careful professional examination. I believe that local effort could accomplish a good deal by the execution of a few simple measures well within the scope of purely district agency, and in a note appended to the *Karnal Gazetteer* I have attempted to indicate what some of these measures are.

## CHAPTER IV.

### REVENUE ASSIGNMENTS.

87. It will be understood from the foregoing pages that the subject of assignments is one of unusual importance in the Karnál and Ambala districts. Only about half of the revenue of Jagádhri and Indri, and less than two-thirds of that of Pípli, is paid to Government. Under the rules which govern the succession to the Cis-Sutlej jágirs the State's share of the revenue in both districts tends constantly to increase, but the process is a very gradual one, and lapses of large estates have been rare since the regular settlement. It is well known that they ought not to have been so uncommon, and no part of a Deputy Commissioner's duties in the two districts is so disagreeable as the enquiries that have often to be made into the claims put forward in favour of supposititious heirs. The Cis-Sutlej Sikh families of the two districts are destitute of any feeling of shame in this matter, but no good object would be served by describing the efforts, successful or otherwise, made by living and deceased Sardárs to cheat a Government, which has, on the whole, treated them with much forbearance.

88. A full account of the history of the Cis-Sutlej jágirs and all necessary information as to jágir estates in Jagádhri and Pípli will be given in Mr. Kensington's settlement report and in the *Ambala Gazetteer*. The only jágirs of much importance in Indri and Kaithal are those of the Nawáb of Kunjpura and the Bháis of Arnauli and Siddhuwál, who are the last representatives of the Kaithal house. The history of the Kunjpura and Kaithal families, and a complete list of jágirs in Indri and Kaithal with their revenue and the rate of commutation paid in each, will be found in the *Karnál Gazetteer*.

89. The share held by individual jágirdárs in Ambala is often absurdly petty. The fraternities of pattidárs in Karnál are smaller than those of Ambala, but the jágirs are also less extensive and the subdivision is in some cases great. Perhaps the worst instance that can be quoted is that of the Gudha branch of the Jameráyan confederacy. This fraternity held eight estates. In seven of these shares of the value of Rs. 886 have lapsed to Government, and the rest of the revenue of the eight villages, amounting to Rs. 3,026 in all, is divided among 19 families and 98 shareholders. Four pattidárs enjoy Rs. 1,730 and the balance of Rs. 1,296 has to be divided between 94 persons, giving on the average Rs. 14 to each. But the division is very unequal, and we find that 20 men have between Rs. 5 and Rs. 10, 34 between Rs. 2 and Rs. 5, while 10 have actually less than Rs. 2 each per annum.

90. I have referred in the beginning of the 2nd chapter of this report to a class of jágirdárs subordinate to the greater chiefs and known as zaildárs. When the jágir enquiry was undertaken at the regular settlement it was at first decided that it should not extend "to the possessions of the zaildárs or dependents of an individual Sardár during the life-time of such Sardár" (see rule IX sanctioned by the Board of Administration in 1852, Punjab Revenue Circulars, Volume I, page 320). But this decision was modified two years later on the advice of the Financial Commissioner, Mr. Edmonstone, who had been Commissioner of the Cis-Sutlej States, and it was decided that 1847, the year in which the jágirdárs were deprived of their sovereign powers, should be assumed as the basis of adjudication in all disputes between jágirdárs and zaildárs as to the shares of the latter (Punjab Revenue Circulars, page 320). It is clear from the correspondence\* which took place at the time that the reason for taking the date 1847, instead of 1809, as in the case of pattidári jágirs, was to protect zaildárs from harsh claims on the part of the chiefs, whose dependents they

\* It is printed in Punjab Government Revenue Proceedings, General Nos. 21-25, of February 1860.



were. It was felt that endless disputes and claims would arise if the status of 1808-96 were taken as the year for defining their tenure. It was soon seen that the new rule cut both ways, and would in the future be prejudicial to the zaildars, and in 1856 the Commissioner, Cis-Sutlej States, urged this strongly as a reason for modifying it, but without success. There are no zaildari tenures subordinate to existing jagirs in Indri or Kaithal, but a good many villages in Jagadhri and one or two in Pipli are held by zaildars of the Sardar of Buria.

91. The conquerors of Shahabad and of many villages in the neighbourhood divided their acquisitions into seven pattis, as to one Shahabad jagir. Patti of which, Patti Himmat Singh, a curious difficulty arose Himmat Singh. during the settlement. The greater part of the revenue of this patti is enjoyed by the three minor Sardars of Shahabad, and the rest by several families of jagirdars, each holding a small share. I found that Mr. Wynyard had held in 1852 the latter to be zaildars of the Sardars, but his order could not be traced, and the reasons on which it was based were not apparent from the history of the jagir. Under the rule then in force the tenures of these zaildars were held to be exempt from enquiry and the status of 1808-9 was not conferred upon them. Since then, however, the jagir has always been treated as an ordinary pattidari one without any objection on the part of the Sardars. If the jagirdars were zaildars of the Sardars certain shares valued at Rs. 252 should, in accordance with the rule giving zaildars the status of 1847, have lapsed to the latter, and they were also entitled to a share of Rs. 136, which lapsed to Government in 1859. On my reporting these facts, it was decided that the jagir should be treated in every respect as a pattidari one (Punjab Government No. 57, dated 15th May 1889).

92. Another question which arose at the regular settlement concerned Zaildari tenures in lapsed the treatment of zaildari tenures in jagir estates which had already lapsed. In a letter No. 912, dated 23rd November major jagir estates. 1851, Mr. Wynyard referred to Mr. Edmonstone, Commissioner of the Cis-Sutlej States, certain difficulties which had arisen in connection with the jagir investigation, which was then proceeding, and asked, among other things, whether he should enquire into zaildari tenures of the kind mentioned above. As stated in my No. 384, dated 19th April 1889, Mr. Edmonstone's view was that Government was entitled to any lapses that the Sardar, to whom the zaildars had been subordinate, could have claimed; but, to quote his own note on Mr. Wynyard's letter, "it will not be just to go back to the state of possession in 1808-9, it (i.e., the enquiry) could only go back to possession at the time when the Sardar's estate lapsed to us, and extend to successions which have taken place since." Mr. Edmonstone's views, as Commissioner in 1852, regarding zaildari tenures in lapsed estates were determined by the same considerations which prompted the advice regarding zails dependent on existing jagirs, which, as Financial Commissioner, he offered to the Chief Commissioner in 1854. The rules printed on pages 319 and 320 of the 1st volume of the Punjab Revenue Circulars were proposed by Mr. Edmonstone in consequence of the reference from Mr. Wynyard referred to above. The wording of rule X is obscure, but I think it was intended to embody the opinion on the subject, which Mr. Edmonstone appears to have held. It says expressly that "from and after the date of lapse of the Sardar's estates, lapses of the zaildar's shares and successions to the same shall follow the first and second of the rules prescribed by the orders of Government No. 461, dated 12th February 1851." It is, therefore, implied that the 3rd of the rules of 1851 (Punjab Revenue Circulars, page 315), which allowed the succession of collaterals, when they and the deceased had a common ancestor in possession in 1808-9, would not apply. A case in point soon came up for decision. The Dialgarh estate lapsed in 1851, and the zaildari tenures subordinate to it were reported by the Board to the Government of India. In a few cases the grants were only continued for life, but in most a perpetuity tenure was admitted in favour of the holders of 1852 and their descendants (Government of India No. 4199, dated 10th November 1852). If the true meaning of the 10th of Mr. Edmonstone's rules was that suggested above it does not appear to have been understood by Mr. Wynyard's



successor in Thānesar, for Captain Larkins recognised the status of 1808-9 as in force in some small jāgirs held by zaildārs of the lapsed estates of Radaur, Chhalaundhi, and Lādwa. After the death of Sardār Bhagwān Singh in 1812, the Jagādhrī State was divided between his two widows, and the moieties were henceforth known as Diālgarh and Jagādhrī. As noted above Diālgarh lapsed in 1851, and the zaildārs dependent on it were given the status of 1852. But zaildārs of Jagādhrī, which lapsed in 1829, held three estates, and I found that their tenure had always been treated as the same as that of a pattidārī jāgīr. I reported these circumstances deprecating any interference with past practice, and in Punjab Government No. 63, dated 4th June 1889, it was ruled that "in all cases of zaildārī estates in jāgirs which lapsed before the first settlement the rule of 1808-9, *which is the rule adopted by Mr. Wynyard and his Deputy Collectors in cases in which they passed orders on the point*, may now be adopted as the rule of guidance for the disposal of claims of collaterals." The words in italics are based on a misconception, but the decision will prevent the hardship and confusion which a breach of the practice in force since last settlement would have entailed. It will not, of course, apply to the case of the Diālgarh zails or to certain zails of the Kaithal State, in regard to which definite orders of the Supreme Government have been passed. The Kaithal zail of Ahun was released on the curious condition that the whole should be continued to the two persons in possession at the date of enquiry for their lives, and that half the share of each should after his death be continued to his descendants for a period of 20 years (Government of India No. 2720, dated 19th November 1847). The letter just quoted contains the orders on the other petty jāgīr grants of Kaithal, and any subsequent orders passed have been noted in the jāgīr register. But as I had some doubt as to the interpretation to be put on the orders relating to the zaildārs of Bari Jaurasi and Rawāhar, I asked for a ruling on the subject, and the Financial Commissioner held, in his letters Nos. 4417 and 4418, dated 18th July 1889, that the status of 1808-9 should be considered applicable to both jāgirs. A similar decision has also been given as to the petty jāgirs of Sādīkpur, Sambhi, and Parwāla in Indri, which were zails of the lapsed Thānesar State (Punjab Government No. 116, dated 24th September 1889).

93. One other case, which was decided during the recent settlement, must be noticed. The Talakaur jāgīr in Jagādhrī is a branch of Patti Balchhapar. In 1823 the Talakaur Sardārs were put under the protection of the Maharāja of Patiala (Griffin's "Punjab Rājās," page 210), who retained police jurisdiction down to 1860. But the British Government did not give up its right to benefit by lapses. In the similar case of the Khumanon jāgīr Mr. Edmonstone gave the following decision (Commissioner, Cis-Sutlej States, to Settlement Officer, Ambala, No. 35, dated 11th January 1853):—

"In regard to the first point my opinion is that the enquiry into holdings which would lapse under the ordinary rules regulating succession in pattidārī jāgirs should be foregone. The Patiala State has had jurisdiction in Khumanon ever since 1815. During this period of 37 years no investigation has been held and no interference exercised respecting the holdings of the Khumanon pattidārs, and no share has reverted to the British Government, although in the common course of nature many legitimate lapses must have occurred. In consideration of these circumstances and of the orders of Government permitting the continuance of Patiala jurisdiction during the life of the present Rāja and of the instructions which have been received regarding the pattidārs of Thānesar and Diālgarh, with whose position that of the Khumanon Sikhs is somewhat analogous, I think that the enquiry regarding past successions may be dispensed with and the state of present possessions may be accepted as the basis on which all questions relative to the future lapse of, and succession to, shares should be adjudicated. The only difference is that the order of Government as contained in the Secretary's letter No. 461, dated 12th February 1851, will be applied prospectively only."

When the Settlement Officer asked for orders as to Talakaur, Mr. Barnes, who had succeeded Mr. Edmonstone as Commissioner of the Cis-Sutlej States, directed him to apply the rules adopted in the Khumanon case (No. 1384, dated 15th August 1853). About half of the jāgīr might have been resumed had the status of 1808-9 been insisted on. After the regular settlement the jāgīr has

been treated as standing in every respect on the same footing as any other pattidārī jāgīr, and Government has now interpreted the orders of 1853 as meaning that the state of possession existing in that year should be maintained, but that, in future, if any person in possession in 1853 should die childless, a collateral relative descended from a common ancestor in possession in 1809 would be entitled to succeed (Punjab Government No. 46, dated 22nd May 1890, in Revenue Proceedings No. 1—9 of July 1890).

94. The jāgīrdārs have till lately all been allowed to collect their jāgīr revenue direct. In Karnāl they have all, I understand, with the exceptions of the Bhāīs of Arnāuli and Siddhuwāl and the jāgīrdārs of Pahārpur, been deprived of what they doubtless considered a privilege. The question of the collection in Ambala of jāgīr revenue through the tahsil has recently been under discussion. Government has decided that direct collection may be tried experimentally on a small scale. Stress has been laid on the need of caution in carrying out a change of system, and the circumstances which would justify the withdrawal of the privilege of direct collection in any particular case have been stated to be proved trouble and oppression to zamindārs and difficulty in recovering commutation fees. Where direct collection is permitted it has been provided—

- (1) that the place of payment shall be either, at the village itself, at the head-quarters of the tahsil, or at the place of residence of the jāgīrdār, provided that it is not more than ten miles distant from the village and within the same tahsil;
- (2) that the jāgīrdār shall keep up regular accounts in Urdu showing the dates and amounts of each collection made, together with a book of duplicate lithographed and regularly numbered receipt forms, in a prescribed form, one receipt to be torn out and given to the lambardār in return for every payment, and the duplicate to remain in the book as a record (Punjab Government, Revenue and Agriculture, Proceedings Nos. 23—30 of January 1891).

95. A careful enquiry into each jāgīr has been made, the files connected with which have been bound in volumes and deposited in the district offices. The results have been embodied in new registers, which were devised by Mr. Kensington. They are compact and convenient in form, and are a vast improvement on the cumbrous registers drawn up at the regular settlement. The conditions of each jāgīr with a reference to the order determining them, and the rate of the commutation paid to Government are given. A genealogical tree of each family showing all existing descendant of the person in possession in 1809-9 or other date which determines the right of succession and a list giving the name of each of the shareholders of 1888, with the fraction representing his share and the value of that fraction in money, form part of the register, and a convenient method of recording successions and lapses has been provided. The investigation and the preparation of these registers was a heavy task, but its result will be a great simplification of all future district work in connection with jāgīrs.

96. When the Sikhs took possession of the country they found certain powerful individuals and communities in possession of grants from the former Government, which they found it impossible or impolitic wholly to resume. A Rājput family belonging to Rāmgarh in Jagādbri has a share in the Leda jāgīr, and the Afghāns of Khizrabad still divide the revenues of eleven British and some Kalsia villages with the Lahdpindīān Sikhs, and have always been treated as ordinary jāgīrdārs. In origin there is no real difference between the tenures of these Rājputs and Afghāns and the chahārami tenures in Pipli described by Mr. Wynyard in paras. 289—307 of his south Ambala settlement report. The word "*chahārami*" may have indicated that the grantee got one-fourth of the whole produce, the ruler's share or *hākimi hissa* being assumed to be one-half, of which the chahārami-

khwár was allowed to take or keep one moiety. A statement of the Pípli chaháramis is given below :—

Persons enjoying chahárami.	Share of revenue enjoyed.	Amount of chahárami.	Estates in which chahárami is enjoyed.
Proprietors of Pattis Jhamra and Kankra of Shahabad.	50 per cent. ...	Rs. 3,028	Patti Jhamra, Patti Kankra, Shahádupur, Zalpur, Beripur, Patti Beripur, Déomazra.
Rájpút proprietors of Lukhi.	Do.	1,022	Lukhi, Panwán, Hasepur, Jhinwarheri, Piplimazra.
Afgháns proprietors of Bahádupur.	Do.	100	Bahádupur.
Proprietors of Pattis Malakpur and Shahápur of Nalwi.	20 per cent. in Patti Shahápur and 25 per cent. in Patti Malakpur.	228	Patti Malakpur and Shahápur of Nalwi.
Total ...	...	4,378	

In all the estates except Bahádupur, which is entirely *jágir*, some of the shares of the Sikh *jágirdárs* have lapsed to Government. All the proprietors of Shahabad have not chahárami rights in all the seven villages shown in the last column of the table. Some have rights in one estate and some in another, while some have no share at all in the grant. In four of the seven estates the owners and the chahárami holders are one and the same, in two of the others the chahárami holders are superior proprietors, while in one they have no rights of ownership. The Lukhi chahárami-khwáris own the whole of three villages and a part of a fourth, but in the fifth they have no proprietary title. The two Afgháns, who enjoy the chahárami of Bahádupur, also own that village, and the biswádárs of Pattis Malakpur and Shahápur of Nalwi have chahárami rights in their own pattis. In some cases, *e. g.*, in the Lukhi villages, the chahárami is divided by shares without regard to the amount of land owned by each holder. In others, *e. g.*, in the two pattis of Shahabad, each man's holding is the measure of his right, and the grantee in paying in his land revenue simply takes a drawback of one-half as his own share. In the 297th paragraph of his settlement report Mr. Wynyard wrote :—

"These chaháramis are in fact sharers in the *jágir*, by a gift of the *jágirdár*, but it is inconvenient, inexpedient and contrary to orders to admit this; and I proposed to settle these villages with the zamindárs, for the term of settlement, at half the *jama* which would otherwise be paid. I further stated my opinion that when this settlement has expired, or when all the *jágir* shares may have lapsed, it will be time enough to consider how much longer this indulgence should be granted to the zamindárs, but that, as long as a *jágirdár* remains in any of these villages, the chaháramis are entitled to the share which they have hitherto enjoyed in the *jágir*."

The Commissioner had permitted Mr. Wynyard to carry out the arrangements, which he describes, and a general sanction to them was given in the 9th paragraph of the Government orders on Mr. Wynyard's and Mr. Melvill's settlement reports of Ambala (Punjab Government No. 723, dated 19th August 1856).

When these tenures were enquired into in the recent settlement the *jágirdárs* of course wished to resume them outright. But such a claim was without foundation, for there is nothing to show that they would have become independent of the need of conciliating the landowners, had not a stronger power than either appeared upon the scene. On the other hand, no direct public benefit was derived from these assignments. The amounts held by many of the sharers were extremely petty. Lands subject to the right had often been sold or mortgaged and the chahárami had passed with the land to the transferee. But Government has always shown a wise reluctance to cancel entirely and suddenly ancient grants, and it is still worth while to conciliate the landowners of great estates like Lukhi, Nalwi, and Shahabad. I therefore proposed rules, by which the amount of chahárami which had been alienated would have been resumed at



once, and the rest of the grant would have disappeared in the course of a few generations. The orders passed by His Honor the Lieutenant-Governor are quoted below :—

"Looking to all the facts of the case the proper way of treating these chahārami-khwārs at first settlement would, Sir James Lyall thinks, have been to have recorded them as partners in the jāgīra, and to have, as in the case of the Sikh jāgīrdārs, continued the assignments in perpetuity subject to certain rules as to lapses and escheats. Such rules might have been the same as the general rules for the Cis-Sutlej States jāgīrdārs which are given in paras. 272 to 287 of Mr. Wynyard's report. His Honor is inclined to believe that Mr. Wynyard had those rules in mind when he proposed in para. 297 of the report in respect to the chahārami-khwārs that, as long as a jāgīrdār remains in these villages, the chahārami-khwārs shall be held entitled to the share which they have hitherto enjoyed in the jāgīr. He probably thought that there was an analogy between these chahārami-khwārs and the zaildārs of a jāgīrdār, to whom rule X of the supplementary rules applies. Though His Honor does not think there was really any close analogy, yet he is of opinion, on the whole, that it will be fairest and best to now accept what was proposed by Mr. Wynyard and passed by Government in 1855 without objection, though without formal sanction. According to this view the chahārami holdings in each village will be treated as zaildāri holdings created by the original Sikh jāgīrdār conquerors of the village; and so long as in each village a part of the Sikh jāgīr remains unresumed so long these holdings will not be resumed. Whenever in any village the whole of the Sikh jāgīr has lapsed the whole of the chahārami grants will be resumed at once. Till then, in accordance with the analogy of rule 12 (V) of the supplementary rules for jāgīrdārs, alienations will not be treated as a good ground for resuming part of a chahārami grant. This, though a liberal view of the case, is not in the Lieutenant-Governor's opinion too liberal, considering the antiquity of these holdings and the tacit approval for more than 30 years of Mr. Wynyard's proposals."

97. There is one chahārami tenure in Jagādhri, which Mr. Wynyard does not mention in his settlement report. The Afghān proprietors of Aurangabad held a share of the revenue of that estate and three neighbouring villages, amounting in value, according to the old assessment, to Rs. 373, but which would have been increased under the new settlement to Rs. 472. Their ancestors were chakladārs responsible to the Mughal Emperors for the revenue collections of a circle of villages. The family possesses a sanad of Aurangzeb's, granting them a village called Khatauli, which they re-named Aurangabad in honour of their benefactor. When the Bhāngi Sikhs conquered a large part of Jagādhri, they found it expedient to conciliate the Afghāns, who had fought against them, and with this object they released to them one-fourth of the revenue of Aurangabad, in the area of which the three other villages were afterwards founded. On the lapse of the Dīlgarh State in 1852, the Commissioner directed the settlement officer to treat the Aurangabad grant like the Pīpli chahāramis. I submitted a report on the case, and the Lieutenant-Governor ordered the grant in Aurangabad, where the assignees are also proprietors, to be continued for the term of settlement, and the chahārami in the other three villages to be resumed (Punjab Government No. 190, dated 30th July 1889). The present value of the grant is Rs. 221.

98. The enquiry into revenue assignments other than jāgīrs was a tedious, though not a difficult, work. In Pīpli and Jagādhri there were about 3,000 cases to be investigated. In above half of these I ordered or recommended resumption, and in some 300 the old condition was sufficient authority for continued release. Above 500 mūfis in jāgīr estates were maintained in accordance with the wishes of the jāgīrdārs, and Government ordered some 60 grants in shared villages in Pīpli to be released during the pleasure of the jāgīrdārs. In khālsa and shared villages I recommended some 450 assignments for continuance, the condition proposed and sanctioned being usually "for the term of settlement." In Indri there were 800 or 900 cases, in more than half of which resumption took place. In Kaithal most of the assignments had been released either in perpetuity or for life, and the work of revision was easy. Although half of the grants were resumed, it must not be supposed that the assigned revenue was lowered in the same proportion, though the reduction was considerable. The district registers were loaded with petty "panarth" grants in favour of Brahmans, to which no duties were attached. At the first settlement in very many estates Brahmans were found in possession of small plots, which had been allotted to them by the village communities for their support. They paid nothing for these plots either



to the village or to the Sikh ruler, and our officers usually ordered that they should continue to be held revenue-free for the term of settlement. Whenever the holder of a petty grant of a kacha bigah died, a mutation file had to be prepared and orders passed on it by an Extra Assistant Commissioner, with the result that much time was wasted and useless records accumulated in the district office. I resumed these punarth assignments as far as Government was concerned, but the landowners were given an opportunity, of which they not seldom availed themselves, of excluding the land from assessment when the revenue was distributed over holdings. When they did so, the former assignee is as well off as he was before, and the grant has been put on its proper footing as one held at the pleasure of the village landowners (see also para. 80).

The following is a detail of land revenue assignments as they stood at the close of settlement taken from the new registers which I prepared:—

TAHSIL OR PARAGANA.	IN PERPETUITY OR DURING PLEASURE OF GOVERNMENT.		FOR TERM OF SETTLEMENT.		FOR LIFE OR LIVES.		DURING PLEASURE OF JAGIRDARS.	
	No.	Revenue.	No.	Revenue.	No.	Revenue.	No.	Revenue.
		Rs.		Rs.		Rs.		Rs.
Jagādhrī ... ..	133	649	83	704	85	1,212	412	447
Pīplī ... ..	101	3,954	259	1,313	92	1,007	182	412
Indri ... ..	43	400	43	280	39	153	216	851
Kaithal ... ..	121	3,674	4	12	37	399	40	510
Total ...	403	8,633	389	2,309	254	2,764	850	2,220

In Pīplī 61 of the assignments shown as released during pleasure of Government are in shared villages, the other 789 grants entered in the same column are in estates which are entirely jāgīr. The jāgīrdārs usually were very liberal in maintaining existing grants. The actual condition in the case of assignments in Pīplī, Jagādhrī, and Kaithal, which are released in favour of institutions for the term of settlement, is "for the term of the present settlement in favour of the manager of the institution for the time being on condition of good conduct and maintenance of the institution, with the proviso that on the death of the manager for the time being the Collector shall make an enquiry and propose resumption, if he thinks that the conditions of the grant are not properly fulfilled, or that the longer continuance of the grant on the part of Government is unnecessary." These terms were framed by the late Colonel Wace. They will make it easy to withdraw the bounty of Government in case of abuse.

99. The power of jāgīrdārs to maintain and resume māfis in jāgīr estates was considered at last settlement. The correspondence on the subject between the Commissioner of the Cis-Sutlej States and the Board of Administration is printed in Punjab Government Revenue Proceedings, General Nos. 19 and 20 of February 1889. Both Mr. Melvill and Mr. Wynyard state in their settlement reports (North Ambala Settlement Report, para. 322, and South Ambala Settlement Report, para. 265), that jāgīrdārs were given full power to maintain or resume assignments, save where an order of a British officer existed in favour of the assignee. The orders of the Board (No. 811, dated 16th March 1852) read in connection with the Commissioner's letter No. 25, dated 15th January 1852, not only except grants sanctioned by British officers after 1809, but also "sarkāri grants" and "service grants." By "sarkāri grants" were meant assignments made by native rulers previous to the Sikh conquest. By "service grants" petty assignments made by the village community to menials, &c., were probably intended. The Board held that in shared and māfi villages our officers should adjudicate on all claims to hold land rent-free. The instructions issued by the Financial Commissioner (Colonel Wace) as to the treatment of such grants during the settlement and in future years are noted below:—

" No such grants can be resumed against the will of the holder, except after application made to, and with the concurrence of, the Settlement Officer or Deputy Commissioner. Such an application may be made while a settlement is in progress or at any other time. In dealing with such applications, the Deputy Commissioner or Settlement Officer will be guided by the following instructions :—

" Where such grants have been released *tā habāli jāgīr*, such an order is to be understood *prima facie*, as merely asserting the right of the Government to reconsider the case, in the event of the *jāgīr* lapsing. It is not ordinarily to be interpreted, as giving to the sub-assignee any right to hold against the will of the *jāgīrdār*. Similarly in cases in which at the regular settlement or original *māfi* investigation the recording officer passed an order stating that a *māfi* held from the *jāgīrdār* of a perpetuity *jāgīr* was to be recorded as released in perpetuity, this order is to be understood *prima facie* as having reference to the relation of the *jāgīrdār* to Government and not as affirming the tenure of the *māfidār* against the *jāgīrdār*. In the absence of very special circumstances, the Government recognises the right of the *jāgīrdār* to resume all grants made by himself or by his predecessors in interest, whether the grants were made for service of any kind, or for the support of an institution. But if the grant is of older date than the *jāgīr* (it is believed that such cases are rare), or in any case in which it has been created by the order of a British officer, acting on behalf of Government, and not merely as manager for a minor or incompetent *jāgīrdār*, the *jāgīrdār's* application to resume the grant so made should be reported for the orders of superior authority under the same procedure as applies to unsanctioned *māfis* in *khālsa* villages.

" Rent-free grants in villages of which the revenue is shared between Government and a *jāgīrdār* must be dealt with under the procedure prescribed for such grants in *khālsa* villages. But if in any village a defined area of the village lands are *khālsa*, and the rest *jāgīr*, the rules stated in the previous paragraphs of this letter will apply to *māfis* in the *jāgīr* lands.

" In *jāgīr* villages held on shares by several *jāgīrdārs* disputes concerning proposed resumptions of *māfi* grants occasionally occur; some of the sharers desiring to resume and others desiring to continue the *māfi*. For the principles on which such cases should be decided I am directed to refer you to a letter No. 1074, dated 12th June 1852, addressed by the Commissioner of the Cis-Sutlej States to the Settlement Officer, Cis-Sutlej States, of which a copy is appended. If a minority of the *jāgīr* sharers interested object to the resumption of a *māfi* held under them, the proposed resumption must be submitted for the orders of the Deputy Commissioner or Settlement Officer, who will decide each such case on its merits as explained in the letter above quoted.

" In conclusion I am to state that in framing these orders the Financial

1. Mr. Wynyard's Ambala Settlement Report, paras. 265—7.	Commissioner has been guided by
2. Mr. Melville's ditto ditto para. 322.	the records quoted in the margin,
3. Punjab Board of Administrations 1846, dated 1st October 1861, and 811, dated 10th March 1852.	and he believes that they express
4. Direction to Settlement Officers, Appendix III., para. 22.	the principles laid down by Government for the guidance of the

Settlement Officer and Deputy Commissioner of Ambala and Thanesar at the last settlement, and are also in accordance with the practice hitherto in force in these districts."

Paras. 2 and 4 of Commissioner, Cis-Sutlej States, No. 1074, dated 12th June 1854.

" 2. I do not think that the question is one, in regard to which any general rule of guidance can be prescribed with advantage: either injustice will follow on the strict observance of any such rule, or the deviations from it will be so frequent that it will exist in name only. Generally, I should say, the largest sharer (for in coparcenary *jāgīr* villages only will the question arise) should have the option of declaring whether a rent-free holding shall be maintained or resumed; but even to this it might be objected that the holding was granted by the ancestors of the smaller sharer; that the lands constituting it formed part of his *patti* or share; that, if resumed, the revenue would come to him, and not to the larger sharer; and that, therefore, the latter should have no voice in the matter. Each case, it appears to me, must be judged on its own merits, and with advertence rather to the origin of the grant (except in the case of grants made by *zamīndārs*) than to the present position of the parties in the village. For example, if the grant be *badshāhi*, I should be disposed to regard it in the light of a "sarkari" grant (vide Board's letter) and to claim the right of adjudication to the exclusion of the *jāgīrdārs*. If the grant originated with the ruling Sikh Chief, and his descendants or followers were in possession of a share of the *jāgīr*, I should be disposed to give them a preferential voice in the matter of upholding or resuming it; if the sharers of the *jāgīr* belonged to different classes, and were on an equality in respect of shares and every other circumstance, I should allow the option solely to the descendants of the grantors, whether they alone or both sharers might be affected by the release or the resumption; and lastly, in the case of grants made by the village *zamīndārs*, I would give a preference to the vote of the largest sharer in the *jāgīr*, or in case of an equality of shares, as in the present instance, to the dominant body, or rather to their descendants, as you propose.

"4. I hope that differences of this kind may not prove numerous, or we shall have gained little by the modified procedure which the Board have sanctioned. Such differences will, I should think, most frequently arise in villages shared by jagirdars of different tribes and religions, and the opposition to release will in such cases commonly be caused by religious bigotry, or class feeling. Such feeling should in my opinion be discountenanced, and unless the right of declaring for release or resumption clearly belongs under the above principles, which seem to me equitable, to the one party or the other, the decision must rest with the Settlement Officer, who would in my opinion act judiciously in authoritatively putting down the opposition, and thus rebuking the factions or bigoted author of it. In all disputed cases the decision must rest with the Settlement Officer, not with any of his subordinates, open to the usual appeal to the Commissioner."

It is of course usual to ascertain the jagirdar's wishes as to assignments in shared estates, and, when they enjoy a preponderating share of the revenue, their wishes should usually prevail. It will save trouble if the district officer is allowed to continue without report life grants in shared villages in which the Government's interest in the revenue is less than that of the jagirdars, when the latter do not wish to resume. The condition on which grants have been released in jagir villages is almost invariably "during the pleasure of the jagirdar and the continuance of the jagir." The first clause expresses the power of the jagirdar to resume when he pleases, and the second the power of Government to resume as soon as the jagir ceases to exist. Whenever a jagir estate lapses the assignments in it have to be reported for orders.

100. In the registers the assignments have been divided into four classes: In perpetuity, for life or lives, for term of settlement, and *mafis* in jagir estates. A fifth group was added in Pipli for grants in shared villages released during the pleasure of the jagirdars. Provision has been made for the convenient record of mutations and lapses. Sanads were given to assignees when the grant was in favour of an institution and released for the term of settlement.

101. Zaildars have been appointed except in the jagir villages of the Bhais of Arnauli and Siddhuwal, the village of Kunjpura, which the Nawab owns, and where he has his residence, and the towns of Thanesar and Shahabad. The zaildars in Indri and Kaithal are remunerated by an allowance of one per cent. deducted from the land revenue of their zails. The allowance is given in the shape of an *inam* paid out of the revenue of a *khalsa* estate included in the zail, that estate in which the zaildar resides being selected where possible. The one per cent. on net jagir revenue after deducting commutation will be paid by the jagirdars along with the commutation. *Mafis* of less value than Rs. 50 have been exempted from contribution except when the *mafi* consists of a whole village. In Ambala a sum of Rs. 8,500, which is nearly equivalent to one per cent. on the *khalsa* land revenue and service commutation of the district, has been allotted for *inams* of all sorts. Assigned revenue has been entirely exempted from contribution. The greater part of the amount sanctioned by Government is expended in remunerating zaildars, who receive fixed cash *inams* of Rs. 120 or Rs. 90. The balance is expended in providing a few *inams* of the class described in the next paragraph. All *inams* are purely personal, and are held for life subject to good conduct and efficiency. The duties of *inamdars* are the same as those of zaildars in other districts. When a vacancy arises in a zaildari *inam* of the first class, the Commissioner may order the new zaildar to receive a second class *inam*, the *inam* of the first class being at the same time transferred to another zaildar, who has earned promotion by his conduct of the duties of his office.

A list of zails with the revenue of each will be found in the gazetteers of the two districts. Their limits were based chiefly on tribal considerations, and the value of the *inams* in Karnal varies greatly, ranging in Kaithal from Rs. 90 to Rs. 265 and in Indri from Rs. 61 to Rs. 235.

102. The grant to influential zamindars of small *sufedposhi inams* was also sanctioned. In Indri and Kaithal the value of these *inams* amount to  $\frac{1}{4}$  per cent. on the *khalsa* and assigned revenue. Seven *inams* of Rs. 50 each were proposed in Indri

and eleven in Kaithal, but two of the Indri ináms and four of those in Kaithal have been reduced by Rs. 10 each to provide small extra ináms for four zails, as the zaildári ináms calculated at one per cent. on the revenue were small. The successors of the present zaildárs will have no claim to these supplementary ináms. The zamindári ináms in the Ambala district are of the value of Rs. 60 each. Eight of these have been given in the Pípli and one in the Jagádhri tahsil. The correspondence on the zaildári and sufedposhi ináms is contained in Punjab Government Revenue Proceedings of July 1884, April 1885, June 1890, and January 1891.



## CHAPTER V.

## OCCUPANCY TENANTS AND LEASED ESTATES, &amp;c.

103. The subject of tenant right in Ambala and Thanesar is discussed in paras. 309—311 of Mr. Wynyard's settlement report. As a rule twelve years' uninterrupted possession was considered to be sufficient to establish a claim to occupancy rights at the regular settlement. In only a few cases in the tract included in my settlement were the rents fixed at revenue, cesses, and village expenses; in the vast majority of cases a small *málikána* was also imposed, amounting generally to 5, 9, or 11 per cent. The *lambardár's* *pachotra*, the *patwári* cess, and the *malba* at the regular settlement amounted to Rs. 13-2-0, so that the tenants as a rule paid, or were supposed to pay, revenue and local rate plus Rs. 18-2-0, Rs. 22-2-0, or Rs. 24-2-0 per cent. on the former. In Ambala the occupancy tenants are the best cultivators in the district. They are very often *Mális*, and their thrift and enterprise may be judged by the extent to which they have bought up land in *Pipli*, for the *Máli* immigrants are usually occupancy tenants from one of the other *tahsils*. Although the provisions of the village administration papers prevented any enhancement of rents during the currency of the regular settlement, the number of occupancy tenants fell off greatly between the two settlements. I think it is probable that many of them threw up their holdings before successive revisions of assessment and the rise of prices had reduced the Government demand to a reasonable amount. I doubt also whether the tenants were always given the benefit of the reductions, for the rents were often in great confusion, due partly to the imposition of the local rate after settlement, but partly also, I think, to the revised demand on tenants' holdings not being properly calculated. The Tenancy Act of 1887, which was passed during the revision of the settlement, revolutionized the position of the tenants in the parts of Ambala and Karnal which were under my charge. The class which only paid revenue and cesses, and which had the status defined in section 5 (1) (a) of the Act, was a very small one. It was almost impossible for any tenant who paid *málikána* to prove that he fell under the provisions of any of the sub-sections of section 5, or to establish any other status than that given by section 6. Men who had for 35 years been paying a *málikána* of from 5 to 11 per cent., and from whom the landowners as a body neither desired nor expected to get any larger rent, suddenly became liable to have their *málikána* raised to 75 per cent. on the enhanced revenue.

104. In Indri the revenue had been announced and distributed over holdings before the Act came into force, and landlords and tenants had generally agreed to rents calculated substantially in the old way, inconvenient fractions being got rid of. The result was that, after the Act came into force, scarcely any enhancement suits were filed by landowners in Indri, although they were informed that they were at liberty to sue. The cases in *Kaithal* were also very few in number, but there was a good deal of rent litigation in the two Ambala *tahsils*. The Financial Commissioner desired Mr. Kensington and myself to settle as far as possible all enhancement cases before the conclusion of settlement operations. The suits were mostly brought during the last six months of the settlement. The number exceeded 450, of which I decided 256, 63 were disposed of by the Extra Assistant Settlement Officer, and 135 were transferred to the district court when I left Ambala. To mitigate the hardships which a great and sudden enhancement of rents would have caused, Mr. Kensington and myself agreed to take advantage of the discretion given to revenue courts by section 25 of the Act, and to fix a general scale of enhancements to be applied to cases falling under certain categories, and this course met with the approval of the Financial Commissioner. The rules of practice which we adopted were that—

- (a) where the tenants paid nothing but revenue and cesses, the maximum *málikána* of 12½ per cent. should be decreed at once;

(b) where the existing rate of *mālikāna* was not more than 12½ per cent. it should be raised to 4 annas in the rupee, or 25 per cent.;

(c) where the existing rate of *mālikāna* exceeded 12½ per cent. it should be raised to 5 annas 4 pies in the rupee, or 33 per cent.

In my *tahsils* most of the cases fell under class (b). The rents which we fixed will become liable to enhancement in 10 years; but I trust the discretionary powers vested in the courts by the Act will be freely exercised, and that, if any further increase is given, it will be of very moderate amount.

105. Until the recent settlement there were 66 leased estates, 6 in Indri, 8 in the present *Pipli*, and 52 in the present *Kaithal* *tahsil*. The *Pipli* leases and two of those in Indri were made by Mr. Wynyard in the course of the *Thán-sar* settlement under the provisions of a notification of the North-Western Provinces Government No. 5705, dated 28th November 1848. Nearly all the other leases were arranged by Captain Larkins when he settled *Kaithal* in 1855-56.

106. I shall first of all give the history of the *Kaithal* and *Indri* leases, and for convenience sake I will in giving figures include the two estates in *Indri* leased by Mr. Wynyard. When *Kaithal* lapsed in 1843 we took over a country occupied by settled communities, some of which had been strong enough to offer a very vigorous resistance to the oppressions of the Sikhs. But cultivation had declined in the evil days that preceded our rule. It was found that there were some patches of waste land kept as *hirs* or grass preserves by the late Sikh ruler, and that there were also a number of deserted sites which tradition said had once been occupied by village communities. The owners had been driven from their homes by one or other of the numerous famines which desolated *Kaithal* and the neighbouring States in the last quarter of the 18th and the first quarter of the 19th century, or had fled in the times of confusion which followed upon the decay of the *Mughal* Empire. When order was restored there was no lack of claimants to the ownership of the deserted sites. In many cases the *zamindárs* of the large villages in the neighbourhood asserted that they were the *biswadárs*. They doubtless declared with more or less truth that the smaller estates had been founded by colonies from the older villages, and that the colonists, when unable to protect themselves from oppression, had returned to the strong parent community.

The cessation of internal disorder and border warfare which followed on the introduction of our rule gave a sudden impulse to agriculture. Many *zamindárs* came back to their homes, and in 1843 Major Lawrence was able to locate 39 *thehs* or abandoned villages, 89 were engaged for by the *zamindárs* within whose original boundaries the deserted sites were situated, and 34 remained to be disposed of after time had been given to the old cultivators to return (Lawrence's settlement report, page 40). No details can be given as to the arrangements made by Lawrence. But Captain Abbott describes the general results of his action as follows:—"The terms of the leases were so light, and the parties being generally bound in no penalty, very few of the estates were peopled; greater profits were to be derived from the sale of grass, wood, and grazing privileges." As regards uncultivated lands generally, Lawrence explained to the *zamindárs* that the waste lands were their own to do what they pleased with for the next three years (the period of his summary settlement), adding that at the expiration of that time they would only be entitled to areas of waste equalling double the extent of their cultivation.

107. In 1846 Sir Henry Lawrence, as Agent to the Governor-General, North-Western Frontier, addressed a Circular (No. 4, dated 20th April 1846) to his subordinates giving them instructions as to the measures to be taken in settling the territories of Sikh States which had recently lapsed. Its 4th paragraph, which is quoted below, contains directions as to the method to be followed in dealing with the large areas of waste then existing in many estates:—

"For the present term of three years village communities may make their own arrangements for reclaiming waste lands, but they should be warned that Government

reserves to itself the right, at the expiration of the present settlement, to take into its own hands all wastes beyond a fair percentage, according to circumstances, on the cultivation of the village; this waste in no case to exceed the quantity under the plough, and the balance to be marked off into new villages with a reservation of the *málikána* right for the ejected *kakádáras*, whose rights however it would be expedient, as far as possible, to commute into a fixed sum to be paid down at once. These remarks especially apply to the large holdings in the direction of Thánesar and Ládwa."

108. At the regular settlement made in 1847 by Captain Abbott, 64 Leases made at Captain Abbott's settlement (1847): sites were leased out. In some cases two neighbouring sites were leased to the same persons, so that there were not really 64 estates. Fifty-two of the leased sites were in the dry uplands, where well irrigation is unprofitable. Captain Abbott stipulated for the breaking up of a certain proportion of the waste, the sinking of a well or the digging of a tank, the locating of a certain number of ploughs, and the building of a certain number of houses. The leases were often made to the zamindárs of large neighbouring villages with which the sites had been measured at the summary settlement. The lessees were acknowledged as biswadárs, but it was provided that if they failed to fulfil the conditions of the lease they should lose the biswadári, and also pay a penalty of three times the jama assessed. Captain Abbott's view of the rights of Government and of the effect of the action he took was expressed as follows:—

"I have endeavoured as much as possible to restore the sites to former occupants, but very few such existed. The lands were waste, overrun with jungle, the peculiar property of Government to dispose of to the best advantage. Proclamations for their disposal were issued, and after the disposal of any claims that might be made the more eligible offers were accepted. Thus the biswadári of these sites has been disposed of under certain conditions, failing fulfilment of which it will, at the end of three years, be available to the Government to dispose of in any other way."

He expected that in consequence of the arrangements he had made 50 new estates would be founded within three years, and at the termination of the settlement these would be strong villages. These sanguine expectations were however disappointed. The main defect in Captain Abbott's scheme was the extremely short time given for the fulfilment of the terms. The condition of sinking a well was also a very unsuitable one to impose on the founder of a new village in this upland tract, where water is often above 100 feet from the surface and wells are not used for irrigation. They are extremely costly, and take 10 or 15 years to sink. The work is begun in a good year, abandoned if bad seasons follow, and taken in hand again when times improve. The large proportion of cultivation demanded by Captain Abbott could scarcely be effected in three years, and there was every temptation to rely on the profits of cattle-rearing and proceeds of grazing dues, from which a fair income was derivable.

109. It is not therefore strange that in the great majority of cases Leases made at Captain Larkins' settlement in 1855-56. Captain Larkins, who re-settled the district in 1855, found that the conditions of the leases were unfulfilled. It was at first proposed to sell the leased lands outright; but the result of the single sale that was carried out was not encouraging, and Mr. Edmonstone, Commissioner of the Cis-Sutlej States, proposed to the Board of Administration that the lands should be again leased. The Board, while expressing much scepticism as to the possibility of converting a tract intended by nature for cattle-rearing into a well-cultivated country, unless a canal could be brought through it, acquiesced generally in Mr. Edmonstone's proposals (Secretary to the Board of Administration to the Commissioner, Cis-Sutlej States, No. 1629, dated 25th May 1852). In only a few cases were Captain Abbott's lessees held to have earned a proprietary title; more than one-third of the leases were cancelled, and the lands re-settled with new applicants. But in many cases, where something had been done to improve the land, Captain Larkins revised the original conditions and granted fresh leases to the old farmers. The chief alteration was the striking out in bangar leases of the condition that the lessee should sink a well. They were given five years within which to fulfil the terms of the new leases. Many of Captain Abbott's leases had been made to the zamindárs of the villages in which the deserted sites had been included in the first summary settlement. In these cases Captain Larkins held that defaulting



lessees "had forfeited all claim, beyond a biswidári allowance of 5 per cent. on the Government demand, where they have been recorded as proprietors." Besides dealing with the leases made by Captain Abbott, Captain Larkins himself separated off from the areas of villages having excessive waste 21 new estates. A málikána of 5 per cent. on the revenue was declared to be payable to the original proprietors. His action in demarcating these estates was based on Regulation VII of 1822, and it is clear that his authority was derived from the 8th section, and the málikána was fixed, to quote the words of that section, "in lieu and bar of all claims to or in waste lands so granted." He intended that a lessee, who fulfilled the conditions of the lease, should be regarded, or, if already recorded as owner, confirmed as proprietor of the village which he founded. Even if the lessee was also the recorded proprietor, he was liable, if he failed to carry out the conditions on which the estate was leased to him, to forfeit all title in it beyond the right to receive an allowance of 5 per cent. on the revenue. Excess waste was not always formed into separate estates. In the cases of some villages with enormous areas of jangal, Captain Larkins contented himself with taking written engagements from the proprietors to the effect that "it would be in the power of the district authorities (under Regulation VII of 1822), at any time during the terms of the present settlement in estates where the waste exceeds twice the area under cultivation, to mark it off separately for the formation of a new mahal in the event of any parties coming forward to take up the lease."

Captain Larkins' policy in the high upland tract was only to require the cultivation of a certain proportion, usually one-third or one-fourth of the assessable area, and the location of a certain number of ploughs. He considered it absurd to bind a lessee to sink a well, seeing that the zamindárs in many old villages depended on their tanks for drinking-water, and, even where wells existed, preferred to use tanks because of the trouble involved in drawing water from a depth of above 100 feet. He knew besides that if cultivators settled at all, they would assuredly either sink a well or dig a tank. The stipulation as to houses appeared to him superfluous, as the location of ploughs implied the presence of cultivators. He fixed progressive assessments, the initial jama being two-thirds of the average annual income found to be derived from the sale of grass and of grazing dues. The final demand was not allowed to exceed the amount brought out by the application of the pargana revenue rates to the area required in the lease to be cultivated. In new leases ten years were allowed for the fulfilment of the terms, but it was stipulated that one-half of them should be carried out within five years.

110. In 1863, soon after the abolition of the Thánesar district and the transfer of Kaithal to Karnál, Mithan Lal, Extra Assistant Commissioner of Kaithal, carried out an enquiry as to the extent to which the lessees had fulfilled the conditions of their leases. He appears to have found that in scarcely a single case had the lessee succeeded in carrying out within the first five years all that he was required to do within that period. The Deputy Commissioner of Karnál cancelled many of the leases; but the Commissioner subsequently held that the annulment of a lease merely because the farmer had failed to bring the required extent of land under the plough would not be justifiable, as he considered that the terms imposed were impossible of fulfilment. The lessees were to continue in possession and their claims could be considered at settlement.

111. A full enquiry into all these leases was made during the recent settlement. I had to deal with an area of 73,930 acres, of which 24,669 were under cultivation. I found that there were six villages classed as leased estates which did not really answer to that description. The so-called lessees were owners of the land, but had in most cases been bound over to cultivate a certain portion of their waste within a limited period. If they failed to do so, Government had the power to cancel their rights of ownership and form new estates out of the excess waste. Adding to the area of these estates a few plots in ordinary leased villages which were recorded as the property of private persons at the last settlement, I held that 16,364 acres were already owned by zamindárs,

Enquiry made in 1863.  
Enquiry into rights of lessees at settlement of 1882-80.



and I proposed that Government should admit that their proprietary rights were subject to no special conditions. I considered that in such cases tenants who made claims to occupancy rights should be left to establish them by regular suits. As regards the remaining estates, enquiry showed that in hardly a single instance had the conditions been fulfilled within the period fixed in the original lease. But I proposed that Government should deal liberally with the lessees, and look rather to the present state of the villages than to the result of the enquiry made by Mithan Lal in 1863. Where the terms were shown now to have been fulfilled, and even in some cases where they had not been literally fulfilled but substantial progress had been made, I advised Government to admit the lessees as owners, subject to certain conditions stated below. Where little or nothing had been done, I proposed to cancel the lease, and to resume the estate. I urged that advantage should be taken of the fact that the conditions were not fulfilled in time—

- (a) to protect the rights of old cultivators ;
- (b) to secure the reservation of a considerable area as village pastures ;
- (c) to put certain restraints on the power of alienation.

A register containing detailed proposals as to the grant of ownership and occupancy right, &c., in each estate was submitted, and is now in the district office. The gist of the proposals was that Government should resume 10,310 acres, grant ownership in 45,620 acres, and give a fresh lease of 1,636 acres. In many cases the recorded lessees were merely representatives of a larger body of their caste fellows, or had, after obtaining the leases, called in cultivators under engagements, express or implied, to give them a share in the ownership, if ultimately conferred. Hence many persons, other than the recorded lessees, were held to be owners. This was often, but not always, done by consent. Many old cultivators, though not entitled to a share in the proprietorship, appeared to deserve protection from ejectment and future enhancement of rent. They had in most cases paid exactly like owners, and shared all their other burdens and privileges. In such cases I proposed to fix their rents in perpetuity at revenue, cesses, and malha. Where rent was paid by division of crops, the old rates were as a rule continued. It was proposed to reserve 7,750 acres of the land made over in ownership to the lessees as common village pastures, providing that any one encroaching on such land should pay a fine of Rs. 100 to Government and be ejected. This plan met generally with the approval of the people, and did by order what they would do themselves if they had not lost the power of combination. The management of these reserves was to be left entirely in the hands of the owners.

The restrictions on alienation which were suggested need not be detailed, as Government declined to sanction them. In other respects the proposals were approved of, though final orders on one or two points have yet to be issued. Where *mālikāna* has hitherto been given by the lessees to the owners of the estates from which the leased areas were originally separated, it will continue to be paid, but the recipients are not recognised in the revenue records as *ālā māliks*, and they will receive their *mālikāna* not direct from the new owners but through the *tahsīl*.

The estates which Government has now taken over are Badalwa, Dhin-dhari, Ukasbaithi, and one-third of Motia in Indri, and Theh Mujibulla, Koli Khara, one-fourth of Khanpur, Rawanhera, Theh Bahiri, Basi, Kabulpur, and Khandakheri in Kaithal. The last five will probably become irrigable from Sirsa Canal and *rājba* No. 1 ; and four of them should become very valuable. The Indri estates form two solid blocks of grazing land. Khanpur is close to the town of Kaithal, and contains good pasture. Koli Khara is of little use for grazing but contains fine timber (*kikar*), which would be valuable if there were any market for it. The land is unsuited for cultivation. Theh Mujibulla is in the Sarusti valley and liable to be flooded. Much of the land is bad, and the grasses are coarse. In addition to the above Government owns in Kaithal 451 acres in Theh Ruherān, which is kept as a grazing *rakh*, and a small uncultivated estate near Pehowa, called Theh Barasu.

112. In carrying out Sir Henry Lawrence's policy in Thánesar Mr. Wynyard unfortunately adopted the procedure laid down in the notification of 28th November 1848, which was quite unsuited to the circumstances with which he had to deal. In his No. 79, dated 28th February 1849, he submitted a list of 13 areas which he proposed to sell by auction on the conditions embodied in the notification. These areas consisted partly of reserves belonging to the deposed Raja of Lúdwa and partly of excess waste cut out of inhabited estates. The revenues were to be fixed according to the scale laid down in the notification. The full demand was to be reached in the 29th year, and the settlements were to run for 50 years. Ultimately only 12 of the 13 areas were auctioned. Mr. Wynyard's sales were sanctioned by the Board of Administration in 1851 (No. 1827, dated 29th September 1851), but he was ordered not to carry the policy embodied in his proposals, which was not considered a judicious one, any further. The conditions of the sales made in 1849 briefly were—

- (a) The assessable area to be considered three-fourths of the culturable area.
- (b) One-fourth of the assessable area to be cultivated in five years, half in 10 years, and the whole in 20 years.
- (c) If on enquiry it was proved that the conditions had not been fulfilled, Government could realize a fine of four annas for every acre by which the area actually cultivated fell short of the area which the vendee was bound to bring under cultivation by the rules. On payment of this fine Government would give the cultivated land and one-third as much again from the waste in ownership to the vendee and resume the rest.
- (d) If the conditions were fulfilled, the vendee would be admitted to be owner of the whole area.

Considering that the lands were situated in the Pípli Chachra the terms were very severe, but they were explained to the parties when the sales took place. The assessments made under the rules proved to be absurdly high, and were largely reduced at the various revisions of the Thánesar settlement which took place between 1853 and 1862. Finally, by the orders contained in Punjab Government No. 416, dated 23rd April 1864, it was decided that the assessments of the leased estates should run for the same period as those of the other villages of the Thánesar district. The leases should all have been reported on in 1869, and the Deputy Commissioner had an enquiry made, and in his No. 333, dated 19th August 1871, he submitted his recommendations as to one of the estates, Bír Sonthi, and ordered the other files to be brought up when orders were passed regarding it. The Financial Commissioner's final orders resuming the greater part of Bír Sonthi were not received till 1876, and by that time the fact that the other cases were pending appears to have been forgotten. Another of the leased estates, Bír Sujra, also became the property of Government.

113. I had therefore only to report on 10 estates—eight in Pípli and two in Indri. The latter were Bír Narana and Bír Rái Tikhana. The lessees in the one were Rájpáts of a neighbouring Nardak village; the other was in the possession of a minor scion of the Kunjpura family. In both cases Government conferred the ownership on the lessees, subject in Bír Rái Tikhana to the grant of occupancy rights to the resident cultivators. The eight Pípli estates have an area of 5,993 acres, of which only 68 were cultivated when the leases were sold. Captain Larkins selected his own lessees, and got as a rule Jat landowners for the Kaithal estates, but Mr. Wynyard's auction purchasers were land speculators. A bania, Nágari Mal, who had been diwán of the deposed Raja of Lúdwa, bought Bír Kulwa, Bír Bartauli, and Bír Balsua; another bania, brother to the serishtadár of the Governor-General's Agent at Ambala, got Bír Pípli; and a third, Har-dwári Mal, Bír Mangauli and Bír Khairi. Two members of the Kunjpura family purchased Bír Babain and Bír Mathana. Most of Bír Babain was sold in 1869 to Málís, and the rest shortly after to a distinguished native officer belonging to the family of the Ludhrán jágirdárs of Ludhiána. Bír Mathana

was transferred to a bania, who sold three-fourths to Mális, and agreed with them that they should also cultivate the share which he retained. Bír Kalwa was sold by Nágár Mal's sons to Mális about 1872, and is now a flourishing estate. Bír Bartauli and Bír Balsua are still in the hands of Partáb Singh, son of Nágár Mal, and the tenants are Mális, whom he has treated with much harshness. Hardwári Mal's son, Jamna Dás, has retained Bír Mangauli and Bír Khairi. The former is fully cultivated, thanks to the Máli tenants, who are well treated; in the second the older tenants are Jats, Rors, and Brahmans, and the later Raiens. Every lease could have been cancelled in 1869, and Government could then have recovered penalties from the lessees, and have resumed all but a small part of the 5,993 acres leased. There was of course no question of now interfering with Máli purchasers. They had turned Bír Babain and Bír Kalwa into fine villages, and were rapidly improving Bír Mathana, a very recent purchase. I therefore proposed, and Government agreed, to confirm them as owners, and to admit that the one-fourth share of Bír Mathana retained by the bania was his property, provided he gave the Máli cultivators occupancy rights in the land, as indeed he appeared to be bound to do under the terms of a private agreement. In the two villages held by Partáb Singh, I suggested that Government should give him the choice of taking what he would have been entitled to under the terms of the lease in 1869, according to the enquiry then made, and surrendering the rest to Government, or being recorded owner of the whole and giving all the Máli tenants occupancy rights. To this course Government agreed; and the same policy was followed in the case of Jamna Dás's village of Bír Khairi. In Bír Mangauli the Máli tenants will be entered as occupancy tenants. In Bír Pipli Government will resume all the land lying to the north of the Ladwa-Pipli road, or about half of the whole, and acknowledge the lessee as owner of the rest. This will give Government a grazing rakh of 400 acres adjoining the Pipli encamping-ground.

114. As pointed out in para. 5, the inconvenient size of the Pipli and Kaithal tahsils became so apparent that, for settlement purposes, the old Gula tahsil was revived and put under a fifth Superintendent. Ambala with its six tahsils is a difficult district to manage, and the difficulty is increased by the fact that part of Pipli is very unlike the rest of the district, though very similar to neighbouring tracts in Karnál. The late Colonel Wace considered that a re-adjustment of boundaries was necessary in the interests of good revenue management. I submitted proposals by which tahsil Pánapat of Karnál would have been transferred to Delhi, and tahsil Pipli, with the exception of the Márkanda Bet, to Karnál. This proposal was negatived, and finally the Naili and Bangar Pehowa circles and eight villages of the Southern Chachra circle, or 89 estates in all, were transferred from Pipli to Kaithal, and the 15 outlying Budhláda villages from Kaithal to the Hissár district (Punjab Government notifications Nos. 715 and 716 of 15th December 1888). Ambala lost 214 square miles, including 70 of cultivation, and the Pipli tahsil is now of a manageable size. Karnál has gained by giving up the inconveniently situated and distant Budhláda villages; but the area of Kaithal is even larger than it was before, and now amounts to 1,289 square miles, or almost exactly the same as the whole of the Delhi district. An extra náib-tahsildár has been appointed at a special rate of pay and is stationed at Gula; but this is a mere makeshift, and it will be absolutely necessary, sooner or later, to revive the Gula tahsil.

115. It now only remains to notice some of the native officials who served under me. Munshi Alimulla, Extra Assistant Settlement Officer, brought a very high reputation as a Superintendent from previous settlements. I do not think he was quite as successful in the higher post, but he is an experienced, honest, and reliable officer. My best Superintendents were Kishu Pershád of Pipli and Alam Shah of Gula. The former, who is now tahsildár of Pipli, is an excellent revenue officer, and a careful and accurate worker; but he sometimes allows his valuable qualities to be marred by faults of temper. Alam Shah is an excellent specimen of the best of our older officials. He is devoted to the interests of the Government which he serves, and the hard work he endured in the unhealthy Naili country

tried his constitution severely. Thoroughly honest and ready of access, he was very popular with the landowners, and the name of the "Shahji" will long be remembered in Kaithal. Of course he has the faults of the school to which he belongs. Punctuality is not his strong point, and in his pursuit of justice he sometimes fails to recognise her in the guises which she assumes in our legal codes. Narsingh Dás did very well as Superintendent of Indri, considering that he came to the work with no previous practical experience of revenue work. He and Alam Shah are now working under Mr. Lawrence in the Jammu settlement. Towards the close of the settlement, Beli Rám, now Extra Tahsildár in the Gujranwála settlement, officiated for a considerable time as Superintendent of Jagádhri, and I was fully satisfied with his work.

*Dated January 1891.*



## Area (in acres) and Revenue Statement of Tahsils as at present constituted.

Tahsil.	Period.	Total area.	Forests.	UNCULTIVATED OTHER THAN FORESTS.						CULTIVATED.						REVENUE.				
				Not available for cultivation.		Available for cultivation.		Irrigated.		Unirrigated.		Assigned.	Khatai.	Total.	Number of canals or wells in use.	Total area of crops harvested by jharwar method.	Total area of crops harvested by jharwar method.			
				Unimproved Government waste.	Other.	Chab.	Aul.	Total irrigated.	Rainfed.	Total unirrigated.										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
JAMSHEDPUR	Regular Settlement 1940-55	254,420	...	44,130	1,848	34,853	4,002	2,120	4,711	12,908	337	140,672	141,329	154,592	...	339	1,04,651	1,00,783	2,05,434	1 3 9
	Revised Settlement 1952-59	248,421	...	46,470	4,896	30,640	5,442	2,054	3,975	10,772	10,746	144,885	155,631	156,403	160,162	413	1,18,877	1,22,516	2,40,893	1 7 2
	1959-60	250,247	12,012	49,797	342	27,982	3,108	2,080	2,021	7,902	11,239	150,519	161,751	160,643	151,682	345	1,17,576	1,51,343	2,38,919	1 6 6
PATNA	Regular Settlement 1949-56	324,024	...	57,244	1,642	117,405	24,981	5,014	21,302	828	149,588	15,044	150,431	...	...	1,810	81,838	1,44,047	2,25,885	1 2 6
	Revised Settlement 1952-59	307,810	...	41,942	6,800	114,759	24,010	4,002	189	27,910	41,712	126,894	168,466	186,816	180,922	1,872	86,129	1,40,531	2,26,660	1 3 10
	1959-60	337,635	...	46,212	1,427	108,537	18,361	1,705	6,111	27,152	381	142,178	194,420	200,430	181,748	1,154	81,889	1,54,378	2,36,266	1 2 4
BOKARO	Regular Settlement 1949-56	419,045	...	19,927	1,578	79,015	25,178	2,658	302	20,038	1,195	88,197	80,398	118,421	...	1,793	82,709	81,799	1,64,508	1 3 11
	Revised Settlement 1952-59	394,403	...	20,324	4,046	88,960	25,796	3,246	1,168	28,916	8,423	105,441	108,586	132,103	167,794	1,796	77,204	81,640	1,46,843	1 3 9
	1959-60	393,070	...	42,312	1,532	79,594	15,035	1,281	673	17,739	5,499	116,770	122,300	139,959	164,679	1,857	74,368	80,047	1,54,415	1 1 9
KATMAU	Regular Settlement 1953-56	817,950	...	154,022	1,606	435,432	26,669	4,549	2,113	27,751	685	177,714	178,809	200,160	...	2,073	29,615	1,76,144	2,05,759	0 2 0
	Revised Settlement 1952-59	854,841	...	95,047	4,029	351,127	21,873	1,157	10,969	33,819	44,015	285,575	330,490	364,859	281,956	1,902	31,466	2,17,113	2,48,579	0 10 11
	1959-60	894,705	...	97,047	6,018	336,771	29,856	1,316	9,284	31,452	31,119	307,488	358,647	398,081	179,516	1,676	29,323	2,17,143	2,46,465	0 10 2

Note.—The headings of the statement have been made generally to correspond with those of the annual agricultural statement III. The classification of uncultivated land in statement III differs somewhat from that given in the assessment reports, from the fact that for the two statements are taken, a 2, under column 4 in the first two lines, and land owned by Government has been shown.

\* The figures for the regular settlement exclude the hill areas of certain states and the area of the Kaimar forest. The figures for the revised settlement exclude the latter.

† The figures of area and revenue include areas and revenues of 7 estates transferred to India by river action after the regular settlement.

‡ The upper figures in the first line under column 30 and 31 show the revenue of the regular settlement as originally assessed with the rate on the cultivated area of that settlement; the lower figures show the revenue immediately before revision with the rate on the cultivated area of the revised settlement.

## APPENDIX A.

### *Instructions for the assessment of lands affected by river and canal action in tahsils Pipli and Jagádhrí and by ravine action in Jagádhrí.*

The following rules apply to the river Jamna with its spill channels, and the Western Jamna Canal in Jagádhrí and Pipli, to ravines in Jagádhrí, and to the following hill stream<sup>n</sup> with their spill channels and affluents in both tahsils :—

<i>Jagádhrí.</i>	<i>Pipli.</i>
Som. Pathrála or Boli. Chautang. Bakshi. Pandoi.	Umla. Márkanda, including the Botan and Gadla channels.

### A.—ASSESSMENT RULES APPLICABLE TO ESTATES SUBJECT TO THE ACTION OF THE JAMNA.

1. When land assessed as cultivated is rendered unfit for cultivation, or land assessed as pasture unfit for grazing, by river action, the original assessment will be remitted.

2. Assessed cultivated land which has, owing to river action, ceased to be fit for cultivation, but is fit for grazing, and unassessed land which has, owing to the same cause, become fit for grazing, will be assessed at 1 anna per acre or 2½ pies per kacha bigah.

3. The following rates will be applied in assessing new cultivation and cultivated land subject to river action which has improved or deteriorated, provided that no land which was cultivated at Settlement, and the assessment of which has not thereafter been remitted or reduced under these rules, shall pay a higher assessment than that imposed upon it at settlement :—

*Rates on cultivation—*

(a) In Pipli and Northern Jamna Khádir Circle of Jagádhrí :—

	Rs.	a.	As.	p.
Lowest	0	8	per acre	= 1 8 per kacha bigah.
Middle	0	14½	"	= 3 0 "
Highest or full	1	4	"	= 4 2 "

(b) In Southern Jamna Khádir Circle of Jagádhrí :—

	Rs.	a.	As.	p.
Lowest	0	8	per acre	= 1 8 per kacha bigah.
Middle	1	0	"	= 3 4 "
Highest or full	1	8	"	= 5 0 "

4. The application of one or other of these rates is a matter within the discretion of the assessing officer. But, in exercising this discretion, he will be guided by the following instructions :—

- (a) The character of the crops which are raised on the land is the best test of its quality.
- (b) Land which has only recently become fit for cultivation in consequence of the action of the river, and land which has been injured by deposits of sand, is usually sown with such inferior crops as masri, jamaasri, alsí, and barley. Such land should be assessed, according to its apparent quality, at the lowest or at the middle rate.
- (c) Generally speaking, the lowest rate will only be suitable in the first year of cultivation, when the land has been roughly cleared of jháo and sown with masri, &c.; but the lowest rate may be retained in subsequent years if the quality of the soil and crops renders this course desirable.
- (d) When the land yields fair crops of wheat, maize, or other superior staples, or when two crops are raised from it in a single year, the highest rate should usually be charged. But the highest rate should not be charged, although the crop is of a superior class, if the yield is markedly inferior.

- (e) The settlement rate or the full rate imposed under clause (d) should not subsequently be lowered because the land is found to be sown with inferior crops, unless there is reason to believe that its quality has deteriorated owing to river action.
- (f) When it is doubtful which of two rates should be applied, the lower should be taken.

5. The classification of land should not be too minute. If a survey number is not very large, it will usually be best to apply a single rate to the whole number, although different parts of the field may differ somewhat in the character of the crops grown and in the quality of the soil.

6. In calculating the revenue, no fractions of a bigah less than half will be taken into account. Any number of biswās below six will be disregarded. Six to 14 biswās will be treated as half a bigah, and any number of biswās above 14 as a whole bigah.

#### B.—ASSESSMENT RULES APPLICABLE TO ESTATES SUBJECT TO THE ACTION OF THE CANAL, TORRENTS, OR RAVINES.

7. The 1st, 2nd, 5th and 6th of the rules applicable to estates subject to the action of the Jamna apply *mutatis mutandis*.

8. When cultivated land has been materially injured by the action of the canal, torrents, or ravines, but is still capable of cultivation, half the assessment imposed at settlement will be remitted. The full rate will be reimposed if the land again becomes of average quality.

9. Land which was unassessed at settlement, but has since become capable of cultivation owing to the action of the canal or torrents, may be assessed, according to its quality, at the full village assessment rate for unirrigated land or at half the full rate, provided—

- (a) that the above rates shall not be imposed under Rule 3, unless the land is actually cultivated;
- (b) where in the same estate there are two rates, one for land which at settlement was affected by the river, and one for land which was not so affected, the former is the rate to be used in applying Rule 3.

#### C.—PROCEDURE.

10. In each year, as soon as the river has fallen to its ordinary cold weather level, measurements will be made in the case of estates on the Jamna, in order to bring to record the changes caused by river action, and to assess land which has improved or deteriorated from the same cause.

11. In the case of estates affected by the canal, torrents, or ravines, measurements will ordinarily only be made in the year when the quadrennial attestation of the estates takes place, provided that the Deputy Commissioner may order the lands in any estate to be measured and assessed in a year other than that of quadrennial attestation, if changes have occurred in the estate as a whole, or in individual holdings of sufficient importance to render this course desirable. In the case of a large estate, part of which comes under special attestation in one year and part in a second year, the measurements should, as a rule, be made in the first year.

12. Early in October the tahsildār will send to the Deputy Commissioner a list of estates not coming under quadrennial attestation in which he proposes to make measurements under Rule 2, explaining the grounds of his proposal. The Deputy Commissioner will return the list with his orders on it to the tahsildār.

13. The estates having fixed boundaries, changes are confined to alteration of class, the total area of each estate remaining unaffected.

14. The patwāri will draw on his girdāwari map a thin red line round all areas previously assessed below settlement or full rates, including areas assessed after settlement at grazing rates and all areas improved or deteriorated by river action in the past year. He will note the English year at one or more places on the line. If the land lies in several blocks, each should be enclosed by a red line and numbered a, b, c, &c. The block or blocks will contain—

- (a) all land previously assessed below settlement or full rates, including land assessed at grazing rates after settlement;
- (b) all cultivated land previously assessed at settlement or full rates which has changed for the worse;
- (c) all land previously unassessed which has been cultivated or become fit for grazing.

In defining the limits of the "blocks," fields should be treated as a whole and entirely included or excluded. If the river bed as it existed at settlement has been given a single number, each square should now be treated as a field and dealt with under section 81 of Part I of Rules under the Land Revenue Act.

15. The patwári will prepare in duplicate a tracing or tracings of the areas mentioned in Rule 14. He will then make any measurements required, and draw up in duplicate a khasra in form A of all fields included in these tracings. He will fill up the first nine columns in ink, and columns 10 and 11 in pencil. He will also make in the register of fields previously assessed below full rates (Statement B) the necessary entries relating to crops grown in the past year, or, in the case of villages affected by torrents, ravines, or the canal, in all years since alluvion and diluvion assessments were last made.

16. When the measurements are to be inspected by any officer, the patwári will plant flags round the areas mentioned in Rule 14.

17. The kánungo will satisfy himself that the patwári has included in his map and khasra all land which under Rule 14 should be so included, will test the measurements and check the khasra.

18. As soon as the khasra has been checked by the kánungo, the patwári will prepare in duplicate in form C a village abstract of changes due to river, canal, or ravine action. He will make all the entries in columns 1 to 3, and also those giving the details of area and revenue for the previous year, in ink. The entries showing deductions and additions and the area and revenue for the current year will be made in pencil.

19. The tahsildár will test the maps, &c., on the spot, and pass orders as to classes of soil and rates after inspecting the fields and examining the entries in forms A and B. He will have entered in ink in the khasra the class and rate for each field as determined by himself. He will then make the patwári complete under his directions form C, and enter in form B all fields assessed for the first time below settlement or full rates. He will also have an extract from register B, showing those numbers only of which the assessment has been changed in the current year put on the file. This extract should only give the entries relating to these fields for the past four years. He will add a brief note to the file, explaining the changes which have occurred and his assessment proposals. He will then sign the maps, khasras, extract from register and abstracts of area and revenue (Form C), taking over the extract and the Government copies of the other papers. He will also sign the register (Form B), which the patwári will retain in addition to his own copies of the other papers.

20. When the revenue officer who is empowered to pass final orders on the assessment disposes of the case (see para. 18 of Revenue Circular 33), any corrections in the papers required will be made in the Government copies, and the patwári will be ordered to correct his own copies. He will also prepare in duplicate a khewat, showing the result of the new assessment (Form D), and forward both copies to the tahsildár through the kánungo. The tahsildár will see that the khewat agrees with the orders, and, signing both copies, will file one with the record and return the other to the patwári. The latter will embody the new figures in future bāchh papers, and will give a fard showing the result, free of charge, to each khewatidār concerned.

21. The whole file regarding changes of assessment due to river, canal, or ravine action will be prepared on Lucknow paper, stitched at the back in book form. The tracings of maps will be on sheets not exceeding the size of a regular mapping sheet. These will be placed in an envelope of the full size of the file, and will not be folded more than twice.

22. The district report on changes of assessment due to river, canal, or ravine action will be prepared in form E, which will take the place of form XXVA prescribed in Revenue Circular 33.

23. Cases frequently occur in which remission of the current demand is required in consequence of destructive inundation, although no permanent injury has been done to the soil rendering a reduction of revenue needful. When making his inspection, the tahsildár should report on all such cases, including cases occurring in estates in which no measurements will be made in the current year. Reports recommending such remissions should be made in forms A or B appended to Revenue Circular 31 instead of in form XXVB appended to Circular 33, and should be submitted for sanction along with form E.



Form A.—Khasra of changes due to River, Canal, or Ravine action during Year 18.

1	2	3	4	5	6	7	8	9	10	11	12
Serial No.	No. of holding.	Khasra No.	Patti.	Owner.	Tenant.	Area.	Former Revenue Class and Demand.		Present Revenue Class and Demand.		Remarks.
							Class.	Demand.	Class.	Demand.	
1	7	11	Alfa	Rahona	Jot Ram	17 6	Kharij parts	...	Charand	0 3 7	
2	8	27	Do.	Kahn Daa	Khandisat	20 11	Charand	0 4 3	Adna	2 2 0	
						20 5	harabasti	0 4 0	Darmiyana	2 15 0	
						40 16		6 8 3		5 15 0	
3	9	23	Do.	Do.	Do.	15 10	Darmiyana	2 14 0	Kand	4 0 0	

Columns 8 and 10.—The only revenue classes will be in the case of lands subject to the action of the Jāmā,

(a). Unassessed (Kharij parts).

(b). Fit for grazing (charand).

(c). Paying Settlement rate on cultivation or grazing (harabasti).

(d). Paying full rate (Kand).

(e). Paying middle rate (darmiyana).

(f). Paying lowest rate (adna).

(g). Unassessed (Kharij parts).

(h). Fit for grazing (charand).

(i). Paying Settlement rate (harabasti).

(j). Paying half rate (Kand).

And in the case of lands subject to the action of torrents, canal, or ravine,

In the form entries have been made for three fields.

**Form B.**—Register of fields assessed below full value and of fields assessed at grazing value.

[illegible]

and 50 cm. packing columns for 20 runs.

4. A full number will be scored out in red ink when the assessment is entirely omitted or when the full rule is imposed. If it again becomes assessable a new entry will be made.

**Form C.—Abstract Manufacturer Statement of changes ascertained at end of Kharif Sambat 19....., A. D. 18.....**

No.	Name of estate and Revenue Officer.	LAND CHARGED WITH A NEW RATE SINCE SETTLEMENT.												DIFFERENCE BETWEEN REVENUE BY KASTHANITI AND REVENUE AS NOW ASCERTAINED.	Excess to be collected as fluctuating revenue.	Deficiency to be remitted.	
		LAND STILL PAYING SETTLEMENT RATE ON CULTIVATION OR GRAZING.			At full rate, 4 annas 2 pice per kachin bigha.			At middle rate, 3 annas per Achin bigha.			At lowest rate, 1 anna 5 pice per Achin bigha.						TOTAL.
		Area.	Demand.	Rs.	Area.	Demand.	Rs.	Area.	Demand.	Rs.	Area.	Demand.	Rs.				
By last year's paper ending Babi Sanyat 19		Bighas.	Rs.	Bighas.	Rs.	Bighas.	Rs.	Bighas.	Rs.	Bighas.	Rs.	Bighas.	Rs.	Bighas.	Rs.	Bighas.	Rs.
1. Old figures for land of which rate has been changed for the better		40	10	100	20	100	20	100	20	100	20	100	20	100	20	100	20
2. Old figures for land of which rate has been changed for the worse		40	10	100	20	100	20	100	20	100	20	100	20	100	20	100	20
Total		80	20	200	40	200	40	200	40	200	40	200	40	200	40	200	40
3. New figures for land of which rate has been changed for the better		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. New figures for land of which rate has been changed for the worse		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Area and revenue ascertained for Kharif 19, and Babi 19		2,100	510	210	54	420	75	300	38	1,700	22	1,540	632	702	10	632	10

NOTE.—1. This is the form for villages on the Janna. The rates entered are those for Pipli and the Northern Janna Khads of Jagadhri. In the form for villages subject to the action of the canal, torrents, or ravines, substitutes for columns 6 to 11 two columns:

2. The area figures in column 16 under "Deficit (1) and (2)" must equal those under "And (3) and (4)" respectively. If the Island has been submitted at the proper time, the entry in column 17 should agree with the revenue by last year's report shown in column 16.

**Form D**—*Khasat showing changes in revenue of holdings as ascertained at end of Kharif Sambat 19*.

[illegible]

1. Only those lowest numbers need be shown in which changes have taken place.

1. Only those sheet numbers need be shown in which changes have taken place.  
2. Each sheet number in which change has taken place should be shown separately, and columns 6 to 13 filled up for it. The remaining fields of the holding need not be shown separately.



**Form E.**—*Annual Statement showing alterations in the Land Revenue Demand in District due to the action of Rivers, the Canal, and Ravines.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Taluk.	Name of river, torrent, or canal.	Number of taluqa affected.		LAND STILL PAYING THE SETTLEMENT RATE ON CULTIVATION OR GRAZING.		LAND CHARGED WITH A NEW RATE SINCE SETTLEMENT.		LAND NOT ASSESSED.		TOTAL.		DIFFERENCE BETWEEN REVENUE BY LAST KIST, DEMAND AND REVENUE AS NOW ASCERTAINED.		Reverts explaining entries in columns 1 and 2, and showing rates allowed by the rules.
				Area.	Demand.	Area.	Demand.	Area.		Area.	Demand.	Excess to be collected as fluctuating land revenue.	Deficiency to be re-estimated.	
				Acres.	Rs.	Acres.	Rs.	Acres.		Acres.	Rs.	Rs.	Rs.	
JAGADPUR.	Area and revenue by last year's papers undling field	10	...	...	...	...	...	...	...	...	...	...	...	
	1. Old figures for land which has been changed for the better		...	...	...	...	...	...	...	...	...	...	...	
	2. Old figures for land which has been changed for the worse		...	...	...	...	...	...	...	...	...	...	...	
	Total		...	...	...	...	...	...	...	...	...	...	...	
JAGADPUR.	3. New figures for land which has been changed for the better		...	...	...	...	...	...	...	...	...	...	...	
	4. New figures for land which has been changed for the worse		...	...	...	...	...	...	...	...	...	...	...	
	Total		...	...	...	...	...	...	...	...	...	...	...	
	Area and revenue ascertained for Kharif 19 and Rabi 19		...	...	...	...	...	...	...	...	...	...	...	

NOTE.—1. Each river or torrent will be shown separately in column 2.  
 2. All villages affected by any action will be shown together, and the entry in column 3 will be "Ravines."  
 3. The entries relating to assigned revenue will be made in red ink, and the additions or reductions under the head of commutation to be made in the kistbandi will be noted at the end of the statement.  
 4. If the district had revenue roll has been prepared at the proper time, the entry in column 12 should agree with the demand by last year's papers in column 11.  
 5. In columns 13 and 14 the net maximum increases and decreases will be shown; thus in columns 13 and 14 the entries will be the sums of the entries in columns 13 and 19 respectively of the abstract of the year Statement C.

*Instructions for the assessment of lands affected by River and Canal action in Pargana Indri.*

The following rules apply to the River Jamna with its spill channels, including the Nun and Puran nalas, and to the Western Jamna Canal above Indri and the Buddhakhhera escape channel :—

**A.—ASSESSMENT RULES APPLICABLE TO ESTATES SUBJECT TO THE ACTION OF THE JAMNA.**

1. When land assessed as cultivated is carried away or rendered unfit for cultivation, or land assessed as pasture is carried away or rendered unfit for grazing by river action, the original assessment will be remitted.

2. New uncultivated land added by alluvion which is fit for grazing, unassessed land which has become fit for grazing owing to the action of the river, and assessed cultivated land which has from the same cause ceased to be fit for cultivation but is fit for grazing, will be assessed at  $2\frac{1}{2}$  pies per kacha bigah, or one anna per acre.

3. In villages subject to the action of the Jamna and its spill channels, the following rates will be applied in assessing new cultivated land added by alluvion, land not cultivated at settlement but subsequently brought under cultivation, and land cultivated at settlement which has improved or deteriorated, provided that—

- (a) no land which was cultivated at settlement, and the assessment of which has not thereafter been remitted or reduced under these rules, shall pay a higher assessment than that imposed upon it at settlement; and
- (b) the assessment will not be reduced for deterioration not due to the action of the river.

*Rates on cultivation.*

Lowest	...	...	1 anna 8 pies per kacha bigah, or 8 annas per acre.
Middle	...	...	3 " " " " or 14½ "
Highest	...	...	4 " " " " or Rs. 1½ "

Rules 4—6. As in Rules for Jagádhrí and Pipli.

**B.—ASSESSMENT RULES APPLICABLE TO ESTATES SUBJECT TO THE ACTION OF THE CANAL AND THE BUDDHAKHERA ESCAPE.**

7. The 1st, 2nd, 5th, and 6th of the rules applicable to estates subject to the action of the Jamna apply *mutatis mutandis*.

8. When cultivated land has been materially injured by the action of the canal or the Buddhakhhera escape, but is still capable of cultivation, half the assessment imposed at settlement will be remitted. The full rate will be reimposed if the land again becomes of average quality.

9. Land which was unassessed at settlement, but has since become capable of cultivation owing to the action of the canal or of the Buddhakhhera escape, may be assessed, according to its quality, at the full village assessment rate for unirrigated land or at half the full rate, provided—

- (a) that the above rates shall not be imposed unless the land is actually cultivated;
- (b) where in the same estate there are two rates, one for land which at settlement was affected by the canal or escape channel and one for land which was not so affected, the former is the rate to be used in applying this rule.

**C.—PROCEDURE.**

10. As in Rule 10 for Jagádhrí and Pipli.

11. In the case of estates affected by the canal or the Buddhakhhera escape, measurements will ordinarily only be made in the year when the quadrennial attestation of the estate takes place, provided that the Deputy Commissioner may order the lands in any estate to be measured and assessed in a year other than that of quadrennial attestation, if changes have occurred in the estate as a whole or in individual holdings of sufficient importance to render this course desirable. Early in October the tahsildár will send to the Deputy Commissioner a list of estates not coming under quadrennial attestation in which he proposes to make measurements, explaining the grounds of his proposal. The Deputy Commissioner will return the list with his orders on it to the tahsildár.

12. In cases of diluvion the patwári will chain the remaining parts of fields which have been partly washed away, and will by offsets from the nearest squares plot on the girdáwari map the position of the edge of the river, showing it by a red line, at both ends of which he will write "bardí" and the English year.

## 13. In the case of alluvion—

- (a) if the area gained is included in the girdawari map, the patwari will plot the boundary of the new land, as in the case of diluvion, showing it by a red line, at both ends of which he will write "haramad" and the English year;
- (b) if the land gained was not included in the girdawari map, but was included in the settlement map, or in any subsequent map, the patwari, after plotting the line of the river by prolonging the squares up to the deep stream, will trace the old field boundaries in red ink from the proper map on to his girdawari map;
- (c) if the land gained has not before been included in the estate, the patwari will map the new land by extending the squares as above, and will divide it into numbers corresponding with the limits of the squares.

14. Whether the field numbers are according to squares or according to former boundaries of properties, sub-numbers will not be made for plots of new cultivation or for temporary cultivating holdings. The premature record of cultivators' sub-numbers should be avoided, because such divisions are often obliterated and recast, and their introduction into the map and annual papers complicates future business.

NOTE.—Rules 12 to 14 do not apply to estates on the canal, the Buddhakhera escape, or spill channels of the Jamna such as the Parna, where changes are confined to alteration of class.

15. The patwari will draw a green line on the map round (a) all land which has been improved or deteriorated by river action during the year and (b) all land previously assessed below settlement or full rates, including land assessed after settlement at grazing rates. If the land lies in several blocks, each should be enclosed by a green line and numbered a, b, c, &c. In defining the limits of blocks, fields should be treated as a whole and entirely included or excluded.

16. The patwari will prepare in duplicate tracings of the areas mentioned in Rules 13 and 15, and draw up in duplicate khasras of land lost by diluvion (Form A), gained by alluvion (Form B), and improved or deteriorated by river action (Form C). In form C he will fill up the first 9 columns in ink and columns 10 to 12 in pencil. He will also make in the register of fields previously assessed below full rates (Form D) the necessary entries relating to crops grown in the past year, or, in the case of villages affected by the canal or the Buddhakhera escape, in all years since alluvion and diluvion measurements were last made.

17. When the measurements are to be inspected by any officer, the patwari will plant flags round the areas mentioned in Rules 13 and 15.

18. The kánungo will satisfy himself that the patwari has included in his maps and khasra all land which under Rules 13 and 15 should be included, will test the measurements, and check the khasra.

19. As soon as the khasra has been checked by the kánungo, the patwari will prepare in duplicate in form E a village abstract of changes due to river or canal action. He will make all the entries in columns 1 to 3, and also those giving the details of area and revenue for the previous year in ink. The entries showing deductions and additions and the area and revenue for the current year will be made in pencil.

20. The tahsildar will test the maps, &c., on the spot, and pass orders as to classes of land, rates, and revenue after inspecting the fields and examining the entries in the khasras and in form D. He will have entered in ink in the khasra the class and rate for each field as determined by himself. He will at the same time make the patwari enter in form D the rate against each field of which the class has been changed, and also all fields assessed for the first time below settlement or full rates. He will also have an extract from form D, showing those numbers only of which the assessment has been changed in the current year, put on the file. This extract will only give the entries relating to those fields for the past four years. Form E will be completed by the patwari under the tahsildar's directions. The tahsildar will add a brief note to the file, explaining the changes which have occurred and his assessment proposals. He will then sign the maps, khasras, extract from form D, and abstract of area and revenue (Form E), taking over the extract and the Government copies of the other papers. He will also sign the register (Form D), which the patwari will retain in addition to his own copies of the other papers.

21 to 24. As in Rules 20 to 23 for Jagadhri and Pipli with some verbal alterations.

**Form A.—Diluvion Khayra (for Villages on the Jamna only).**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Serial No.	No. of holding.	Khanna No.	Toted or Faddi.	Owner.	Tenant.	FORMER AREA, CLASS AND REVENUE.			LAND LOST.				REMAINING LAND.			REMARKS.	
						Area.	Class.	Revenue.	Dimensions.		Area.	Class.	Revenue.	Area.	Class.		Revenue.
						B. D.		Rs. a. p.	Length.	Breadth.							

**Notes.**—The revenue shown in column 17 will not agree with the figure in column 9, minus that in column 14, if the class of the land shown in column 15 has been changed by the action of the river. In that case the land in column 16 will also be shown in forms C and D, a note to that effect being entered in the Remarks column.

The only revenue classes will be (a) unassessed (sharij patta), (b) Rs. for grazing (charaud), (c) paying settlement rate on cultivation or grazing (bandobasti), (d) paying full rate (kamil), (e) paying middle rate (darsayaka), (f) paying lowest rate (adami).





Form C.—*Khasra of changes due to River or Canal action during year.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Serial No.	No. of holding.	Khasra No.	Pati.	Owner.	Tenant.	Former Area, Revenue Class, and Demand.			New Area, Revenue Class, and Demand.			Remarks.	
						Area.	Class.	Demand.	Area.	Class.	Demand.		
								Rs. n. p.			Rs. n. p.		

Columns 7 & 10.—The new area may in some cases differ from the old, see notes to Form B, columns 8 and 11. The only revenue classes will be in the case of lands subject to the action of the Jamsa—

- (a) unassessed (kharaj paria).  
 (b) fit for grazing (charand).  
 (c) paying settlement rate on cultivation or grazing (bandobast).  
 (d) paying full rate (band).  
 (e) paying middle rate (darmiyat).  
 (f) paying lowest rates (adna).  
 (g) unassessed (kharaj paria).  
 (h) fit for grazing (charand).  
 (i) paying settlement rate (bandobast).  
 (j) paying full rate (band).

And in the case of lands subject to the action of the canal and the Boudhachet escapes—

- (a) unassessed (kharaj paria).  
 (b) fit for grazing (charand).  
 (c) paying settlement rate (bandobast).  
 (d) paying full rate (band).

Form D.—*Register of Fields assessed below Full Rates and of Fields assessed at Gracing Rates.*

(As in Form B. appended to rules for Jagadhri and Pipri).

**Form E.**—*Abstract Mauzawár Statement of Changes ascertained at end of Kiarif Sambat 19*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Assessment No.	Name of estate and its assessment circle.	DETAILS.	Land still paying assessment rate on cultivation (own or government) (sq. ft.)		LAND CHARGED WITH A NEW RATE SINCE SETTLEMENT.										TOTAL.		Revenue by last Kharif.	Excess to be collected as floating revenue.	Deficiency to be remitted.
			Area.	Demand.	At full rate, 4 annas per bigha.	At old rate, 3 annas per bigha.	At double rate, 8 annas per bigha.	At lowest cultivated rate, 2 annas per bigha.	At growing rate, 2 annas per bigha.	Area.	Demand.	Area.	Demand.	Area.	Demand.				
		By last year's papers ending Rabi Sambat 19	Bighah.	Rs.	Bighah.	Rs.	Bighah.	Rs.	Bighah.	Rs.	Bighah.	Rs.	Bighah.	Rs.	Bighah.	Rs.	Rs.	Rs.	
		1. On account of diversion																	
		2. Old figures for land of which rate has been changed for the better.																	
		3. Old figures for land of which rate has been changed for the worse.																	
		Total																	
		4. On account of alluvion																	
		5. New figures for land of which rate has been changed for the better.																	
		6. New figures for land of which rate has been changed for the worse.																	
		Total																	
		Area and revenue ascertained for Kharif 19 and Rabi 19																	

Column 3. HEAD 1.—Figures for dilution will be got from columns 12 to 14 of Form A.

HEAD 1.—Figures for migration are given from columns 12 to 14 of Form A.  
 HEADS 2 & 3.—Figures will be got from columns 7 to 9 of Form C.

HEADS 4.—Figures for affluents will be got from columns 13 to 14 of Part II.

REPTILES 3 & 6.—Figures will be got from columns 10 to 12 of Series C after studies.

CONCERNED TO 11.—AN CHINESE SUBJECT TO ARREST BY CHINESE CRUISE, ALLEGEDLY FOR THREE SIX COLUMN TWO COLUMNS:—

$A\frac{1}{2}$ half rates.	Demand.
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Column 16—A rose in this column under heads 2 and 3 and heads 3 and 4 should agree.

Column 19.—Aves. In this column under items 2 and 3 are noted 3 and 6 animals agree.

**Form F.**—*Khowat showing changes in revenue of Holdings as ascertained at end of Kharif Sambat 18*,  
(As in Form D. appended to rules for Jagadhri and Pipli).

# Form G.—Annual Statement showing alterations in the Revenue Demand in

District due to action of River or Canal.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Tahsil or Pargana.	Name of River or Canal.	Number of Estates affected.	Detail of Causes.	Land still paying the settlement rate on cultivation or grazing.		Land charged with a new rate since settlement.		Land not assessed.		Total.		Difference between revenue by last Kistbandi and revenue as now ascertained.		Remarks explaining entries in columns 7 and 8 and showing area assessed at each of the rates allowed by the rules.
				Area.	Demand.	Area.	Demand.	Area.		Area.	Demand.	Revenue by last Kistbandi.	Deficiency to be made good.	
				Acres.	Rs.	Acres.	Rs.	Acres.		Acres.	Rs.	Rs.	Rs.	
			Area and revenue by last year's papers ending Babi 19											
			1. On account of dilution											
			2. Old figures for land which has been changed for the better											
			3. Old figures for land which has been changed for the worse											
			Total											
			4. On account of alluvion											
			5. New figures for land which has been changed for the better											
			6. New figures for land which has been changed for the worse											
			Total											
			Area and revenue ascertained for Kharif 19 and Babi 19											

Columns 11 and 12.—If the district rent-roll has been prepared at the proper time, the entry in column 12 should agree with the demand by last year's papers in column 11.  
 Columns 13 and 14.—Show net monetary difference. The entry in column 13 will be the total of the figures in column 12 of the mutasafir Statement B. The entry in column 14 will be the total of the figures in column 14 of the mutasafir Statement B.



## APPENIDX B.

### *Instructions for Assessment, and important Notifications relating to Karnál-Ambala Settlement.*

The instructions issued for the assessment of Karnál-Ambala were as follows :—

The general principle of assessment to be followed is that the Government demand for land revenue shall not exceed the estimated value of half the net produce of an estate, or, in other words, one half of the share of the produce of an estate ordinarily receivable by the landlord, either in money or kind. In applying this principle in the case of the portions of the districts abovenamed where kind rents prevail, special attention should be given by the settlement officer to produce estimates. In estimating the land revenue demand the settlement officer will take into consideration all circumstances directly or indirectly bearing upon the assessment, such as rent rates where money rates exist, the habits and character of the people, the proximity of marts for the disposal of the produce, facilities of communication, the incidence of past assessments, the existence of profits from grazing, and the like. These and other considerations must be allowed their weight.

Punjab Government Notification No. 123—572, dated 17th May 1882.

Whereas portions of the Ambala and Karnál districts are to be put under settlement, His Honor the Lieutenant-Governor is pleased, with the previous sanction of the Governor-General in Council, to issue the following notification of settlement in accordance with the provisions of Section II of the Punjab Land Revenue Act, 1871. The local area which is to be put under settlement consists of Tahsils Jagádhrí and Piplí of the Ambala district, and in the Karnál district Tahsil Kaithal and that portion of Tahsil Karnál of which the previous settlements have expired, commonly known as Pargana Indri.

2. The settlement will be made by the following officers ; and, in exercise of the powers conferred by Sections 49 and 50 of Act XVII of 1877, the Lieutenant-Governor hereby invests these officers with the civil judicial powers stated opposite their names respectively, and directs that such powers shall be exercised in subordination to, and subject to the control and superintendence of, the courts of the Settlement Commissioner and of the Financial Commissioner, Punjab :—

Names of Officers.	Designation.	Powers.
Mr. H. G. Thomson ...	Settlement Officer in charge of the Settlement.	Powers of a Deputy Commissioner defined in Act XVII of 1877, to decide suits and hear appeals :— (1) Under the Punjab Tenancy Act, 1868 ; (2) Alter or cancel any entry in the register of names of proprietors of revenue paying estates ; (3) Under Section 2 of the Specific Relief Act, 1877 ; (4) For declaration of title in land, or the rent, revenue or produce of land, brought by parties in possession of the rights claimed.
Munshi Alimulla, Honorary Assistant Commissioner.	Settlement Officer ...	Ditto ditto.
Superintendent.		
Kálka Parshád ...	Ditto ...	Powers of a Tahsildár with special powers in respect of the same classes of cases.
Parneshri Saháí ...	Ditto ...	Ditto ditto.
Kishn Parshád ...	Ditto ...	Ditto ditto.
Karm Chand ...	Ditto ...	Ditto ditto.

Appeals from the orders of the Superintendents—Kálka Parshád, Parneshri Saháí, Kishn Parshád, and Karm Chand—will lie to the courts of Mr. R. G. Thomson and Munshi Alimulla, and appeals from the orders of Mr. Thomson and Munshi Alimulla will lie to the courts of the Settlement Commissioner and of the Financial Commissioner, Punjab, according to the provisions of the Code of Civil Procedure and of the Punjab Courts Act, 1877.

3. The settlement to be made will be a resettlement, and will comprise both a re-assessment of the revenue and a revision of the record of rights.

4. Surveys and plans will be made for the whole tract hereby placed under settlement.

Punjab Government Revenue and Agriculture Department Notification No. 125—574, dated 17th May 1882, invested Mr. R. G. Thomson and Munshi Alimulla with the powers of Deputy Commissioners, and Settlement Superintendents with the powers of tahsildars.

Punjab Government Revenue and Agriculture Department Notification No. 82, dated 18th April 1883, appointed Mr. J. M. Duns to the charge of the settlement, with effect from the afternoon of 22nd December 1882.

Punjab Government Notification No. 236, dated 14th November 1888.

In exercise of the powers conferred by Section 29 (1) of the Punjab Land Revenue Act, 1887, the Hon'ble the Lieutenant-Governor is pleased to fix Rs. 4-13-6\* as the proportion which the village officer's cess shall bear to the annual value of the land in the Kaithal tahsil of the Karnal district.

NOTE.—Under the orders passed on the assessment report of Indri the rate of the patwari cess in that pargana was fixed at Rs. 5-7-6 per cent.

Punjab Government Notification No. 17, dated 16th January 1889.

In exercise of the powers conferred by Section 29 (1) of the Punjab Land Revenue Act, 1887, the Hon'ble the Lieutenant-Governor is pleased to fix Rs. 5-3-4\* as the proportion which the village officer's cess shall bear to the annual value of the land in the Pipli tahsil of the Ambala district.

Punjab Government Notification No. 46, dated 25th February 1889.

In exercise of the powers conferred by section 29 (1) of the Punjab Land Revenue Act, 1887, the Hon'ble the Lieutenant-Governor is pleased to fix Rs. 4-13-6\* per centum as the proportion which the village officer's cess shall bear to the annual value of the land in the Jagadhri tahsil of the Ambala district.

Punjab Government Notification No. 154, dated 7th June 1889.

His Honor the Lieutenant-Governor is pleased, with the sanction of His Excellency the Governor-General in Council, to lay down the following rule for the assessment, until further orders, of the "owner's rate" under Sections 37, 38, and 39 of Act VIII of 1873 (The Northern India Canal and Drainage Act) on all land irrigated from the Western Jamna Canal in the Indri pargana and Kaithal tahsil of the Karnal district and the Jagadhri and Pipli tahsils of the Ambala district.

#### Rule.

In all estates receiving irrigation from the Western Jamna Canal the owner's rate shall, until further orders, be assessed at one-half of the occupier's rate leviable on occupiers of canal-irrigated lands.

Proviso.—The owner's rate shall no where exceed the sum which, under the rules for the time being in force for the assessment of land revenue, might be applied on such land on account of the increase in the annual value of produce thereof caused by the canal.

2. This rate will be first collected in the Indri pargana for the autumn harvest of 1886, and in the rest of the tract under reference from the autumn harvest 1888.

\* Lamhardri Rs. 5 per cent, and patwari Rs. 4-11-4 per cent. on land revenue.

† Lamhardri Rs. 5 per cent. and patwari Rs. 5-6-8 per cent. on land revenue.

‡ Lamhardri Rs. 5 per cent, and patwari Rs. 4-11 per cent. on land revenue.

5. The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors, and who will report to the Board at its next meeting.

The Board of Directors has also appointed a committee to investigate the affairs of the company, and to report to the Board at its next meeting.

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