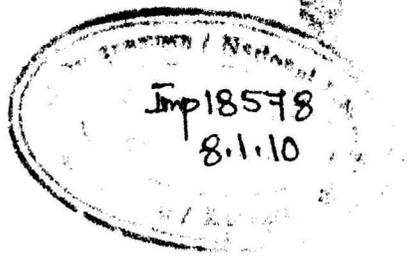


REPORT
ON THE
SETTLEMENT OPERATIONS
IN THE
THAYETMYO DISTRICT
Season 1900-1901.



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1902.



RESOLUTION
ON THE
REPORT ON THE SETTLEMENT OPERATIONS
IN THE
THAYETMYO DISTRICT.
SEASON 1900-1901.

Extract from the Proceedings of the Lieutenant-Governor of Burma in the Revenue Department No. 2S-25,
dated the 21st June 1902.

READ—

The report on the Settlement Operations in the Thayetmyo district, season 1900-1901, with note
by the Settlement Commissioner, Burma.

RESOLUTION.—The report relates to the whole of the cadastrally surveyed portion of the Thayetmyo district (Lower Burma portion) comprising a total area of 577 square miles.

2. The district is very similar in its general characteristics to Prome, which was brought under revision settlement the same year. In both districts the rainfall is about the same average amount, and, to a certain extent, precarious. There is but little land available for extension of paddy cultivation, all suitable land being already taken up. Holdings are small, there is considerable pressure of population on the soil, and the sale and letting values of land are in consequence very high.

3. Communications in the district are generally good. The proposed extension to the Thayetmyo-Kyaukgyi road was taken in hand some years ago, but was stopped by His Honour's orders because it was held that it would be very expensive and of little value.

4. The area of land left fallow annually (average for four years, 17 per cent.) is considerable and shows that cultivation is rather precarious, as in a district where holdings are so small as in Thayetmyo every available piece of land would naturally be cultivated every year when possible. The two-anna fallow rate is at present allowed without application, and this privilege should be continued; it will prevent the recurrence of cases similar to those mentioned in paragraph 53 of the report.

5. The stock of cattle is ample, and considerable numbers are bred for sale; facilities for grazing are everywhere abundant and the Lieutenant-Governor agrees that it is not necessary to reserve grazing-grounds in Thayetmyo. He also agrees that the gradual reservation of fuel reserves is a salutary measure; the question should be taken up by the District authorities in communication with the Forest Department.

6. The people of the Thayetmyo district cannot as a whole be said to be very well off; they, however, live in fair comfort. Sir Frederic Fryer thinks that the Settlement Officer has recorded (paragraph 7 of the report) an unnecessarily

low opinion of the Thayetmyo people. So far as His Honour has observed there is nothing particular to distinguish them from the mass of the people of the country. It would probably be advantageous if the congestion of population could be relieved by migration to more fertile districts where land is available.

7. Fourteen thousand four hundred and forty-five acres out of a total area of 55,686 acres of paddy land are held by rent-paying tenants at the very high average rent of Rs. 8.83 per acre. The highest average rent, Rs. 10.03 per acre, is paid in Tract IV where, however, the smallest proportionate area is rented, and the lowest, Rs. 4.67 per acre, in Tract VII, which is undoubtedly a poor tract. The average incidence of the present revenue per acre is Rs. 1.13, so that, notwithstanding that Thayetmyo is by no means a rich district and that holdings are small, some increase of revenue may fairly be taken.

8. His Honour agrees with the Commissioner of the Minbu Division and the Settlement Commissioner that the standard of one-twelfth net produce, which has been adopted by them in fixing the proposed rates, is as high as can be taken in view of general circumstances of the district. All considerations of outturn, prices, and tenants' rents would warrant very much higher rates than those which have been proposed, but crops are undoubtedly precarious, the people are not in very prosperous circumstances and there is practically no export of paddy from the district. He also agrees with the principle stated in paragraph 14 of the Settlement Commissioner's note that the deduced rates should be taken as the basis of the proposed rates as much as possible. With regard to the actual rates proposed for paddy land in the table in paragraph 14 of the Settlement Commissioner's note, His Honour is not disposed to accept the rates suggested by the Commissioner of the Minbu Division for Tracts III and IV, and prefers the rates originally suggested by the Settlement Commissioner. The principal reason for the rates suggested by the Commissioner, Minbu, appears to be that they are multiples of four annas, but this is not a sufficient reason in view of the fact that the rates are higher than those suggested by the Settlement Commissioner which give as large an enhancement as is desirable. The Commissioner of Minbu's rates for Tract V may be accepted. The rates finally adopted will cause a reduction of the total proposed revenue for paddy land from Rs. 78,603.05 to Rs. 76,908.10, and the resulting increase per cent. will, therefore, be 25.9 instead of 28.8.

9. The Lieutenant-Governor accepts the rates for all other classes of cultivation which have been agreed upon by the Settlement Commissioner and the Commissioner of the Minbu Division, and which are set forth in detail in paragraphs 15—19 of the Settlement Commissioner's note, and for the reasons there given. He also accepts the proposal that *ya* land should only be assessed when a matured crop is obtained.

10. His Honour agrees that Mr. Wallace has done very good work during his four years' service in the Settlement Department; he also considers that the present report is a very good one and a great improvement on the Toungoo report, submitted by the same officer, which was unduly prolix. The rates should be fixed for a period of 15 years in accordance with the Settlement programme.

By order of the Lieutenant-Governor of Burma,

H. THOMPSON,

Offg. Revenue Secretary to the Government of Burma.

Note by the Settlement Commissioner.

- THE settlement of the Thayetmyo district was taken up by Mr. Wallace in conjunction with that of the Bawni circle, Pegu district, the report on which has already been reviewed.
- Introductory.**
- General description.** The Thayetmyo district is in its general characteristics, rainfall, climate, etc., very similar to the Prome district which it adjoins, and both resemble Upper Burma districts rather than the ordinary districts of Lower Burma. In both districts the rainfall is not sufficiently heavy or regular to allow of the cultivation of the longer-lived species of paddy: in both districts holdings are small and the majority of the cultivators have other subsidiary means of livelihood, while in the Myedè subdivision of the Thayetmyo district, particularly in the northern portion of it, *ya* cultivation of the ordinary Upper Burma description is carried on to a considerable extent.
 - General condition of the people.** The actual average cost of living is nowhere mentioned in the report, but there is no doubt that as a rule the people of Thayetmyo are not rich: they are not in debt to any considerable extent, but this is probably because their credit is not good enough to induce people to lend to them.
 - Communications.** The district as a whole is very fairly provided with means of communication. With regard to the proposed extension of the Thayetmyo-Kyaukgyi road, the Commissioner, Minbu, says that this is not nearly so urgently needed as many other roads in the division, as there is a fair water-way till March.
 - Cultivated area.** Only about 24 per cent. of the total area is occupied for cultivation, but it may be broadly stated that as regards paddy cultivation there is practically no room for extension, all suitable land having already been taken up. The occupied area is very closely cultivated, the area of fallow being very small.
 - Grazing-grounds.** The Commissioner, Minbu, agrees that it is not necessary to reserve grazing-grounds in Thayetmyo. With regard to fuel reserves, he is of opinion that reservation should be gradually proceeded with, the villagers being given rights in the reserves, but not allowed to cut fuel for sale.
 - Cattle statistics.** The stock of cattle in the district is ample for the requirements of cultivation. The Commissioner, Minbu, is of opinion that the recorded figures for cattle mortality must be very much below the actuals, which are probably about 12 per cent. The recorded cattle mortality, however, really refers only to deaths from disease, as cattle are not kept till they are old, but sold to other districts.
 - Average area of holdings.** The figures given in paragraph 24 of the report do not afford much useful information. If, however, the total area occupied for all kinds of cultivation be divided by the number of agricultural families in the settlement area, it will be found that on the average each family has about 5 acres of cultivation of all kinds. This, of course, is a very small area for a Lower Burma district.
 - Tenant statistics.** As in Prome, the rents paid by tenants are extremely high. This is due to the great demand for, and the limited extent of, paddy-land. The sale value of land is also very high.

I do not think that the custom by which tenants pay as rent one-tenth of the produce is at all common. Even if the revenue is paid in addition to the one-tenth share, rents would work out much lower than they have actually done. There is no distinct tenant class; in fact, the landholders often cultivate other land as tenants, as in Prome. With an average tenant rate of Rs. 8·83 per acre, and an average revenue rate of a little more than one rupee, it is obvious that the revenue rate can be raised.

10. With regard to the practice of giving out unculturable land by grants, remarked on in paragraph 38 of the report, the Commissioner, Minbu, says that he has ascertained that the practice does exist and that he is issuing orders prohibiting it in future.

Proposed Assessment—Paddy-land.

11. Four soil tracts have been formed which are shown in Map No. VI of the Appendices. Owing to the extremely favourable season the same difficulty has been experienced as in Prome with regard to the determination of average outturns, as the crop cuttings were of little use as a guide. I checked the classification on the ground in a considerable number of *kwins* in the field season and found that the work had been well and carefully done. The outturns finally assumed by the Settlement Officer are, no doubt, very moderate, and both the Commissioner, Minbu, and myself think they may be accepted as they stand.

12. Three price tracts, with assumed prices of Rs. 90, Rs. 85 and Rs. 75 respectively, based on the local prices recorded by the Land Records Department, have been fixed. An inspection of Map V of the Appendices will show that these are *prima facie* reasonable, and the proposed tracting may be accepted.

13. An uniform cost of cultivation of Rs. 3·25 per acre has been assumed for the whole district. This is very low, but holdings are very small, and the cultivators are able to dispense with hired labour to a considerable extent.

14. The rates proposed by the Settlement Officer are shown in the table on page 21 of the report. It will be observed that although the combination of the 4 soil tracts with the 3 price tracts gives 8 assessment tracts, the Settlement Officer has only proposed 4 different sets of rates. The reason for this is not given in the report, and I do not think it is either necessary or expedient. I think the deduced rates should be taken as the basis of the proposed rates as much as possible. I agree with the Settlement Officer in thinking that Rs. 2·50 per acre is as high a rate as should be demanded from any paddy-land in Thayetmyo. In Prome the highest rate which I have proposed is Rs. 2·375 per acre, which represents one-ninth of the net produce in the tract where it is to be imposed, but in that particular tract in Prome the cost of cultivation is much higher than in Thayetmyo. A rate of Rs. 2·50 on Assessment Tract I, Soil class I, represents as nearly as possible one-twelfth of the net produce. I think, therefore, that this standard should be followed as closely as possible through the different assessment tracts and soil classes. Before proceeding to consult with the Commissioner, Minbu, regarding the report, I drew up the following set of rates based on a one-twelfth share of the net produce:—

Tract.	Soil class.	Rate per acre.	Rate suggested by
			Commissioner, Minbu.
		Rs.	Rs.
I	I ...	2.50	...
	II ...	1.75	...
	III ...	1.00	...
II	I ...	2.25	...
	II ...	1.50	...
	III ...	1.00	...
III	I ...	2.125	2.25
	II ...	1.50	...
	III ...	1.00	...
IV	I ...	1.875	2.00
	II ...	1.125	1.25
	III ...	.75	...
V	I ...	1.875	1.75
	II ...	1.25	...
	III ...	.875	.75
VI	I ...	1.75	...
	II ...	1.00	...
	III ...	.75	...
VII	I ...	1.50	...
	II ...	.875	...
	III ...	.50	...
VIII	I ...	1.50	...
	II ...	1.00	...
	III ...	.625	...

The modifications suggested by the Commissioner, Minbu, are also given above and I recommend that the rates as modified be accepted. Although in some cases they result in a considerable increase of revenue, there is no doubt that, based as they are on a one-twelfth share of the net produce, they are extremely moderate. They are, however, considering the smallness of the holdings and the fact that the people of Thayetmyo are not as a rule very well off, as high as can fairly be taken. The result of the application of the proposed rates is as follows:—

Tract.	Present revenue.	Proposed revenue.	Increase or decrease per cent.
	Rs.	Rs.	
I ...	11,356.15	17,580.55	+ 54.8
II ...	4,974.25	7,935.93	+ 59.5
III ...	7,764.81	10,289.01	+ 32.5
IV ...	15,758.17	20,721.20	+ 31.5
V ...	5,047.16	6,733.35	+ 33.4
VI ...	7,081.58	7,267.63	+ 2.6
VII ...	4,697.49	3,631.89	- 22.7
VIII ...	4,360.28	4,443.49	+ 1.9
Total	61,099.89	78,693.05	+ 28.2

It will be observed that a considerable reduction is proposed in Tract VII: this, however, is a notoriously poor tract, and it will be noticed that the tenant rate in this tract is much lower than in any other. Fallow rates should undoubtedly be allowed, as at present, without application in Thayetmyo.

15. There is force in the arguments used in paragraph 54 of the report, and the Settlement Officer's proposal may be approved.

16. *Onions*.—The rate of Rs. 4 may be accepted.

Rates on other cultivation. *Tobacco*.—The Commissioner, Minbu, and I agree that in view of rates already sanctioned in Hénzada, Rs. 2.50 will be high enough for tobacco.

All other kaing crops.—We are of opinion that a general rate of Rs. 2.00 per acre for all *kaing* crops, other than onions and tobacco, will be high enough.

Ya lands.—The Settlement Officer has formed two tracts, and two classes in each tract. We are of opinion that the rates proposed in the report are rather high, and that the following should be substituted:—

		Soil class.			
Tract I (Suburban)	...	{	I	...	2.00
			II	...	1.50
Tract II	...	{	I	...	1.50
			II	...	1.00

We are further of opinion that the Upper Burma practice should be followed with regard to *ya* lands, *i.e.*, the lands should only be assessed when a matured crop is obtained.

Betel-vine.—The betel-vine gardens at Allanmyo are as good as any I have ever seen, and they are carefully worked on business principles. I recommend a rate of Rs. 10, the highest rate yet imposed in Lower Burma. The Commissioner, Minbu, agrees.

Gardens.—Except the custard-apple gardens near Thayetmyo, the gardens are not of much importance. As regards the custard-apple gardens, the profits, Rs. 75 per acre, are much higher than I recorded as the result of my enquiries on the spot. The Commissioner, Minbu, and I think the following rates should be substituted for those proposed:—

		Class.			
Tract I (Suburban)	...	{	I	...	3.00
			II	...	2.00
Tract II	...	{	I	...	2.00
			II	...	1.50

17. The Commissioner, Minbu, thinks that the solitary tree tax should be abolished. I understand that the matter is now being enquired into and recommend that until it is decided the present tax of 4 annas a tree be retained.

Solitary fruit trees.

Thayetmyo Municipality and
Cantonment.

18. We recommend that the proposals regarding the Municipality and Cantonment lands be approved.

19. We recommend that the term of settlement should be 15 years. The district is not one in which any important changes are likely to take place during that period.

Term of settlement.

20. After completing this report Mr. Wallace proceeded on furlough, severing his connection with the Settlement Department after nearly 4 years excellent work. During the present year work (with Bawni Circle) was exceptionally heavy and Mr. Wallace deserves the greatest credit for bringing it to a successful close. Captain Ormiston, Assistant Settlement Officer, worked hard and well in the field.

Conclusion.

RANGOON,
18th March 1902.

T. C. WILSON,
Settlement Commissioner.

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REPORT
ON THE
SETTLEMENT OPERATIONS
IN THE
THAYETMYO DISTRICT
SEASON 1900-1901.

CHAPTER I

GENERAL DESCRIPTION OF THE COUNTRY.

THE Lower Burma portion of the Thayetmyo district was selected for the operations of settlement during the season of 1900-1901, the area that had previously been brought under supplementary survey, comprising 369,280 acres, being treated.

This area lies just south of the old line which marked the frontier before the annexation of Upper Burma, and is intersected by the Irrawaddy river. The western limits extend up to the forest tracts on the slopes of the Arakan Yomas which form the boundary between the districts of Thayetmyo and Sandoway. The tract on the east bank of the river consists of a fairly compact block of cadastrally surveyed *kwins* extending to a maximum distance of about 12 miles due east from the Irrawaddy, but far short of the district boundary where the Pegu Yomas divide it from Toungoo. On the west, however, the *kwins* are scattered irregularly along the bank of the main river, and up the valleys of the Matun, Pa-ni, and other lesser streams, and there are in many places great stretches of unsurveyed, and mostly unculturable, land, between small groups of *kwins*.

The Prome district is the southern boundary of the tract.

Of this area the portion known as the Mindon Valley lying along the upper banks of the Matun, or Mindon *chaung*, was only surveyed in 1899; the other parts of the tract were completed in 1892 and 1893.

The country is generally very hilly, except at the mouths of the tributary streams where they form a miniature delta before emptying themselves into the Irrawaddy, as in the case of the combined Pa-ni and Matun *chaungs* above Kama, or close to the bank of the main river where the land is, or was at one time, subject to its overflow. The result is that a very great number of paddy *kwins* consist of narrow valleys between the hills, some traversed by large or small streams, but some almost quite enclosed and difficult to drain in case of an over-supply of water being obtained. There is much land, especially along the Matun *chaung*, that is particularly suitable for the cultivation of such crops as onions and tobacco and miscellaneous dry-weather crops generally, and a good deal of the soil in the dry tracts, not watered by the annual overflow of a stream, is capable of growing less valuable produce, such as wet-weather maize and early *sesamum*.

The forest vegetation proves that a large portion of the eastern tract falls under the heading of *indaing* or laterite forest land, while most of the waste land on the west would be known as 'dry forest' (of which the catch tree is typical) interspersed with bamboo jungle. The dry forest growth is found on a formation of calcareous sandstone.

The Matun *chaung*, above spoken of, is the chief stream on the west, and flows from the extreme north-west, forming an outlet in the south-east near Kama after having been joined by the Mu *chaung* near Mindon, and the Hlwa and Pa-ni *chaungs* lower down in its course along the valley which it fertilizes.

The Pun *chaung* is a small stream which meets the Irrawaddy a little above the town of Thayetmyo, and the Madè joins the main river at Kama. These two last named streams are insignificant except during the wet weather after a heavy fall of rain, when they are somewhat subject to sudden flooding, as indeed are all streams in this district.

The Kyi-ni, on the northern boundary, and the But-le *chaungs*, joining the river near a village of that name, are the only considerable streams on the east side of the Irrawaddy.

Islands and large banks are here and there sometimes thrown up by the action of the river, and again are washed away through some change in the current. Opposite Kama a large bank is now in the course of formation, while a little above Pyalo two surveyed *kwins* (Nos. 215 and 216) have lately been quite obliterated and only exist as dry-weather islands that appear when the water is low in the river. Three *kwins* of the Nyaungbinseik circle (Nos. 99, 178, and 179) are really an island formed by a slight change in the course of the river, the main channel of which was formerly on the west and not on the east side of these *kwins*. These *kwins* are counted as part of the Nyaungbinseik circle, notwithstanding their situation on the opposite bank, for the following reason. In the year 1783, when Bodaw-paya, or Min-taya-gyi as he is generally called, was king of Burma, an expedition was undertaken for the conquest of Arakan, and the army having been successful, returned with a highly-prized and colossal image of Gautama Buddha which was towed up the Irrawaddy to Ava, and was taken through the channel on the west of the island, so that it has ever since been considered the main stream, although it is now practically closed up.

Some banks and islands are created by the action of tributary streams flowing into the Irrawaddy and bringing down large quantities of suspended matter, which is deposited in the dead water left at the lower side of the affluent, and finally becomes an island or large bank of rich but sandy soil. The bank opposite Kama seems to have been formed in this way, and the island called Yebawkyun just opposite Thayetmyo has been caused by the combined action of the Kyi-ni and Pun *chaungs* which flow into the river from different directions above this point, and serve to make a zone of dead water in the middle of the river.

There are indications of oil beds existing under the surface in a few places where petroleum can be sometimes seen oozing out of the ground in the beds of streams, and at Padauk-bin and Banbyin villages, not far from Thayetmyo and close to the road that extends from that place to Mindon, the oil has been at one time actually obtained in saleable quantities. I noticed a deep well being dug near Nwathe, a little beyond Padauk-bin, in the vain attempt to tap a supply of good water which is much required at that place, and I was struck with the similarity of the formation, exposed during the sinking of the shaft, to that I once saw some years ago when watching the boring of an oil well at Yenangyat, which is situated in the recognised oil fields a long way further north on the same side of the river.

There are many brine springs to be found in various parts of the district; There are several near Bwet-gyi close to the bank of the Irrawaddy in the Myede subdivision, and two others are to be found many miles to the east, near the foot of the Yomas, in the same subdivision, but outside the settled tract, at a place called Sadwin in the Pyinkadaw circle.

On the Thayetmyo side are a few salt springs, but none of any importance, two are situated in the Mindè circle, two in the Mindon township in Kubyu and Shwedaung circles; others are to be met with at Pato, Thapangyo, Penekwin, and Kyaukmè in the Kama township. None of these are now worked, and they never seem to have yielded much salt.

3. The climate of Thayetmyo is extremely dry when compared with that of most of the Lower Burma districts, and more nearly approaches that of Prome than any other. The

district in fact lies on the southern edge of the dry zone which exists in the valley of the Irrawaddy, and of which the Myingyan district must be about the centre. On the whole the tract is a fairly healthy one, though cholera breaks out occasionally in places like Kama, where the river recedes far from the village in the hot season, and the people are too lazy to make arrangements for obtaining a pure water supply, resorting instead to the contaminated water of pools left close to their houses on the shore, or using the filthy water of the almost stagnant *Madè chawng* which must receive a large part of the village drainage. The Mindon valley, too, is a very feverish place, especially at the beginning of the cold weather just after the rains, one cause of the fever being the chills that are the frequent result of the sudden falls of temperature experienced here at night. Ophthalmia is also prevalent amongst the people, and is certainly the result of their dirty habits during the cold season, when a bather is looked upon by his fellows either as a hero or a lunatic. Ulcers and indolent sores seem pretty common amongst the children brought up in jungle villages, and are very likely the consequence of impoverished blood caused by neglected malaria and bad food. Skin diseases are also very common, and like nearly every complaint I noticed amongst the people, are almost wholly attributable to dirty habits. I did not meet with goitre here at all, although it is certain that one great defect is the water supply, and most persons drink the water from mountain streams which probably contains lime. Almost all the available well water is impregnated with salts of lime and magnesia as well as common salt. The water on the eastern bank of the Irrawaddy is said to be less unsuitable for drinking purposes.

4. The average rainfall for 15 years—from 1863 to 1878—was 48·99 inches according to the *Gazetteer*. The average fall in ten years—from 1863 to 1872 was only 45·77 inches, and the annual fall shows wide variations in different years. The highest fall in any year was 54·85 in 1871, and the lowest, in 1869, was only 33·20 inches. The rainfall in both Prome and Thayetmyo during the four years, from 1868 to 1871, is set forth in detail in the introduction to *The Forest Flora of British Burma* by Kurz, and it is clear from that table that the rainfall at Prome very closely approximates that of Thayetmyo, the average fall during the period being 47·90 in the former station, and 49·77 at the latter place. There were 62·90 inches recorded at Prome in 1871, and only 34·00 inches in 1869.

The average rainfall for the past four years at Thayetmyo has been 38·11 inches; at Kama 45·33 inches have been recorded, and at Mindon 48·25 inches. On the opposite side of the river at Myède the rainfall is almost the same as at Thayetmyo, 38·19 inches having been registered on the average during the period of four years. In Statement No. I details of the rainfall are shown.

It is most difficult to guess from a mere bald statement of the average rainfall whether or no a tract is one in which paddy can be raised with certainty and success. Even the average rainfall taken month by month is not of much assistance, for the nature of the fall, whether erratic or steady, the nature of the soil and sub-soil, and many other matters have to be known if any useful conclusion is to be arrived at from mere figures. It is apparent, however, that the rainfall in many years must be quite insufficient when such a small fall as 33 or 34 inches only is registered, and where the rainfall is small, it is likely to be also irregular, and therefore not well suited for rice crops. Even in the north of Toungoo, where the land receives some 30 inches more rain than does that of Thayetmyo, it sometimes proves insufficient for the needs of the cultivator owing to its uneven distribution, and such unevenness is likely to produce still more disastrous effects in a tract with a lower fall of rain. One fact that makes it patent that the rainfall in the Thayetmyo district is considered by the people themselves to be precarious is the universal practice of planting only the short-lived paddies in that district; indeed, I did not see or hear of a single field of *kaungyi* paddy in the place except a plot of long-lived *kaukhnyin*, which a man planted through ignorance of its nature, and which proved an utter failure even in such a remarkably good season as the last.

It is probable that the places situated near the higher hills and generally at the head of the Mindon valley receive a larger supply of rain than those on the

lower ground near the Irrawaddy, but even there, if the fall is heavier, it comes more in the shape of sudden storms than steady or continuous rain, and at the same time it falls on soil that is mostly sandy loam and not capable of retaining water as clay soil would. At Dayindabo I had an opportunity of seeing the effect of the soil on the retention of water derived from a heavy fall of rain, when I was finishing the field work this season in June, and it was astonishing how quickly the water drained off the fields, which are there composed of sandy loam with a sandy or gravel sub-soil. On the whole, I think, the rainfall in the district must be considered unsatisfactory from the rice cultivator's point of view, and the returns he obtains for his labour must be insignificant in a large percentage of cases in any except the best of seasons.

One great cause of the comparatively light rainfall here is the high range of hills that intervenes between Thayetmyo and Arakan, so that the south-west monsoon expends its force on the slopes on the other side of the hills and arrives in this place only after having parted with most of its moisture. Thus Sandoway has an annual fall of about 223 inches as against some 48 inches at Mindon, or nearly five times as much.

5. **Burmans and Chins** are practically the only races to be found within the settled tract in Thayetmyo, though natives of India are naturally to be found, especially near the town of Thayetmyo itself, having in the first instance followed the troops to that place, and afterwards settled down with their families. Amongst these people are many keepers of cows and cattle breeders who have a small colony just south of the town at a small outlying village. A great number of shops of all sorts are kept by Indians in the town itself, and there are several Chinese merchants and traders.

6. **The Chins** are met with on both sides of the Irrawaddy, but are principally found on the west, along the valley of the *Matun chaung* and its affluents. These people seem to have mostly migrated from the Ngapè valley, and appear to have settled down as regular cultivators in permanent villages, so that their former nomadic habits are not now noticeable. A number of the older women have their faces tattooed in the hideous fashion that was once in vogue amongst this tribe, in order, it is said, to prevent the girls from being carried off by Burman raiders in the old days, but all the young folk refuse to undergo this unnecessary torture, although the old crones affect to look upon this refusal as a sign that young girls are not nearly so well brought up now as they were in their time. They also like to persuade themselves that their very Christy-minstrel-like appearance adds to their good looks, and will almost invariably reply, if asked why they submitted to the operation, that they did so to make themselves beautiful. One playful old lady told me, with a toss of her head, that she quite expected to marry a Commissioner and another, with a well affected air of boredom, said she really couldn't count all the sweethearts she had had. They are a very jovial people, ready to make, and quick to understand, a joke, and unlike the Karens, to whom they might be expected to bear a resemblance, they are not in the least shy or distrustful of strangers. They are good cultivators, inasmuch as they make the most of the natural resources of the land, and wherever possible try to supplement a scanty rainfall by a system of irrigation from the hill slopes, and at this work they seem to be particularly clever.

Their legends are very similar to the Karen stories regarding their origin, and the drinking of intoxicating liquor enters largely into their religious rites too, but there appears to be no resemblance at all between the languages of these peoples.

7. **The Burmans** of this district are a pure race, unmixed with Shans or Talaings, and are not by any means a prepossessing people. They have none of the marked sturdiness of the lazy, but muscular, Burman of Pegu, and their features often have a decidedly simian cast. I do not think that they are in any way superior to their Chin neighbours, not even in the matter of cleanliness, indeed, the Chin village, notwithstanding the usual herd of swine that is kept there,

is often cleaner than a Burman hamlet, though this is perhaps due to the fact that the Chins frequently, though not invariably, build their villages on the tops of small hills, and thus have the advantage of natural drainage which they utilize for the fertilization of small plots of miscellaneous produce that they often grow on the slope just outside the village fence.

It is curious how quickly all indigenous hill races become Burmanized when they leave their own haunts and settle down amongst the natives of the plains. Chins, like others, rapidly lose many of their characteristics and become almost indistinguishable from Burmans when they have lived with them for some time, and often a Chin is only to be detected by his peculiar accent when speaking Burmese, as he is generally unable to pronounce the 'u' sound, making it 'eu' as pronounced in 'lieu' or 'Dieu' in French.

8. Cattle breeding is one of the chief occupations of the people, and is commonly carried on by all agriculturists. The kine largely outnumber the buffaloes, for the latter cannot obtain the wallowing places, which they find so necessary, except in those places that are close to a perennial stream. Even the kine here seem very often to be undersized and not too well fed; indeed, during the hot season there must be a good deal of difficulty experienced in finding any pasture for them, as the grass withers everywhere except on marshy ground which is seldom met with.

The cotton trade supplies work for a certain number of people, both as carters and cleaners of the raw material. There is a mill at Allanmyo owned by Messrs. A. S. Jamal Bros. & Co. Here oil is also extracted from cotton seed, and about 500,000 viss of raw cotton are dealt with every year. This mill in the busy season employs 100 hands, but the permanent staff consists of only 30 persons, natives of India as well as Burmans being employed. Nearly all this cotton is produced outside the settlement area in this district, and about one-fourth of the whole comes from Upper Burma. It is bought direct from the growers as well as through brokers. The mill deals in sesamum, too, to a small extent. Cutch boiling is carried on in many parts of the district, but the number of boileries licensed in different years varies considerably, as the Forest Department are of course obliged to supervise and restrict the destruction of the trees in order to keep up the supply and prevent them from being entirely exterminated. In 1900-01 there were 245 cutch boilers' licenses issued on the Myède side of the river, and 239 on the Kama side, the total revenue from this source amounting to a sum of Rs. 29,040. Of course a very large number of these boileries are outside the settled tract. This year (1901-02) only 50 cutch licenses were issued altogether, all on the Myède side.

Herding and keeping goats is another means of eking out a livelihood. Numbers of goats are to be seen all along the Matun *chaung* and generally all over the district. They are often owned by Chins and seem to have been brought into the district by them, for they differ a good deal from the common Indian goat which is to be seen wherever natives of India have settled down. Native owners of goats from Prome frequently leave their animals in the hands of Chin and Burman goat-herds here, and pay the herdsman by allowing him to keep half the progeny born while the animals are in his hands.

Carters on the Allanmyo side go to other districts, often in the busy paddy season and ply for hire. The execrable roads and inferior cattle on the other side would be an obstacle to such emigration on the other bank even if they could leave the district, for they make it necessary to use tiny carts carrying only 10 baskets of paddy instead of the regulation 25 that are expected elsewhere.

A great deal of firewood is cut along the banks for the supply of steamers plying on the river, and the work of hewing this must provide a number of people with a small income, and the loading of the fuel on the steamers gives employment to booty women.

Earthen pots and vessels are made in many places, and there are many kilns a little to the north of Thayetmyo. Lime burning is carried on pretty extensively at Tondaung just south of the town. Mat making is also an occupation of the people in some small villages. Chins are particularly clever at plaiting and weaving bamboo strips of which they make mats and other articles. Bamboos,

are also extensively cut and sold, being used as rafts. Sericulture is practised to a small extent at Bangôn, and there are a good many plots of *morus indica* to be seen there. A man told me that Rs. 80 per annum was the most a man could make out of silkworms. There seems to be a regular trade from this place in the eggs of the moth, people on the hill sides in the Toungoo district buying them in many cases in order to introduce new "seed," as it is termed, into their hatcheries. The silk I saw woven here was coarse but very strong. The common appliances for winding, etc., were in use—the *kaladon*, *set-hnyat*, and *ye-nwe-o* being used in winding the silk off the cocoons, while the moths are enclosed in *waings* made out of strips of the toddy palm leaf, over which they cannot climb, so that they are forced to deposit their eggs on a piece of cloth placed beneath. The worms, when hatched, are placed in *sagaws* or trays and are fed on finely chopped leaves. They must be kept carefully covered up in order to prevent a fly from destroying them. This fly is not a blue bottle, as I have seen it described in a monograph on silkworm culture in this country, nor does it sting. It is a small fly that might easily be mistaken for a common house fly though it is much more rapid in its movements. It spoils the cocoon by depositing its *ova* on the worm, with the result that they hatch immediately and burrow into the body of the caterpillar and live there, almost destroying its powers of spinning a cocoon, and eating their way out through the body of the pupa and its silken envelope as soon as it is mature, thus destroying silk and silkworm at one fell swoop. This fly is well known in India as the Bengal silkworm fly. A village called Danyinhmaw is the chief centre of the silkworm business. The name is evidently a corrupt form of Tanyin-myo, or "Spindle town," the implement on which the silk is finally reeled being known as a "*tanyin*."

9. The paddy-fields in this district must be ploughed at the very first opportunity, and the paddy planted as early as possible in order to minimize the risks of failure due to the absence of late rain during the season. The cultivators nearly all use bullocks only, and these animals, though they are often but poor looking specimens, are quite strong enough to do the work demanded of them in the small holdings to be generally met with here. The nursery is, in many instances, not situated in the holding itself, but is a new clearing in the jungle waste-land, a plan that allows the cultivator to keep his small holding intact and at the same time introduce plants that retain a certain amount of vigour bestowed on them by the virgin soil on which they were raised in the forest. It is most necessary to choose a time when it is unlikely that there will be a prolonged break in the rains for the planting operation, as it is nearly impossible to plant a field again when once the first crop has failed, and fail it assuredly will if the rains cease for any length of time soon after the plants have been put in, for the soil as a rule does not retain the water sufficiently well to serve the young seedlings. The *tè* does not seem to be used much, if at all, for paddy cultivation in this district, the ordinary soil being too shallow for its use, and the sub-soil of such a nature as to render it necessary not to disturb it or allow it to be mixed with the surface soil. The growth of grass is not heavy, and the fields, which have often undergone the process of "green soiling" through cattle being grazed on them, are merely made ready with the *tôn* or cultivator, and are sometimes smoothed over by means of the *kyan-dôn*.

Mayin, or hot-weather irrigated rice, is sometimes extensively raised, I believe, along the banks of the *Matun chaung* in the Mindon valley through the instrumentality of water wheels used for raising the water from the level of the stream to that of the high banks where the river flows through an alluvial plain and has cut a deep channel for itself.

The Mindon wheel is, indeed, quite a feature of the district in some seasons when the wet-weather crop has decidedly failed, but it is not resorted to in good years, and this season having been an astonishingly favourable one, not a single wheel was to be seen. These wheels are, I am told, also used in the Upper Chindwin district, and may have been the invention of some Chin genius. They are of the "under-shot" variety, fitted with floats of coarse bamboo woven work, and carry several buckets in the shape of large bamboo joints so arranged that they come up half filled with water at an angle of forty-five degrees and discharge

their contents into a trough connected with the irrigation channels on the bank. It is said that the outturn per acre on irrigated land is about double that of the ordinary outturn in fields naturally watered by the rain.

Colonel Horace Browne, in his interesting Statistical and Historical Account of the Thayetmyo district, which was published in 1873, mentions that no less than 61 different varieties of paddy were known to the cultivators in the district; but, of course, a number of these were *taungya* paddies, and are not seen in ordinary cultivation, yet curiously enough *kunwa*, the most common paddy in the district now, is not mentioned in his list. This paddy, *saba-pyu*, *thon-la-bu*, and a few *kaukhnyin* sorts are to be met with nearly everywhere. All are short-lived varieties, the district not being suitable for other sorts.

As already stated, there is much land in the Mindon valley that is suitable for the cultivation of miscellaneous crops, and elsewhere many *taungyas* exist. The manner of cultivating all these crops has been so thoroughly explained in the Report on the Settlement Operations in the Meiktila district, where the modes of agriculture seem to be almost precisely the same as here, that it is hardly necessary to go into the matter in detail. This remark applies to betel-vine plantations and *taungya* crops.

The manner of cultivating onions, which are a feature of the upper reaches of the Matun stream, and the way in which tobacco is grown, may perhaps be described, as they differ considerably from those in vogue in other places. The sandy loam of the riverine *kwins* close to Mindon is specially suited for the cultivation of onions. A good deal of care is bestowed on the preparation of the soil. The land is ploughed with a four-tined *tôn*, which allows the teeth to dig deeply into the ground; the clods are then broken down and the fields smoothed by means of the *kyan-dôn*, or smoothing log. This is a piece of heavy wood, squared so that when it is dragged along by a pair of buffaloes one edge only touches the ground; in this way any irregular lumps of earth left by the *tôn* are prevented from being brushed aside and are crushed under the log. After this the land is gone over with a ten-tined *tôn* of light make, which leaves a series of shallow furrows that mark where the seed onions should be set in lines. The onions are planted by women at intervals of about six inches, and require careful weeding afterwards until almost ready for digging. The leaves of the onions wither, and the bulbs have attained their full size about the end of February or the beginning of March, and they are then dug up with small forks. They are afterwards cleaned and dried.

Tobacco cultivation is interesting, and is also attended to carefully by the cultivators. The large-leaved variety of tobacco known as "*se-gyi*" or "*se-ywet-gyi*" is the common crop, but the smaller sort with pointed leaves, called "*se-ywet-gyun*," is to be seen in many places. The former produces a heavier crop, but the latter gives a finer quality of tobacco, the value of which can be added to greatly by the simple expedient of cutting it into fine shreds. The soil for tobacco culture is worked to a fine tilth by means of the *tôn* and *kyan-dôn*, and then a light furrow marker is drawn across the fields so that parallel lines at intervals of about $2\frac{1}{2}$ feet are plainly traced. In these furrows the seedlings taken from the nursery are set by women, who prick a hole for each plant with a pointed wooden instrument, and having poured a little water into the hole with a tiny ladle made out of the nut of the toddy palm, insert the seedling and press the earth firmly around it. The plants are about two feet distant from each other.

The cultivators in some places where the *kaing* grass has not been thoroughly eradicated use the *tê* in order to loosen the weeds and cut the roots of the grass before breaking up the soil with the *tôn*. I noticed that the *tês* were of the Shan pattern, but had been manufactured by a European firm. Tobacco land is locally measured by the "*gan*," i.e., a square each of whose sides are 64 cubits in length, thus a "*gan*" equals 0.21 acres. The coarse tobacco is merely dried on bamboo frames, the leaves being laid about three deep, and a second frame being placed over them to keep them in position while the sun and air cure them. In some few cases the leaves are more carefully dealt with, and are hung up in bunches in small sheds, or at all events out of the sun, and are allowed to

ferment and become cured in the orthodox way. The fine leaved tobacco is often twisted up as soon as the leaves are pulled and cut into fine shreds by means of an old *dah* fastened near its point to a post in such a way that it can be used as a lever knife to cut what is placed upon a block below. In this case the fine-cut shreds are laid out on mats to the thickness of about two inches and are kept there for a few days and turned at intervals until they are uniformly dried and cured.

10. The great danger in this district seems to be a failure of the rains. All paddy planting operations appear to be carried out with this possibility in view. At the same time there are a few *kwins* that suffer from the overflow of the Irrawaddy and some other streams. Close to Nyaungbinseik there are some poor *kwins* that are made worse by floods, and a line of *kwins* between the river and the road just south of Ywataung also suffers. If the overflow takes place early in the season it does good instead of harm, but a late overflow that destroys the crop already planted, ruins the cultivators' prospects. Occasionally men plant maize on their paddy fields and await the flood, which, if it comes, destroys the maize but still allows of separate paddy being planted. This is only done on the sandy higher ground in a few river-side *kwins*. Sesamum is also occasionally planted in the same way. I saw a good deal in *kwins* north-east of Allammyo this season. The Butlè *chaung*, too, overflows in parts and spoils the paddy. Some of the poorest crops that I saw this year were those that had been planted late owing to floods, yet the season was on the whole one of the best that has ever been known in the district.

Grazing grounds.

11. There are no grazing-grounds in the district, and I do not see any possibility of reserving any.

It is the common custom here to reap the paddy so as to leave only a short stubble, and the straw is carefully preserved as fodder for the cattle. A species of grass called *myet-nan*, which commonly grows on the hill sides, is also cut and made into hay to be used as cattle food when the pastures fail. There is so much waste land in every *kwin* that there is no need for a grazing-ground in the rains, and no grazing-ground would be of any use in the hot weather, for the grass entirely withers and the hill sides are almost entirely bare of all vegetation. At this time places, where the cattle browsed almost hidden by the long grass at the end of the rains, have become almost bare earth, so that it is difficult to believe that any grass ever grew there. Green fodder is often grown for cattle, and most of the maize plots to be seen in the Mindon valley are fields of thickly sown Indian corn meant to be cut green and fed to bullocks. Numbers of *taungyas* are planted with *hnan-sa-pyaung* (sorghum), the *jowar* of India, and this is used commonly for fodder after it has been cut and dried. A cartman, when going on a journey of any length in this district, will usually provide himself with some *jowar* and some oil cake for his bullocks, as it is impossible to count on getting grass, and the people in the village which he intends to visit may not have any fodder for sale if their own supply is short. Goats pick up a living almost anywhere and are commonly fed on the leaves of the *zi-bin* (*Zizyphus jujuba*) which grows in most places only too profusely.

Many cattle are sent across from Kama to the Nyaungbinseik side of the river at the beginning of the rains in order to be fed on the grass that quickly springs up under the trees in the less hilly parts of the *indaing* tract where the land is useless in most cases for regular cultivation, and only an odd nursery for paddy is to be met with in the jungle, carefully fenced and often watched to prevent the cattle entering it. If segregation of cattle is needed owing to an outbreak of disease, the only thing to be done is to confine the herds affected to their own *kwins* and villages.

12. A statement showing the number of cattle in the settled area will be found amongst the appendices. From this it will be seen that there are 72,839 cattle of all sorts. Of these, 8,905 buffaloes and 19,745 bullocks are actually used for draught purposes. This gives one yoke of cattle for a little less than 5½ acres of all sorts of cultivation.

Cattle statistics.

The mortality is shown to be 2.36 per cent. per annum amongst buffaloes, and only 1.59 per cent. amongst the kine. This is less than has been found to be the case in Pegu and Toungoo, and is probably rather under the true number, but Thayetmyo is, I fancy, a very healthy district for cattle, as the dry and high grounds suit the kine, while the buffaloes are not grazed in enormous herds as they are in Pegu or Toungoo, and therefore escape from widespread epidemics. The people, too, seem to quite understand the necessity for segregation and have no dealings with a village that happens to be infected with cattle disease.

14. It might be well if a competent Forest official enquired into the matter of reserving fuel. At present a great deal of wood seems to be cut for steamers, etc., and, as far as I know, no provision has been made for preventing indiscriminate wood cutting along the banks of the Irrawaddy, though a glance at Map No. 1 will shew that there are several forest reserves further inland. At present there is, of course, a large area of waste and unculturable land still covered with forest, and the supply of wood for fuel seems well nigh inexhaustible, but it would be as well perhaps to anticipate the possible denudation of forest wastes, especially near the larger towns and villages, lest the supply of cheap fuel should fail later on as it has in many of the other districts of Lower Burma. The matter is not urgent at present, and there ought to be no difficulty in finding suitable reserves.

15. The eastern portion of the Thayetmyo district is, on the whole, well off in the matter of communications, for not only does the Irrawaddy form one of its boundaries, but the well-kept road from Prome also runs along the river bank on the Myède side and has branches that allow of access to the interior towards the east. Besides these roads that are kept up by the district authorities, there are a large number of passable lanes and tracks, so that every village is approachable even in the wet season except when cut off by a passing flood in one of the larger streams. The Thayetmyo side is not quite so well off, however, and an extension of the Thayetmyo-Kyaukgyi road as a bridged and metalled track to Mindon is urgently needed. Here the conformation of the country is such that many of the jungle tracks are extremely rough in the dry weather and quite impassable in the wet season owing to the swollen condition of the numerous fords that have to be crossed, and besides the extension of the Thayetmyo-Kyaukgyi road, a lot of useful work might be done by partially re-grading and clearing these lesser roads, if funds would allow of such work being carried out. This is, indeed, being done in one or two places, and I noticed some work of this sort being done on the road leading west from Kama, where the rocks needed blasting at one point.

The *Matun chaung* forms a very good means of communication from Mindon to the river Irrawaddy from the commencement of the rains until the month of January or so, but after that it is too shallow for anything but a bamboo raft to make the voyage with certainty, and temporary tracks have then to be resorted to as a rule. Bamboo rafts are often used to convey produce down the stream, and as every raft can be sold together with its cargo on arrival at Prome or any other port of destination on the Irrawaddy, this means of transport is cheap and effective.

Map No. 1 shows fairly well the roads and proposed roads of various sorts, but it is not very correct in its outlines as no good maps of the whole district are available, and I was forced to make an attempt to fill in my skeleton map from two or three different sources. It, however, gives a good idea of the position of the settled tract and of the various forest reserves, unsurveyed lands, etc., that go to make up the district. It is of course impossible to show all the minor tracks and roads upon it.

16. There are only six unimportant fisheries in the district. One of these is situated in Cantonment (*win* No. 53), and the annual value is, I presume, credited to the Cantonment funds. The aggregate annual value of the five fisheries that are outside the Cantonment limits is only Rs. 401. Maps of these fisheries are already in

existence, so the usual plans have not been sent to the Deputy Commissioner this year.

17. Thayetmyo and Allanmyo are the only large towns in the district. The latter is important as the outlet of the cotton and sesamum trade in the Myède subdivision. Kama and Mindon are fair sized villages and township head-quarters. A very complete history of all these places, and indeed a clear description of the whole district from all points of view, may be found in Colonel Browne's Statistical and Historical Account of it, and the district has changed so little since the time when that *Gazetteer* was written, that it may be referred to for almost any information to the present day, though communications are now better and the annexation of the upper province has made a change for the better in the district.

18. A peculiarity of the district is that there are no export markets properly speaking for paddy. Indeed, paddy is frequently cheaper at the river bank than it is inland, being imported and the price being added to as it goes up country. Kama generally exports a little paddy, which is sent across the river and up to Thayetmyo. The better prices now obtained down stream tend to raise the price of paddy here, not because paddy from this place is sent down stream, but because grain from below is not sent upwards unless the price paid here gives better profits than the sale of the grain below would allow. Onions, tobacco, bamboos, etc., are sent away from Kama to Prome and elsewhere, the Matun stream acting as a means of communication with the interior.

CHAPTER II.

GENERAL CONDITION OF THE PEOPLE.

19. The population of the villages within the settled tract amounts to 95,116 souls as far as I can gather from the circle summaries kindly sent to me by the Superintendent of Census Operations; this is exclusive of those persons residing within municipal limits in Thayetmyo and Allanmyo.

According to the census of 1891, the total number of persons living in the same tract was 102,304, making it appear that a large decrease has taken place during the last 10 years. I have taken the figures from the rolls, village by village, but I fear it is impossible to place absolute reliance in the results, though it is very probable, I think, that a large decrease has taken place in the settled tract, owing to a variety of causes, and yet the district total may not be much less than it used to be all round. This is not, however, a district to support any large increase in the population, and probably numbers of people wander away from it almost every year and settle down in more favoured spots to which they have gone in the first instance in search of work. It is curious, however, to notice how the Burman of this district is attached to his land, so much so that he never seems to mortgage it without making a proviso that it shall be redeemable at any time, and this right is strictly enforced by heirs to the third and fourth generations and is always acknowledged by the mortgagee and his heirs.

If the figures I have set down are correct, there must be some four acres of cultivation of all sorts to each family of five persons, and about 166 people to the square mile throughout the whole area. Thus the population is more dense than it was in the north of Toungoo where there is still a little room left for extension of cultivation.

According to the Capitation Tax Rolls, 22,382 persons assessed were agriculturists, and only 1,532 were people gaining their livelihood in some other way, while some coolies and a few fishermen still remain; but even excluding all coolies from the list of agriculturists, the result is that 85.17 per cent. of the people live by the practice of agriculture.

20. General statistics taken amongst the paddy cultivators prove that the average family consists of five persons; statistics taken amongst the cultivators of miscellaneous crops relate to 189 holdings only, and make it appear that

the average family is only a little more than four persons. Five may be safely taken as being the average number of each family all round.

21. The standard of living is, on the whole, not by any means a high one.

Standard of living.

The ordinary village is a poor looking place with somewhat squalid houses of bamboos and mat-work. There is indeed an air of actual poverty prevailing in many of them. Those villages on the river bank that have large *pongyi kyaungs* and *pagodas*, and in which well-built houses are often to be seen, mostly owe their prosperous appearance to the presence of traders in the produce of the country side or importers of necessaries, and very few indeed of the regular agriculturists are really well off. Some places, like Mindon, owe their appearance not only to traders but also to the fact that they have been the birthplace of successful and well-connected Burmans who have built shrines and *kyaungs* there, and have in some cases established their families in their native place in comfortable circumstances in old age.

22. The records of indebtedness show that over 39 per cent. of the people examined were in debt. The average sum for which

Indebtedness.

each person was indebted was Rs. 76-8 nearly. Most of this was, as usual, for house expenses. It must be remembered, however, that the statistics relate to persons whose holdings are on the average $5\frac{3}{4}$ acres, while the average holding in the district is only 2.92 acres, so that probably the average number of people in debt is much less than this throughout the district. Colonel Horace Browne remarked in 1873 that very few cultivators were in debt, the system of making advances on produce being almost unknown, as is still the case; and although better communications and greater ease in discovering debtors may now make it less hazardous to lend money, yet, I fancy, the mobile habits of the population which he notes must still cause the money-lender to pause before he trusts the ordinary cultivator with his money. There are of course a few Burman usurers whose local knowledge allows them to invest money where the chetty could not see his way to advance it. I came across an instance of one of these men near Nyaungbinseik who lent money to paddy cultivators on the security of their land at 60 per cent., he himself having borrowed it from a chetty in Thayetmyo at 18 per cent. I am pretty sure that he very seldom obtained the difference of 42 per cent. at which he aimed. The arrangement tends to show, I think, that chetties are not blood-thirsty vampires, and that they do not necessarily look upon cultivators as their milch cows, but knowing the people they have to deal with they prefer good security, with small interest, to questionable investments and a nominally greater profit. The chetty is often a nuisance, but he is also frequently a convenience to the people, and the every-day unreasoning abuse of him is to my mind absurd.

23. The area of the tract now dealt with is about 577 square miles, of which

Area.

89,000 acres (roughly) are under cultivation. This is only .24 of the total area, or less than one-fourth of the tract under survey. Considering that this land has been surveyed with the express purpose of including all the cultivated, and as far as possible, excluding the unculturable portions of the district, this is a very small proportion, and goes far to show the general poverty of the soil.

Below will be seen a statement showing the distribution of the land. The land entered as "culturable" is in many cases rather doubtful, though of course some sort of crop can be grown on most land that is not actually rocky or gravel soil. The uncultivated paddy-land is generally of the poorest description, and is only taken up periodically after long intervals during the very best seasons.

Distribution of land.

Township.	Serial number.	Circle.	PADDY-LAND.		Garden land.	Miscellaneous land.	GRAZING-GROUND.			Village site.	LAND THROWN OUT OF PADDY CULTIVATION.		LAND THROWN OUT OF GARDEN CULTIVATION.		Monastery or Pagoda land.	Roads.	GRASS JUNGLE.		TREE OR BUSH JUNGLE.		Under water.	Total area.
			Under paddy cultivation.	Uncultivated paddy-land.			Culturable.	Unculturable.	Culturable.		Unculturable.	Culturable.	Unculturable.	Culturable.			Unculturable.	Culturable.	Unculturable.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
			Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
MINDON.	1	Kyan	842.60	21.50	79.60	429.61	...	...	...	48.95	21.45	...	...	26	12.20	1.47	394.70	374.46	1,004.25	1,685.02	450.43	5,366.50
	2	Kybu	1,761.08	86.89	122.24	553.98	...	...	...	73.54	28.07	1.22	...	7	29.16	17.65	194.75	135.40	1,220.51	3,082.84	316.01	7,623.41
	3	Mandsing	633.40	23.09	47.98	802.81	...	...	...	40.78	30.51	...	4.22	...	14.38	22.13	770.03	10.41	...	1,082.87	237.32	3,719.93
	4	Mindon-myoma	1,897.38	38.49	277.06	843.05	...	...	...	162.37	36.14	...	80	23	40.28	59.45	511.38	345.48	684.06	5,408.84	507.26	10,812.27
	5	Pemyauk	1,301.04	80.28	100.14	364.87	...	...	...	57.81	35.88	...	...	3.29	23.40	7.88	566.49	318.70	1,993.32	3,703.85	531.27	9,088.22
	6	Shwedaung	2,055.30	131.54	253.32	1,079.24	...	...	...	119.48	47.58	4.68	95	39.56	37.82	12.85	1,309.81	478.81	750.10	4,235.51	1,097.83	11,654.38
	7	Tagaungnet	717.01	91.23	38.43	167.58	...	...	...	35.17	14.77	...	1.87	5.50	2.59	6.18	414.30	78.57	436.97	1,384.66	237.78	3,632.61
	8	Mindat	22.20	...	5.60	6.54	...	...	...	2.71	...	...	...	...	32	89	10.85	...	65.66	...	11.95	126.72
			Total	9,230.01	473.02	924.37	4,247.68	540.81	214.40	5.90	7.84	48.91	160.15	128.50	4,172.31	1,741.83	6,154.87	20,583.59	3,389.85	52,024.04
KAMA.	9	Aukmanein	208.29	16	5.40	30.15	...	...	...	13.69	44	...	...	5.98	2.10	...	23.54	98.66	61.37	452.32	133.67	1,085.17
	10	Shawdaung	1,614.95	25.09	123.32	717.02	...	...	...	60.10	26.13	89	...	9.44	7.65	19.92	337.65	438.89	112.01	10,903.43	634.03	15,030.52
	11	Natmi	1,421.71	59.07	55.58	819.64	...	...	...	50.59	42.50	...	...	34.30	16.66	17.00	372.77	402.00	139.15	14,387.96	632.94	18,451.87
	12	Pato	1,756.06	80.88	53.70	304.99	...	...	...	64.64	59.99	1.32	2.82	...	11.98	6.55	1,036.36	205.93	547.49	5,078.96	234.16	9,445.83
	13	Kyauksaung	2,323.99	14.62	207.59	1,349.65	...	...	...	89.47	6.73	66	...	2.21	18.07	11.06	186.99	269.24	255.65	5,059.96	394.35	10,190.24
	14	Ngahlaing	1,362.74	3.70	53.54	599.03	...	...	...	51.21	21.56	...	98	25.61	8.93	4.58	198.38	121.73	642.19	2,858.66	207.17	6,160.01
	15	Thambaya	3,765.12	64.24	366.70	1,930.61	...	...	...	141.76	183.08	26.36	3.70	4.74	22.24	16.63	809.54	892.92	560.64	5,408.46	416.32	14,613.06
	16	Kadubyin	1,940.22	13.09	334.77	72.84	...	...	...	46.67	144.38	82	38.59	21.65	2.96	1.18	502.89	172.43	20.22	3,000.89	185.31	6,498.91
	17	Kama-myoma	998.65	43.15	27.05	1,744.74	...	...	...	92.27	51.13	...	17.23	59.52	47.30	9.33	251.65	289.14	96.83	1,999.42	205.85	5,933.26
	18	Tangauk	2,172.04	48.97	374.11	78.30	...	...	...	67.97	34.96	...	...	21.54	10.00	45	316.27	154.88	71.18	2,149.86	205.22	5,705.75
19	Taukma	2,076.00	90.72	111.38	205.50	...	...	...	94.58	28.37	1.24	...	8.39	18.76	5.21	857.82	2,396.49	404.11	12,947.21	410.67	19,656.45	
		Total	19,639.77	443.69	1,713.14	7,852.47	...	...	...	772.35	599.27	31.29	63.32	193.38	166.65	91.91	4,893.86	5,442.31	2,910.84	64,247.13	3,659.69	112,721.07

Distribution of land—concluded.

Township.	Serial number.	Circle.	PADDY-LAND.		Garden land.	Miscellaneous land.	Other land.	GRAZING-GROUND.		Village site.	LAND THROWN OUT OF PADDY CULTIVATION.		LAND THROWN OUT OF GARDEN CULTIVATION.		Monastery or Pagoda land.	Roads.	GRASS JUNGLE.		TREE OR BUSH JUNGLE.		Under water.	Total area.
			Under paddy cultivation.	Uncultivated paddy-land.				Culturable.	Unculturable.		Culturable.	Unculturable.	Culturable.	Unculturable.			Culturable.	Unculturable.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
			Acres.	Acres.	Acres.	Acres.	Ac.	Ac.	Ac.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
MVEDE.	20	Myède-myoma	1,055-56	119-21	42-42	1,511-51	...	...	...	164-71	19-03	...	3-62	1-40	43-55	36-50	157-36	90-15	361-59	1,911-16	203-06	5,720-92
	21	Mogaung	1,322-55	141-16	53-75	1,630-55	...	...	...	113-66	26-90	3-34	12	8-70	26-08	7-17	3,957-81	1,511-53	166-98	3,634-18	573-35	13,177-83
	22	Gondaw	759-62	62-31	34-62	1,188-12	...	...	...	55-61	34-48	...	...	97-14	10-00	7-70	102-59	426-61	...	15,738-08	356-18	18,873-06
	23	Ywataung	234-33	15-99	123-83	1,498-37	...	...	...	112-38	16-36	1-24	1-50	31-41	22-55	235-63	151-41	484-68	376-61	6,498-71	211-36	10,016-36
	24	Myohla	388-47	5-97	16-17	1,902-38	...	...	...	38-39	138-80	9-59	1-20	34-75	11-97	102-62	1,015-75	1,303-63	1,537-91	10,199-28	228-73	16,945-61
	25	Butlè	2,085-32	150-57	7-96	1,258-66	...	...	...	107-21	560-92	80-44	2-43	163-18	20-46	61-50	672-43	706-07	714-13	3,352-90	263-15	10,207-33
	26	Sindòk	3,775-28	120-40	53-45	722-33	...	...	...	120-96	514-91	1-25	...	203-42	8-79	14-19	1,749-88	981-38	2,252-13	11,815-09	581-01	22,914-47
	27	Pyalo	2,348-69	65-96	64-43	1,559-79	...	...	...	118-19	157-18	0-05	...	66-22	17-61	34-18	918-09	3,092-34	1,643-16	18,386-83	408-24	28,880-96
	28	Ngapyin	3,612-84	67-25	24-65	1,011-89	...	...	...	138-98	377-09	65-65	2-10	168-48	19-99	37-98	2,719-90	564-00	4,900-85	3,046-37	118-76	16,876-78
	29	Nyaungbinseik	4,096-86	246-72	24-11	1,288-05	40	...	...	86-40	425-32	51-16	14-02	363-66	10-18	58-83	3,728-05	4,192-12	903-08	8,405-35	207-73	24,102-04
	Total		19,679-52	995-54	445-39	13,571-65	40	...	1,056-49	2,270-99	212-72	24-99	1,138-45	191-18	596-30	15,173-27	13,352-51	12,856-44	82,987-95	13,161-57	167,715-36	
THAYETMYO.	30	Sa-aing	1,039-92	78-91	56-61	549-30	...	...	...	49-21	212-72	...	12-60	24-51	11-49	29-89	498-40	57-35	363-15	943-84	71-60	3,999-50
	31	Ngahlaingyôn	85-99	...	...	26-00	...	...	...	5-62	11-43	14	...	...	...	20	538-55	...	257-20	219-21	50-95	1,245-29
	32	Bangôn	1,093-44	65-23	122-18	652-74	...	...	...	62-33	90-41	...	13-53	5-58	11-78	13-18	277-08	90-80	160-66	1,459-48	260-83	4,379-25
	33	Kundôn	1,549-20	72-18	214-58	529-98	...	...	...	74-71	20-60	...	...	5-27	7-50	27-46	681-57	753-96	335-81	7,824-67	244-40	12,341-89
	34	Mindè	1,336-82	7-15	627-15	1,756-27	5-26	...	...	97-04	60-92	...	20-67	24-74	32-34	58-62	690-32	617-08	684-67	5,270-27	411-70	11,701-02
	Total		5,105-37	223-47	1,020-52	3,514-29	5-26	...	288-91	396-08	14	46-80	60-10	63-11	129-35	2,735-92	1,519-19	1,801-49	15,717-47	1,039-48	33,666-95	
	GRAND TOTAL		53,654-67	2,135-72	4,103-42	29,186-09	5-66	...	2,658-56	3,480-74	250-05	142-95	1,440-84	581-09	946-05	26,975-36	22,055-84	23,723-64	183,536-14	11,250-59	366,127-42	
THAYETMYO.	35	Municipality	41-97	65	106-79	65-02	...	...	...	259-05	...	...	...	...	45-52	100-34	17-60	19-23	...	...	29-54	685-71
		Cantonment	12-36	...	3-46	15-48	...	...	...	67-01	...	...	...	...	3-23	70-16	1-99	704-31	...	...	13-38	891-38

REPORT ON THE SETTLEMENT OPERATIONS IN THE THAYETMYO DISTRICT, SEASON 1900-01.

mortgagee. From this it should follow that the mortgage and sale value of the land would be the same, and this is found to be practically the case. The sale value of paddy-land is Rs. 49.30, and the mortgage value is very little less—Rs. 45.25. Very little land seems to be sold annually, most of it being mortgaged with the right to redeem at any time.

The sale value of garden land is Rs. 30.74 per acre; the mortgage rate is Rs. 19.85, but only a few mortgages take place. *Ya* land is mortgaged for Rs. 17.34 per acre and is sold for Rs. 16.26, but this is nearly all land in or near the municipal limits, I think, at Allanmyo or Thayetmyo. Other miscellaneous plots in the district seem a little more valuable, for the land is sold for Rs. 23.46—and people can be found to advance Rs. 22.97 on it. It is impossible to say what the value of land was in former times, but it has no doubt increased.

CHAPTER IV.

PROGRESS OF THE COUNTRY SINCE LAST REVISION OF RATES.

36. According to the thugyis' rolls for the past twenty years a slight decrease has taken place in the area under paddy. In 1881-82 the area of paddy-land is said to have been 55,336 acres, and in 1900-01 it is set down as being 54,190 acres, but according to the figures made out in this office the area under paddy cultivation during the season was really over 55,000 acres, so that no increase or decrease to speak of seems to have taken place. The cause of the non-extension of paddy-land is easy to explain; there is simply no more land available that is fitted for a rice crop. Apparently the increase of revenue with a simultaneous decrease in the area as shown in the thugyis' rolls is explained by the fact that in some years the area of land left fallow is very large, while last year there was practically no fallow at all.

The areas under miscellaneous cultivation and gardens have increased by some 44 per cent. The cause of this increase is partly the formation of new alluvial banks and islands where valuable miscellaneous crops can be grown, and partly to the extension of custard-apple orchards and other gardens near Allanmyo and Thayetmyo. An apparent increase has also been shown during the last few years owing to more correct survey of these lands.

37. As far as I can make out from the figures I have been able to obtain, there has been an exodus from the part of the district now coming under settlement. It may be, however, that while there were 102,304 persons in the tract in 1891 and only 95,116 in 1901, yet the district total has not altered very much. Being a border district in 1885, close to the frontier where the first and most severe fighting took place before the annexation of Upper Burma, it is natural to suppose that a number of people migrated and came southwards to settle down temporarily under more peaceful conditions than prevailed further north, and many of these persons were probably still in the settled tract in 1891 for there was much disturbance on both sides of the frontier for years after the annexation, and the effect of this had not quite died away when the census was taken, but soon after that, when it was seen that things had really settled down permanently, and the outlaws on both sides of the old border had all been killed or captured, the immigrants probably returned in large numbers to their old homes, and were lost to this part of the district. At the same time I fancy that many persons must have also left for other parts of Lower Burma, finding work in the first instance and then taking up land in more favoured spots. The land here has been subdivided amongst heirs until single fields often represent the share of more than one member of a family, and it seems wonderful that more emigration does not take place considering how much rich land awaits the pioneer in some of the adjacent districts that are easy of access by rail or steamer. I have met people from Thayetmyo in the north of the Toungoo district, but they seemed timid about clearing land except for *taungya* cultivation as a rule, probably being imbued with the idea that all other land was owned by others or reserved in some way. The old

idea of the right of re-entry upon land by anyone who has once cleared it seems to be still uppermost in the minds of the people in the interior of Thayetmyo, and they seem to act on the belief that it is adhered to elsewhere, and are therefore rather cautious about entering upon new land. I remember meeting a few Chins from Kama township this year at Pado in the Pegu district, and I dare say these men will induce others to follow them.

38. The statement showing the varieties of tenures under which land is held, which will be found in the appendices, proves that in the district outside the Thayetmyo Municipal and Cantonment limits nearly 80 per cent. of the agriculturists have been over 12 years in possession of their land, and very nearly 20 per cent. are in temporary occupation. The number of grants is insignificant. I may here remark that I noticed a certain number of *pottas* that were marked out on the shingle in the beds of streams in the Mindon valley. As the land could not by any possibility be classed as cultivable, the grants were merely applied for as speculations, in the hopes that the next year's floods and the annual change in the course of the stream might cause a deposit of silt on the chosen spot. Moreover, the applicants appeared in some instances to attempt to assist nature in making a new bank in the proper place by erecting weirs or obstructions in such situations as they judged would cause a suitable change in the force of the current. I need hardly say that they were not in the habit of consulting their neighbours' interests when carrying out these designs, and I dare say they often sweep another man's soil on to their own grant, at all events they are liable to do so. Grants of this sort are not contemplated in the rules I think, and should not be allowed.

39. Judging from the account of the crops obtained in Colonel Browne's time, there has been little or no change in the productiveness of the soil. The paddy-land in the lowest parts of most *kwins* gets an annual deposit of fresh matter washed down upon it. The higher portions of the *kwins*, even when they are so situated as not to get some deposit from still higher uncultivable land, are capable of giving astonishing results in a really good season when the rainfall suits the crop, for they have not been exhausted by over cropping, having been left fallow often for several years in succession and having been manured by cattle grazing there and so "green soiling" the land. The *kaing* lands are annually renewed by floods, or if not they finally cease to be true *kaing* lands and are used for *ya* or ordinary paddy cultivation, or they may go out of cultivation altogether.

Colonel Browne reported that the average productiveness of paddy-land was 42 bushels, or a little more than 37 standard baskets per acre. This is higher than the assumed average outturn set down by me, but I fancy that the very poorest lands were not included in the experiments on which these figures were based, and as 82 bushels, or nearly 73 baskets, per acre, are said to have been obtained in some instances, some rather abnormal fields must have been included. My statistics show that the average outturn of the land where crops were cut was 27.95 baskets according to the cultivators' own estimate, and would have been 25.59 baskets per acre according to my assumed outturns for the various soil classes. This was such a good year that the cultivators were afraid to state their real outturns for this year, and many of them had so seldom got a decent crop from the land that they had a very hazy idea of the normal amount that might be expected from it. When examined they tried, I think, to depreciate the value of this season's crop as far as they thought safe, imagining that the rates on the land would be based entirely on the results of this year, and fearing that too much exaggeration regarding the poverty of the soil would not be believed in view of the heavy crop that was often to be seen. On looking through the statistics relating to tenancies made out annually by the Land Records Department, I find that in 1897-98 the average yield per acre of land rented was put down as 24.99 baskets; in 1898-99 it was said to be 19.38; in 1899-1900 it was set down as 23.07 baskets, and in 1900-01 it rose to 33.57 baskets per acre. The average yield per acre according to these figures would be 25 bas-*

* Areas held under various tenures, and number of tenure holders of each class.

Former and present rates of productiveness per acre.

kets per acre during the period of four years. My estimates therefore seem to be fair all round and closely coincide with two estimates taken from very different sources.

40. The size of the average holding does not seem to have appreciably changed during the last 30 years. In 1873 it was reported that the ordinary paddy holding was just a little over 3 acres; it is now a fraction less than 3 acres. *Ya* plots have always remained much the same I fancy, and other miscellaneous plots cannot have changed much. In fact in this as in many other ways the district seems to have been at a standstill for a long time. Probably about three acres is the smallest area that is worth cultivating as a paddy plot, while it is about the largest area that a man can properly attend to himself if it is planted with any other crop.

41. The prices of paddy have changed a good deal, in consonance, as before explained, with the higher prices ruling down stream from whence rice or paddy is usually imported. In scarcely any case is paddy sold wholesale in the interior of the district. I saw a man buying paddy in a *kwin* to the south of Mindon who had to obtain small quantities from six different houses before he could fill his small cart. In the *Pyauing kwin* to the north of the same town I came upon some people who were exchanging earthen pots for paddy—two pots for one pot full of grain. It is rather hard to guess the market value of paddy from transactions of this nature. The fact is that in really good seasons only is there a surplus of paddy at all, and then a great part is exchanged for other necessaries amongst the villagers themselves. In 1872 the harvest was an unusually good one, and paddy was sold at Rs. 40 per 100 baskets on the river near Thayetmyo, while the price at Mindon was Rs. 60. In 1870, when the harvest was a bad one, the price on the river bank at Thayetmyo was Rs. 75, and it was as high as Rs. 120 at Mindon. Now the price is somewhere about Rs. 90 on the average at Thayetmyo and on the opposite side of the river, and it seems to be on the whole less at Kama and Mindon; it certainly is in good years.

With regard to the prices of miscellaneous produce, I find that but little difference exists between the prices reported to have been current 30 years ago and those that are obtained now. Tobacco now fetches from Rs. 20 to Rs. 30 per 100 viss as it did then, and onions are sold early in the season at Rs. 5 per 100 viss and later on usually at the rate of Rs. 20 or Rs. 25 for the same weight, and this seems to have been the case many years ago. Chillies have perhaps increased in value, but the crop varies greatly according to the season, and wide fluctuations are caused by the local scarcity or otherwise.

42. I do not think the general condition of the people has changed for a long time to any extent. The district is free from organized crime, and cattle breeding can be carried on without risk, while similar prices and more accessible markets can now be obtained for miscellaneous produce, and better communications make it easier for a man to leave the place in search of work elsewhere if necessity compels him to do so during a bad season, and in this way life must be easier for the majority of people than it used to be.

CHAPTER V.

PROPOSED ASSESSMENT.

43. I have divided the soil of the paddy-land throughout the tract now under report into three classes in each *kwin*. The plan was necessary owing to the unevenness of the ground and the wide difference between the best and worst parts of most of the *kwins* both in the nature of the soil and the position of the fields.

44. The season in Thayetmyo has been abnormal, more so than it was even last year in Toungoo. *Kwins* that had been left almost entirely fallow the year before were covered

with luxuriant crops, and it is most difficult to judge from the results of crop-cutting what outturn should be assumed to represent that of the ordinary average season. In a good season very often some of the worst fields give as large outturns as the best, partly because they are so seldom placed under crops that the soil is not in any way exhausted, and partly because they have gained a certain amount of fertilizing matter from the cattle droppings and the growth of weeds or grass that is ploughed in when long fallowed fields are again cultivated.

I have divided all the land under paddy into four soil tracts, and have practically based my assumptions on the statements of the cultivators, the statistics obtained in the files of the office of the Land Records Department, and my own experience of different sorts of soils, making allowances for the somewhat scanty and erratic rainfall.

Tract No. I is assumed to yield 40, 30, and 20 baskets per acre on each of the respective soil classes; Tract No. II is supposed to give 35, 25, and 20 baskets; Tract No. III 30, 20, and 15 baskets; and Tract No. IV 25, 15 and 10 baskets on each acre. Tract No. I consists of the best land which is only to be found in the Kama township. The next is a tract amongst the moderately good lands of Kama and Mindon and small patches on the west of the Irrawaddy. The largest portion of the land has been placed in Tract No. III, and a very poor piece of land towards the south, about the Nyaungbinseik circle, has been alone placed in the lowest tract.

45. The average area of holdings scarcely seems to vary from circle to circle and township to township, and may be taken as being everywhere as nearly as possible 3 acres per holding. Statistics made out in this office make it appear that just half that area is the size of the ordinary holding, but this result is due to the fact that the same owner occupies more than one holding, and this has not been taken into consideration, as it is nearly impossible to discover whether the man whose name appears in one *kwin* is the same man who owns land in the next. The Land Records Department, on the other hand, working through local agencies, are able to arrive at the total amount owned or occupied by each particular cultivator, and their figures are pretty correct.

46. I have assumed three price tracts, basing my assumptions on the prices given by the Land Records Department as the local prices for the past four years. From these statements of prices I have made out three price tracts, one in which the price of paddy is assumed to be Rs. 90, one in which it is Rs. 85, and one where it is Rs. 75. The highest price tract includes the whole of the Myède side of the river. Here I think the town of Allannmyo causes a demand which cannot be supplied in the immediate neighbourhood, and in the interior there is so little paddy produced that the price must always be high there even in good years. *Kwins* near Thayetmyo are in a similar position and are placed in the same tract. The whole of the Kama township has been placed in the Rs. 85 price tract. Here there seems to be an occasional export of paddy at Kama itself, from which place small quantities of paddy are sent in good seasons to Thayetmyo and elsewhere. Here in the interior there are a fair number of people who live by other sorts of cultivation, and who buy their paddy from the rice cultivators at probably much the same price that prevails at Kama, though in a really bad year, when grain has to be imported through that place, the prices must be very high. Towards Mindon it is most difficult to guess what the ordinary value of paddy is. I fancy that in a good season it is not more than Rs. 60 or 65, while in a bad season, when it has to be brought up the Matun *chaung*, the price may rise to double that. I have put the Mindon township into a Rs. 75 price tract, for though the statement showing the prevailing prices does not work out to so high an average price, yet this seems to be due to the fact that only three years instead of four are dealt with, and the year that is not included happens to be one in which the price of paddy ruled rather high, so that Rs. 75, instead of Rs. 73, which is the average price for three years past, has been adopted.

47. The combination of four soil tracts and three price tracts results in the formation of eight tracts with varying values for the produce of an acre.

Assessment tracts (Paddy).

48. Statistics prove that the average cost of cultivation per acre is only Rs. 3.12. This is the natural result of small holdings and poor land. The smallness of the farm allows the

Cost of cultivation per acre.

cultivator to do most of the work without having recourse to hired labour, and the poorer soils give such small outturns as a rule that strict economy has to be practised. It may be remembered that even in Toungoo, when the south portion of the district was settled by Captain Des Voeux in 1898-99, the expenses of cultivation in Group II only came to Rs. 3.03 per acre as against Rs. 5.40 in the better parts of the tract. For practical purposes Rs. 3.4 may be assumed as the cost of cultivation for an acre of paddy-land.

49. I have taken statistics of the cost of living in almost every case where I examined cultivators with reference to their other expenses, and I find that, reduced to an acre rate, the

Cost of living per acre.

cost of living is Rs. 15.75. This is of course high, but a large part of this cost should be debited to other pursuits and should also be modified in many cases by deducting a proportion on account of other sorts of cultivation, either *kaing* or *taungya*, that is often carried on by paddy cultivators.

50. Below is given a table showing the total area under paddy in each tract by soil classes. I have worked out the half net profits, taking the cost of living at Rs. 15.12 per

Proposed rates.

acre for the purpose of making clear the fact that these figures regarding cost of living cannot be applied to the land, for if they were, more than half the soil classes would show no profit at all.

The calculation of the net produce, by deducting the cost of cultivation from the assumed value of the gross produce of the land, gives very different results, and but for the small size of the holdings and the extreme risks of the seasons in this district they might justify a large increase in the rates now prevailing. As it is, a good many of my proposals only amount to a re-distribution of the old rates, which in some cases causes a very slight decrease in the total demand, though the final result is an increase on the whole.

Assessment tract.	Soil class.	Cultivated area in each tract, by classes, excluding fallows.	Cost of living per acre.	Cost of cultivation per acre.	Total assumed cost of living and cultivation per acre.	Assumed outturn per acre.	Average outturn per acre.	Price per 100 baskets.	Gross produce.	Half profit by soil classes.	Proposed rate by tracts.	Net profit.	Quarter net produce by soil classes.	Proposed rate by soil classes.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
I	I	Acres.	Rs.	Rs.	Rs.	Bkts.	Bkts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. A.
	II	4,788-73	15-75	3-25	19-00	40	34	85	34-00	7-50	1-96	15-00	7-68	2 8	
	III	2,421-92	...	...	...	30			25-50	3-25		6-50	5-56	1 8
	1,468-56	...	...	...	20	17-00			...	...		3-43	1 0	
II	I	2,187-21	15-75	3-25	19-00	35	29	90	31-50	6-25	1-56	12-50	7-06	2 0	
	II	2,204-98	...	...	...	25			22-50	1-75		3-50	4-81	1 4
	III	463-07	...	...	...	20			18-00	...		...	3-68	1 0
III	I	2,353-35	15-75	3-25	19-00	35	27	85	29-75	5-37	1-44	10-75	6-62	2 0	
	II	2,117-84	...	...	...	25			21-25	1-13		2-25	4-50	1 4
	III	2,071-21	...	...	...	20			17-00	...		...	3-43	1 0
IV	I	5,308-89	15-75	3-25	19-00	30	22	90	27-00	4-00	1-11	8-00	5-93	1 8	
	II	6,068-50	...	...	...	20			18-00	...		...	3-68	1 0
	III	3,832-64	...	...	...	15			13-50	...		...	2-56	0 12
V	I	2,052-36	15-75	3-25	19-00	35	27	75	26-25	3-62	1-13	7-25	5-75	1 8	
	II	1,921-72	...	...	...	25			18-75	...		...	3-87	1 0
	III	1,235-21	...	...	...	20			15-00	...		...	2-98	0 12
VI	I	2,040-88	15-75	3-25	19-00	30	21	85	25-50	3-25	1-08	6-50	5-56	1 8	
	II	2,284-47	...	...	...	20			17-00	...		...	3-43	1 0
	III	2,039-07	...	...	...	15			12-75	...		...	2-37	0 12
VII	I	1,127-39	15-75	3-25	19-00	25	15	90	22-50	1-75	-95	3-50	4-81	1 4	
	II	1,275-21	...	...	...	15			13-50	...		...	2-56	1 0
	III	1,985-45	...	...	...	10			9-00	...		...	1-43	0 12
VIII	I	1,042-43	15-75	3-25	19-00	30	30	75	22-50	1-75	-97	3-50	4-81	1 4	
	II	1,996-01	...	...	...	20			15-00	...		...	2-93	1 0
	III	1,422-03	...	...	...	15			11-25	...		...	2-00	0 12

It will be seen from the above statement that the highest rate which I propose is Rs. 2-8-0 on first class soil in any tract, and the lowest rate on the same class of soil is Rs. 1-4-0. The quarter net produce of these soil classes varies from Rs. 7-68 to Rs. 4-81, so that if the rate were exactly proportionate to these results, and the rate of Rs. 2-8 was correct, the lowest rate on the first class soil in Tracts Nos. VII and VIII ought to be about Rs. 1-8. As, however, poor land can never pay so much in proportion to the acre profits as good land, owing to the deduction of food paddy being the same in each case and the margin of profit being then in favour of the better land, I think Rs. 1-4 is a better rate to suggest, while Rs. 2-8 seems to me to be quite as much as any land in this district can afford to pay when under ordinary paddy. It is rather difficult to compare the land here and the rates with any others that I am personally acquainted with, but altogether the rates I now propose very much resemble those sanctioned for land from which the quarter net profit worked out to much the same amounts in Toungoo. In the case of Thayetmyo, however, the rates I now propose seem to me not to lend themselves to any further general enhancement, as the rates on much of the land in Toungoo certainly do.

51. The table below allows the proposed rates to be judged by the standards of sale values and rents, and at the same time permits of a comparison being made between the present and proposed rates by showing the incidence of each:—

Proposed rates contrasted with sale rates, rents, and incidence of present rates.

standards of sale values and rents, and at the same time permits of a comparison being made between the present and proposed rates by showing the incidence of each:—

Tenant rates.

Tract.	Tenant rate.	Sale rate.	Incidence per acre of present revenue on Thugyi's area.	Incidence per acre of present demand on Settlement area.	Incidence per acre of proposed rate on Settlement area.	Remarks.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	
I	9-37	56-87	1-35	1-30	1-96	
II	9-34	34-34	1-06	1-02	1-56	
III	8-24	49-45	1-22	1-18	1-44	
IV	10-03	35-02	1-05	1-03	1-11	
V	9-22	71-92	.99	.96	1-13	
VI	8-37	58-51	1-14	1-11	1-08	
VII	4-67	27-71	1-11	1-07	.95	
VIII	6-90	43-07	.99	.97	.97	

It will be seen that except in Tracts VII and VIII the tenant rates run very high, and the sale rates, which fluctuate considerably without much reference to the tracts as they stand in series, range from Rs. 71-92 in Tract V to Rs. 27-71 in Tract VII. Curiously enough, while the tenant rate in Tract IV is as high as Rs. 10 per acre, the sale rate in the same tract is only Rs. 35. In Tract VIII, where the tenant rate is only Rs. 6-90, the sale rate is Rs. 43. This seems to shew that only general deductions can be made from these figures. Of course all the proposed rates are far below the tenant rates all round, and the sale rates prove, I think, that the pressure on the land is rather severe. In the north of Toungoo the highest sale rate, in a tract where the yield of paddy was very large and the risks of cultivation were almost absent, was only Rs. 21-60.

A comparison of the present incidence of the rates and that which will result if the proposed rates are applied proves that very little difference will be felt, though the rate per acre will be more in proportion to the value of the yield, I trust, on each soil class.

52. The rates on paddy-land that are at present in force can be easily ascertained from a perusal of Map No. III. They seem to have been laid down, as I have before remarked, in proportion to the general fertility of the *kwins* to which they applied. At the same time some of these rates were, I fancy, based on the rather vague reports of thugyis and others, as it is hardly possible that every *kwinn* was visited. On the whole the rates seem to have been very fair considering the principle on which it was necessary to calculate them; I cannot quite understand some of the *kwins* assessed at the Rs. 1-8 rate in the Myède subdivision, but possibly they have changed since the rates were first applied, or the proportion of fair land in them was considered to be so great as to justify high rates without much reference to the yield per acre from the soil.

The statement below shows the results of the present and proposed rates, so that the effects can be compared. There is more fallow included in the settlement areas than in the thugyis' rolls, but not so much as to materially affect the resulting figures. A good many of the settlement areas have had to be worked out in this office by means of the acre comb, and I fear it is possible that small errors have crept in which could not be avoided.

Comparison of present and proposed demand—(Paddy cultivation).

No. of tract.	Assessed area under paddy cultivation, including fallow.	PRESENT ASSESSMENT, THUGYI'S RATE AND MEASUREMENT.		ASSESSMENT WITH THUGYI'S RATE AND REVISED MEASUREMENT.		ASSESSMENT AT PROPOSED RATE WITH REVISED MEASUREMENT.		Percentage of difference, columns 3 & 5	Percentage of difference, columns 5 & 7	Remarks.
		Without 10 per cent. cess.	With 10 per cent. cess.	Without 10 per cent. cess.	With 10 per cent. cess.	Without 10 per cent. cess.	With 10 per cent. cess.			
1	2	3	4	5	6	7	8	9	10	11
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			
I	8,670-21	11,350-15	12,401-76	11,057-99	12,163-70	16,980-67	18,678-74	-2-62	+53-53	
II	4,855-21	4,974-25	5,471-67	4,733-08	5,206-39	6,947-27	7,642-00	-4-85	+46-78	
III	6,542-40	7,764-81	8,541-29	7,095-70	8,465-27	9,192-59	10,111-85	-89	+19-45	
IV	15,210-03	15,758-17	17,333-99	16,601-29	18,261-42	16,599-19	18,259-11	+5-35	-01	
V	5,209-29	5,047-16	5,551-88	5,023-33	5,525-66	5,763-70	6,340-07	-47	+14-74	
VI	6,364-42	7,081-58	7,789-74	7,363-06	8,099-87	6,713-65	7,385-01	+3-97	-8-82	
VII	4,388-05	4,528-11	4,980-92	4,291-47	4,720-62	3,988-27	4,387-10	-5-22	-7-06	
VIII	4,460-47	4,360-28	4,796-31	4,206-25	4,626-87	4,160-23	4,604-85	-3-53	-47	

53. This district is one in which fallow rates should be allowed on all uncultivated paddy-land. I understand that these rates are now automatically applied, but if not they certainly should be. I came across a few cases near Nyaungbinseik where people appeared to have lost their land altogether because they had left it in charge of an aged relative during a bad season while they went elsewhere in search of work, and returned to discover that it had been sold in their absence for default of revenue because the care-taker found it impossible to raise the amount of the land tax, assessed at the full rate for want of a formal application. It may be taken that if land is left fallow in this place, the cultivator has excellent reasons for not attempting to sow a crop. There are certainly a few landlords whom one would wish to see compelled to pay the full amount of the revenue when they fail to get tenants, but one rule must be made for all, and any but automatic fallow rates will press very harshly on the majority of the cultivators. I give below a statement taken from the township records that shows the area of fallow all round for the last four years. It will be seen that 17 per cent. of the land is regularly left fallow, and my own impression is that these figures under-state the area.

Area left fallow (average of 4 years—Paddy).

Tract.	Area left fallow during the last four years.	Average of each year.	Settlement area.	Percentage of area left fallow to total area in each tract.	Remarks.
1	2	3	4	5	6
	Acres.	Acres.	Acres.		
I	3,023.69	755.92	8,679.21	8.70	
II	6,036.25	1,509.06	4,855.21	31.08	
III	4,443.58	1,110.89	6,542.40	16.97	
IV	13,286.10	3,321.52	15,210.03	21.83	
V	1,297.95	324.48	5,209.29	6.22	
VI	4,494.12	1,123.53	6,364.42	17.65	
VII	307.33	76.83	4,388.05	1.75	
VIII	5,100.32	1,275.08	4,460.47	28.58	
Total ...	37,989.34	9,497.31	55,709.08	17.04	Thayetmyo Municipality and Cantonment excluded.

54. I do not propose any particular rate for *mayin*. It seems to me better to charge the ordinary rates prevailing in the *kwin* when land is irrigated for hot-weather crops. There is a small area in the Myede sub-division near Butle that seems to be regularly used for *mayin* crops, but the *mayin* cultivation in most years, when it is extensive, is really due to a bad season which has rendered futile the planting of the ordinary paddy, and is only an attempt on the part of the cultivators to retrieve the situation to some extent. Moreover, the cultivator has often spent money and labour in ploughing his fields without result in the first instance, and has then to face a further expenditure for the erection of water-wheels or bunds when he makes up his mind to plant *mayin* paddy, so that the greater certainty and larger average outturn of the crop is balanced by the increased expenditure and labour. Most of the *mayin* crop is naturally planted on the lowest, and therefore first class soil of the *kwin*, where the rates are highest, and the grain obtained is always a rather coarse and not very valuable sort of *kaukngè*. Two selections only were made amongst the fields of *mayin*; although both were first class soil, the better field gave only 36.57 baskets to the acre, and the other field, in which the water failed, gave only 18 baskets to the acre. These fields are both situated in the No. 11, or 35-25-20 Soil Tract. The total area under *mayin* this year only amounted to 279 acres.

55. I have taken statistics this year in order to find out as far as possible the profits arising from miscellaneous crops in a tract wholly given over to the cultivation of the best sorts. These statistics prove that the profits may run very high indeed where miscellaneous cultivation is carried on carefully, on really suitable soil and on a fairly large scale. The results which are shown in Statement No. VI of the appendices were arrived at from the examination of all the cultivators in the Maudaing and Kanle *kwins*—two typical *kwins* of the upper part of the Mindon valley.

The onion crop is valued at Rs. 10 per 100 viss for the purpose of these statistics, and tobacco is assumed to be worth Rs. 25. Other small patches of miscellaneous products that occur are taken at the value stated by the cultivator himself. The outturns are also put down according to the cultivators' assertions, as well as his expenses, yet the profit per acre all round comes to over Rs. 30. If the onion crop is assumed to give an average yield of 1,000 viss per

acre, as seems to be the case, judging from the crop statistics, which I may say are fairly typical of all sorts of fields, good, bad and indifferent, taken in a season that was admittedly not a good one for the onion cultivator on the whole, and which were also taken by whole plots and not selected portions of fields, it will be clear that at the rate of Rs. 10 per 100 viss an onion cultivator can make a clear profit of some Rs. 76 per acre. In the same way tobacco may be certainly assumed to give, all round, an average yield of 250 viss, a rather moderate assumption, and if the cost of cultivation is assumed to be the same as for an onion crop, the result is an acre profit of some 28 rupees. As a matter of fact the cultivation of tobacco costs far less than that of onions, and the outturns frequently run to about 400 viss per acre on good land. The cultivators themselves admitted that 100 viss was often obtained from one "gan," i.e., 21 of an acre.

Other miscellaneous crops also give fair results, I fancy, though it is most difficult to arrive at the acre value of the crop with any accuracy. Chillies are very valuable when the crop is a good one, but the crop cannot be depended on, and it seems to be often a failure owing to many obscure causes.

Indian corn is not often grown on *kaing* land for the cobs, but is frequently cut as a fodder crop for cattle; it is no doubt fairly valuable as such, but it is never sold as far as I can learn. *Hnan-gyi*, or sesamum, grown on *kaing* land during the dry season, is quite a different thing to the *hnan-yin* of the *ya* plots. It seems to give from 5 to 10 baskets per acre if not damaged, and occasionally double that amount. It is worth Rs. 3 a basket, and there are very few expenses of cultivation to be met. *Pè-sin-gôn*, the *arhar dhal* of India, was found growing to a fair extent in *kwins* near Singaw. I made out that the crop was worth at least Rs. 20 per acre. *Pè-yin*, fennel, sweet potatoes, some sorts of millet, such as *lu* (*miliun paspalum*) and many other sorts of plants are to be found grown in small patches, mostly for home use and not for sale. It is quite impossible to guess what profit per acre is made out of these patches; of course, they are simply valuable as food supply for the household.

56. In order to assess something like proportionate rates on different classes of *kaing* lands, I would assess them according to the crop on the area actually cultivated. Onions as the most valuable crop should be assessed high, and considering the profits, I do not think that Rs. 4 per acre can be considered extortionate, and I would levy that sum. The onion cultivation is a feature of the Mindon valley where the present rate for miscellaneous cultivation is Rs. 1 per acre; it is scarcely seen elsewhere except in plots near towns that are practically market gardens and also valuable. Tobacco is mostly grown on land along the lower reaches of the Matun *chaung*, and on islands where the soil is particularly rich. A rate of Rs. 3 per acre will not be too much to charge for this crop. Where *kaing* land is temporarily planted with paddy I would assess it as a tobacco crop; indeed, tobacco is generally grown after paddy in these cases. Maize might be assessed at Rs. 2-8 per acre. Other sorts of miscellaneous crops I would treat generally, and assess at only Rs. 2 per acre. The least valuable crop on *kaing* land can well afford to pay this rate. The present incidence of the rates on miscellaneous crops is about Rs. 1.11 in the case of onions, Rs. 1.42 on tobacco land, and Rs. 1.33 on land under maize. The incidence of the present tax on land under other crops on *kaing* land is about Rs. 1.34.

57. *Ya* lands exist mostly on the Myède side of the river and on the west side near Thayetmyo. The people seem to divide them into two classes, *pyaung-gins* and *hnan-gins*, according as to whether the crop usually grown is maize or sesamum.

Of course a number of other crops, miscellaneous vegetables, *hnan-sa-pyaung* (*sonar*), sesamum, and cotton are to be found on these plots, and occasionally one crop follows another on the same land—as for instance cotton follows sesamum. In this case the seed of both is sown at the same time; but the sesamum ripens before the cotton has grown and is gathered without detriment to the other crop. I have classified the *ya* lands as first and second class *yas*, and have also made two tracts—one a suburban tract which includes lands under *ya* crops close to the large towns of Allammyo and Thayetmyo, in which area *ya*

cultivation to a certain extent partakes of the nature of market gardening, and where the produce is readily sold retail in the bazaar daily by the women of the household. Here, of course, higher rates can be enforced. Outside this tract while the *ya* lands are still classified they practically resolve themselves into miscellaneous and sesamum plots, and on the whole all the *pyaung-gins* are first class while all the *hnan-gins* are second class.

The sesamum of the *ya* cultivator does not give nearly such good results as that sown by the owner of *kaing* land, and the results of crop-cutting on *ya* lands this year gave an average yield all round of only 3.69 baskets. I think some 4 baskets or so is the average yield in an ordinary year, but this season was a very bad one for this crop.

Miscellaneous *ya* plots near a town where they can be manured cheaply are often really valuable and might pay quite as much as third rate, or maize crops on *kaing* land. The cost of cultivation cannot be high and the maize cobs and miscellaneous vegetables grown are easily disposed of retail.

The second class *ya* lands, even near a town, are often not capable of producing crops of miscellaneous vegetables owing to the soil of which they are composed being unsuitable for the purpose, and they are generally found under *jowar* or a mixed crop of *jowar* and sesamum. They can very well afford to pay Rs. 2 per acre, however, as they can be used with a sesamum crop without bad effect annually. In the outside *yas* it is not possible to manure a sesamum plot, nor is it indeed often that a plot can be sown for even two years in succession. The *ya* cultivator who sows *hnan-yin* cuts down the forest growth, burns the logs and gets rid of the weeds, and gets a crop for the first year, but as a rule he fails to obtain another crop during the second year, and he seldom attempts to do so, for next year after the first crop has been obtained is marked by a dense growth of weeds which choke the delicate sesamum, and which cannot be picked out without destroying the main crop. Moreover the fertilizing effect of the ashes of the first year is now almost at an end. From enquiries made amongst the cultivators of *ya* lands I have come to the conclusion that a good suburban plot may yield as much as Rs. 25 or Rs. 30 worth of produce per acre in an ordinary year, while a second class plot may be worth from 15 to 20 rupees, and the pocket expenses on account of cultivation are very small in the case of the better class of *yas*, and almost *nil* in the case of the poorer plots, where weeding is not required. Second class *yas* outside the suburban tract are worth about Rs. 12 per acre, and the largest expenditure for labour (generally for rapid harvesting lest the seed should fall from the bursting pods) is about Rs. 1-8 per acre. The better plots in the outside tract must be worth about Rs. 20 per acre on the average, but require careful ploughing and weeding. Cotton plots scarcely exist inside the settled tract, and only a few acres were assessed there. Experimental crop cuttings were tried, with the result that in two plots an average of about 100 viss per acre was found to be the yield, and in a third plot as much as 250 viss was produced to the acre. The price of cotton varies considerably from year to year. The price, according to the books of Messrs. Jamal Bros. & Co., at Allanmyo, has been about Rs. 22 on the average for the past four years. Practically the whole of the cotton tract falls outside the area now under report, and the crop is not therefore important from the Settlement Officer's point of view, and need not be specially assessed.

58. I recommend a rate of Rs. 2-8 on first class *ya* land inside the No. I or

Suburban Tract, which will be seen marked by a line of red colour in Map No. VII. I would assess second class *ya* lands falling within the same limits at Rs. 2 per acre. Outside the boundary marked I would suggest that first class *yas* might be made to pay Rs. 2 per acre, and second class plots might be taxed at Rs. 1-8 only. The incidence of the present tax on *ya* lands in the suburban tract is Rs. 1-0-1 per acre; in the No. II Tract it is Rs. 1-13.

59. There are several valuable orchards of custard apples close to Thayetmyo, inside the suburban tract, that has just been mentioned with reference to *ya* cultivation. In

Cardinal: proposed assessments.

near Allantmyo, too, custard apples are beginning to be a feature of the garden lands. I have classified the gardens inside the suburban tract as first and second class, and would recommend a rate of Rs. 3-8 to be levied on first class and Rs. 2-8 on second class gardens inside this tract. The gardens of custard apples near Allantmyo have been very leniently dealt with when they were classified, as they are mostly newly planted and it is as well to encourage the cultivation there. Many lands now classified as *yas* will soon have to be placed under the heading of gardens, as they are in many cases being planted with trees. The trees have to be renewed every few years by a system of planting young seedlings between the lines of old and mature stock, but the expenses incurred cannot be very great and the profits of a first class orchard must be large—at least Rs. 75 per acre I think. Outside the suburban tract there are but few good gardens, and as the villages in the interior are all fenced, and the area of the house sites therefore much restricted, there are hardly any gardens within them. I have also classified these gardens as first and second class, but a rate of Rs. 2-8 for first class and Rs. 2 for second class gardens in this tract will be quite enough. Betel-vines need not here be specially assessed as there are only a couple of plantations of an experimental type, and these may well be encouraged. The majority of gardens are only plantain groves of the common sort. In No. I Tract the present rate is Re. 1, in No II Tract it varies from 12 annas to Rs. 1-8 per acre.

60. There are a good many very fair plantations of betel-vine in Thayetmyo inside the suburban tract, and the profits must be very large indeed. As much as Rs. 400 per acre must be assured in some cases, and even the worst garden must be a profitable investment. The betel-vine grower has to meet some heavy expenditure on account of wells for irrigation, water wheels, cost of coolies, renewal of earth, etc., and he must have some capital to start with, but every garden can pay at the rate of Rs. 5 an acre, a large enhancement on the present rate, but a rate that bears no real proportion to that which might be demanded in view of the large profits that accrue.

61. As long as it is considered expedient to enforce this tax it might be levied at the rate of 4 annas per tree. I must say I never heard any man complain about this rate, and any less rate on a particular variety of tree can do no good.

62. Thayetmyo Municipality and Cantonments have not been considered in the proposals made up to this point. The present rate on paddy-land there is Rs. 3 per acre. If rates of Rs. 3-8, Rs. 2-8 and Rs. 1-8 are substituted and levied on the three classes of soil, the result will be almost exactly the same total revenue differently and more justly distributed.

I would allow the present rate of Rs. 3 to stand in the case of all miscellaneous cultivation.

Gardens here are all practically house sites with fruit trees, etc., planted on them. The present rate of Rs. 3 might also stand in the case of these. There are no betel-vine plantations within town limits.

63. I now give a table showing the present and proposed demand. It will be seen that the total increase in land revenue amounts to Rs. 44,626.41. I base the figures relating to all *kaing* cultivation on the area assessed under various crops as shown in the statements of the Land Records Department.

I am doubtful about the accuracy of any increase supposed to be due to more correct areas being made out in this office.

Comparison of proposed and present demand (All kinds of cultivation).

Group.	Tract.	THUGYI'S RATE AND THUGYI'S AREA.		THUGYI'S RATE AND SETTLEMENT AREA.		PROPOSED RATE WITH REVISED MEASUREMENT.		Percentage of increase or decrease: columns 4 and 6.	Percentage of increase or decrease: columns 4 and 8.	INCIDENCE PER ACRE.		Remarks.
		Without cess.	With cess.	Without cess.	With cess.	Without cess.	With cess.			Revenue in col. 6 on Settlement area.	Revenue in col. 8 on Settlement area.	
1	2	3	4	5	6	7	8	9	10	11	12	13
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			Rs.	Rs.	
Paddy	I	11,356.15	12,491.76	11,057.99	12,163.79	16,983.67	18,678.74	- 2.62	+ 49.68	1.40	2.15	
	II	4,974.25	5,471.67	4,733.08	5,206.39	6,947.27	7,642.00	- 4.84	+ 29.68	1.70	1.57	
	III	7,764.81	8,541.29	7,695.70	8,465.27	9,192.59	10,111.85	- .89	+ 18.38	1.29	1.54	
	IV	15,758.17	17,333.99	16,601.29	18,261.42	16,599.19	18,259.11	+ 5.35	+ 5.33	1.20	1.20	
	V	5,047.16	5,551.88	5,023.33	5,525.66	5,763.70	6,340.07	- .47	+ 14.19	1.36	1.22	
	VI	7,081.58	7,759.74	7,363.06	8,099.37	6,713.65	7,385.01	+ 3.97	- 5.19	1.27	1.16	
	VII	4,528.11	4,980.92	4,291.47	4,720.62	3,988.27	4,387.10	- 5.22	- 11.92	1.07	.99	
	VIII	4,360.28	4,796.31	4,206.25	4,626.87	4,186.23	4,604.85	- 3.53	- 3.99	1.08	1.08	
	Total		60,870.51	66,957.56	60,972.17	67,069.39	70,371.57	77,408.73	+ .16	+ 15.60	1.20	1.38
Gardens and solitary fruit trees	I	882.81	971.09	914.73	1,006.20	2,386.20	2,624.82	+ 3.61	+ 170.29	1.23	3.34	Includes rates for solitary fruit trees.
	II	5,686.65	6,255.31	5,479.25	6,027.18	8,242.70	9,066.96	- 3.64	+ 44.94	1.90	2.75	
	Total		6,569.46	7,226.40	6,393.98	7,033.38	10,628.90	11,691.78	- 2.67	+ 61.79	1.77		2.87
Betel-vine						147.50	162.25				5.50	
Miscellaneous						5,910.00	6,501.00					Miscellaneous crops of all sorts are assessed alike under present rules, so total sum is cols. 3 and 4 for whole area including yea.
Tobacco						19,071.00	20,978.10					
Onions						6,412.00	7,053.20					
Maize		31,683.09	34,781.40	31,683.09	34,781.40	1,462.50	1,608.75		+ 85.09	1.33	2.47	
Yea	I					3,325.72	7,586.50					
	II					3,570.10						
Total	I					7,326.68	20,649.92					
	II					11,445.97						
Total		31,683.09	34,781.40	31,683.09	34,781.40	58,524.67	64,377.47		+ 85.09	1.33	2.47	
GRAND TOTAL		99,123.06	1,09,035.37	99,049.24	1,08,884.17	1,39,672.94	1,53,640.23	- .13	+ 40.90	1.25	1.79	
Cantonment	Paddy	50.91	56.00	37.08	40.79	36.50	40.15	- 27.16	- 28.30	3.30	3.24	
	Gardens and solitary fruit trees	6.00	6.60	10.38	11.42	10.38	11.42	+ 73.03	+ 73.03	3.30	3.30	
	Yea	48.84	53.72	46.44	51.08	46.44	51.08	- 4.91	- 4.91	3.29	3.29	
Total		105.75	116.32	93.90	103.29	93.32	102.65	- 11.20	- 19.77	3.30	3.27	
Madrass	Paddy	118.47	130.32	121.60	133.76	126.16	138.78	+ 2.56	+ 6.49	3.13	3.23	
	Gardens and solitary fruit trees	315.98	347.56	320.39	352.43	320.37	352.41	+ 1.39	+ 1.38	3.50	3.30	
	Yea	173.31	190.64	195.06	214.57	195.06	214.57	+ 12.14	+ 12.55	3.29	3.30	
Total		607.76	668.54	637.05	700.76	641.59	705.76	+ 14.81	+ 5.58	3.08	3.29	

64. The sanctioned rates may remain in force for the next 15 years I think.

Duration of settlement. It is difficult to imagine any great change taking place in the district during that time, and even at the end of that period I scarcely see how the rates which I now propose can be generally enhanced.

65. I regret that there has been great delay in submitting this report.

Delay in submitting report. This has been due to a number of causes. In the first instance proper maps were not obtainable, the Land Records Department supplying only the original survey traces, supposed to be brought up to date. As these maps had no field or survey plot numbers, they could be of very little use to a Settlement Officer, and as they were frequently incorrect in outline, and so smudged and dirty as to be almost undecipherable, they would have been of but little use in any case, and the payment of the copyists and tracers by this department was a sheer waste of money. After a delay caused by finding these maps were useless and the substitution of the supplementary survey map of the year in which mortgagees in possession were entered as owners, and other small errors were to be found, the whole of the maps of the Ngapyin and Paylo circles were burnt after they had been temporarily returned to the Land Records Department, and of course all the *kvins* had to be copied on blank survey sheets in order to allow of the return of the original maps of the year to Thayetmyo and also in order to allow of necessary corrections being clearly made in the records of this office. As it was I did not get through the field work until after the rains had set in, and did not arrive at head-quarters for the recess until July, and the extra work entailed by the copying of maps in this office, together with the difficulties caused by the extraordinary incorrectness of the area statements supplied, accounts for the further delay. The incorrect area statements have also made many statements and statistics most difficult to work out, and the use of the acre comb has had to be largely resorted to when working out areas of all sorts, thus making it most difficult to really check results.

66. Lieut. (now Captain) Ormiston acted as Assistant Settlement Officer

Officers and establishment. during the season in the field, but went on leave as soon as the out-door work was finished. Maung Kyaw Zan U was Junior Assistant Settlement Officer. He worked well. A great deal of sickness occurred amongst the men employed in the field, and the want of communication rendered it difficult to supervise the work and movements of the staff.

On the whole the Inspectors and holding markers did very well. Maung Po Hlaing, a man only recently promoted, did some really excellent classification work in the field.

The enormous number of small holdings created some difficulties in holding marking and also in the making out of registers afterwards.

TOUNGOO: }
The 3rd January 1902. }

W. V. WALLACE,
Settlement Officer.

APPENDICES

STATEMENT No. I.—Showing the Rainfall for the years 1897 to 1900.

Registering station.	Year.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	Total of each year.	Average of four years.	Remarks.
		January to March.	April to June.	July to September.	October to December.			
1	2	3	4	5	6	7	8	9
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	
Thayetmyo ...	1897	·41	16·47	17·61	10·66	45·15	} 38·11	
	1898	·31	8·08	15·94	1·97	26·30		
	1899	...	12·80	19·69	1·48	33·97		
	1900	...	16·13	26·70	4·29	47·03		
Kama ...	1897	...	16·98	20·10	9·17	46·25	} 45·33	
	1898	...	10·36	21·89	2·94	35·19		
	1899	...	11·98	33·44	3·20	48·62		
	1900	...	20·89	25·63	4·76	51·28		
Mindon ...	1897	·10	19·30	21·58	8·63	49·61	} 48·25	
	1898	...	12·71	21·95	3·57	38·23		
	1899	...	16·56	23·11	3·47	43·14		
	1900	...	22·32	27·36	12·34	62·02		
Myeth ...	1897	·14	15·07	15·61	8·87	39·69	} 38·19	
	1898	·34	7·83	17·66	1·96	27·79		
	1899	...	12·12	25·38	1·15	38·65		
	1900	...	16·31	24·35	5·98	46·64		

STATEMENT NO. II.—Cattle Statistics (Settlement returns).

Township.	Number of owners.	NUMBER ALIVE IN 1900-1901.									MORTALITY OF CATTLE.											Number of carts.	Remarks.						
		Buffaloes.			Bullocks.			Total.			1259 B.E.	1260 B.E.	1261 B.E.	1262 B.E.	Total for four years.			Average of four years.			Annual percentage of mortality.								
		Used.	Not used.	Total.	Used.	Not used.	Total.	Used.	Not used.	Total.	Buffaloes.	Bullocks.	Buffaloes.	Bullocks.	Buffaloes.	Bullocks.	Buffaloes.	Bullocks.	Total.	Buffaloes.	Bullocks.			Total.	Buffaloes.	Bullocks.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Mindón ...	2,414	3,809	3,091	7,000	3,849	7,905	11,754	7,758	10,996	18,754	103	161	155	161	224	229	218	258	700	809	1,509	179	202	377	2.50	1.72	2.01	1,568	
Kama ...	4,244	3,654	1,827	5,481	5,798	10,120	15,918	9,452	1,1947	21,399	46	87	75	149	201	385	182	359	504	980	1,484	126	245	371	2.29	1.53	1.73	1,660	
Myedè ...	3,766	887	747	1,634	7,358	14,472	21,830	8,245	15,219	23,464	31	426	78	564	34	225	19	226	162	1,441	1,603	40	360	400	2.47	1.65	1.70	2,066	
Thayetmyo...	1,751	455	395	850	2,740	5,632	8,372	3,195	6,027	9,222	2	101	5	91	23	119	18	147	48	458	506	12	114	126	1.41	1.36	1.37	858	
Total...	13,175	8,905	6,060	14,965	19,745	38,129	57,874	28,650	44,189	72,839	182	775	313	965	482	958	437	990	1,414	3,688	5,102	353	922	1,375	2.36	1.59	1.75	6,752	

STATEMENT NO. III.—General

Number of tract.	Number of tracts examined.	Number of cultivators examined.	NUMBER OF PERSONS IN FAMILY.		Total area under cultivation.	Average area worked by each family.	COST OF CULTIVATION.									Cost Family.
			Workers.	Non-workers.			Amount of seed.	Value of seed.	Hire of		Miscellaneous charges and cost of implements.	Cost of coolies' food.	Grazing hire.	Total.		
									Cattle.	Labour.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
					Acres.	Acres.	Baskets.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
I	10	167	361	562	1,266.88	6.89	1,016.32	863.88	1,392.61	1,782.49	237.00	402.77	36.17	4,714.92	26.21	
II	2	46	62	175	256.01	5.56	285.35	256.82	25.94	336.56	66.00	72.50	...	757.82	16.47	
III	5	116	244	347	798.19	6.83	753.17	641.69	895.25	1,502.59	129.18	451.62	114.00	3,224.48	27.88	
IV	12	277	490	677	1,577.70	5.69	1,765.41	1,588.87	78.17	2,585.88	327.01	794.02	112.00	5,485.55	19.80	
V	7	153	278	511	595.18	3.89	461.66	346.25	316.22	1,000.09	157.00	272.77	76	2,093.09	13.68	
VI	3	68	103	183	282.91	4.16	230.50	195.93	37.50	108.50	78.00	22.75	...	437.68	6.43	
VII	2	69	95	262	706.74	10.24	676.84	609.16	202.18	409.12	81.00	235.25	35.44	1,572.15	22.78	
VIII	9	178	311	510	619.99	3.48	485.97	364.48	159.83	96.84	177.00	22.37	...	820.52	4.80	
Total	50	1,094	2,036	3,527	6,120.60	5.75	5,675.22	4,867.08	2,607.70	7,817.07	1,252.14	2,274.25	298.37	19,116.61	17.96	

STATEMENT NO. IV.—General Agricultural Statistics

Owners and Tenants.	Race.	Number of tracts for which statistics were recorded.	Number of cultivators examined.	NUMBER OF PERSONS IN FAMILY.		Total area under cultivation.	Average area worked by each family.	COST OF CULTIVATION.						
				Workers.	Non-workers.			Amount of seed.	Value of seed.	Hire of		Miscellaneous charges and cost of implements.	Cost of coolies' food.	Grazing hire.
										Cattle.	Labour.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
						Acres.	Acres.	Bkts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Owners	Burmans...	50	773	1,488	2,514	4,353.78	5.85	4,261.25	3,682.46	1,215.18	5,720.26	908.27	1,743.55	256.76
	Chins ...	...	32	68	98	231.61	7.23	165.09	143.23	...	149.61	29.00	69.76	...
	Total ...	50	805	1,556	2,612	4,585.39	5.91	4,426.34	3,825.69	1,215.18	5,869.87	937.27	1,813.36	256.76
Tenants	Burmans...	...	282	463	899	1,489.92	5.28	1,221.30	1,020.31	1,392.52	1,887.58	307.87	449.07	41.61
	Chins ...	...	7	17	16	45.29	6.47	27.58	21.98	...	59.42	7.00	11.98	...
	Total ...	...	289	480	915	1,535.21	5.31	1,248.88	1,042.29	1,392.52	1,947.20	314.87	460.95	41.61
Grand Total	50	1,094	2,036	3,527	6,120.60	5.75	5,675.22	4,867.08	2,607.70	7,817.07	1,252.14	2,274.25	298.37	

Agricultural Statistics (by tracts).

OUTTURN ASSUMED BY SETTLEMENT OFFICER.							NET PRODUCE.			INDEBTEDNESS.			
per Acre	Total outturn.	Outturn per		Value of outturn.	Value per		Total.	Per		Total.	Per		Remarks.
		Family.	Acre.		Family.	Acre.		Family.	Acre.		Family.	Acre.	
17	18	19	20	21	22	23	24	25	26	27	28	29	30
Rs.	Bkts.	Bkts.	Bkts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
3-85	44,487-90	237-90	34-51	37,814-63	202-21	29-84	33,009-71	177-00	25-69	7,715-00	41-25	5-98	
2-96	7,383-75	160-51	28-84	6,645-88	144-46	25-95	5,887-56	127-99	22-97	2,005-00	43-58	7-88	
4-07	22,149-30	190-94	27-92	18,826-01	162-30	23-73	15,592-43	134-42	19-66	9,360-00	30-68	11-80	
3-47	36,713-90	132-54	23-27	33,042-51	119-28	20-94	27,558-56	99-40	17-47	7,472-00	26-97	4-73	
3-51	17,026-85	111-38	28-60	12,770-14	83-46	21-45	10,677-05	60-78	17-94	2,816-00	18-40	4-73	
1-54	5,993-60	88-14	21-18	5,004-56	74-92	18-04	4,656-88	68-49	16-50	339-00	4-96	1-19	
2-22	10,015-75	145-16	14-17	9,014-18	130-64	12-75	7,442-08	107-86	10-58	2,655-00	42-82	4-18	
1-32	12,880-10	72-32	20-77	9,660-08	54-27	15-08	8,839-56	49-87	14-26	597-00	3-35	-96	
3-12	156,651-05	147-16	25-59	1,32,868-39	127-87	21-70	1,13,751-78	103-96	18-58	33,259-00	30-40	5-43	

(Owners and Tenants), Paddy cultivation (by races).

OUTTURN ASSUMED BY SETTLEMENT OFFICER.							NET PRODUCE.			INDEBTEDNESS.			Remarks.		
Total.	Cost per		Total outturn.	Number of baskets per		Value of outturn.	Value per		Total.	Per		Total.		Per	
	Family.	Acre		Family.	Acre.		Family.	Acre.		Family.	Acre.			Family.	Acre.
16	17	18	19	20	21	22	23	24	25	26	27	28		29	30	31
Rs.	Rs.	Rs.	Bkts.	Bkts.	Bkts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
13,523-48	18-20	3-16	111,262-65	140-74	25-55	95,108-11	128-00	21-84	81,581-63	109-80	18-68	24,800-00	32-37	5-69	
391-55	12-23	1-09	5,659-65	176-86	24-43	4,870-01	152-18	21-02	4,478-42	139-95	19-33	554-00	17-31	2-39	
13,915-07	17-29	3-08	116,922-30	150-86	25-49	99,978-12	124-11	21-60	86,060-05	106-90	18-76	25,354-06	32-71	5-52	
5,099-36	18-06	3-12	38,541-40	136-67	25-87	31,985-00	118-42	21-46	26,886-04	95-34	18-04	8,325-00	29-52	5-58	
99-58	14-22	2-19	1,187-35	169-62	26-21	905-27	129-32	19-98	805-69	115-10	17-79	30-00	4-28	-66	
3,193-54	16-33	3-36	39,728-75	137-59	25-88	32,890-27	113-80	21-42	27,691-73	95-47	18-04	8,355-00	23-91	5-44	
13,116-07	17-29	3-08	116,922-30	150-86	25-49	99,978-12	124-11	21-60	86,060-05	106-90	18-76	25,354-06	32-71	5-52	

STATEMENT NO. V.—Abstract of General Agricultural Statistics (by tracts).

Tract.	Soil classes.	Number of cultivators examined.	Area for which statistics were recorded.	Average cost of cultivation per acre throughout tract.	Average value of outturn per acre throughout tract.	Average profit per acre throughout tract.	Cost of cultivation per family examined.	Average area of holding.	Average value per acre by soil classes.	Profit : difference between columns 10 and 5.	Quarter net produce by soil classes.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13
			Acres.	Rs.	Rs.	Rs.	Rs.	Acres.	Acres.	Rs.	Rs.	
I	I	187	1,288.88	3.65	29.34	+ 25.69	25.21	6.89	I	34.00	30.35	7.58
	II								25.50	21.85	5.46	
	III								17.00	13.35	3.33	
II	I	46	266.01	2.96	25.95	+ 22.97	16.47	5.56	I	31.50	28.54	7.13
	II								22.50	19.54	4.88	
	III								18.00	15.04	3.76	
III	I	116	793.19	4.07	23.73	+ 19.66	27.88	6.83	I	29.75	25.68	6.42
	II								21.25	17.18	4.29	
	III								17.00	12.93	3.23	
IV	I	277	1,577.70	3.47	20.24	+ 17.47	19.80	5.69	I	27.00	23.53	5.88
	II								18.00	14.53	3.63	
	III								13.50	10.03	2.50	
V	I	153	595.18	3.51	21.45	+ 17.94	13.68	3.89	I	26.25	22.74	5.68
	II								18.75	15.24	3.81	
	III								15.00	11.49	2.87	
VI	I	68	282.91	1.54	18.04	+ 16.50	6.43	4.16	I	25.50	23.96	5.99
	II								17.00	15.56	3.89	
	III								12.75	11.21	2.80	
VII	I	69	706.74	2.22	12.75	+ 10.53	22.78	10.24	I	22.50	20.28	5.07
	II								13.50	11.28	2.82	
	III								9.00	6.78	1.69	
VIII	I	178	619.99	1.32	15.53	+ 14.26	4.60	3.48	I	22.50	21.28	5.32
	II								15.00	13.68	3.42	
	III								11.25	9.93	2.48	
Total	...	1,094	6,120.60	3.12	21.70	+ 18.53	17.96	5.75	

STATEMENT NO. VI.—General Agricultural Statistics (Owners and Tenants), Miscellaneous cultivation (by races).

ABSTRACT.

1	2	3	4	5	NUMBER OF PERSONS IN FAMILY.		8	9	COST OF CULTIVATION.										VALUE ASSUMED BY SETTLEMENT OFFICER.			NET PRODUCE.			26
					6	7			10	11	Hire of			15	16	17	Cost per		20	Value per		23	Per		
											12	13	14				18	19		21	22		24	25	
Owners and tenants		Races.	Number of huts examined.	Number of cultivators examined.	Workers.	Non-workers.	Total area under cultivation.	Average area worked by each family.	Cost of coolies' food.	Value of seed.	Cattle.	Labour.	Grazing.	Miscellaneous charges and cost of implements.	Cost of huts built for onions.	Total.	Family.	Acre.	Value of outturn.	Family.	Acre.	Total.	Family.	Acre.	Remarks.
Owners	Kaniè ...	Burmans	2	27	71	55	62.30	2.30	21.00	1,997.15	5.00	153.91	...	52.13	148.75	2,377.94	88.07	38.16	3,904.47	144.61	62.67	1,526.53	56.54	24.51	
	Maudaing	Burmans	75	171	119	159.86	2.13	34.75	3,367.77	35.20	458.27	15.00	89.00	283.50	4,283.49	57.11	26.79	8,574.00	114.32	53.63	4,290.51	57.21	26.84		
	Total		2	102	242	174	222.16	2.17	55.75	5,364.92	40.20	612.18	15.00	141.13	432.25	6,661.43	65.30	20.98	12,478.47	122.34	56.17	5,817.04	57.04	26.19		Onions valued at Rs. 10 per 100 viss.
Tenants	Kaniè ...	Burmans	54	123	102	87.02	1.61	33.94	2,954.47	27.13	335.87	17.00	83.38	199.50	3,651.29	67.61	41.95	7,808.80	144.60	89.73	4,157.51	76.99	47.78	Tobacco at Rs. 25 per 100 viss. Other produce at cultivators' own valuation.	
	Maudaing	Burmans	33	91	58	63.46	1.92	19.75	1,744.82	...	294.19	13.25	41.50	152.75	2,266.26	68.67	35.71	3,773.22	114.84	59.45	1,506.96	45.67	23.74		
	Total		87	214	160	150.48	1.72	53.69	4,699.29	27.13	630.06	30.25	124.88	352.25	5,917.55	68.01	39.32	11,582.02	133.12	76.96	5,664.47	65.11	37.64		
GRAND TOTAL			2	189	456	334	372.64	1.97	109.44	10,064.21	67.33	1,242.24	45.25	266.01	784.50	12,578.98	66.55	33.75	24,060.49	127.30	64.56	11,481.51	60.75	30.18	

APPENDIX.

STATEMENT No. VII.—Tenants paying rent, or rent and revenue, excluding privileged tenants (by tracts).

Tract.	Total area of paddy-land in tract.	TENANTS PAYING RENT, OR RENT AND REVENUE.								Remarks.
		Area.	Number of land-lords.	Number of tenants.	Rent.	Revenue.	Total.	Rate per acre.	Percentage of land rented to total area.	
1	2	3	4	5	6	7	8	9	10	11
	Acres.	Acres.			Rs.	Rs.	Rs.	Rs.		
I	8,679-21	2,897-80	712	1,062	25,499-27	1,997-73	27,497-00	9-48	33-38	Privileged tenants are excluded in this statement.
II	4,855-21	1,369-66	351	433	12,689-22	110-66	12,799-88	9-34	28-21	
III	6,542-40	1,827-70	521	709	13,995-61	1,223-18	15,218-79	8-32	27-93	
IV	15,210-03	2,815-95	977	1,128	27,746-44	504-57	28,251-01	10-03	18-51	
V	5,209-89	2,105-27	623	729	18,075-44	1,603-36	19,678-80	9-34	40-41	
VI	6,364-42	1,296-99	390	464	10,661-52	851-87	11,513-39	8-87	20-37	
VII	4,388-05	990-86	179	247	3,920-72	709-10	4,629-82	4-67	22-58	
VIII	4,438-27	1,140-94	323	426	7,028-24	940-18	7,968-42	6-98	25-70	
Total	55,686-88	14,445-17	4,076	5,198	1,19,616-46	7,940-65	1,27,557-11	8-83	25-93	

STATEMENT NO. VIII.—Varieties of tenure.

Township.	Area held for more than 12 years.	OWNERSHIP.		Other kinds of tenure.	Leases.	IN TEMPORARY OCCUPATION UNDER SECTION 19, ACT XI OF 1876.	Over 12 years and under 12 years land not paying revenue.	Grand total.	TENURE-HOLDERS.				Remarks.
		Grants under section 18, Act XI of 1876, and leases.	Revenue paying.						Temporarily exempted from revenue.	Over 12 years.	Under 12 years.	Without paying revenue.		Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Acres.	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.					
Mindon ...	12,551.68	60.84	34.47	...	...	2,111.24	116.85	14,875.08	7,844	2,012	190	10,016	
Karna ...	25,990.80	112.36	3.87	...	...	3,388.72	153.32	29,649.07	14,258	3,146	164	17,568	
Myedè ...	23,275.01	55.05	43.44	40	...	10,542.59	460.38	34,377.87	14,237	6,934	168	21,339	
Thayetmyo ...	8,080.19	36.02	73	5.26	...	1,136.41	10.30	9,868.91	8,970	1,348	16	10,334	
Total ...	70,497.68	265.27	82.51	5.66	...	17,178.96	740.85	88,720.93	45,309	13,440	538	59,287	
Percentage ...	79.42	.30	.09	.01	...	19.35	.83	100.00	7.643	2.266	.91	10,000	
Thayetmyo Municipality...	205.95	...	...	...	...	9.08	...	214.43	95	9	...	104	
Thayetmyo Cantonment ...	8.77	...	...	...	...	22.53	...	31.30	11	10	...	21	

APPENDIX

STATEMENT NO. IX.—Revenue assessed on Paddy-land (Thugyis' rolls).

Serial No.	Year A. D.	Year B. E.	THAYET TOWNSHIP.						MINDON TOWNSHIP.								KAMA TOWNSHIP.				
			Kunon circle.	Mindé circle.	Sa-aing circle.	Ngahlainggyin circle.	Thayet-myoma circle.	Bangon circle.	Kyan circle.	Kabyu circle.	Mandaing circle.	Mindon-myoma circle.	Ponyauk circle.	Shwedatung circle.	Taganaguet circle.	Mindat circle.	Aukmanain circle.	Shawdaung circle.	Natmi circle.	Pato circle.	Kyauksaung circle.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	1881-82	1242	2,309-25	979-56	547-56	828-38	213-75	1,223-25	909-63	2,423-94	635-50	1,803-19	1,332-81	2,136-31	1,247-94	367-13	319-81	1,147-50	1,068-25	2,067-38	3,024-88
2	1882-83	1244	2,249-63	990-19	547-56	837-75	215-82	1,240-81	981-44	2,426-25	653-81	1,810-12	1,353-63	2,273-63	1,263-44	367-69	326-81	1,156-00	1,105-06	3,075-56	3,021-38
3	1883-84	1245	2,392-31	990-00	540-97	842-63	212-82	1,241-19	982-31	2,423-81	631-75	1,799-00	1,353-63	2,253-38	1,270-69	359-44	325-50	1,206-88	1,116-94	1,928-00	3,019-06
4	1884-85	1246	2,056-94	966-44	438-80	1,044-94	142-74	1,168-57	932-43	2,080-16	610-94	1,743-50	1,333-88	2,246-44	1,182-31	353-56	328-50	1,131-69	1,104-75	1,815-25	3,018-75
5	1885-86	1247	489-37	1,362-79	293-63	358-56	165-62	745-81	946-38	1,543-71	596-87	1,595-76	1,278-17	1,750-75	795-13	158-25	256-37	1,053-25	1,075-37	1,879-19	2,924-18
6	1886-87	1248	1,245-60	1,364-61	659-44	770-32	173-85	1,170-38	962-06	2,088-91	607-85	1,790-30	1,291-65	2,009-31	1,135-19	213-75	326-31	1,116-38	1,151-88	1,861-94	3,001-19
7	1887-88	1249	1,032-57	1,364-36	496-88	633-31	80-82	939-87	869-86	2,008-75	595-55	1,723-56	1,247-83	1,874-69	975-81	253-24	218-26	943-82	1,072-87	2,095-56	2,370-38
8	1888-89	1250	1,116-00	1,354-58	419-76	833-26	86-34	996-75	999-81	2,185-15	629-05	1,803-30	1,358-62	2,033-69	1,121-87	255-56	317-19	1,498-87	876-44	1,934-87	2,333-44
9	1889-90	1251	513-01	704-15	435-44	480-06	103-27	1,089-25	1,002-64	2,184-01	634-45	1,826-39	1,401-81	2,123-00	1,224-51	241-25	322-41	1,540-56	1,107-57	1,876-94	2,960-94
10	1890-91	1252	937-25	690-38	702-31	732-87	105-84	1,281-69	992-31	1,938-00	614-19	1,768-80	1,422-19	2,225-59	1,019-50	252-00	327-88	1,600-63	1,503-44	1,979-94	3,047-44
11	1891-92	1253	856-44	1,107-73	610-31	465-18	41-52	1,109-25	994-60	2,011-69	624-97	1,828-56	1,441-81	2,235-25	938-44	202-62	332-81	1,626-44	1,068-88	1,568-63	2,580-06
12	1892-93	1254	800-12	1,277-25	827-60	...	106-97	834-86	...	...	...	...	...	...	...	...	188-91	1,514-65	1,360-79	2,197-94	2,443-80
13	1893-94	1255	1,291-16	1,223-97	817-04	56-31	119-75	1,113-88	...	...	...	...	...	...	...	...	194-67	1,486-98	1,253-45	2,139-82	2,526-06
14	1894-95	1256	1,028-29	934-99	641-83	57-97	122-44	1,050-77	...	...	...	...	...	...	...	...	192-08	1,464-69	1,368-18	1,972-34	2,455-44
15	1895-96	1257	527-26	627-53	347-98	38-45	153-73	964-57	...	...	...	...	...	...	...	...	153-75	840-34	714-70	1,112-42	2,017-69
16	1896-97	1258	669-00	701-99	387-81	27-79	149-87	1,136-32	...	...	...	...	...	...	...	...	185-88	1,448-97	1,256-99	1,679-81	2,460-94
17	1897-98	1259	1,470-65	1,270-29	834-77	61-48	172-62	1,239-65	...	...	...	...	...	...	...	...	202-89	1,573-40	1,497-34	2,133-41	2,576-15
18	1898-99	1260	1,351-25	1,254-23	878-05	62-39	163-08	1,225-49	...	1,822-31	611-35	1,868-28	...	...	...	...	205-06	1,586-66	1,509-38	2,220-68	2,590-55
19	1899-00	1261	1,248-20	1,085-35	697-17	60-30	148-46	1,256-74	868-71	1,810-11	644-76	1,871-74	1,326-78	2,151-58	818-17	17-40	206-48	1,581-46	1,510-65	2,135-22	2,582-72
20	1900-01	1262	1,490-43	1,253-30	897-11	65-36	169-38	1,261-37	856-63	1,797-98	643-28	1,870-31	1,298-55	2,135-54	787-75	17-40	209-24	1,592-14	1,518-23	2,200-01	2,594-53
Percentage of increase or decrease of Revenue in 20 years.			-56-98	+27-94	+63-83	-1,167-41	-26-19	+3-11	-6-18	-34-81	+1-22	+3-72	-2-63	-08	-58-41	-2,009-94	-52-84	+38-74	+39-51	+6-41	-16-58

STATEMENT No. IX.—Revenue assessed on Paddy-land (Thugyis' rolls)—concluded.

Serial No.	Year A. D.	Year B. E.	KAMA TOWNSHIP—concluded.					MYEDE TOWNSHIP.										Total revenue.	Remarks.	
			Ngabbling circle.	Thambays circle.	Kedabin circle.	Kama-myoma circle.	Tangauk circle.	Taukma circle.	Myede-myoma circle.	Mogaung circle.	Gondaw circle.	Ywadaung circle.	Myohla circle.	Butti circle.	Sindók circle.	Pyalo circle.	Ngaypin circle.			Nyaungbinsein circle.
1	2	3	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	1881-82	1243	1,879-86	4,461-19	2,203-56	1,160-38	2,912-44	2,430-66	940-19	1,655-75	820-56	202-25	2,082-50	2,395-13	4,217-56	2,337-62	2,979-50	2,910-81	59,897-08	
2	1882-83	1244	1,675-94	4,433-38	2,103-57	1,184-13	2,923-56	2,450-13	849-88	1,612-81	823-06	206-13	2,163-44	2,159-13	4,021-50	2,502-56	2,996-45	2,984-56	59,990-81	
3	1883-84	1245	1,601-73	4,454-75	2,101-38	1,194-50	2,933-38	2,468-31	807-50	1,615-62	809-38	208-50	2,262-88	2,147-00	4,029-68	2,500-12	2,980-13	3,185-69	60,147-96	
4	1884-85	1246	1,603-38	4,439-75	2,113-44	1,182-32	2,923-06	2,526-25	368-26	1,413-56	600-06	185-19	1,008-06	1,779-62	3,318-42	1,668-36	2,585-00	3,205-75	54,636-07	
5	1885-86	1247	1,607-59	4,425-44	2,085-50	1,035-44	2,690-56	2,075-12	486-81	1,428-44	656-51	177-31	1,427-88	1,909-31	3,207-50	1,429-32	2,709-81	3,200-83	49,782-47	
6	1886-87	1248	1,573-19	4,457-75	2,134-89	1,100-13	2,889-88	2,574-63	704-43	1,569-56	587-56	189-25	1,700-49	2,117-87	3,827-12	2,369-31	2,970-57	3,366-76	57,073-30	
7	1887-88	1249	1,582-57	4,303-00	1,989-12	1,052-19	2,841-31	2,401-69	558-56	1,568-56	660-58	59-00	1,464-75	1,527-44	3,781-56	2,361-44	2,717-63	3,247-74	52,725-12	
8	1888-89	1250	1,482-18	4,303-26	1,657-32	1,106-37	2,907-01	2,187-91	547-94	1,226-38	591-87	111-38	1,471-20	2,070-31	3,753-07	2,361-44	2,723-08	2,929-81	54,092-85	
9	1889-90	1251	1,502-44	4,387-63	1,648-68	1,040-69	2,881-25	2,388-56	598-95	869-69	584-06	192-95	1,562-00	1,708-56	3,095-44	2,047-13	2,855-06	3,066-39	52,191-06	
10	1890-91	1252	1,430-13	4,422-38	1,758-94	1,139-82	3,058-13	2,564-62	671-74	1,109-62	559-51	159-54	1,560-56	1,944-57	3,480-81	2,222-62	2,556-38	2,716-13	54,527-85	
11	1891-92	1253	1,392-63	4,080-11	1,752-11	951-13	2,936-94	2,523-38	535-50	1,152-58	680-44	117-13	1,944-88	1,372-12	3,342-75	1,527-36	2,251-50	3,216-50	51,312-07	
12	1892-93	1254	1,658-76	4,374-29	2,488-61	1,540-62	2,973-19	2,451-82	1,301-49	...	...	...	...	...	1,755-64	1,353-58	1,263-17	4,202-30	36,821-85	
13	1893-94	1255	1,509-56	4,381-56	2,557-01	1,586-51	2,829-77	2,480-76	1,180-44	1,161-37	762-60	186-69	276-73	2,454-62	3,972-87	2,478-35	4,012-13	4,115-70	46,175-94	
14	1894-95	1256	1,612-25	4,703-21	2,586-81	1,497-64	2,801-77	2,312-63	1,102-88	1,226-91	737-51	165-93	219-78	2,379-36	3,859-19	1,999-81	2,924-48	3,066-80	48,427-08	
15	1895-96	1257	1,532-88	4,026-68	1,550-31	1,081-41	2,008-91	993-56	818-79	917-47	611-98	135-37	130-79	1,285-73	2,669-41	838-59	1,449-88	2,404-90	29,865-21	
16	1896-97	1258	1,569-58	4,688-47	2,612-91	1,389-17	2,909-46	2,334-86	884-84	1,092-16	743-51	136-17	186-89	1,303-83	3,929-89	1,870-31	3,667-61	3,465-85	42,580-43	
17	1897-98	1259	1,696-03	4,934-04	2,763-01	1,511-65	3,016-16	2,604-20	1,005-10	1,176-64	716-02	139-55	203-53	1,686-97	3,129-14	1,563-45	3,523-06	4,179-04	46,979-84	
18	1898-99	1260	1,712-82	4,950-92	2,746-90	1,617-27	3,009-81	2,603-82	1,140-95	1,347-72	748-02	208-21	310-57	2,449-51	4,125-49	2,301-96	3,877-38	4,484-59	54,974-72	
19	1899-00	1261	1,708-75	4,939-72	2,688-78	1,531-10	2,715-05	2,280-27	889-57	1,165-47	706-15	175-03	277-65	2,425-22	4,082-74	2,001-65	3,904-14	4,334-69	67,887-96	
20	1900-01	1262	1,710-59	4,986-88	2,761-13	1,477-82	3,032-43	2,596-60	1,155-40	1,416-44	823-03	210-77	366-53	2,500-69	4,133-36	2,501-00	4,310-74	4,407-44	61,089-89	
Percentage of increase or decrease of Revenue in 20 years.			+ 8.27	+ 11.78	+ 25.31	+ 27.35	+ 4.11	+ 6.82	+ 22.88	- 16.91	+ 30	+ 4.21	- 468.43	+ 4.40	- 2.03	+ 6.98	+ 44.67	+ 51.41	+ 1.90	

APPENDICES.

STATEMENT NO. X.—Revenue assessed on Garden and Miscellaneous cultivation (Thugyis' rolls).

Serial No.	Year A. D.	Year B. E.	THAYET TOWNSHIP.						MINDON TOWNSHIP.								KAMA TOWNSHIP.				
			Kun'on circle.	Mindà circle.	Sa-aing circle.	Ngathalaggyon circle.	Thayet-myoma circle.	Bang'on circle.	Kyan circle.	Kubyu circle.	Maudaing circle.	Mindou-myoma circle.	Pemyauk circle.	Shwedaung circle.	Taguungnet circle.	Mindat circle.	Aukmainsin circle.	Shawdaung circle.	Natmi circle.	Pato circle.	Kyaukaung circle.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	1861-62	1248	487-32	506-13	281-94	95-94	469-89	452-69	425-31	534-26	952-37	1,205-93	378-50	1,395-44	245-69	218-06	93-69	667-38	600-19	458-38	1,681-87
2	1862-63	1244	478-56	654-39	306-15	92-19	436-27	511-76	428-38	544-94	981-12	1,212-12	414-14	1,460-01	245-07	210-49	84-38	681-20	074-07	463-22	1,701-26
3	1863-64	1245	514-88	653-69	300-82	134-13	436-52	482-56	397-19	542-94	964-00	1,167-19	375-07	1,439-63	257-32	218-69	81-00	586-19	387-90	483-75	1,615-18
4	1864-65	1248	643-20	608-45	519-63	208-25	407-27	489-87	379-57	453-00	975-81	1,120-06	420-01	1,423-64	250-07	221-12	91-07	500-69	573-93	377-12	1,646-69
5	1865-66	1247	578-50	1,445-13	505-06	201-37	387-96	484-50	381-19	495-00	928-93	1,141-01	437-88	1,436-13	246-94	213-00	89-19	502-44	590-94	403-56	1,467-25
6	1866-67	1248	548-89	1,432-69	536-63	211-50	386-21	472-51	377-63	474-06	909-25	1,133-31	422-07	1,428-44	230-76	206-50	92-57	511-19	588-82	422-50	1,585-87
7	1867-68	1249	540-19	1,458-57	474-32	196-13	410-57	452-87	365-31	560-76	954-75	1,193-99	402-32	1,390-26	269-07	211-37	91-94	512-50	611-50	418-00	1,624-00
8	1868-69	1250	548-88	1,458-56	450-70	199-37	453-86	485-51	407-00	485-76	965-50	1,171-94	386-45	1,380-76	289-32	205-25	86-01	560-57	608-94	374-94	1,704-61
9	1869-70	1251	544-63	1,468-20	432-82	195-31	449-96	465-38	383-38	495-94	964-44	1,157-06	405-26	1,274-38	270-94	204-56	79-25	830-25	668-12	420-50	1,825-97
10	1870-71	1252	537-01	1,487-38	464-01	188-06	444-88	465-07	370-07	483-56	936-94	1,422-82	397-62	1,405-00	252-82	200-13	79-82	819-50	982-62	499-88	1,888-88
11	1871-72	1253	553-63	1,991-76	488-13	188-63	448-24	840-63	363-75	514-69	946-11	1,395-75	388-50	1,289-07	244-43	238-63	68-26	853-87	962-50	455-75	1,824-88
12	1872-73	1254	295-13	2,126-54	415-94	...	589-88	711-39	...	...	...	...	...	...	...	...	25-66	748-88	1,072-78	514-49	1,884-06
13	1873-74	1255	396-80	1,937-24	390-23	...	586-05	894-33	...	...	...	...	...	...	...	...	23-54	656-48	1,098-23	365-90	1,751-34
14	1874-75	1256	491-43	1,991-41	407-19	...	571-47	839-50	...	...	...	...	...	...	...	...	26-20	689-46	1,052-23	406-72	1,579-43
15	1875-76	1257	538-51	2,242-27	428-31	...	570-42	673-91	...	...	...	...	...	...	...	...	24-60	739-73	1,084-86	455-89	1,570-46
16	1876-77	1258	693-39	2,291-48	620-88	...	549-96	871-78	...	...	...	...	...	...	...	...	24-54	790-40	1,061-28	602-53	1,738-96
17	1877-78	1259	703-73	2,247-07	741-14	24-69	546-66	874-65	...	...	...	...	...	...	...	...	38-01	706-64	1,091-09	453-94	1,749-51
18	1878-79	1260	714-27	2,274-01	841-98	25-28	534-33	957-33	...	671-53	907-43	1,102-01	...	...	...	...	38-24	834-61	1,081-18	417-72	1,713-68
19	1879-80	1261	771-51	2,370-44	785-99	33-28	535-08	1,009-57	484-03	642-87	912-85	1,136-68	516-04	1,376-71	203-07	6-67	42-73	852-16	1,081-61	465-21	1,777-87
20	1900-01	1262	802-36	2,607-14	837-62	39-72	544-13	1,079-34	507-57	726-63	912-00	1,151-62	546-01	1,448-50	235-40	6-99	77-37	719-80	1,128-25	770-22	1,988-35
Percentage of increase or decrease of Revenue in 20 years.			+ 64-64	+ 415-11	+ 197-09	- 141-54	+ 15-92	+ 138-42	+ 19-34	+ 36-00	- 4-42	- 4-71	+ 44-25	+ 3-80	- 4-37	- 3,019-59	- 20-93	+ 37-53	+ 87-98	+ 68-02	+ 18-23

STATEMENT No. X.—Revenue assessed on Garden and Miscellaneous cultivation (Thugyis' rolls)—concluded.

Serial No.	Year A. D.	Year B. E.	KAMA TOWNSHIP—concluded.						MYEDE TOWNSHIP.						Total revenue.	Remarks.				
			Ngahlaing circle.	Thambaya circle.	Kadnbyin circle.	Kama-myoma circle.	Taugauk circle.	Thakma circle.	Myede-myoma circle.	Moguang circle.	Gondaw circle.	Ywadaung circle.	Myohla circle.	Batla circle.			Sindok circle.	Pyalo circle.	Ngayin circle.	Nyaungbinnak circle.
1	2	3	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	1881-82	1243	473-38	1,943-45	587-41	1,645-49	699-50	466-75	338-00	463-24	219-44	788-20	2,435-06	792-50	1,123-43	795-88	703-06	2,207-19	26,832-46	
2	1882-83	1244	467-64	1,908-12	584-88	1,905-01	702-38	627-20	320-25	458-07	213-44	788-93	2,243-32	701-43	1,063-87	717-79	636-68	2,285-94	27,498-74	
3	1883-84	1245	472-88	1,749-63	581-31	1,865-01	678-00	612-51	321-31	432-06	191-43	747-63	2,293-75	711-69	1,007-72	749-06	720-01	3,087-37	27,406-07	
4	1884-85	1246	478-15	1,827-70	548-95	1,821-07	681-19	559-42	325-70	538-24	144-82	747-26	2,372-32	853-55	884-94	749-82	712-01	2,688-56	27,443-15	
5	1885-86	1247	355-51	1,464-76	510-58	1,574-14	674-38	544-45	361-88	512-37	181-98	616-38	2,472-19	759-82	850-02	670-44	688-69	2,779-80	26,963-37	
6	1886-87	1248	406-08	1,537-39	532-38	1,558-56	662-38	527-45	593-05	512-06	194-46	749-76	2,782-87	997-76	743-26	602-51	632-19	2,144-83	27,148-19	
7	1887-88	1249	396-95	1,513-75	524-75	1,703-63	650-95	620-43	640-26	508-31	217-43	713-26	2,785-87	1,072-08	781-68	602-51	526-00	2,058-26	27,486-54	
8	1888-89	1250	393-20	1,512-70	537-63	1,756-95	657-63	599-26	689-57	315-50	251-75	706-51	2,644-63	1,190-83	752-32	721-18	480-31	2,122-95	27,562-05	
9	1889-90	1251	399-76	1,567-57	532-58	1,833-81	647-00	711-13	681-07	330-25	249-07	957-95	2,544-32	1,237-81	786-45	719-18	737-81	2,404-10	28,815-31	
10	1890-91	1252	459-01	1,605-89	540-19	1,899-76	647-44	607-06	690-37	337-81	218-50	981-26	2,968-93	1,474-08	799-26	568-99	717-24	2,189-31	29,977-17	
11	1891-92	1253	480-95	1,570-19	549-53	1,900-94	646-44	644-81	973-32	372-56	233-63	1,092-17	3,004-37	1,653-01	980-39	508-72	933-25	2,045-81	31,865-85	
12	1892-93	1254	911-88	2,319-62	665-08	1,760-26	631-63	573-10	1,204-23	497-02	366-45	1,097-02	776-46	1,126-99	279-86	189-25	97-65	2,495-87	19,443-07	
13	1893-94	1255	724-62	2,000-57	569-34	1,681-86	578-00	497-02	1,176-50	312-31	366-45	1,097-02	776-46	1,126-99	621-79	504-55	63-42	1,596-18	21,796-23	
14	1894-95	1256	718-83	1,924-19	517-85	1,577-16	559-47	429-20	1,137-02	403-98	410-49	921-00	752-37	960-59	448-97	320-87	137-18	1,374-65	20,749-49	
15	1895-96	1257	718-06	1,867-89	629-81	1,951-53	616-48	450-50	1,368-78	423-50	443-12	966-76	964-49	1,315-80	924-01	516-10	224-22	1,409-81	23,109-13	
16	1896-97	1258	810-51	2,363-44	670-67	1,890-11	641-45	516-75	1,411-37	1,322-43	1,129-98	952-68	1,248-41	1,384-80	902-17	760-40	650-87	1,672-07	27,572-21	
17	1897-98	1259	978-14	2,961-36	601-69	2,480-88	657-03	527-22	1,273-08	1,487-04	1,184-00	1,203-53	1,359-97	1,651-69	943-87	789-54	832-08	1,542-96	29,751-21	
18	1898-99	1260	940-66	3,014-87	643-01	2,548-83	631-47	408-39	1,220-40	1,234-62	1,053-45	1,171-04	1,049-85	1,164-22	1,022-35	884-45	667-03	1,487-02	31,255-31	
19	1899-00	1261	995-75	3,082-83	854-36	2,323-71	634-50	466-71	1,379-40	1,568-80	1,227-36	1,278-12	1,444-35	1,193-51	952-61	1,027-93	830-73	1,521-07	35,590-61	
20	1900-01	1262	1,063-62	3,216-31	703-81	2,714-91	696-50	505-61	1,576-85	1,566-51	1,273-00	1,275-39	1,369-96	1,338-24	971-87	1,218-52	1,307-39	1,650-97	38,796-68	
Percentage of increase or decrease of Revenue in 20 years.			+ 128-91	+ 66-49	+ 19-81	+ 64-96	- 43	+ 8-32	+ 366-52	+ 238-16	+ 460-11	+ 61-81	- 77-74	+ 68-87	- 15-59	+ 53-10	+ 85-95	- 33-68	+ 44-56	

APPENDIX.