

EXTRACTS FROM REPORTS BY COMMISSIONERS AND DEPUTY COMMISSIONERS, UPPER BURMA.

PART III.

RAINFALL AND HARVEST.

Remarks by Deputy Commissioner, Mandalay.

THE recorded rainfall of 1892 as taken at the Civil Dispensary in Mandalay exceeded that of the previous year by 19·39 inches.

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In the two subdivisions Madaya and Amarapura, where the total rainfall was much better than last year, the harvest under report was greatly superior, though it was not a bumper one. Copious showers fell in the early part of the year or just a little before agricultural operations could be started. These showers were succeeded by a long term of drought and then rain fell again, but rather late in the season. Agricultural prospects were thus much retarded and much of the kaukkyi crops were destroyed by the inundations of the river.

In some parts, especially in the western portion of the Madaya subdivision, the water did not recede for a longer time than is usually the case, and in this way kaing and other crops were kept back, and consequently the revenue collections were not so prompt as during the previous year.

Remarks by Deputy Commissioner, Bhamo.

Subdivision.						1890.	1891.	1892.
Bhamo	...	...	...	...	...	69·15	59·82	75·98
Mogaung	...	...	...	...	...	...	...	116·58

No statistics for the whole of 1891 are available for Mogaung. But in February and March 1892 there fell 18·7 inches and in February and March 1893 2·6 inches. Both Shwegu and Myitkyina report that the rainfall was above the average. Although no statistics were kept, on the whole the rainfall was above the average. The harvest was above the average in Shwegu and Bhamo. In Sinkin the crops which promised well suffered from floods. In Mogaung and Myitkyina the harvest is reported to have been good, but in Mogaung enough is never raised locally to supply local wants which are chiefly met by importation from Bhamo. The locally raised food-supply was sufficient in every township except Bhamo and Mogaung, but the importation from the Shan States was amply sufficient to meet the demand. The Kachin Hills, however, fared badly owing to the excessive rain and from a plague of rats, and at the Jade Mines in particular much want was felt.

Remarks by Deputy Commissioner, Katha.

THE rainfall during the year was considerably above the average for the last two years. The fall registered at Katha, the only station where a record is kept, amounted to 78·13 inches during 1892 as against 33·63 inches in the previous year. Though the rainfall was not very evenly distributed over the rainy months, the season was on the whole a good one.

Remarks by Deputy Commissioner, Shwebo.

Subdivision.						1891.	1892.
Shwebo	...	...	...	...	...	24·82	29·41
Sheinmaga	...	...	...	...	...	22·26	33·81
Kanbalu	...	...	...	...	...	25·45	50·20

The rainfall though not so much below the average as that of the previous year, yet was so unseasonably distributed that it was of very little use except in the north.

(b) *Harvest*.—The crop which promised well at first, owing to the heavy rain in April and May, was in great part destroyed by the long drought which followed and was only saved from complete failure by the heavy rain at the end of October. As it was the harvest reaped was a very small and partial one, but a little way removed from total failure. The only exception to be made is of the northern part of the Tantabin subdivision in which the rain having been more evenly spread over the working season the crop was fairly good.

Remarks by Deputy Commissioner, Ruby Mines.

THE total rainfall during the year under report was 141.12 inches as compared with 67.20 inches of the previous year, showing an increase of 73.92 inches. It was very much above the average.

The harvest was generally somewhat below the average, owing to floods in the autumn. The local food-supply is never sufficient.

Remarks by Commissioner, Northern Division.

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Mandalay.—The harvest is believed to have been an average one. The rainfall was not well distributed for agricultural operations, and the very heavy and unseasonable rain at the end of October, accompanied, as it was, by an unexpected rise of the river, did a good deal of damage.

Katha.—The rainfall registered was more than double that of the previous year, but was unevenly distributed. The Kawlin township and parts of Mawnaing suffered from drought, but on the whole the harvest has been a good one.

Shwebo.—The rainfall registered was above that of the previous year and not much below the average, but it was so unevenly distributed that except in the northernmost part of the district, the harvest was almost a total failure. This is the fourth season in succession that this unfortunate district has suffered from drought and the people have emigrated in large numbers to Lower Burma and elsewhere in search of a means of livelihood.

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The food-supply was supplemented by large importations of rice from Lower Burma, Ye-u, and other districts. Prices were somewhat higher than in the previous year, but there was an ample supply of food-grains, and prices were not exorbitant.

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Ruby Mines.—The rainfall of the year as registered at Mogók was 141.12 inches against 67.20 inches in the previous year. This was much above the average; but the harvest was not as good as usual. The standing crops were seriously damaged by the heavy rain at the end of October.

The food-supply of the district generally has to be obtained from extraneous sources. In the stone tract with Mogók and Kyatpyin as its centre, almost the whole of the food-grain is imported; that grown locally being an insignificant quantity.

Remarks by Deputy Commissioner, Ye-u.

THE rainfall during 1892 was 37.43 inches as compared with 24.36 inches in the preceding year, or an increase of 13.07 on the former year.

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There was very little emigration during the year under review and it is alleged by some that if there should be another good rainfall this year many who emigrated last year will return. It is probable that a considerable number may, but until wealth is more generally equalised in Upper and Lower Burma it would be running contrary to common sense to suppose that those who have once known what high wages and an abundant supply of food-grain meat would ever return to re-seek low wages and meagre sustenance.

Remarks by Deputy Commissioner, Sagaing.

THE rainfall for the year was far above the average. It was mainly owing to the very good rainfall that the famine-affected parts of the district were very soon removed from under this category. There was a very high rise of the river during the year under report which affected the required amount of water for cultivation as the Sagaing and Chaungu townships depend greatly on the overflow of the river. The actual rainfall from January to December 1892 was 35.11 against 16.57 in the preceding year, or over double the amount of that of last year. Consequent upon the very good rainfall aforesaid there was no lack of food-grains and there was no scarcity, as was the case last year for the import of large amount of food-grains from Lower Burma and elsewhere.

The wet weather crops proved successful excepting a few portions of cultivated land which were damaged owing to the overflow of the river late in the year which was exceptional.

RAINFALL during the year 1892 was 36.91 inches as compared with 16.92 inches in 1891 and 17.74 inches in 1890.

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The crops of sessamum, cotton, and jowar were fair in Mōnywa; Eastern and Western Pagyi townships.

Gram, pulses, and beans were fair throughout the district.

Taking it altogether, the harvest of the year was much better than that of the previous one; though it was on the whole below the average.

THE rainfall during the year is somewhat higher than the previous year. The figures are :—

The harvest throughout the district was good and the food-supply sufficient. Much grain has been and is still being exported to the Lower Chindwin and other neighbouring districts.

THE rainfall registered at Myingyan was 23·11 inches as compared with 21·15 in the previous year, and that registered at Pagan showed 12·13 as against 18·21 inches. There was no rain-gauge at Kyaukpadaung, but the rainfall was believed to be a good deal below the average. The harvest in the Myingyan subdivision was above the average and was fairly good, but in both Kyaukpadaung and Pagan there was a great falling off, although not so bad as in the previous year. This falling off below the average was due to the partial failure of the rains and to the showers coming at unseasonable times. The scarcity of food caused considerable numbers of the adult male population to seek temporary employment in Lower Burma and elsewhere, but it is not expected to permanently decrease the population of the affected parts. The staple food of the people as in previous years was *pyaungsan* for the poorer and rice for the richer classes.

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Subdivision.	1891.	1892.
	Inches.	Inches.
Pakōkku	14'32	14'82
Gangaw	46'84	38'10

The rainfall both at Pakòkku and Gangaw was below the average. In the Gangaw subdivision the harvest could only be called fair: the rains were late and irregular. In the other subdivisions of the district the harvest was better than that of last year, especially in the Yawdwìn subdivision. The food-supply was not sufficient. It must not be understood by this that there was any distress. There is always a large import of food-grains into this district. The crops grown are chiefly non-edible and are exported. The supply of rice is generally obtained by import.

There has been no famine during the year; but the price of food-grains rose high and though there has been a certain amount of scarcity in some parts, yet there has been no distress in any township in this district.

Remarks by Deputy Commissioner, Minbu.

THE rainfall during the year under report as compared with the previous year is as follows:—

						1891. Inches.	1892. Inches.
Minbu	...	...	...	...	...	19'06	23'97
Salin	...	...	...	...	...	17'24	12'76
Pyinbyu	...	...	...	...	...	4'26	21'92

It was below the average. Paddy crops were fair in Minbu subdivision except in parts of Ngapè township, where scarcity was felt a little. The jowar, the staple crop along the Môn, was a complete failure; and paddy, the staple crop in Salin subdivision, was bad. But gram, beans, maize, and other crops raised on islands have been good.

The food-supply of the district upon the whole is sufficient, although the harvest was below the average. Towards the end of the year there has been considerable scarcity of water in the south and west of the Salin subdivision.

Remarks by Deputy Commissioner, Magwe.

THERE are only two rainfall registering stations in the district, namely, Magwe and Taungdwingyi.

The rainfall for the year was slightly below the average throughout the district. The early rainfall was, however, sufficient and well distributed, but the average was reduced owing to the failure of the later rains. The early rains promised well and the early harvest was good and about the average; but the late rains having failed the second crops suffered considerably. This was most felt in Taungdwingyi, where there was hardly any rain in November. A tract of country in the Myothit township, embracing the circles of Magygya, Kanhla, Palingyi, and Linè, suffered most; the rain there was very scarce and the crops were seriously affected. As a consequence of this these four circles had to be granted remission of a portion of thathameda due from them. On the whole, however, paddy in Taungdwingyi, especially in Suthwa, did well, although the outturn was slightly below the average, and as usual a large quantity of paddy was exported from Taungdwingyi to the river and to Yamèthin, Meiktila, Kyaukpadaung, and other parts of Magwe district. A larger area was planted this year than last year.

In Natmauk subdivision there was an average harvest, although alternative drought and excessive rain had slightly injured a part of the outturn. This part of the district does not produce sufficient paddy for its own consumption, but imports the quantity required from the Taungdwingyi subdivision and Pyawbwè and pays for it in kind, such as sessamum and maize covers, which are used as cheroot wrappers.

In Yenangyaung subdivision the sassamum (which is the staple crop) and maize crops were very good and slightly above the average. The *pyaung* and *lū* crops, however, suffered through the failure of the late rains. But this did not inflict any tangible hardship on the people as their staple crop of sessamum was generally good, and in very few cases have the people complained of bad crops. Some of the *kyun* crops in this subdivision, such as *pegyi*, *pèyin*, and tobacco, have failed owing to high floods. An unexpected rise of the river at the end of October washed away the crops already planted. About 20 days afterwards the river fell and then the crops were sown again, but this time it was too late and the crops had to be put in before the soil was ready for them. About two-thirds of these crops are estimated to have been destroyed. Recommendations for remission of two-fifths of revenue in regard to the crops have gone in.

The food-supply of the district as a whole has been abundant, and no cases have been reported in which people had to resort to jungle roots and berries as in the previous year. Maize, mixed with oil-cake, is the general food of the people of Natmauk and Yenangyaung subdivisions. This appears to be more nutritious than paddy, the general physique of the people of these subdivisions being better than those of the Taungdwingyi subdivision, where the staple food is rice.

The scarcity described last year continued to be felt during the early part of the year under review. Many families have already emigrated to Lower Burma, although some re-

relief works were open. All these relief works were closed in the early part of June. As soon as the rains commenced the people who had emigrated returned to their homes to work their lands. It is not unusual for the poorest of the people to emigrate after their harvest to some of the Lower Burma districts where they obtain good wages and then lay by some money. These people generally return to their homes as soon as the agricultural season commences.

Remarks by Deputy Commissioner, Thayetmyo

The rainfall was below the average, the figures being—

	1891 Inches	1892 Inches
Mindla	37.95	25.30
Sinbaungwè	26.25	20.54

which gives an average of 26.07 against 32.10 inches the year previous. There is no rain-gauge at Lungda but the rains there were not so plentiful as last year and crops suffered. In Mindla township the rains started well but fell off latterly, resulting in bad crops. In some parts of Sinbaungwè there was a want of rain and the people are put to considerable straits to get along. The harvest was below the average and the food-supply of the district barely sufficient. The poorer classes had to subsist largely on roots and herbs mixed with rice on the account the rate of thatamada-tax had to be reduced in certain circles. Sesamum promised well, but did not fulfil its promise. Even with a good crop cultivators get very little benefit from it, as they have to borrow sums repayable with very heavy interest on reaping their crops.

Remarks by Deputy Commissioner Kyaukse

The rainfall which is only registered at Kyaukse headquarters was on the whole rather above the average, being 38.11 inches the rainfall for the previous year being only 17.45 inches. The rain however fell very heavily in the month of April of the year under report and then there followed a long break of no rain till very late in the season, the greater part of the 28.11 inches falling in September and October.

The harvest was consequently very much affected and below the average in the north of the district as the heavy rain in April damaged the dry crops, such as wheat &c, while the want of rain in July and August caused much damage to the *Yau//yi* young plants, wherever canal water was scarce. Very large *Yau//yi* remissions had to be given in consequence amounting to Rs. 10,000 in Sinbaung township alone. The food supply was, however, sufficient, as the greater part of the district had abundance of water from canals.

Remarks by Deputy Commissioner, Meiktila

The recorded rainfall for the five years previous at Meiktila was 28.02, 36.55, 32.34, 29.22 and 23.71 inches. The rainfall of the year 32.42 inches was therefore above the average but the distribution was unfavourable. In Meiktila subdivision over one-third of it fell in April and May when it was too early to be of much use. June and July were dry months and the paddy nurseries were destroyed. In August there was a fair rainfall but in September and October there was drought again and the crops were withered on the ground. The late drought also destroyed the pown crops the early sesamum was the only fair crop in this part of the district.

In Mahlaing subdivision the rain was distributed more evenly. There cotton is the chief crop and as it wants less water the outturn was fairly good.

The Wundwin subdivision suffered more than any other part of the district. During the year there was no rain-recording station at Wundwin, though it has been since established. The rain in Wundwin was much less than at Meiktila or Mahlaing. The early crops suffered greatly and the *Yau//yi* and pown were a complete failure. In this district the rainfall of places not more than twenty miles distant may vary considerably as much of the rainfall consists of local showers. Sufficient water did not come down from the hills to fill the tanks and consequently there was but little irrigation in the district during the year. The food-supply of the district insufficient in itself on account of the failure of crops was supplemented by imports from Kyaukse and Lower Burma, in consequence of which rice in sufficient quantities was procurable throughout the year.

Remarks by Deputy Commissioner, Yamethin

The rain was very unseasonable. At first it was good and transplanting progressed favourably all over the district but the middle and after rains were insufficient, particularly in the Pyawbwe township, where the crops failed altogether, except where the land was irrigated by tanks and seas. The outturn in Yindaw and Yamethin was better than that of last year.

Remarks by Deputy Commissioner, Pyinmana.

THE rainfall registered at Pyinmana during the past four years is shown in the following table :—

						Inches.
1889	...	...	...	...	...	48.71
1890	...	...	...	...	...	52.67
1891	...	...	...	...	...	30.86
1892	...	...	...	...	...	5.68

The harvest in the main portion of the district was the best there has been for some years, but in the north and north-west the rain in October and November fell short and caused a failure of crops. In some cases the failure was due to the people, in anticipation of the rain continuing, having planted *kyaukkyi* on the ground which is only suitable for *kaukkyin*.

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The food-supply was sufficient and considerable quantities of grain were exported from Wanwègôn and Taungnyo to the Magwe and Yamèthin districts. For the town population grain has still to be imported from Lower Burma.

Remarks by Commissioner, Eastern Division.

Yamèthin.—The rainfall was very unevenly distributed. 5.63 inches fell in April when the water was wasted and only did damage to the irrigation works that were in course of construction. During the whole year the rain fell much more to the west than to the east, and the rainfall recorded during the year at Pyawbwe was only 22.25 inches. The failure of crops both in Yamèthin and Meiktila occurred chiefly to the east of the district on both sides of the railway line.

CATTLE.

Remarks by Deputy Commissioner, Mandalay.

THERE were not many deaths of cattle reported, but a few deaths occurred in Singu and Kutywa townships, which are due to cow-pox and diarrhoea.

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The number of plough cattle in the district seems from all reports to be insufficient for the area now under cultivation.

Remarks by Deputy Commissioner, Bhamo.

IN Mogaung foot-and-mouth disease was most destructive, about 411 cattle being carried off. The subdivisional officer reports, however, that owing to new importations from Mohnyin the total number has not fallen off as it otherwise would. In Shwegu there were 41 deaths from foot-and-mouth disease and 400 from diarrhoea. In Bhamo there were 23 deaths from foot-and-mouth disease and 100 in Sinkin. Advances are being made to the agricultural population to let them recover.

There has been a serious diminution generally throughout the district of late years in the number of cattle held, and if only some effectual treatment were devised it would be a boon. Copies of a Government pamphlet issued some four years back were distributed, but apparently the treatment prescribed was mainly unsuccessful—of course in many instances of diarrhoea the villagers have only themselves to blame. If they would only cut and stack the paddy stubble as fodder instead of turning their cattle out in the rains to feed on the rank green grass they would probably save many. But the causes of the rise and spread of foot-and-mouth disease are not very apparent, and if a Government expert could visit the district sometimes and discuss the question with the villagers, some good might be done. The provisions of the draft Cattle Disease Regulation were enforced by the universal consent of the villagers as far as practicable.

Remarks by Deputy Commissioner, Katha.

TOWARDS the close of the year a form of cattle-disease called *thut* appeared in Pinlebu and caused 112 deaths. Elsewhere the district has been comparatively free from cattle-disease.

Remarks by Deputy Commissioner, Shwebo.

NINETY-TWO head of cattle died from foot-and-mouth disease during the year. The number of plough cattle is believed to be sufficient, but the long scarcity led to many being sold.

Kanbalu	...	13
Tantabin	...	12
Cantonment	...	67

Remarks by Deputy Commissioner, Ruby Mines

TWENTY fatal cases of cattle-disease were reported during the year, of which 15 were due to foot-and-mouth disease and the others to rinderpest, otherwise the health of cattle has been good. The plough cattle are not sufficient and advances for purchase will be required for many years to come.

Remarks by Deputy Commissioner, Ye-u

THE number of cattle reported to have died in the district during the year of anthrax is put down at 222, more than half of this number died at Indaing. The military police loss of cattle was very few.

Remarks by Deputy Commissioner, Sagaing

THERE were 24 deaths amongst the cattle in Ava subdivision from foot-and-mouth disease. In Sagaing subdivision 20 deaths in the Wachet circle and its neighbourhood were reported, but the prompt measures taken stayed the spread of the disease. There were no deaths in the Myinmu subdivision.

The number of plough cattle in the district is reported to be sufficient. Cattle are increasing rapidly and this district will be, as in former days, one of the sources of supply of cattle.

Remarks by Deputy Commissioner, Lower Chindwin

Of the total number (101 518) of plough and breeding cattle, 2,289 were affected by diseases and 296 died, thus giving a death-rate of 29 per cent. No cases of rinderpest were reported.

I consider the district is fairly well off for cattle on the whole.

Remarks by Deputy Commissioner, Upper Chindwin.

NO disease among cattle has been reported.

Remarks by Deputy Commissioner, Pakókku

With the exception of Gahgaw, the number of plough cattle is sufficient. The stock of cattle is steadily increasing. The price of plough cattle has fallen about 20 per cent.

Remarks by Deputy Commissioner, Minbu

The health of cattle is generally good. The hoof disease appeared in the Sidóktaya and Dabwin townships in Môn subdivision early in the year, but in a very slight form. It is reported that the disease was that of the previous years which lingered until beginning of the year under report. Over 2,200 deaths were reported, but these appear principally to have been from natural causes. From some portions of this district (Ngape township) it is reported that the number of bullocks is consequently insufficient for the needs of the cultivators. The number had been enormously diminished by the epidemics prevailing in the years prior to 1891-92, and villagers had not yet been able to replace those they lost.

Remarks by Deputy Commissioner, Magwe.

In every case as soon as an outbreak of cattle-disease was reported, orders were at once issued for the segregation of the affected cattle, and all precautions recommended in the draft rules for preventing the spread of contagious disease among cattle in Burma were at once adopted. The people cheerfully carried out these instructions, and this no doubt helped in a great measure to check the subsequent spread of the disease. In the month of October there was a sudden outbreak of foot-and-mouth disease in the town of Taung-dwingyi, and between the middle of October and the middle of November 197 cattle were affected, but owing to prompt measures taken by the subdivisional officer there was not a single fatal case. The disease was chiefly confined to cattle owned by the natives of India. The services of a veterinary assistant were requisitioned and placed at the disposal of the subdivisional officer and the disease soon disappeared. The total number of cattle affected was 229, out of which only three calves died. Both the subdivisional officer and the veterinary assistant were commended by the Financial Commissioner for their action in this case.

Towards the close of the year cattle-disease again appeared in the Taungdwingyi and Yenangyaung subdivisions. Although this was of a very mild character, it spread over many places. A veterinary assistant was therefore again asked for and has arrived since the close of the year. He has been sent round to advise people generally regarding the treatment of cattle-diseases.

The number of cattle in the district is sufficient for all its requirements. Natmauk, Pin, and Gyokôn are cattle-breeding centres and export a number of cattle to other districts. The decrease in the cattle-thefts has given a stimulus to this export.

Owing to the comparative immunity from cattle-disease and cattle-thefts, the number of cattle in the district is on the increase. The people have almost recovered from the ravages committed by disease in 1889 and 1890, and although owing to the scarcity prevalent last year, large numbers of cattle were sold, the district is regaining its former position as a breeding centre.

Remarks by Deputy Commissioner, Kyauksè.

THE health of cattle has been good, and no deaths from disease have been reported.

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The number of plough cattle is sufficient and is daily increasing as cultivation increases. The Burmese-Mahomedan villages of Salegôn, Letpan, Tabetswè, Palambo, &c., are breeding rapidly, and the people generally are purchasing largely and the price of cattle has risen, good bullocks fetching as much as Rs. 200 per pair and buffaloes Rs. 150 per pair.

Remarks by Deputy Commissioner, Meiktila.

THE health of the cattle has been the most satisfactory feature in the agricultural prospect of the year. In May and June there were a few cases of anthrax, but the disease did not spread. Otherwise the health of cattle has been excellent. As Meiktila is a district the prosperity of which depends almost as much on cattle-breeding as on agriculture, the healthy condition of the cattle has been a considerable factor in modifying the distress due to the failure of crops. Large herds of cattle were taken to Lower Burma for sale during the dry months. The freedom from Kin duties, which in Burmese times would amount to Rs. 10 or Rs. 12 per head on the journey has given a stimulus to this trade. Agricultural distress has also enlarged it. Though it was found that a good many people were parting with their plough bullocks, it was almost always done with the hope of replacing them when required and getting a profit besides. I have not found a single case in which distress compelled any one to sell either plough or other cattle at a less figure than they were worth. I think that distress will have to be very much more acute than it was before there will be any fear of plough cattle being parted with in such quantities as to seriously impair the power of cultivation.

Remarks by Deputy Commissioner, Pyinmana.

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The number of cattle is still insufficient for the requirements of the people, but the cultivators are mostly too poor to purchase for themselves. The advances sanctioned since the close of the year have been eagerly taken up and numbers of applications have been made for advances in excess of the sum available.

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PRICES.

Remarks by Deputy Commissioner, Mandalay.

PRICES for the year under report as compared with the previous year per 100 9-gallon baskets and cotton and salt per 100 viss are given below.

Comparative statement of prices.

District.	PRICE PER 100 9-GALLON BASKETS.														PRICES PER 100 VISS.			
	Rice.		Millet.		Maize.		Pulses.		Oil-seed.		Wheat.		Gram.		Cotton.		Salt.	
	1891.	1892.	1891.	1892.	1891.	1892.	1891.	1892.	1891.	1892.	1891.	1892.	1891.	1892.	1891.	1892.	1891.	1892.
Mandalay ...	392	370	...	...	180	175	170	175	390	400	290	325	200	225	150	150	10	9

Remarks by Deputy Commissioner, Katha.

THE average price of paddy was Rs. 100 and of rice Rs. 372. The prices were highest in the five months from June to October. This was due to the bad harvest of the previous year.

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The price of locally manufactured salt was Rs. 14 and Rs. 12-8-0 per 100 viss respectively, showing a slight decrease as compared with last year.

Remarks by Deputy Commissioner, Shwebo.

Description of article.	AVERAGE PRICE PER 100 BASKETS.						Remarks.
	1891-92.			1892-93.			
	Rs.	A.	P.	Rs.	A.	P.	
Rice ...	366	0	0	383	0	0	per 100 viss. not procurable. per 100 viss.
Oil-seed ...	319	0	0	352	0	0	
Pulses ...	180	0	0	190	0	0	
Millet ...	76	0	0	70	0	0	
Cotton ...	24	0	0	24	8	0	
Wheat ...	.....			.....
Salt ...	8	10	0	8	6	0	

Remarks by Deputy Commissioner, Ruby Mines.

THE average prices of rice, wheat, Indian-corn, &c., during the year under report as compared with the prices of last year were as follows:—

Name of article.	Prices in 1891-92.			Prices in 1892-93.						Remarks.
	Rs.	A.	P.	Rs.	A.	P.	to Rs.	A.	P.	
Rice ...	825	0	0	860	0	0				per 100 baskets.
Wheat ...	.....			.....						not available.
Indian-corn ...	200	0	0	200	0	0	202	0	0	per 100 baskets.
Millet ...	200	0	0	200	0	0	230	0	0	ditto.
Cotton ...	2	8	0	2	8	0	3	0	0	per viss.
Oil-seeds ...	250	0	0	240	0	0				per 100 baskets.
Pulses ...	200	0	0	200	0	0				ditto.

Remarks by Deputy Commissioner, Ye-u.

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During the year under report rice from April to July 1892 was sold at Rs. 400* per hundred baskets; *n August and September owing, doubtless, to the promising appearance of the kaukkyin crops the price gradually fell to Rs. 370, in October to Rs. 350, in November and December 1892 to Rs. 300, to Rs. 230 in January 1893, and in February it was sold at Rs. 200 per hundred baskets, or at an average rate of Rs. 326 per hundred baskets against Rs. 368 of the previous year. The district does not produce much millet and gram and very little wheat, but that wheat can be grown is proved by the villagers near Kyunte north of Tottalot growing it, and it is said that it is of a good quality.

Remarks by Deputy Commissioner, Sagaing.

THE following is the comparative statement of the prices of the agricultural produce for the years 1891-92 and 1892-93:—

Name of article.	1891-92.		1892-93.		Remarks.
	Rs.		Rs.		
Rice ...	350		300		per 100 baskets.
Wheat ...	250		250		ditto.
Indian-corn ...	5		5		per 100 cops.
Millet ...	100		90		per 100 baskets.
Cotton ...	25		25		per 100 viss.
Oil-seed ...	250		300		per 100 baskets.
Pegyi ...	180		220		ditto.
Pegya ...	150		120		ditto.
Gram ...	170		150		ditto.
Salt ...	5		10		per 100 viss.

Remarks by Deputy Commissioner, Lower Chindwin.

THE following statement shows the average prices of the chief field crops in 1892-93 as compared with those of the previous year :—

Name of produce.	Price in 1891-92.	Price in 1892-93.	Remarks.
	Rs. A. P.	Rs. A. P.	
Rice	448 8 0	331 3 7	per 100 baskets.
Wheat	197 6 0	240 0 0	ditto.
Jowar (unhusked)	108 0 0	90 5 2	ditto.
Sessamum	361 15 0	383 11 9	ditto.
Pegya	146 0 0	131 3 5	ditto.
Gram	160 8 0	179 2 8	ditto.
Sadawpe	223 15 0	177 3 6	ditto.
Cotton (cleaned)	Not sold	100 0 0	per 100 viss.
Salt	12 15 10	12 8 3	ditto.

Remarks by Deputy Commissioner, Upper Chindwin.

Paddy.

	1891-92.	1892-93.
	Rs.	Rs.
Kindat	65 to 140	55 to 85
Mingin	80 to 145	60 to 110
Taungdwin	70 to 125	60 to 95
Legayaing	60 to 100	50 to 100
Balet	65 to 145	60 to 85
Kalemyo	60 to 104	60 to 100

Rice.

	1891-92.	1892-93.
	Rs.	Rs.
Kindat	472	250 to 350
Mingin	487	275 to 375
Taungdwin	433	225 to 300
Legayaing	487	350 to 450
Balet	428	250 to 325
Kalemyo	420	250 to 300

Other products.

	Rs.
Cotton (clean)	30 per 100 viss.
Oil-seed	400 per 100 baskets.
Pulses	300 ditto.
Salt	13 per 100 viss.

Remarks by Deputy Commissioner, Pakòkku.

Wheat is grown in small quantities in the Pakòkku subdivision. The price shown is not the market rate, because the produce has not as yet been brought for sale at the market, but bought up by Indian contractors at wholesale rates direct from cultivators.

Remarks by Deputy Commissioner, Magwe.

The prices in most cases except salt have fallen considerably. This was only to be expected. The prices last year had risen owing to the failure of rains, whereas during the year under report, there was a comparatively good harvest. Although the price of salt has increased, the increase is not considerable and in fact about the average price of the last five or six years.

Remarks by Deputy Commissioner, Kyaukse.

The cultivation of wheat and barley has been rapidly increasing, a ready market being found for it in Mandalay with the army and military police contractors.

The cultivation of sugarcane is also on the increase, and an enterprising Burman has started a sugar manufactory near Singaing, which proves to be a very remunerative investment.

Remarks by Deputy Commissioner, Meiktila.

PADDY and rice averaged slightly higher than in the previous year. The imports by rail steadied the prices and there was no marked fall till January, when the new crop

came into the market at the end of the year. Lower Burma paddy was procurable at Rs. 106 and rice at Rs. 300 per hundred baskets in the railway towns. The price of jowar rose owing to the poor crops and to the fact that there is no import by rail of this grain. Price of other food-grains calls for no comment.

During the repeated years of distress some people have turned their attention to wheat. It was grown chiefly near the Meiktila Lake and in some villages near Thabyewa, though it is also occasionally found in small patches in other parts of the district. Though a considerable quantity of it was lost this year owing to the excessive drought and the inability to get water for irrigation purposes, yet the total outturn was not less than 2,000 baskets. I think this industry has now taken a firm root in this district.

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THATHAMEDA.

Remarks by Deputy Commissioner, Mandalay.

I MYSELF believe that the thathameda-tax is only deemed an oppressive and unsuitable one because it is not in all cases equitably applied. It is under the present system too much in the hands of thugyis and thamadis who can be just or not as they please, and check is difficult. That the thathameda system can be worked in a manner which will throw a good deal, but not all, the responsibility, as is practically the case now, on the thamadis, there can I think be no doubt, and that suggested by the Settlement Officer of classification of calling as traders and professions with rates for each class seems a way out of the difficulty.

Remarks by Deputy Commissioner, Meiktila.

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It is difficult to explain the increase. The people were certainly not in better circumstances during the year under report than in the previous year. In such an enquiry in a district where accurate areas of land under cultivation are not obtainable and where consequently action has to be taken on information of a very vague character, there may be considerable difference due to the individual opinions of the officers holding the enquiry. I am of opinion also that in the former year the rates followed rather too closely, an arithmetical calculation of profit, the main basis of which was the statement of the cultivators themselves.

I think this led to the rates being cramped and to an unnecessary loss of revenue in many cases.

Remarks by Commissioner, Eastern Division.

Kyaukse.—Many families from Shwebo and Meiktila have now permanently settled in Kyaukse. The improvement of the canals has brought water to lands which had not been irrigated for 60 or 80 years and is thus enabling new settlers to take up lands and remain permanently in the district.

Meiktila.—It seems to me that the explanation of the increase of thathameda is a simple one. In the previous year the crops failed over the whole of the Meiktila division whence in the present year they only failed in the eastern portion of the district. Although the Wundwin subdivision was able to pay less than in the previous year the other townships of the district will be able to pay more.

COLLECTION OF LAND REVENUE.

Remarks by Deputy Commissioner, Mandalay.

THE revenue collections are made by 7 myothugyis and 242 ywathugyis. The myothugyis draw on an average Rs. 612 per annum as commission on collections; whilst the average commission of a ywathugyi is Rs. 144 per annum. The average number of villages in each circle was three.

Remarks by Deputy Commissioner, Katha.

THERE were in all 65 myothugyis and 171 thugyis, of whom one myothugyi and 25 thugyis were transferred to the Ruby Mines district in January last. The average number of villages in each circle was 10. The amount of commission drawn up to 31st March was Rs. 16,377-12-4, of which Rs. 3,600-14-0 represented arrears on account of collections in 1891-92, the payment of which was withheld on account of the delay in clearing off outstandings. The average commission received by each myothugyi or thugyi was Rs. 69. The commission due on the collections up to 31st March amounts to Rs. 39,406-13-9 and the average each thugyi should receive is Rs. 167.

Remarks by Deputy Commissioner, Shwebo.

THERE are 12 myothugyis and 268 ywathugyis in the district. The average number of villages under each myothugyi is 13.33 and ywathugyi 1.34.

The amount of commission drawn by thugyis was Rs. 11,402.

The average commission of each myothugyi was Rs. 296 and of each ywathugyi Rs. 29.

Remarks by Deputy Commissioner, Ruby Mines.

THE number of myothugyis, ywathugyis, and ywagaungs during the year under report was as follows:—

(1) Myothugyi—Nil, as the myothugyiships have been broken up into ywathugyiships.							
(2) Ywathugyis	...	...	...	...	...	107	
(3) Ywagaungs	...	...	...	...	...	150	

The total commission earned by the ywathugyis up to the 31st March 1893 was Rs. 3,396, or an average of Rs. 31.73. The average number of villages in each ywathugyi's circle is 1.40.

Remarks by Deputy Commissioner, Ye-u.

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The largest amount paid as commission in this district was drawn by the thugyi of Ywathitkyi in Shwegyin township, Rs. 592-3-3, while the Nabèhla thugyi in the Mayagôn township drew the smallest commission, namely, Rs. 5 only. There are altogether 240 thugyis and 2 ayatòks in this district at present and the average commission drawn by each is Rs. 80-12-2.

Remarks by Deputy Commissioner, Sagaing.

THERE were 13 myothugyis and .86 thugyis. The average number of villages in each circle was 3. The amount of commission drawn by thugyis was Rs. 51,901 and the average commission each myothugyi or thugyi received was Rs. 260.

Remarks by Deputy Commissioner, Lower Chindwin.

THERE were 251 circles (including Gyaungòkship of Seywa-gyaung specially sanctioned) and one gyaungòk and 250 thugyis during the year as compared with 244 circles and 244 thugyis in the previous year.

* * * * *

There are 998 villages under these circles or an average of 4.57 villages under each thugyi. The total amount of commission paid to all the thugyis during the year was Rs. 41,733-14-8 and the average commission of each thugyi amounted to Rs. 166-4-3.

Remarks by Deputy Commissioner, Upper Chindwin.

THE revenue is collected by 15 myothugyis, tamòns, or shwehmus and 310 ywathugyis, having 1 to 8 villages under each. The average commission enjoyed was Rs. 80, being 10 per cent. of the collections.

Remarks by Deputy Commissioner, Thayetmyo.

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There are altogether 126 ywathugyis, of whom 92 are under taikthugyis and receive 5 per cent. commission on collections. The remaining 34 ywathugyis are independent, they make their own collections, and receive 10 per cent. commission. The total commission drawn by thugyis and ywathugyis amounted to Rs. 9,733, of which Rs. 7,807 was drawn by the 34 taikthugyis (inclusive of the 5 per cent. paid by them to ywathugyis under them). Rupees 1,926 commission was drawn by the 34 independent ywathugyis.

The average commission then of each of the taikthugyis was Rs. 252 including the 5 percentage paid by them to their ywathugyis. The average commission of each of the 34 ywathugyis who draw 10 per cent. commission was Rs. 57.

PROCESS FOR COLLECTION OF LAND REVENUE.

Remarks by Deputy Commissioner, Mandalay.

THERE were 1,047 coercive processes issued for arrest as against 1,209 in the year previous. One defaulter was imprisoned. In four cases the moveable property of defaulters were sold and in ten cases the land resumed.

Remarks by Deputy Commissioner, Katha.

THERE was a considerable increase in the number of processes issued as compared with last year. The number of processes issued was 50, but in no case was the defaulter imprisoned or immoveable property sold. Moveable property was sold in four cases.

Remarks by Deputy Commissioner, Shwebo.

ONE hundred and fifteen coercive processes were issued for the recovery of outstanding revenue under Chapter III of the rules under the Upper Burma Land and Revenue Regulation; only one defaulter was imprisoned. Moveable property was sold; no defaulters' land sold.

Remarks by Deputy Commissioner, Ruby Mines.

THE total number of processes issued during the year under report was 32. No warrants of arrest were made, the defaulters paying up the amount of their arrears immediately and no further steps being required. No moveable property or land was sold.

Remarks by Deputy Commissioner, Ye-u.

THREE processes for the recovery of thathameda-tax were issued in Ye-u town under Chapter 18 of the rules under the Upper Burma Land and Revenue Regulation of 1889, and only in one case the defaulter's moveable property consisting of one bullock was attached and sold by the Collector of Ye-u. None were imprisoned for non-payment of revenue.

Remarks by Deputy Commissioner, Sagaing.

OUT of a total number of 67 persons against whom coercive processes were issued 53 paid up before further steps were taken against them, 12 suffered arrest, of whom 10 eventually paid up, and the remaining 2 were imprisoned for one month each. The moveable property of five persons was attached and sold.

Remarks by Deputy Commissioner, Lower Chindwin.

SUMMONSES were served on 96 persons who failed to pay up thathameda-tax on due dates, but as they promptly paid the tax on receipt of the summonses none were imprisoned nor was their moveable and immoveable property sold for the recovery of the revenue.

Remarks by Deputy Commissioner, Upper Chindwin.

TWENTY-FOUR coercive processes were issued during the year and 24 arrests were made. No defaulters were imprisoned and no moveable or immoveable property sold for recovery of revenue.

Remarks by Deputy Commissioner, Pakókku.

THREE hundred and thirty-one coercive processes were issued during the year and 6 arrests were made. There was no necessity for imprisoning defaulters as they paid up the revenue on issue of process. In no case was the property or land of a defaulter sold.

Remarks by Deputy Commissioner, Magwe.

The number of processes has much increased compared with the number in the previous years. The increase is mainly due to the arrears of revenue for the year 1891-92. The people had left the district when the tax was collected and when on their return it was demanded from them it was very difficult to get them to pay it.

Remarks by Deputy Commissioner, Kyaukse.

No defaulters were imprisoned nor was any moveable property or land sold, the defaulters generally paying up on the issue of process.

Remarks by Commissioner, Eastern Division.

Kyaukse.—The decrease in the number of processes is satisfactory, but it should be possible to effect a further decrease.

STATE LANDS.

Remarks by Deputy Commissioner, Bhamo.

All land in the district is practically State land, and the whole of the land of the district was declared such last year under the provisions of section 24 (e) of the Upper Burma Land and Revenue Regulation. In December last 66 petitions were received from the villagers of Paukkôn, Kuntha, Myenu, Aleyat, and Thadigôn, claiming certain lands as boba-

being, but there were no officers to go into these cases when the columns are out in the open season, and now the country is simply a big lake. These petitions were presented long after the time limit prescribed in Deputy Commissioner's proclamation of the year before (which was duly notified in each village). Mr J. M. F. George when acting as Deputy Commissioner in October 1892 entertained the following claims (as per list below). Thus setting a precedent for the re-opening of the whole question. The system of land tenure here is peculiar, and it is doubtful whether Mr George's decisions will not require reconsideration.

Case No		Acreage	Held to be
109	...	5 5057	Damaugya land
108	..	0 1411	Ditto
14 *	..	2 4685	Ditto
10	...	6 8777	Bobabaing land
110	...	3 4287	Ditto
13	..	0 3101	Damaugya land.
	..	2 7553	Bobabaing land
111 {	...	3 2983	Ditto
	..	2 0747	Ditto.
Besides the above there were cases	...	..	13
			14
			15
			16

* Shwega where it was held the land was not bobabaing but thugyisa.

Remarks by Deputy Commissioner, Katha

ALL the lands in the district are treated as State lands with the exception of lands held by certain old Burmese officials. Last year the assessment of kyaukkyi-tax was made at 20 per cent of the outturn except in the old Wuntho State, where the rate was 25 per cent. Before the rolls were prepared, the Chief Commissioner reduced the rate in 35 circles of the old Wuntho State from 25 to 12½ per cent. This caused discontent in the adjoining circles and orders were subsequently received sanctioning a uniform rate of 12½ per cent all over the district. The order was received too late to allow the alteration to take effect this year. The magin-tax is levied at the rate of 10 per cent on the outturn.

* * * * *

The scale according to which the rent in kind is converted into a money rent was carefully revised during the year. It varies for each township and each kind of crop.

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No lands were declared to be State during the year

Remarks by Deputy Commissioner, Shwabo.

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The revenue on State lands was collected on the principle traditionally followed in this district, namely, of a quarter share of the produce converted into money at a rate fixed for the year by the Deputy Commissioner having regard to the market rate.

* * * * *

During the year 548 acres were declared State under section 24 of the Upper Burma Land and Revenue Regulation.

The area is unknown.

State lands tax—(Rent of State land)

		Rs
The demand in 1891-92 was	...	5,732
The demand in 1892-93 was	...	7,094

including Rs. 52 on account of the previous year, an increase due to the circles of Pintha and South Ngasin transferred from Katha. It was believed that the land in these circles was all State, and as they had been almost wholly laid waste and were now coming under cultivation again, all this cultivation was assessed to land revenue. The occupiers protested against assessment to State land-tax, but paid on the understanding that it would be refunded when the ownership of the land should be settled.

Remarks by Deputy Commissioner, Ruby Mines.

(a) All land in this district, whether State or private, pays land-tax, and lists as complete as possible have been made of all such land. The State land has nearly all been surveyed. The revenue on State land is assessed at one-fourth of the produce. The latter has been fixed at certain amounts for certain tracts. The Government share is commuted into money at the rate of Re. 1 per basket in Twinngè township and Rs. 1-8-0 to Rs. 1-12-0 in the Mogòk township. The cost of collection is 10 per cent. commission on the realizations paid to the thugyis.

(b) No lands were declared to be State land.

Remarks by Deputy Commissioner, Ye-u

THE revenue demand under this head during the year 1892-93 is Rs. 5,081-10-2 against Rs. 28-1-11 of the previous year. The whole of this amount was collected with the exception of Rs. 16-6-8.

* * * * *

The total area of State lands is 4,543.28 acres, of which 4,069.15 acres was declared State during the year under report.

The cultivation of State lands does not seem to be very popular in this district, and I am informed that such was also the case in the Burmese time. I entertain hopes of being able to get people to cultivate some this year.

Remarks by Deputy Commissioner, Sagaing.

ONE-FOURTH of the produce was collected on all State lands of which a register is kept up.

* * * * *

The area of land declared State was 4,036 acres.

Remarks by Deputy Commissioner, Lower Chindwin.

THE area of State lands in this district as ascertained up to the end of the year is 4,606.56 acres approximately. There is an increase of 69.47 acres over the figures of the previous year.

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The income from State land rent increased from Rs. 3,077-1-11 in 1891-92 to Rs. 6,716-14-4 in 1892-93.

* * * * *

There has been no change in the principle of collecting revenue on State land. It still remains at one-third of the produce.

Remarks by Deputy Commissioner, Upper Chindwin.

NO land was declared State during the year. The revenue of State lands is assessed at one quarter of the produce throughout the district except in Kalèmyo, where the people have suffered very seriously not only from the Chin rising, but also from having to provide transport for operations in the Chin hills.

The assessment there is the same as the year previous, namely, 10 per cent.

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There has been an enormous increase in the demand under this head from Rs. 11,015 in 1891-92 to Rs. 39,767 in 1892-93. The increase is due to more careful supervision and an excellent harvest.

Remarks by Deputy Commissioner, Myingyan.

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During the year under report the District and Assistant Surveyors surveyed 21,862 acres of State land. The assessment-rolls are being prepared by the district surveyor, but the collections will fall into 1893-94.

The principle on which State lands are assessed to revenue is that the State shall take one-fourth share of the gross produce for kōnayadaw and for kyunayadaw according to the area and description of crop grown.

Remarks by Deputy Commissioner, Pakōkku.

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In 82 cases land has been declared State land under section 24 (1) of the Upper Burma Land and Revenue Regulation, but all the plots declared to belong to the State have not been surveyed. The total average of these plots comes to, roughly calculated, 1,755 acres.

Remarks by Deputy Commissioner, Minbu.

THE State lands in the district are rented out at rates fixed by the Collector, generally a quarter of the gross outturn is taken. The money value of the Government share is taken at the rate current at the harvest time. When cultivators could not work at fixed rate, the gross outturn is checked by the township officer. This was done in six circles of Tagu township, and the assessment-rolls were checked by the township officer. All assessment-rolls as they are received in the Revenue office are compared with the Royal Land Register and with those for the previous years. Assessment-rolls of kyun or inland cultivation were checked by the subdivisional officers and township officers.

A register is maintained containing all known State lands in the district, but the areas entered are still estimates. No accurate areas can be given until the lands are pro-

perly surveyed. This is now being done by the Settlement Survey Department. The register is yearly checked with the assessment-rolls. The mode of assessment is the same as in the previous years, taking a certain per cent. on the gross outturn according to old customs.

Remarks by Deputy Commissioner, Magwe.

In the light of the recent ruling of the Chief Commissioner regarding the tenure of thugyisa lands, the area of State lands will not show such an increase in future years as would otherwise have been the case. It has been the custom hitherto to declare all thugyisa lands as the property of the State. To find out thugyisa land is comparatively easy, as persons who wish to work the lands themselves, and who have a grudge against the thugyi, pretty readily come forward to say a certain piece of land is thugyisa. An enquiry was held, and if the assertion was proved to be true, the land was at once declared State. Now, however, this is altered, and to find out what are indeed State lands irrespective of thugyisa lands is a longer and more difficult matter. There is no doubt that a considerable area of State lands still lies undiscovered.

The rates of assessment of kyun revenue were fixed after a very careful inquiry by the Deputy Commissioner himself. The kyuns under cultivation are actually surveyed every year by the district surveyor or an extra surveyor, and then the revenue is assessed at the sanctioned rates per acre. In this way the assessment of kyuns is not left entirely to the mercy of the thugyis, and the Government gets the revenue as a whole, the thugyis distributing the total amount due from the kyuns over the various cultivators. This year, 1893-94, a different system has been inaugurated whereby the surveyor surveys each holding separately, and a separate demand is prepared for each cultivator. The man thus knows exactly what he is to pay, and it is not left to the thugyi to get more or less out of him as he likes.

Remarks by Deputy Commissioner, Thayetmyo.

The area of State or Royal lands is approximately 1,233 acres. Nothing was realized in the way of rent in the year under report. Last year Rs. 74 were realized as rent, but the area for which this rent was realized was made over on claim and proof of its being private lands.

IRRIGATION.

Remarks by Deputy Commissioner, Mandalay.

THE statement below shows the area irrigated from each of the following irrigation works in this district for 1892-93:—

Work.								Private land.
								Acres.
Shwetaw chaung	...	...	...	...	...	...	...	6,720.69
Nanda lake	...	...	...	...	...	...	...	364.62
Aungbinle	...	...	...	...	...	...	...	1,024.83
Total							...	8,110.14

The water-rate was assessed on private irrigated lands only and collections amounted to Rs. 5,691, of which Rs. 736 was remitted as having been incorrectly assessed on private unirrigated land. The decrease is chiefly due to drought in consequence of which less water was available for irrigation.

Remarks by Deputy Commissioner, Katha.

NO revenue is directly derived from the irrigation works in the district. The Daungyu Irrigation system in Wuntho is a very valuable one and capable of considerable extension, but no money has been spent on it by Government. The Subdivisional Officer, Kawlin, is preparing a report on the subject and it will then be seen whether it would be advisable to have the system looked after by the Public Works Department.

Remarks by Deputy Commissioner, Shwebo.

DURING the year Rs. 1,61,848 was spent on irrigation works. The area actually irrigated was 2,204 acres, the amount of revenue derived Rs. 2,480.

Remarks by Deputy Commissioner, Ye-u.

DURING the year under report repairs to the Tazè, Leindaw, and Tabayin tanks were carried out by the Public Works Department as the bunds, &c., were in a bad state at a cost of Rs. 10,000. The repairs of the Kabaungya tank also was begun by Civil agency at a cost of Rs. 500, which is being met from the District Fund. Rupees 2,108-2-0 was demanded as Irrigation-tax and Rs. 1,722-10-0 was collected, the balance Rs. 105-8-0 amount assessed on Tabayin tank was not collected, and Rs. 280 part assessment on Letsegan tank was remitted by the Commissioner, Central Division, in his Revenue Department letter No. 552-6R., dated the 9th March 1893, as the people did not derive much benefit from the Letsegan dam which has fallen into disrepair.

Remarks by Deputy Commissioner, Lower Chindwin.

A SUM of Rs. 2,907-14-7 was spent on Budalin tank during the year. The former is now in working order and water will be given from it in the forthcoming irrigation season.

Remarks by Deputy Commissioner, Myingyan.

NO new irrigation works were commenced during 1892-93. The Pyugan tank irrigated 952.19 acres of land and so far has turned out a success. The total amount spent on it up to date was Rs. 19,694. It is looked after by the Public Works Department.

Remarks by Deputy Commissioner, Minbu.

THERE are several irrigation works in the district, the principal of which are the Sagu Sedaw in the Minbu subdivision, the Myaungmadaw, Myaungthit, Mingala, Thayetchin, Kaing, Nwetanie, and Thadunwa.

Reports have been submitted from time to time regarding those irrigation works. Money is collected from the cultivators and expended in maintaining each system. A statement showing receipts and expenditure on each canal according to the Treasury accounts is attached. There was no serious breach during the year of any of the canals. There are smaller systems of which Government does not keep accounts. They remain in good order.

Remarks by Deputy Commissioner, Magwe.

* * * * * The palm bund withstood the rains of 1891-92 and conferred a great benefit on the cultivators in that year of scarcity. The area watered by it in 1891-92 was 616.22 acres, and water-rate was levied at one-tenth of the produce. This amounted to Rs. 2,750-8-9 which was collected during the year under report. This year, 1892-93, the bund was not repaired in time for it to be of any advantage to cultivators as the repairs made did not stand and no paddy-lands were worked from the Palin dam. Consequently water-rate was not levied. Another effort was, however, instituted to make the dam a success, and the Executive Engineer was accordingly asked for his opinion. He personally visited the spot in February last and in consultation with the subdivisional officer, sèdaings, and luyis prepared an estimate of the probable cost of erecting a "that sè" which, he considers, will be serviceable for two or more years. This roughly amounted to Rs. 3,000. He did not propose to touch the work which after costing so much money finally failed, but he proposed constructing a new weir at a point lower down. The estimate has been sanctioned and a sum of Rs. 1,000 was spent on it in March last. The remainder will be spent during the current year. If the work will stand this year, as is hoped it will do, a large tract of land will be watered by it and water-rate will be levied.

* * * * * Another project, named the tegyi sè, on the Sunchaung, was strongly recommended by the subdivisional officer and inspected by the Executive Engineer during the year. This sè used to water some of the finest paddy-producing land in Taung-dwingyi. An enormous tract of land was watered by it. The accounts of the outturn of crop of the year before the annexation show the outturn to be over 60,000 baskets of paddy. The people were most anxious for the reconstruction of the work and had even agreed among themselves to contribute 20 per cent. of their crops to a contractor of their own selection. But as a similar application was refused last year the work was undertaken by the Government and an estimate framed by the Executive Engineer. This has been sanctioned. A sum of Rs. 1,000 was spent on the work and a further sum of Rs. 2,000 will be spent this year.

The survey of the Waba tanks in the Pin township was also sanctioned, but nothing appears to have been done in connection with this work. As stated in the last report, sanction to the formation of a company for the purpose of repairing the Gôndan weir and canals and the Kimmundaung canals in the Sathwa township was refused and it was proposed that Government should take the works in hand and efforts should be made to complete them before the rains. No attempt has been made, however, to carry out these works, although the rains of the second year since then have now well set in.

As already reported there are various important irrigation projects in this district, especially in the Taungdwingyi subdivision. At present the cultivators try to maintain some of the old works in accordance with their antiquated methods, but their attempts generally prove failures. If these works were properly kept up they would in all probability keep the district beyond the reach of famine. The people are most anxious to renew their irrigation works in any possible form and would cheerfully pay water rate as an insurance against famine. I have already received applications largely signed from the Sathwa township asking that Government might allow the Sathwa Myoök, who is a man of much influence, to carry out repairs to certain irrigation works named. While encouraging Burmans to carry out works themselves such works do not do any permanent good, so imperfectly and unscientifically are they carried out. It is therefore very imperative that something should be done to meet the wants of this district in this respect.

Its needs have been repeatedly pointed out and applications made for the deputation of a special Engineer to work out the various schemes. But nothing has been done as the formation of a special irrigation circle for Upper Burma was pending. This special irrigation circle has now been formed, and I hope the needs of this district will be carefully examined.

Remarks by Commissioner, Southern Division.

Minbu.—I think it is very desirable that the irrigation works of the district should be put on a proper footing. I consider that the present system of the Myoök and a lot of *osas*, &c., looking after the work is bad. That work should be carried on more in the way it is in Kyaukse district.

The Public Works Department should help with their advice and supervision. As far as I can see there is no immediate necessity for any extravagant scheme based on modern English ideas of irrigation work. The existing works can be kept up in the Burmese method. Improvements will no doubt suggest themselves here and there, and these can be made. At the same time what is wanted is good work and good materials, and good supervision to see that good work and materials are put in. Many petty irrigation works wanting only a little repair exist and district officers cannot, I think, do better than to turn their attention and any spare money they have to taking them in hand.

Magwe.—There are one or two things (however) that are very palpable. They are:—

- (1) the want of some special officer to look after irrigation works;
- (2) the planting of some trees on the roads, &c., and the encouragement of orchard (garden) cultivation.

As regards the remarks of the Deputy Commissioner regarding irrigation works, my opinion is that the Burmese method of working, if only properly carried out, good workmanship and materials being supplied, is good enough for our present wants; and it is better in every respect to make the attempt now than to wait till Government will be in a position to expend large sums on these works in a manner which probably more commends itself to the Public Works Department.

Remarks by Deputy Commissioner, Thayetmyo.

THERE were no irrigation works carried out during the year under report. The proposals alluded to in the previous year's report under Irrigation were submitted and a detailed survey is now being made by a Public Works Departmental officer of some of these schemes under orders of the local Government.

AGRICULTURAL ADVANCES.

Remarks by Deputy Commissioner, Mandalay.

DURING the year Rs. 8,731 were advanced to agriculturists for cattle and seed, and the amount outstanding on 31st March 1893, including previous year's balance, is Rs. 12,112. Some of the cultivators who took advances in the previous year paid up in full and others are paying by instalments. No undue pressure has been put to recover the advances. These advances have been much appreciated and have helped to encourage the cultivation of wheat. The area under cultivation though not large is three times greater, that is, about 1,550 acres against 500 acres of the year previous; and I expect to see a much larger area under cultivation next year. Wheat has been chiefly cultivated in the Lamaing township. In granting leases I make it a condition that half the land, if suitable to wheat, shall be so cultivated. I find that there is always a ready acquiescence in this.

Remarks by Deputy Commissioner, Bhamo.

* * * * *

That the advances were appreciated and did good is shown by the increasing desire of the people to get them and by the prompt way in which repayments were made.

Remarks by Deputy Commissioner, Shwebo.

* * * * *

The recovery of the remaining principal, namely, Rs. 38,083, was postponed owing to the successive bad seasons and failures of crops. It is expected that these advances will be recovered within the year 1893-94, if the season is favourable. The people, however, have a good deal of leeway to make up. They are believed to have derived considerable benefit from the advances in many cases, especially on seed advances.

Remarks by Deputy Commissioner, Ye-u.

* * * * *

Rupees 32,000 was also disbursed to agriculturists to purchase seed-paddy. It may be as well to mention that there is every reason to believe that the people of the district were genuinely grateful to the Government for establishing relief works and granting advances for the purchase of paddy-seed. Often and often have Bermans extolled the generosity of Government in my presence and admitted in a very pleasing and gratifying manner that no one should grudge to pay their thathameda revenue after all Government had done for the poor.

Remarks by Deputy Commissioner, Pakókku.

RUPEES 8,500 for the purchase of cattle and Rs. 7,190 for seed-grains were advanced to cultivators during the year on the usual terms at 6½ per cent. per annum. Rupees 15,379 were recovered during the year on account of advances in previous years; the amount of advances outstanding on the 31st March 1893 was Rs. 16,798. The advances have been beneficial, and the extension of the time of repayment to two years in some cases has been gratefully accepted.

Remarks by Deputy Commissioner, Magwe.

* * * * *

On the whole the advances may be said to have done some good. There were a few cases in which thugyis misappropriated money given out for advances to their villagers; in some cases, also, the security offered was false; and there were some cases in which the surety took half the amount advanced and the person for whom he was surety took the other half. There were two cases, the subdivisional officer reports, in which the advance for the purchase of seed-grain was spent in two hours,—in one case in paying debts, and in the other in buying a *puso*.

I deprecate the regular giving of these advances which the people come to look upon as a right. If they are given out too freely they tend to sap the thriftiness of the people who are already too much inclined to let things take their course.

Remarks by Commissioner, Southern Division.

Minbu.—I doubt that advances do much good and would recommend their being given out with very great care. They are likely to do harm with such a happy-go-lucky people as the Burmese.

Magwe.—I agree thoroughly with the Deputy Commissioner's remarks regarding agricultural advances. Great care and discrimination is necessary, for otherwise they will do very great harm instead of good.

Remarks by Deputy Commissioner, Meiktila.

* * * * *

Fresh advances were made during the year amounting to Rs. 31,821-5-0 and repayments during the year amounted to Rs. 63,498-15-3, leaving a closing balance outstanding on 31st March 1893 of Rs. 74,186-2-9. The amount was given out in sums of Rs. 5 and Rs. 10 to buy seed and to prevent cattle sales. I question whether a sum of Rs. 30,000 given out in this way among a scarcity-affected population of 150,000 can do much real good, while it certainly gives a great deal of trouble in distribution and collection.

Remarks by Deputy Commissioner, Pyinmana.

No advances were given for the season under report. Rupees 24,132, which had been advanced in previous years, was outstanding at the commencement of this year as it had

been necessary to grant an extension of time for repayment owing to failure of crops. Of this Rs. 15,202 was collected with interest at 6½ per cent. during the year and the balance, Rs. 7,930, will be recovered this month.

The advances are eagerly sought after as much land formerly cultivated is lying waste for want of cattle, and they have been given out on good security.

Remarks by Commissioner, Eastern Division.

Meiktila.—I think there cannot be the slightest doubt that the advances did considerable good in enabling the people to raise a crop which they would otherwise not have been able to sow. The advances no doubt give trouble to the Deputy Commissioner, but this can hardly be taken into account considering the good they do.

REVENUE WORK.

Remarks by Deputy Commissioner, Mandalay.

The subdivisional officers frequently checked the thathameda returns when on tour.

Remarks by Deputy Commissioner, Katha.

Mr. des Vœux, Subdivisional Officer, Kawlin, and Mr. Skinner, Subdivisional Officer, Katha, were active in checking thathameda-rolls and sent in large supplementary assessments. Mr. Long, Subdivisional Officer, Mansè, deserves credit for collecting his revenue in full before the end of the year.

Remarks by Deputy Commissioner, Shwebo.

The following are the number of villages checked by each officer:—

	Village
By Deputy Commissioner	65
By Subdivisional Officer, Shwebo	43
By Subdivisional Officer, Kambalu	116
By Subdivisional Officer, Shainmaga	99

Remarks by Deputy Commissioner, Ruby Mines.

THE thathameda-rolls were checked by the subdivisional officers, township officers, and the Deputy Commissioner on tour. The Deputy Commissioner checked the thathameda returns of six circles and the rest of the circles were checked by the subdivisional officers and the township officers. Every circle in the district was checked.

Remarks by Deputy Commissioner, Ye-u.

The following is a list of officers and the number of villages checked by each subdivisional officer; Tabayin 53 villages in Tabayin Myoma, Kyi and Mindeguthwethauks:—

	Villages.
Ye-u Myoök	136
Ye-u Akunwun	39
Shwegyin Myoök	213
Taze Myoök	127
Indaing Myoök	64

and I may here mention that the first township officer from whom the entire demand of thathameda from his township was received was the Shwegyin Myoök Maung Pō Sein whose collections were received at headquarters on the 12th January 1893.

Remarks by Deputy Commissioner, Sagaing.

Thathameda returns and revenue assessments of State lands were checked by the following officers:—

- Deputy Commissioner, a few villages in each subdivision.
- Subdivisional Officer, Sagaing, 15 per cent. in each township.
Subdivisional Officer, Myotha, 55 circles out of 59 in the subdivision.
Subdivisional Officer, Myinmu, 10 per cent. of what township officers checked in circles
- Township Officers.—All circles in their respective townships.

Remarks by Deputy Commissioner, Lower Chindwin.

NEARLY all the thathameda returns and revenue assessments of State lands were checked by the subdivisional and township officers under the supervision of the Deputy Commissioner. In consequence of this careful check of returns thathameda and State land revenue have largely increased during the year under report.

Remarks by Deputy Commissioner, Upper Chindwin.

THE rolls under every head of revenue were carefully checked by township and subdivisional officers in accordance with orders and to this cause is largely due the increase in all branches.

Remarks by Deputy Commissioner, Myingyan.

THE thathameda returns and revenue assessment-rolls of State land were checked by the township officers and subdivisional officers as follows:—

				Circles.
1.	Subdivisional Officer, Myingyan	...	...	20
2.	Myoök, Myingyan	...	...	46
3.	Myoök, Natogyi	...	...	30
4.	Myoök, Taungtha	...	...	20
5.	Myoök, Tanaungdaing	...	...	15
6.	Subdivisional Officer, Kyaukpadaung	...	...	33
7.	Myoök, Kyaukpadaung	...	...	7
8.	Myoök, Satein	...	...	12
9.	Subdivisional Officer, Pagan	...	...	1
10.	Myoök, Pagan	...	...	30
11.	Myoök, Sale	...	...	27

Remarks by Deputy Commissioner, Pakòkku.

THE thathameda and State land assessment-rolls were checked by the township and subdivisional officers. In the Yawdwin subdivision the rolls were checked by the township and subdivisional officer. In the Gangaw subdivision 15 circles were checked by the subdivisional officer and 43 circles by the township officer. Pauk Subdivisional Officer checked 15 per cent. of the rolls, the Pilin Myoök checked all the circles in his township, and the Pauk Myoök check two-thirds of the circles in his township.

The Township Officers of Yesagyo, Myaing, and Seikpyu checked all the circles in their townships, and the Township Officer, Pakòkku, almost all in his township.

Remarks by Deputy Commissioner, Minbu.

THE thathameda-rolls were checked by Myoöks, Subdivisional Officers, and the Deputy Commissioner.

The following is a statement showing, as far as I can, the number of circles checked:—

Serial No.	Thathameda-rolls checked by	Number of rolls.	Remarks.
1	Subdivisional Officer, Minbu	6	
2	Myoök of Sagu	6	
3	Myoök of Ngape	6	
4	Subdivisional Officer, Salin	...	
5	Myoök of Salin	10	
6	Myoök of Kyabin	16	
7	Subdivisional Officer, Môn	3	
8	Myoök of Legang	11	
9	Myoök of Sidóktaya	9	
10	Myoök of Dabwin	13	
	Total	80	

My predecessor appears to have checked several circles in the Salin and Môn subdivisions, but there is no record to show how many circles were checked. The same remarks apply to the Subdivisional Officer, Salin.

Remarks by Deputy Commissioner, Magwe.

THE thathameda assessment-rolls were checked as follows:—

	Circles.
By the Deputy Commissioner	...
By the Subdivisional Officer, Yenanggyaung	16
By the Subdivisional Officer, Taungdwingyi	9
By the Subdivisional Officer, Natmauk	39
By the Township Officers every circle in their respective charges.	

It will thus be seen that the duty of checking the thathameda-rolls has been thoroughly performed by the township officers and subdivisional officers. In some cases, some officers have perhaps been over-zealous in including houses and in unduly subdividing families, but the thathameda is a very difficult tax to collect equitably and without a certain amount of murmuring, and in some cases the checking has led to double entries. The proper duty of the checking officer is to recommend for remission as well as to assess new houses.

Remarks by Deputy Commissioner, Kyaukse.

THE thathameda returns and revenue assessment-rolls on being submitted by the thugyis are all checked in the akunwun's office by the akunwun. When these rolls are returned by the akunwun they are checked by township officers, the subdivisional officers, and by the Deputy Commissioner. The following table shows the work done by the different officers in checking thathameda and revenue-rolls.

			Thatha- meda.	Land revenue.
Deputy Commissioner	...	...	43	17
Subdivisional Officers	...	...	132	28
Township Officers	...	...	406	140

The paucity of rolls checked in the Myittha subdivision is due to the change in subdivisional officers.

Remarks by Deputy Commissioner, Meiktila.

THE thathameda returns were thoroughly checked by both subdivisional and township officers. Each township officer visited every village in his township and personally inquired into the condition of the people and the crops, while calculating the thathameda remissions. In the Wundwin subdivision the Subdivisional Officer Maung Kin visited every village with this object in November, December, and January. In Mahlaing subdivision Maung Saw Hla Pru took over charge in November, but before February he had visited two-thirds of the villages in his subdivision and checked the assessments. In the Meiktila subdivision there was no subdivisional officer, but the akunwun was employed and did the work with the same thoroughness. I joined the district in November, and in December and January I made a tour through each township checking the remissions after the remissions were fixed. The Subdivisional Officers of Mahlaing and Wundwin checked the actual lists in 34 and 41 villages respectively, and the Myoöks of Meiktila, Mahlaing, Pindali, Wundwin, and Thazi checked them in 15, 25, 10, and 29 villages respectively.

Remarks by Commissioner, Central Division.

Ye-u.—I gather from the report of the Deputy Commissioner, Ye-u, which is a very voluminous one, that there is a great increase under thathameda. The remission recommended, Rs. 5,519-9-0, is very heavy, and I have not been able to pass any orders as no proceedings accompanied recommendations for remission. Proceedings have been called for. I imagine that a great deal more might be done in this district as regards declarations of State lands. It appears that before the year under report only a few rupees were collected for State land, whilst during the year Rs. 5,081-10-2 were demanded and collected in full on State lands.

Sagaing.—The report from Sagaing is generally satisfactory. There was a great increase in thathameda demand, which shows that many people who had left the district have returned again, that the population is increasing, and that the people are no longer famine-stricken. There is a decrease in land revenue which is accounted for by the Deputy Commissioner. A great deal of land has been declared State land in the Sagaing district. I think a good deal of dissatisfaction and soreness prevail owing to the summary way in which land has been declared State in certain cases. Now that the Sagaing district is to be settled the Settlement Officer should enquire into all cases which appear doubtful, notwithstanding that a declaration may have been made under section 24 (1) of the Upper Burma Land and Revenue Regulation. The increase in revenue under the head of fisheries is very satisfactory.

Lower Chindwin.—It appears that registers of all lands claimed as private property are kept instead of the usual registers in which all State land is entered. All State lands have been surveyed and maps prepared by the district surveyor. Revenue is collected at the rate of one-third of the produce instead of at one-fourth as in the Sagaing district. Land revenue was promptly collected. It is satisfactory to notice that there were no out-standings at end of the financial year.

Upper Chindwin.—The increase under the head of thathameda, Rs. 21,350, is very satisfactory. The tax has in most instances been paid in with commendable promptitude, more especially in the Kabaw and Balet townships.

SETTLEMENT AND SURVEY WORK.

Remarks by Deputy Commissioner, Mandalay.

* * * *

No survey took place during the year under report; but a settlement of the district excluding the Pyinulwin subdivision, which was left out as no cadastral survey has been made and need not I think be made for some little time to come, was completed.

The area completed comprises 675.39 miles.

Remarks by Deputy Commissioner, Katha.

No settlement work was carried out during the year. The district surveyor was ordered to survey certain lands in connection with claims for bobabaing land. He surveyed in Ganan circles.

	Acres.
About 613 and 2,305·75 acres in Nagasin ...	2,918·75
The area previously surveyed was ...	8,512·37
Total up to date ...	11,431·12

Remarks by Deputy Commissioner, Shwebo.

No settlement work was undertaken during the year. The Traverse and Cadastral Survey, the No. 3 Party, Survey of India, under Mr. Scott, began operations during the year. The area surveyed by this party was up to the end of March 1893 1,200 square miles (Traverse Party) at a cost of Rs. 41,696-14-5; (Cadastral Survey) of 1,117 square miles at a cost of Rs. 88,811-13-2.

Remarks by Deputy Commissioner, Ruby Mines.

* * * * *

The total area of State land surveyed by the district surveyor under report was 343·25 acres as compared with 886·40 acres of the previous year. Practically the whole area of State land has now been surveyed. The total cost of survey was Rs. 1,374 only, being pay of the district surveyor and two chainmen.

Remarks by Deputy Commissioner, Ye-u.

THE areas surveyed by the district surveyor are as follows:—

	Acres.
(1) House-sites in Ye-u town ...	2·23
(2) State lands ...	3,538·44
(3) Waste lands for which grants or leases were applied for ...	1,022·82
(4) Miscellaneous, including bobabaing lands ...	850·51
Total acres surveyed ...	5,414·00

Remarks by Deputy Commissioner, Upper Chindwin.

THE district surveyor has been employed in surveying State lands in the district and in preparing plans. The work is too heavy for one man, and I have recommended the entertainment for one year of two extra surveyors.

AREA UNDER SUPPLEMENTARY SURVEY.

Remarks by Mr. Gibson.

* * * * *

Compared with results of previous year, the above shows an increase of 663 acres in paddy area, and a decrease of 529 acres in garden and miscellaneous crops. In total area under cultivation and fallow there is an increase this year of 134 acres due to waste lands being taken up. Omitting unassessed bobabaing lands the cultivated areas, village by village, as given by survey and by the thugyis are noted in the table attached. It may be observed that the difference between the two is +40·5 per cent. due to—

- (1) under measurements of certain thugyis;
- (2) thugyis not assessing lands in which there were poor crops, or in which crops failed for want of proper irrigation.

Last year the difference was +61·9 per cent.

Remarks by Deputy Commissioner.

THE decrease shown under garden and miscellaneous crops is due to the destruction to crops caused by a second and unexpected rising of the river.

There is a satisfactory move in the direction of taking up waste lands by persons with means.

TENANT, SALE, MORTGAGE, AND OTHER STATISTICS.

Remarks by Mr. Gibson.

i. Tenants of paddy-lands—

(a) *Non-State land*.—474·78 acres of kaukkyi owned by 56 persons were rented to 135 tenants at Rs. 10·32 per acre with an average yield per acre of 35 baskets, and 88·79

acres of mayin land yielding 20 baskets per acre were rented to 40 tenants at Rs. 6.05 per acre.

(b) *State land*.—14.18 acres occupied by three persons were sublet to five tenants at Rs. 11.26 per acre, average yield per acre 45 baskets.

In all cases the landholder paid revenue direct to Government.

All tenants were Upper Burmans.

ii. Sales—

(a) *Non-State land*.—Nil.

(b) *State land*.—180.50 acres changed hands at Rs. 12.76 per acre. Last year the occupancy rights were sold at Rs. 8.19 per acre. This year they have fetched a better price, though these sales are illegal under the Upper Burma Land and Revenue Regulation.

iii. Mortgages—

(a) *Non-State land*.—During the year 2.93 acres of non-irrigated lands were mortgaged at Rs. 17.06 per acre for a few months only.

Total area still under mortgage at close of year is 384.46 acres at Rs. 28.98 per acre, irrigated lands being at Rs. 40 to Rs. 75 per acre, and now irrigated at Rs. 17 to Rs. 22.

(b) *State land*.—Area of 6.41 mortgaged last year was redeemed this year.

During this year 3.21 acres were mortgaged at Rs. 6.20 per acre.

The statistics as per Appendices A1 and A11 have been carefully compiled and are believed to be quite correct.

Remarks by Deputy Commissioner, Mandalay.

THE figures under this head disclose some interesting facts in connection with the capability of the cultivator to pay an irrigation rate of more than Rs. 2.

Tenants of paddy-land non-State.—The tenant pays an average rent of Rs. 10.32 per acre. To do this he gets a crop of 35 baskets on the average for which at an average market rate of Rs. 110 per 100 baskets he gets Rs. 38.8. This leaves him after paying his rent Rs. 28.5, which leaves him a fair margin of profit, after paying the cost of living. The landlord from his Rs. 10.32 pays the State irrigation-tax of Rs. 1.13, leaving him a profit of Rs. 9.19. This is for one acre. So this supports my contention that for paddy an irrigation-tax of Rs. 5 per acre per annum is not excessive. The figures in regard to State land are as shown more satisfactory still as proving to a greater extent what has been said above.

Supposing in the former case the cultivator is the owner, he with market rate at Rs. 110 per 100 baskets, would after paying Rs. 5 per acre per annum as an irrigation-tax, have Rs. 33 left, which would give him a fair margin of profit after paying any land revenue that may be fixed hereafter on the non-State lands.

In the latter case State land taking the average yield at 46 baskets per acre, not too much to expect where irrigation is supplied, the cultivator gets a return in money of Rs. 45.5. Deduct the one-fourth share of the State, which would be Rs. 14, he would still have Rs. 25 with which to pay his irrigation-tax of Rs. 5 per acre per annum, and meet other expenses of course. Rupees 5 may be considered the maximum rate per acre per annum for paddy, but I feel sure it will be paid willingly by all cultivators having lands within the irrigation area. The above of course refers to a 1-acre produce. Take the average holding at 7 acres with a perfect system of irrigation, it can easily be seen what margin will be left to the cultivator after paying his one-fourth to Government and irrigation rate of Rs. 5.

Say, 7 acres producing 67 baskets per acre for two crops = 469 baskets at Rs. 100 per 100 baskets Rs. 469

Deduct one-fourth share, claimed by State = Rs. 117

Deduct one-fourth irrigation-tax on 7 acres, Rs. 35 = Rs. 152

Balance Rs. 317

which is left for the cultivator to live on. Seven acres is a small average holding, the average holding being nearer 10 acres.

The sales of occupancy rights would appear under the provisions of section 25 (a) of the Upper Burma Land and Revenue Regulation to be illegal. There is nothing in the present rules apparently sanctioning such transfers, although such are recognized by the Revenue Courts.

Summary of Report on the Operations of the Upper Burma Special Local Surveys for the year 1892-93.

1. Period dealt with 1st April 1892 to 31st March 1893.
2. Parties employed nature of work executed :—

Name of party.	Nature of work.
i.—Meiktila and Yamèthin survey, Eastern division.	Cadastral 16", holding-marking and preparation of preliminary records of rights.
ii.—Kyauksè supplementary survey, Eastern division.	Preparation of Supplementary Settlement Registers.
iii.—Twingôn and Beme Oil-fields supplementary survey, Magwe district, Southern division.	Preparation of maps for Dr. Noetting's Report, and re-demarcation of petroleum well-sites.
iv.—Rutywa-Taungbôn supplementary survey, Mandalay district, Northern division.	Supplementary survey of 72 square miles of Mandalay district.
v.—Mandalay Town supplementary survey and assessment, Northern division.	Supplementary survey and assessment for the Municipality.

3. *Changes in number of Parties since last year.*—The Imperial Survey party having taken up Shwebo district, the Party from there was transferred on 1st April 1892 to the Eastern division, and amalgamated with the Yamèthin Party. Oil-field surveys being completed last year establishment reduced to two surveyors on 1st April 1892. Kyauksè Party formed October 1892.

4. *Supervision of the Surveys.*—Mr. R. A. Gibson supervised all Parties. Maung Byaung, Myoðk, Assistant for Cadastral Surveys, and Kyauksè Supplementary Survey. Maung Pò U, Myoðk, Assistant for Cadastral Surveys only.

5. Reports for Parties 2, 3, 4, and 5 already submitted. This report therefore deals with 1 only.

6. *Field and Recess Seasons.*—Field 1st April to 31st July 1892 and 1st February to 31st March 1893. Recess 1st August 1892 to 31st January 1893.

7. Area traversed and village boundaries demarcated—

					Square miles.
In Meiktila	...	...	...	...	300
In Yamèthin	...	...	...	...	186

8. Area in square miles surveyed, holding boundaries demarcated, and preliminary records of rights prepared:—

District.	Scale.			Total.	Remarks.
	2"	16"	32"		
Meiktila ...	64'00	70'86	...	134'86	
Yamèthin ...	18'00	140'57	0'57*	159'14	
Total	82'00	211'43	0'57	294'00	

* Survey of Pyawbù Town.
Topographical of cultivable waste lands.

9. Cost of Survey—

District.	AVERAGE COST PER SQUARE MILE.					Remarks.
	Traverse survey.	Detail survey.			Demar- cation and records.	
		2''	16'' •	32''		
Meiktila	30'2	20'9	147'5	...	10'0	
Yamèthin	30'2	20'9	147'5	800'0	10'0	

The total cost was ... Rs. 50,155

Taking this amount for the area surveyed in detail, the cost per square mile in both districts is Rs. 20'91 for 2" topographical work, and Rs. 228'5 for the 16" cadastral work.

10. Average size of fields and holdings in acres:—

District.	Fields.	Holdings.
Meiktila ...	1'08	12'28
Yamèthin ...	0'64	10'78

11. Proportion of cultivation to waste—

For Meiktila ...	...	...	...	...	1 to 0'25
For Yamethin ...	...	...	...	...	1 to 0'33

12. *Increase over Thugyis' areas.*—The areas as given by the thugyis and as found by survey for circles which have been completely surveyed are :—

For paragraph 10 of Summary of Special Survey Report, 1892-93 (Revised correct figures).

District.						Fields.	Holdings.
Meiktila ...	...	...	...	...	...	1'08	12'25
Yamethin ...	...	...	...	...	...	0'64	10'78

For paragraph 12.

District.						ASSESSABLE AND FALLOW AREA.		INCREASE IN AREA.	
						As shown by thugyis.	As found by survey.	Acres.	Percentage.
Meiktila ...	...	...	...	...	...	9,469	23,001	13,532	142'91
Yamethin ...	...	...	...	...	...	38,461	86,825	48,364	125'75
Total ...						47,930	109,826	61,896	129'14

13. Test work by Mr. Gibson, two Myoòks, and Survey Inspectors.—

For Cadastral Survey.—Test lines run 233'5 linear miles or 1'2 miles per square mile of survey.

For holding-marking and registers.—Number examined 5,161 or 50 per cent. of the total number of holdings demarcated.

14. *Mapping.*—Three hundred and twenty-one kwin plans were drawn on transfer paper here and lithographed by the Superintendent, Government Printing, Burma, Rangoon. Reductions to 2" scale of the area surveyed now in hand.

15. *Survey marks.*—All marks fixed made over to the thugyis concerned to be protected with earthen mounds as ordered in Land Records and Agricultural Department Circular No. 5 of 1891.

16. Demand of other Offices for Survey men (all Burmans) trained in the Upper Burma Local Survey Office during the year. Ninety-four hands as noted below were transferred on the special requisition of the officers in charge of the Survey Parties named.

33 to Kyaukse Supplementary Survey (2 Inspectors and 31 Surveyors all worked well).

4 to No. 3 Cadastral Party, Survey of India. For field-to-field survey by contract. (Gave every satisfaction).

14 to No. 12 Cadastral Party, Survey of India. For field-to-field survey by contract. (Gave every satisfaction).

2 to Meiktila Settlement Office. (Both promoted to Inspectorships for good work).

26 to Minbu Settlement Office. (Four appointed Inspectors and 22 as Holding-markers).

15 to Sagaing Settlement Office. (Four appointed Inspectors and 11 as Holding-markers).

Total ... 94 Upper Burma Local Survey Office men transferred.

17. *Health of the party.*—Influenza broke out amongst the men as they took the field and retarded work very much. Three chainmen died. Two from pneumonia after an attack of influenza and one from snake-bite.

18. *Recommendation for promotion of Survey Myoòks.*—Of the two Myoòks employed, both in the Rs. 100 grade, Maung Byaung as usual rendered exceptional good service and was of the greatest help to the Superintendent. He is strongly recommended for promotion. In the Lower Burma Field-to-field Party the Myoòks who do the same work as Maung Byaung receive Rs. 200 per mensem (pay Rs. 150 plus Rs. 50 special allowance.).

MANDALAY:
The 19th August 1893.

R. A. GIBSON,
Superintendent, Special Local Survey.

ERRATA.

In page 2, paragraph 2, Total Revenue Demand Lower Burma 1891-92 *for* "Rs. 3,22,48,623" *read* "Rs. 3,22,48,523."

In page 73, paragraph 137, line 23, *for* "Man and Môn systems" *read* "Safin and Man systems."

REPORT

ON THE

REVENUE ADMINISTRATION OF BURMA

For the year 1892-93.

IN 11* out of 19 districts in Lower Burma the Deputy Commissioners held office throughout the year, in two† districts there were five changes, in one of them four, and in the other three separate Deputy Commissioners successively had charge. In each of three‡ districts three Deputy Commissioners held charge at different times, and in the remaining three§ districts two Deputy Commissioners succeeded one after the other during the year. Tenasserim was the only division which had one Commissioner throughout the year. Arakan and Irrawaddy had two and Pegu three changes of Commissioners.

- | | |
|---------------------|-------------------|
| (1) Akvab | (10) Toungoo |
| (2) Kyaukpyu | (11) Shwegyin |
| (3) Sandoway | † (1) Hanthawaddy |
| (4) Northern Arakan | (2) Amherst |
| (5) Rangoon Town | ‡ (1) Tharrawaddy |
| (6) Pegu | (2) Henzada |
| (7) Prome | (3) Javoy |
| (8) Thayetmyo | § (1) Thongwa |
| (9) Mergui | (2) Bassein |
| | (3) Salween. |

- | | |
|--------------------|--------------------|
| (1) Mandalay | (6) Yamethin |
| (2) Ruby Mines | ‡ (1) Kathi |
| (3) Ye-u | (-) Singing |
| (4) Kyaukse | (3) Upper Chindwin |
| (5) Pymmana | (4) Myingyan |
| (1) Shwebo | (5) Pakokku. |
| (2) Lower Chindwin | § (1) Bhamo |
| (3) Mmbu | \|\| (1) Northern |
| (4) Magwe | (2) Central |
| (5) Meiktila | (3) Eastern |
| | ¶ (1) Southern. |

unchanged, in six† districts two Deputy Commissioners successively held charge; five‡ districts had three Deputy Commissioners and in one§ district there were four changes. Of the four divisions three|| had the same Commissioners throughout the year and one¶ had three Commissioners successively

To ensure punctuality in the submission of the Revenue Administration report to Government, the Financial Commissioner addressed a letter to all Commissioners in Burma requesting that the district revenue reports and returns for 1892-93 should be submitted with their remarks so as to reach this office not later than the 15th June. How far these orders were complied with will be seen from the following record of the dates on which the different district reports were received from Commissioners in Lower Burma.—

District report	From whom received.	Date of receipt
(1) Toungoo ..	From the Commissioner, Tenasserim ..	On the 31st May.
(2) Rangoon Town ...	From the Commissioner, Pegu ...	On the 8th June.
(3) Hanthawaddy ...		
(4) Pegu ...		
(5) Tharrawaddy ...	From the Commissioner, Pegu ...	On the 12th June.
(6) Prome ..		
(7) Northern Arakan ...		
(8) Kyaukpyu ..	From the Commissioner, Arakan ...	On the 16th June.
(9) Sandoway ..		
(10) Thongwa ..		
(11) Henzada ...	From the Commissioner, Irrawaddy ..	On the 16th June
(12) Thayetmyo ...		
(13) Bassein ...		
(14) Akvab ...	From the Commissioner, Irrawaddy ...	On the 19th June
(15) Amherst ...		
(16) Javoy ...		
(17) Mergui ...	From the Commissioner, Arakan ...	On the 23rd June
(18) Shwegyin ...		
(19) Salween ..		
	From the Commissioner, Tenasserim ..	On the 5th July.

Only six reports were received in time, six were late by one day, one by 4 and one by 8 days. Excepting the report from the Toungoo district the district reports from the Tenasserim division were delayed for 3 weeks.

This is the first year in which the Provincial statements have been compiled in every case direct from district returns. The Financial Commissioner regrets to say that not one of the original statements prepared by Deputy Commissioners could be accepted. In all 67 separate references on important details were found necessary, and the compilation of the tables could not be completed till the last reference was answered. This last was from the Deputy Commissioner, Hanthawaddy, and his explanation only reached the Financial Commissioner on the 12th October. Commissioners also omitted to forward the statements pertaining to their own divisional revenue work, and special calls had to be made for their submission. The Financial Commissioner trusts that Deputy Commissioners will in future give more personal attention to the compilation of their returns, and that Commissioners will exercise a better check, than they appear to have done, on the statements which pass through their hands. Unless the statements are complete and accurate, the Provincial statements cannot be compiled. If the present arrangement, which the Financial Commissioner adopted for the convenience of Commissioners, continues to result in the tardy submission of imperfect statements it will be necessary to revert to the original arrangement and to require Commissioners to submit reports with statistics in full for their divisions. The dates on which the Upper Burma district reports were received are noted elsewhere.

2. The total demands under each head of revenue in Lower Burma during the past two years are compared in the table shown below

Lower Burma.

Item of revenue	1891-92			1892-93			Increase or decrease of net demand
	Demand.	Remissions	Net demand	Demand	Remissions	Net demand	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1 Law revenue	92,69,511 ^a	43,114	92,26,397	1,02,24,703	9,250	1,02,14,753	+ 9,88,356
2 Customs	81,04,087		81,04,087	72,70,809		72,70,809	- 8,33,278
3 Capitation tax	17,21,372	13,469	17,07,903	18,49,255	19,415	18,29,840	+ 214,057
4 Excise	19,57,760		19,57,760	41,72,174		41,72,174	+ 22,14,414
5 Forests	28,54,114		28,54,114	35,93,372		35,93,372	+ 7,39,258
6 Stamps	19,19,406		19,19,406	21,64,861		21,64,861	+ 2,45,455
7 Fisheries	16,21,131 ^a	375	16,20,756	16,01,891	1,130	16,00,761	+ 69,995
8 Miscellaneous	1,92,817		1,92,817	3,88,749		3,88,749	+ 1,95,932
9 Marine	2,80,233		2,80,233	2,91,127		2,91,127	+ 10,894
10 Land rate on lieu of capitation-tax	70,848	350	70,498	71,106	2,075	69,031	- 1,467
11 Salt Excise	1,66,114		1,66,114	1,76,729		1,76,729	+ 10,615
Total	3,22,44,523 ^a	57,318	3,21,87,205 ^a	3,34,84,155	32,570	3,34,51,585	+ 12,64,380

^a Revised figures

Deducting remissions the net demand on account of 1892-93 showed an increase of Rs. 12,64,380 or 5.16 per cent. over the previous year against a corresponding increase of 2.18 per cent. in 1891-92 over the year 1890-91. The only decrease of any importance was under "Customs" which fell off by Rs. 8,33,278. This decline was due to a shrinkage in the export trade in rice during the year principally at Akyab, where the quantity shipped fell short of the preceding year by 70,127 tons. At Rangoon there was a decline of 52,773 tons and at Moulmein the decrease amounted to 36,250 tons.

3. The revenue of Upper Burma under its various heads of receipts during 1892-93 as compared with 1891-92 is shown in the following table:—

Item of revenue.	1891-92.			1892-93.			Increase or decrease on net demand.
	Demand.	Remissions.	Net demand.	Demand.	Remissions.	Net demand.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Thathameda ...	44,68,580*	1,61,724*	43,06,856*	47,53,301	64,465	46,88,836	+ 3,81,986
2. State land ...	9,99,036*	7,124	9,91,912*	12,15,095	3,382	12,11,713	+ 2,19,801
3. Excise ...	4,69,461*	...	4,69,461	5,42,013	...	5,42,013	+ 72,552
4. Forests ...	13,27,300	...	13,27,300	20,76,629	...	20,76,629	+ 7,49,329
5. Stamps ...	2,46,729	...	2,46,729	2,91,571	...	2,91,571	+ 44,842
6. Miscellaneous ...	11,71,757*	10,489	11,61,268	12,95,294	2,477	12,93,817	+ 1,32,549
7. Salt ...	14,930	...	14,930	11,456	...	11,456	- 3,474
8. Marine ...	39,365	...	39,365	6,047	...	6,047	- 33,318
Total ...	87,37,158	1,79,337	85,57,821	1,01,92,406	70,324	1,01,22,082	+ 15,64,261

*Revised figures.

Forest revenue which fell off considerably in the past two years now tops the list with an increase of Rs. 7,49,329. Thathameda and State land revenue, both show a satisfactory improvement. The deficit branches are "Salt" and "Marine," but these are unimportant items.

4. The following table shows the total actual receipts of the public treasuries of Lower Burma during the past ten years:—

Year.	Imperial and Provincial.	Local Funds.	Municipal Funds.	Total.
	Rs.	Rs.	Rs.	Rs.
1881-82 ...	2,54,88,803	25,15,910	19,64,378	2,99,69,091
1882-83. ...	2,59,91,542	30,59,166	17,54,976	3,08,05,684
1883-84 ...	2,61,14,686	26,57,729	24,99,503	3,12,71,918
1884-85 ...	2,42,78,984	24,63,539	17,03,228	2,85,35,751
1885-86 ...	2,49,98,191	22,31,213	19,44,001	2,91,73,405
1886-87 ...	2,89,15,325	27,06,951	23,12,056	3,39,94,332
1887-88 ...	2,89,38,275	28,28,501	20,81,570	3,38,48,346
1888-89 ...	2,79,25,558	26,54,352	22,63,122	3,28,43,032
1889-90 ...	3,44,20,436	28,16,256	22,13,292	3,94,49,984
1890-91 ...	3,73,46,777	29,72,064	22,62,335	4,25,81,176
1891-92 ...	3,80,81,009	31,45,041	23,03,920	4,35,29,970
1892-93 ...	4,20,69,835	32,61,556	23,60,252	4,76,91,643

Comparing the gross receipts of the year 1892-93 with the population of Lower Burma according to the census of 1891 the incidence of taxation amounted to Rs. 10.24 per head, of which the Imperial and Provincial share was Rs. 9.03, Local Funds Rs. 0.70, and Municipal Funds Rs. 0.51.

The incidence of Municipal taxation per head of Municipal population, excluding the inhabitants within the Cantonments of Rangoon, Moulmein, and Toungoo, was Rs. 4.47.

5. The average incidence in 1892-93 per acre of the total cultivated area in Lower Burma of—

- (a) land revenue ;
- (b) 10 per cent. cess on land revenue demand ;
- (c) capitation-tax paid by the cultivating population, and
- (d) export duty on rice

was Rs. 3.29 which is identical with that of the previous year. To this rate of Rs. 3.29 Land revenue contributed Rs. 1.77, cess Rs. .18, capitation-tax Rs. .51, and export duty on rice Rs. .83.

6. The following table shows the actual receipts of the public treasuries of Upper Burma during the past five years:—

Year.	Imperial.	Local funds.	Municipalities.	Total.
	Rs.	Rs.	Rs.	Rs.
1888-89	75,25,126	2,21,480	5,21,660	82,68,266
1889-90	1,03,45,083	2,52,376	6,06,453	1,12,03,912
1890-91	1,12,86,965	2,76,488	5,55,855	1,21,19,308
1891-92	1,11,44,406	3,49,977	5,55,279	1,20,49,662
1892-93	1,08,93,117	4,08,537	6,63,922	1,19,65,576

The population of Upper Burma according to the census of 1891 was 3,063,426, of which 322,831 are persons inhabiting municipal towns. The incidence per head of the gross receipts of the public treasuries in Upper Burma is therefore Rs. 3·91, of which Rs. 3·55 represent the Imperial share, Rs. 0·14 Local Funds share, and Rs. 0·22 the Municipal share, but the incidence of purely Municipal income on the Municipal population was Rs. 2·06 per head.

PART I.

SECTION I.—AGRICULTURAL.

7. The rainfall in Lower Burma was abundant and in most districts well distributed and the harvest generally was a good one, the final crop prospect report giving a higher estimate than in 1891-92 for eight out of the ten rice-surplus districts and the same as in that year in the other two. But in Sandoway, Thayetmyo, Mergui, and Tavoy, owing to the rainfall being badly distributed, the rice crop was somewhat deficient.

In the Akyab district the rainfall was abundant, but the rains in October were not quite suitable. Still, as in 1892, it was estimated that there was an 18-anna crop, and there can be no doubt that the harvest was a good one. In the Kyaukpyu district the rainfall was heavy and the harvest good, except in the Kyaukpyu township, where, owing to the rainfall being badly distributed, the crops were light, and throughout the Sandoway district the harvest was also somewhat short owing to the rain in October and November being below the average, but in the Arakan Hill Tracts the rainfall was abundant and the harvest good.

Both in Pegu and Hanthawaddy districts the rainfall was less than in 1891, but it was well distributed and the harvest in both districts was reported to be a 17-anna one, or considerably above average, but it is said that in Pegu the out-turn anticipated has not been realized.

In Rangoon Town the rainfall was 20 inches less than in 1891, but in this district the harvest is not of much importance.

For the first time for many years the Tharrawaddy district enjoyed good seasonable rain throughout, the rainfall in the north of the district being several inches heavier than it had been in recent years. The rainfall in the dry tract round Naftalin was ample, and there, as elsewhere in the district, the harvest was a good one, while throughout the Prome district the rainfall was well distributed and the crop an average one.

In Thongwa and Bassein districts the rainfall was somewhat less than in 1891, but it was ample and well distributed, and, though the Commissioner is of opinion that a little more rain in October would have been followed by a heavier yield, still the harvest was above average in these two districts, whereas in the Henzada district the harvest was only an average one, though the rainfall was much above normal.

In Thayetmyo the rainfall was insufficient, and it is estimated that the paddy crop was but little over half a crop.

In Amherst the rainfall was normal, timely, and well distributed, except that the latter rains were somewhat light, and the harvest was an average one. In Shwegyin a normal rainfall was followed by a harvest that was above average,

due no doubt to favourable rains in October. In Toungoo there was a heavy rainfall and the crops in the plains were good, but the rains broke so early that some of the hill clearings were not thoroughly burnt and the harvest there was very short. On the other hand, in Salween district, where, as the Commissioner points out, the cultivation largely consists of hill clearings, there was a good harvest, notwithstanding the abnormal rainfall in the first months of the year.

In the Tavoy district the harvest was somewhat short owing to the rainfall not being well distributed, and the South-eastern township is said to have suffered from drought in spite of a rainfall of 178 inches.

In the Mergui district the rainfall was below normal and in the middle and at the close of the season not sufficient for the rice crop, which was below average.

8. No very serious calamities occurred in Lower Burma during the season.

Calamities of the season There was a certain amount of drought, some low-lying lands were flooded, in a few districts fever and other diseases were abnormally prevalent, the loss of cattle owing to rinderpest, anthrax, and other diseases was as usual in some places heavy, but still the cultivators did not suffer from any widely spread and remarkable calamities.*

In Akyab and Kyaukpyu smallpox prevailed to some extent in parts of the districts. There were slight outbreaks of smallpox and cholera in Sandoway, and there was a good deal of sickness in the 2nd quarter of 1892 in the Arakan Hill Tracts

No calamities occurred in the Pegu, Hanthawaddy, and Prome districts, but in Tharrawaddy the people suffered from various diseases to an unusual extent, the deaths from fever being 4,059 and from cholera 552. In this district too the sessamum crop was much damaged by an unexpected flood from the Irrawaddy.

In the Bassein district there were 840 deaths from cholera, and in Henzada 727 people died of the same disease, while Thongwa was free from violent outbreaks of disease and all other calamities. In Thayctmyo the crop suffered from drought, but there were no other calamities.

In the Amherst district the fields were to some extent inundated in the Wagaru and Bilugyun townships at spring tides, but in Shwegyin there were no calamities. In the South-eastern township of Tavoy some damage was caused by drought, insects, and salt-water inundation; but no serious calamities occurred in Mergui. In the Salween district smallpox was prevalent and, as already remarked, untimely rain in Toungoo damaged the hill clearings.

9. The total area under cultivation in Lower Burma is given as 5,607,192 acres as compared with 5,114,690† acres in 1891-92. Increase or decrease of cultivation The increase is most remarkable in Thongwa and Bassein, in which districts it is due both to survey and to increase of cultivation; and in Akyab, Pegu, Tharrawaddy, Amherst, Shwegyin, and Toungoo, in which it is for the most part due to new lands being taken up or fallows of late years being cultivated.

In the Akyab district the area under cultivation was 10,221 acres more than in 1891-92, the increase being in land under rice, and it is due to extension of cultivation generally. There is a small increase of cultivation in Kyaukpyu, Sandoway, and the Northern Arakan Hill Tracts.

In the Pegu district there was an increase in the area under cultivation of 53,591 acres, and the increase in the area under paddy was 52,814 acres, consisting of land newly taken up and of fields which were fallow the year before.

In the Hanthawaddy district there were 29,879 acres more under cultivation than in 1891-92 and the increase in the area under rice was 27,723 acres.

In Tharrawaddy there was an increase of 39,389 acres in the area under cultivation, of which more than half was due to the cultivation of fallows of preceding years, but the area of land newly cleared was also considerable.

The area under cultivation in Prome was 11,555 acres more than in 1891-92. There was an increase of 7,887 acres in the area under rice, due for the most part to fallows of last year being cultivated.

* Cattle-disease will be noticed later on in the report. | † Revised figures.

In the Bassein district, while the fallow area remained practically the same as in 1891-92, the area shown as under cultivation increased by 32,775 acres, the increase being due partly to more correct survey by the local Field-to-Field Survey Party and partly to extension of cultivation. The increase in land under rice in Bassein was 32,780 acres.

In Thongwa the area shown as under cultivation is larger by 155,521 acres than the area of 1891-92, the increase being due in great measure to survey, but the area of new land was also large. The area shown as under rice was 719,785 acres as compared with 527,871 acres in 1891-92.

The area under cultivation in the Henzada district is shown as 30,983 acres larger than in 1891-92, but the Deputy Commissioner explains that this increase is largely due to land under dry weather miscellaneous cultivation having been included in this report, whereas it was excluded from last year's. The area under paddy increased by 11,319 acres owing to new lands being taken up.

In Thayetmyo the area under cultivation is shown as 40,502 acres larger than in the year before, the increase under paddy being 10,309 acres. The increase is no doubt due to a considerable extent to survey.

In the Amherst district the area shown as under cultivation was 44,848 acres more than in 1891-92, due largely to a decrease by nearly 15,000 acres in the area left fallow, but also to cultivation of lands newly cleared.

In Shwegyin there is an increase of 22,423 acres, and in Toungoo of 13,749 acres, in both cases due to general extension of cultivation. There was a slight decrease in the Tavoy district (279 acres) and an increase of 1,484 acres in Mergui.

10. The area shown as under rice cultivation in Lower Burma was 5,086,853 acres as compared with 4,648,921 acres in 1891-92, the increase, as already remarked, being, however, due in some cases to survey. The rice harvest is referred to in the first paragraph of this report.

In the Arakan division there was no great change in the area under crops other than paddy. The Commissioner thinks that the falling off of the area under sugarcane in Kyaukpyu is due to damage by wild pigs. In the Arakan Hill Tracts paddy, sessamum, and cotton are grown together in the taungyas. Paddy is the principal staple in Pegu, and the increase in area cropped was large and the crop good. In the Hanthawaddy district, where there are some very rich gardens in the higher lands unsuitable for rice cultivation, the area under garden cultivation shows an increase of 1,100 acres. In Tharrawaddy there was an increase of 34,906 acres of land under paddy, while as regards other crops other than paddy the area under sessamum shows a small decrease and the crop was a poor one. There was a small increase in the area under peas, while there were 4,901 acres under Miscellaneous food-crops, i.e., vegetables principally, as compared with 2,866 acres in 1891-92, and the crop was an average one. In this district the area under orchards increased by nearly 700 acres, and the number of solitary fruit trees assessed by over 900. But the area under sugarcane was much lower than in the year before owing to low prices having prevailed, while the area under tobacco rose from 2,960 acres to 4,561 acres. In Prome the area under sessamum was 3,214 acres, that under cotton 1,950 acres, and that under tobacco 2,203 acres as compared with 2,780, 2,377, and 2,236 acres respectively in the year 1891-92. Nothing is said in the district report about the crop gathered from these lands, nor about the outturn in the area under Miscellaneous food-crops, which is given as 38,278 acres.

In the same way no information is given in the Bassein report about the crops other than paddy, though there was an area of 28,526 acres under Miscellaneous food-crops.

In the Thongwa district the area under dhani increased considerably, and it is expected that the area under this palm will continue to increase for some years. The increase in the area shown as under tobacco in this district is due to supplementary survey. There is a considerable decrease under miscellaneous food-crops, which, however, is not explained. In the Henzada district the area under sessamum was 2,077 acres, or a decrease of 327 acres as compared with the area shown for

1891-92. But there was a substantial increase in the areas under gram, other food grains, and miscellaneous food-crops.

In the Thayetmyo district there was an increase of 6,776 acres in the area under miscellaneous food-crops, and the area under sessamum was 29,217 acres, or an increase of 15,099 acres, and there was also a very satisfactory increase in the area under maize, gram, and cotton, but the larger area recorded in this district is to a great extent due to survey.

In the Amherst district there was an increase of nearly 40,000 acres in the area under paddy and of 5,288 acres in that under orchards. The orchards yielded fairly well, oranges and dorianes being gathered in abundance. There was a decrease in the area under tobacco and sugarcane. In the Shwegyin and Toungoo districts there was no noteworthy change in the area of any crops, except paddy and other food-grains; the area under the former rose in both districts and that under the latter fell in Toungoo and rose in Shwegyin.

The cultivation of jute in Tavoy is increasing, the area in the year under review being 360 acres as compared with 320 acres the year before. The fruit season was not a good one in Tavoy, whereas in Mergui both dorianes and mango-steens were plentiful, but in the latter district the area under orchards only shows an increase of 168 acres, and no remarkable change occurred in the area under other crops.

CATTLE.

11. The number of cattle registered as having died during the year was 48,355 as compared with 50,270 in the year 1891-92, the deaths from the three principal diseases being as follows:—

	1891-92.	1892-93.
Rinderpest	17,456	6,733
Anthrax	9,422	12,257
Foot-and-mouth disease	4,086	5,218

District details are shown in the statement on the next page.

Statement showing number of cattle that died during the year 1892-93.

8

DISTRICT.	Number of full-grown buffaloes.	Number of full-grown oxen.	Number of young stock.	NUMBER OF CATTLE WHICH DIED DURING THE YEAR 1892-93.					CAUSES OF DEATH, i.e., NUMBER OF CATTLE WHICH DIED OF							
				Buffaloes of any age.		Oxen of any age.		Total.	Rinderpest.	Anthrax.	Foot-and-mouth disease.	Debility.	Snake bite.	Accident.	Other causes.	Total value of the cattle which died in the year.
				Male.	Female.	Bulls and bullocks.	Cows.									
Akyab ...	91,119	134,302	111,422	4,011	3,265	4,771	3,953	10,000	806	4,553	2,864	4,944	448	2,385	...	Rs. 3,29,912
Kyaukpyn ...	21,238	46,045	41,094	391	490	742	853	2,476	350	530	371	558	226	441	...	35,663
Sandoway ...	16,503	9,980	13,142	206	355	177	237	975	47	53	54	216	35	270	300	17,691
Northern Arakan ...	90	1,230	141	...	...	6	10	16	...	...	...	...	...	16	...	291
Hanthawaddy ...	27,029	32,073	12,860	924	514	482	94	2,014	271	314	129	934	198	168	...	1,03,580
Pegu ...	55,844	51,233	18,060	2,015	999	1,346	111	4,471	926	545	37	2,208	350	405	...	2,14,692
Tharrawaddy ...	24,328	76,663	16,032	443	664	1,442	633	3,182	717	561	36	606	183	124	955	1,19,509
Prome ...	22,221	99,405	16,827	114	204	680	403	1,401	148	382	290	172	159	250	...	42,196
Thongwa ...	40,862	32,356	26,912	400	305	254	87	1,046	203	366	40	283	79	75	...	55,715
Bassein...	36,276	36,490	29,259	1,930	1,640	1,116	689	5,375	2,037	2,248	437	417	65	171	...	2,72,134
Henzada ...	30,987	99,522	42,343	550	591	2,110	1,193	4,444	931	854	373	1,312	436	538	...	1,21,748
Thayetmyo ...	11,069	75,506	45,031	213	274	839	619	1,945	9	564	173	342	192	665	...	27,593
Amherst ...	36,662	78,705	53,249	518	209	529	360	1,616	126	393	172	583	173	169	...	32,641
Tavoy ...	15,031	5,987	16,205	190	160	69	81	500	8	31	25	199	91	146	...	7,552
Mergui ...	20,862	508	13,174	363	412	2	1	778	8	211	1	306	76	176	...	9,373
Toungoo ...	13,968	8,597	8,600	284	205	101	22	612	77	58	20	272	37	148	...	20,842
Shwegyin ...	31,704	29,629	12,538	571	562	280	91	1,504	69	594	196	317	142	186	...	65,075
Total ...	495,793	818,231	476,889	13,123	10,849	14,946	9,437	48,355	6,733	12,257	5,218	13,669	2,890	6,333	1,255	14,76,207

The total number of buffaloes and oxen in Lower Burma is given as 1,799,801 as compared with 1,683,414 in the year 1891-92, showing a net increase of 116,387, notwithstanding the fact that 48,355 head died, the difference being due to births and to imports from Upper Burma and Siam. The registration of cattle-deaths is no doubt improving. It is carried on by the village headmen and their books are inspected by Deputy Commissioners, Subdivisional and Township Officers, and officers of the Land Records Department when on tour.

The mortality of cattle was much heavier in the Akyab district than in any other in Lower Burma, the death registered being 16,000 as compared with 9,161 in 1891-92, but the difference is to some extent accounted for by better registration. There was only one Veterinary Assistant, but he did good work. There was no great loss from disease in Kyaukpyu and Sandoway, and cattle were as usual exported from these districts to Upper Burma and to Prome and Bassein.

Cattle-disease was comparatively light in Pegu and Hanthawaddy districts, but anthrax and rinderpest prevailed in August, September, and October in Pegu, while rinderpest was reported in Hanthawaddy in April and anthrax in September. The Veterinary Assistant in Pegu took no interest in his work, but the Assistant in Hanthawaddy worked energetically. In Tharrawaddy the number of deaths of cattle registered was 3,182 as compared with 4,852 in 1891-92, and there were cases of rinderpest in every month of the year, but the total number of deaths from that disease was only 717 and from anthrax 561. The Veterinary Assistant in this district did not exert himself and took little interest in his work. In Prome foot-and-mouth disease prevailed during the year, but no rinderpest or other contagious diseases were extensively reported. The Veterinary Assistant did excellent work in this district and in Upper Burma.

In the Irrawaddy division the cattle mortality was much heavier in the Bassein district than elsewhere, the number of fatal cases from rinderpest being 2,037 and those from anthrax 2,248. The two Veterinary Assistants treated 1,118 cases and their work was satisfactory. In the Thongwa district the mortality of cattle was comparatively light, but this district has in former years suffered greatly from epidemics, and the Deputy Commissioner has drawn attention to the fact that one Veterinary Assistant is not sufficient for the district. In Henzada the mortality was somewhat high (namely, 4,444), though much less than in 1891-92, but the loss from rinderpest, anthrax, and foot-and-mouth disease was serious. The Veterinary Assistant treated 843 head of cattle. In Thayetmyo some 2,000 head of cattle died, there being 564 deaths from anthrax, but deaths from other contagious diseases were not numerous. The Deputy Commissioner makes no remarks about the two Veterinary Assistants employed in the district, but the Superintendent of the Civil Veterinary Department has reported that one of them has done good service and that the other neglected his duty.

The mortality of cattle in the Tenasserim division was not heavy, but there were a considerable number of deaths from rinderpest, anthrax, and foot-and-mouth disease in Amherst and Shwegyin. In the other districts there were no serious outbreaks of cattle-disease. The Veterinary Assistant in Amherst did not display sufficient energy. There are no Assistants in the other districts of the division, except Toungoo, where the Veterinary Assistant worked very well, and he has also been commended for his work in other districts to which he was temporarily posted.

During the year 3,421 head of cattle were imported from Siam to the Salween district as compared with 2,176 in 1891-92. Many thousands of bullocks passed through Toungoo from Upper Burma, while from Mergui and Tavoy buffaloes were shipped to Rangoon.

The Financial Commissioner is very glad to notice that the administration and organization of the Veterinary Department continues to improve. The Superintendent, Mr. Evans, has spared no pains to give the Government and the people a good return for the expenditure of the year. He has endeavoured, with a large measure of success, to infuse his own professional zeal into his officers, and small as his staff is he has accomplished a great deal of useful work. The annual loss in hard money suffered by the people by death of their plough-cattle from

preventible causes is still enormous. The Cattle Diseases Bill is nearly ready for submission to Government, and the Financial Commissioner trusts that the measure when approved may be passed into law with all reasonable despatch. Of its eventual benefit to the people there can be no room for doubt, and the people themselves wish the measure. When it becomes law veterinary operations will increase in scope and importance, because the segregation, which can at present only be desultorily carried out, will then be compulsory, inspection and detection of disease will be regular, and both prevention and cure will be in operation to protect the herds.

CATTLE-MARKETS.

12. There are no cattle-markets in the Arakan division nor in the Pegu district of the Pegu division. In the Hanthawaddy district there are two markets, the receipts in fees at which were Rs. 356, or Rs. 133 less than the expenditure. The Deputy Commissioner considers that from one point of view it is satisfactory that the receipts are not as high as they used to be, as formerly stolen cattle were largely passed on at these markets, whereas now the police inspect all cattle sold at the markets, and the Deputy Commissioner is confident that no passes have been issued for stolen cattle in his district. In Tharrawaddy the receipts from the nine cattle-markets were Rs. 3,882 as compared with Rs. 3,712 in 1891-92 and the expenditure was Rs. 1,759. Cattle thieves still make use of the markets in this district, it is believed. In Prome there were four cattle-markets, the fees received at which amounted to Rs. 7,236 as compared with Rs. 3,106 in 1891-92 and the expenditure was Rs. 1,347. As usual cattle were brought down from Upper Burma and Thayetmyo for sale in Prome and the other districts of the Pegu division. The Deputy Commissioner of Prome reports that the larger number of sales in his district is due to Upper Burma being quiet and to the present position of the cattle-market at Prome being appreciated by the people. In the Bassein district as in 1891-92 the expenditure on cattle-markets, of which there are five, was just covered by the receipts, and 2,175 animals were sold. The district report of Thongwa contains no remarks on the cattle-markets of that district, of which there are two, though 1,084 head of cattle were sold at them, nor has the Deputy Commissioner made any reference to the cattle trade, which in a district which is being so rapidly developed is a matter of great importance.

In the Henzada district 8,278 head of cattle were sold at the six markets, and the fees amounted to Rs. 2,056, which exceeded the expenditure by Rs. 925, while in Thayetmyo at the two markets there were 20,895 head of cattle sold, the receipts amounting to Rs. 5,096 and the expenditure to Rs. 1,293. In 1891-92 there were 19,467 head of cattle sold, the receipts were Rs. 4,685 and the expenditure Rs. 933.

There are no cattle-markets in the Toungoo, Tavoy, Mergui, and Salween districts of the Tenasserim division. No particulars are given about the Amherst markets, but from the statement it appears that, though there were only three markets instead of five as in 1891-92, 10,617 head of cattle were sold at the markets in the year under report, the cost of maintenance being Rs. 600, while the fees realized Rs. 2,779. In Shwegyin there were four cattle-markets and the number of cattle sold at them was 2,427, or 679 less than in 1891-92. The fees realized amounted to Rs. 764 and the expenditure to Rs. 480.

PRICES.

13. The price of paddy was high at the beginning of the year (April 1892) in Rangoon and most parts of Lower Burma. It fell gradually towards the end of the rains and, when the grain of the harvest of December 1892 came to the market, prices were very much lower than in the early part of 1892 and there was no great change before the close of March.

In Akyab in April 1892 the price of paddy was Rs. 90—96 the 100* baskets, but later the price became fixed at Rs. 88. When the new grain came into the market in January 1893 the price fell to Rs. 84, but subsequently before the close of the year it rose to Rs. 88. In Kyaukpyu the price of paddy was considerably

* Nine-gallon, or 1½ bushel baskets

higher than the year 1891-92, owing, it is said, to an outbreak of smallpox which prevented traders from going about. In Sadoway too the price of paddy was higher than the year preceding owing to the crop not being a good one. No remarks are needed on the prices of other articles in this division as there have been no changes of consequence, except in Kyaukpyu, where the price of salt has gone up, while the price of earth-oil has fallen. The price of plough-cattle in this district has risen owing to the demand in Upper Burma. The rise in the price of salt in Kyaukpyu is explained in Part II, section 3, of this report under Salt Excise Revenue.

The prices paid for paddy in Rangoon during the year were very remarkable, and the prices paid throughout the Pegu division and in some parts of the Irrawaddy division rose and fell with the prices paid at the principal seaport.

At the beginning of April 1892 the price of paddy in Rangoon was Rs. 138. In the middle of May it rose to Rs. 142, after which it gradually fell, being Rs. 130 at the end of May and Rs. 125 at the end of June. In July and August the price fluctuated somewhat between Rs. 120 and Rs. 130. In September it fell, and at the close of that month it was Rs. 101-106. At the end of October it had risen to Rs. 110-112, and in November it rose to Rs. 120, but there was not much business at the time. It fell steadily in December and the early part of January, before the close of which month it became fixed at Rs. 78, and after that there was no great fluctuation before the close of the year (March 1893), when the price was Rs. 76-79 as compared with Rs. 138 on the 1st April 1892. The great fall in prices is generally said to be due to the Rangoon merchants being able to combine successfully. In Bassein the price of paddy at the beginning of the year was Rs. 130-138. At the close of the month it was Rs. 120-135, but in May it rose to Rs. 145, but before the close of the month it had fallen to Rs. 120-145. At the end of June it was Rs. 130, after which there was not much change till September, when the price fell to Rs. 120 and later to Rs. 110, while at the close of October Rs. 90 only were paid. In January after the new harvest came in the price in Bassein was Rs. 80 and there was but little change before the end of March, when the price was Rs. 79. In the other districts of the Pegu and Irrawaddy divisions the prices of paddy fluctuated with Rangoon prices, the rates paid in Thayetmyo being higher than those paid in Rangoon for the most part owing to there being a local demand.

As compared with the price of paddy, that of other articles in the Pegu and Irrawaddy divisions is unimportant, and as a rule no explanation for the changes can be given. The price of firewood rose in Pegu owing to the tax levied on it. In Thayetmyo the price of earth-oil has fallen from Rs. 5 the maund to Rs. 1.8-0, owing no doubt to the fall of price at Yenangyaung in Upper Burma. In the Bassein district the price of gram and of sessamum have fallen, the latter owing, it is said, to gingelly having taken its place to some extent.

At Moulmein the price of paddy was very high in April 1892, namely, Rs. 138 the 100 baskets, and very high prices ranging from Rs. 120 to Rs. 150 continued to be paid throughout the Tenasserim division until the end of July. In August the price fell in Shwegyin to Rs. 105 and in Toungoo to Rs. 115, but it still remained Rs. 120 in Amherst and Tavoy and Rs. 145 in Mergui. In October the price in Toungoo rose to Rs. 130 owing probably to a demand for Upper Burma, but it fell generally towards the close of the month, when the Moulmein price was Rs. 110. When the new paddy came in in January 1893 the price in Moulmein was Rs. 85, in Shwegyin and Toungoo Rs. 90, in Tavoy and Mergui Rs. 100-110. Later the price in Moulmein fell to Rs. 78-80 and in Toungoo to Rs. 75-80, and in the railway towns of Shwegyin it was only Rs. 60-70, but in Tavoy it was as high as Rs. 130 and in Mergui as Rs. 120.

In Moulmein the price of firewood rose owing to the imposition of tax or rather, as the Commissioner points out, as soon "as its imposition was mooted". In Shwegyin the price of firewood rose for the same reason and in Salween the price of sugar rose owing to a demand for Karenni and the Shan States. In Tavoy the price of salt, which in the early part of the year was high, fell towards the close of the year, when the new season's salt came in. The price of firewood rose slightly in Mergui.

SECTION II.—LAND RECORDS

14. In most districts of Lower Burma District Surveyors and circle thugyis are not now appointed on vacancies occurring, the place of the former being in districts under supplementary survey taken by the Inspectors of Land Records, while for revenue collection the village headmen are generally to take the place of the circle thugyis; the land records, however, especially the land revenue-roll and its subsidiary registers and the maps, being prepared and kept up by surveyors specially appointed for the purpose. This new system is being introduced generally in Lower Burma as vacancies occur and a general scheme is being prepared under which the new charges are mapped out and all details fully arranged in anticipation of thugyis falling vacant.

In the Akyab district, which is nearly all under supplementary survey, nine vacancies occurred and no new circle thugyis were appointed. In this district, it is said, that a "pretty large proportion of the thugyis are lazy and untrustworthy." However, in the unsettled circles the inspection of thugyis' measurements did not result in any large increase.

In Kyaukpyu district three circles became vacant, but in eight circles village headmen collected the revenue, receiving a commission of 7 per cent., while 3 per cent. was paid to the four surveyors who prepared the rolls. The circle thugyis are said to be a lazy, inefficient set of men in this district, and the supply of surveyors is believed to be insufficient. However, the Survey school now at Sandoway, where it is not appreciated, will probably be removed to Kyaukpyu shortly.

In Sandoway all thugyis are reported to have worked well; one circle became vacant and in it the village headmen were placed in charge of the collection of the revenue.

In the Arakan Hill Tracts three of the circle thugyis having retired 14 village headmen were appointed to charge of their circles.

All districts in the Pegu division, except Rangoon town, are under supplementary survey, and there are now no District Surveyors in those districts and as vacancies occur village headmen are taking the place of circle thugyis.

In the Pegu district most of the thugyis have passed the examination prescribed, but 10 are exempted, while five circles are temporarily placed under circle thugyis pending final arrangements for putting the headmen in charge. In Pegu the circle thugyis collected the revenue well, the whole of the demand made in the year having been collected before the close of the year, so that, as the Deputy Commissioner remarks, so far as his district is concerned, the headmen cannot surpass the circle thugyis in collecting revenue. The thugyis have also been submitting their reports more promptly.

In the Hanthawaddy district two vacancies occurred and in one case a new thugyi was appointed, but the system of collection of revenue by headmen is to be introduced now in the district. On the death of a thugyi a deficiency of Rs. 4,000 was discovered and the amount was paid up by the sureties. Five of the thugyis are exempted from examinations, but all the rest have passed. They are all, the Deputy Commissioner remarks, fairly competent and they have been efficiently supervised by the Township and Subdivisional Officers.

In the Tharrawaddy district there are three thugyis who have not yet qualified in surveying and are not exempted. There are now 29 circle thugyis, village headmen having been appointed in the place of thugyis in three circles. The thugyis collected their revenue promptly and worked well on the whole; but did not take sufficient interest in supplementary survey. The headmen newly appointed in the three circles collected the land revenue very quickly.

In the Prome district there are 50 circle thugyis as compared with 52 in 1891-92. Of these 26 are exempted from passing the examination in surveying and 21 have passed. Proposals for filling up vacancies by village headmen are under consideration. It is said that the thugyis have for the most part worked fairly well, except that as in Tharrawaddy they do not sufficiently attend to supplementary survey and further they are said to be on bad terms with their surveyors.

In Rangoon Town the circle thugyis were relieved of all work in connection with income-tax for which special thugyis were appointed. As in 1891-92 the eight circles remained in charge of seven thugyis. The Deputy Commissioner considers that the thugyis performed their duties in a satisfactory way. Their collections were promptly made and their general conduct was good.

In the Irrawaddy division there is supplementary survey in all districts now. District Surveyors are, however, retained in Thongwa and Thayetmyo, in which districts there is still a considerable amount of survey work to be done outside the tracts under supplementary survey. The system of collecting revenue through village headmen instead of thugyis had not at the close of the year been introduced in any district of this division except Bassein, where one circle has been placed under village headmen. In Thongwa the District Surveyors did good work in surveying fisheries and also checked areas in unsettled circles. One thugyi did good work and six were brought to the Commissioner's notice for doing fair work, whereas two allowed their circles to get into very bad order. Of the 40 thugyis in the district 13 have still to qualify in surveying.

There are 47 circle thugyis in the Henzada district, of whom 35 have qualified in surveying and the rest are exempted; some of the thugyis required no assistance from surveyors, and the 12 who are not qualified to survey assisted in preparing the revenue-rolls and other registers, while the rest of the thugyis took part in the field work. This is very satisfactory, especially as in two adjoining districts the thugyis do not take sufficient interest in supplementary survey.

In the Bassein district there are 47 circle thugyis. One circle has been placed under village headmen and in six circles thugyis were appointed to fill vacancies. Of the 47 thugyis 33 have passed in surveying and four, not being exempted, have still to pass. It is reported that many of the thugyis have serious faults and the really efficient ones are very few. Most of them have not paid sufficient attention to supplementary survey, and there has been much delay in the issue of grants of land, but on the whole the revenue has been collected more promptly.

The number of thugyis in the Lower Burma portion of Thayetmyo was 38, or one less than in the year 1891-92. It has been proposed to place the village headmen in charge of the revenue collections in 12 circles of which the thugyis have failed to pass the examination. The Deputy Commissioner remarks on the poor qualifications and unsatisfactory behaviour of many of the thugyis, and adds that there is only one really good thugyi in Myedè township. Supplementary survey was introduced in 21 circles this year. The circle thugyis rendered no assistance and indeed obstructed as much as possible. The Commissioner is of opinion that the Deputy Commissioner was not as vigorous as he might have been in dealing with this difficulty, and there can be no doubt whatever that, if the Deputy Commissioner had carefully supervised the introduction of the new system himself, seeing on the one hand that the thugyis were not unfairly treated and on the other that all disobedience or obstruction was promptly and severely punished, no difficulties need have occurred.

In the Tenasserim division there is at present no supplementary survey, but considerable progress has been made in substituting headmen for thugyis as revenue collectors, especially in Shwegyin. District Surveyors are generally employed in the division, but these appointments will gradually be abolished after the introduction of supplementary survey.

In the Amherst district nine circles have been placed under village headmen and proposals for carrying out the scheme in nine others are being prepared, the total number of circles being 102. Of the circle thugyis one was dismissed, one removed from his appointment, and one suspended. It is said that many of the thugyis in the district are very ignorant. In the Shwegyin district the thugyis all worked well. The District Surveyor checked the areas given in the revenue-rolls in 11 circles and was also usefully employed in marking out the boundaries of village lands in circles placed under village headmen. In the Toungoo district most of the circle thugyis are said to be competent men and to have worked well; two circles were broken up and placed under village headmen during the year. The District Surveyor did good work testing thugyis' measurements. The Deputy Commissioner of Salween is of opinion that the circle thugyi system cannot possibly be abolished in his district as the headmen are illiterate, but at

the same time it is difficult to find suitable circle thugyis. The District Surveyor appears to have worked well.

In Tavoy village headmen were entrusted with the collection of revenue in three circles. But the Deputy Commissioner reports that no surveyors were appointed to measure the new lands and prepare the revenue-roll. Few of the circle thugyis in this district are qualified surveyors and several are, in the Deputy Commissioner's opinion, incompetent, so that they will have to be removed. The District Surveyor was employed in checking thugyis' measurements and did good work. In the Mergui district seven circles were placed under village headmen, and surveyors were very properly appointed at the same time to measure new lands and to record changes and to prepare the revenue-roll. The headmen worked very well.

SURVEYS AND BOUNDARY DEMARCATION.

15. The following revenue surveys were in progress during the year under report —

- (a) Cadastral survey by No. 7 Party, Survey of India, in Amherst Shwegyin, Tavoy, and Mergui.
- (b) Cadastral survey by local Agency under Mr. Clancey in Kyaukpyu, Sandoway, Akyab, Thayetmyo, and Bassein.

Demarcation work was carried on in Amherst and Shwegyin in circles which are to be taken up by No. 7 Party, and in Akyab, Kyaukpyu, and Sandoway to prepare the way for the local Field-to-field Party.

The demarcation work has not been altogether satisfactory. In some of the districts taken up by the local Field-to-field Party no Demarcation Officers were appointed, thugyis being simply ordered to demarcate, and they as a rule did not do all that was required, except where there was already a supplementary survey establishment in the district, in which cases the demarcation was sufficiently good. But even where Demarcation Officers have been appointed the work was not always well done. These officers are sometimes strangers to the districts in which they work and cannot always get the thugyis and village headmen to assist them as they should. It is of great importance that the demarcation that precedes survey should be carefully attended to, and the Financial Commissioner has taken steps to insure Boundary Officers (who are usually Deputy Commissioners or Settlement Officers) taking a sufficient interest in the demarcation work.

Number 7 Party (Cadastral) of the Survey of India was working during the year in four districts of the Tenasserim division, namely, Amherst, Tavoy, Mergui, and Shwegyin. The boundary survey in advance was carried on in all four districts and the area completed was 811 square miles, the cost of this branch of the operations being Rs. 66,673. There were 896 square miles cadastrally surveyed in Amherst, Tavoy, and Mergui, containing a cultivated area of 251,184 acres. The cost was Rs. 1,27,301. There was also a sum of Rs. 8,067 spent on revision survey.

This was the fourth and last season of the survey by local Agency, and the party is now to be broken up as the programme has been carried out.

The larger portion of the work of the season was in Arakan, but Cadastral Camp No. I under Myoök Maung San Dun had, in the first place, to finish off the traverse plots of Thayetmyo and Bassein districts, which had been prepared by the traverse section the season before. This work they completed at the end of January, when the camp was at once transferred to Kyaukpyu, where they found traverse plots ready and they started work on them without delay in the Myebôn and Kyaukpyu townships.

Cadastral Camp No. II under Myoök Maung Tun started cadastral work in Sandoway early in December on the triangulation system owing to there not being any traverse plots yet ready. During the two months the camp was kept working on that principle in Sandoway 17 circles (two in part) were surveyed and nine circles were left incomplete when it was found advisable to move the camp to Ramree and Cheduba, where traverse plots had become available. In these townships it worked for the rest of the season, a detachment, however, being sent to Sandoway when traverse plots became available there. Camp No. I had also to do some

survey on the 'triangulation system in Kyaukpyu and Myebôn townships, where owing to sickness the preparation of the traverse plots was delayed. The Superintendent points out that it is very much better to supply the cadastral surveyors with traverse plots from the first than to work on the triangulation system. But it was not possible to conduct the necessary traverse work in Arakan in 1891-92 so that the plots could not be supplied for cadastral work during the first two months of the 1892-93 season. Under the circumstances, Mr. Clancey made the best arrangement he could, and appears to have done wisely in not reducing his cadastral establishment as a temporary measure. If he had done so he would certainly have failed to get the men together again for service in such a district as Kyaukpyu, and further he would have left a considerable amount of cadastral work over for 1893-94, which would not have been desirable as the party is to be broken up.

There has been, however, an area of 309 square miles left for cadastral survey, in the Akyab, Kyaukpyu, and Sandoway districts, of which the traverse plots are ready, and arrangements for completing the cadastral work of this area in 1893-94 under the Superintendents of Land Records have been completed. The cadastral work of these tracts too would no doubt have been nearly completed had it not been that the monsoon burst so very early this season.

The cadastral surveyors found the demarcation of gardens, village-sites, pagoda lands, and other small plots very badly done in Thayetmyo and Bassein, but in Kyaukpyu and Sandoway this work was, except in the case of dham gardens, well done owing to regularly appointed demarcation officers having the work under their charge, which was not the case in the other districts.

The cadastral work was more extensively checked this season than in former years, one Inspector being engaged for every 10 field surveyors instead of for 12 as hitherto. The Inspectors partialled 1,272 miles of linear measurement and check lines were run in all kwins except a few which contain jungle or water only. Of the kwins tested by the Inspectors 215 were re-tested by the Myoôks and 47 by the Superintendent, when it was found that, except in two cases, the Inspector's work was well done. The Superintendent visited all the camps except that in Bassein more than once, while he paid four visits to No. I Camp, Kyaukpyu, and the Director inspected the field work in Thayetmyo.

The traverse section was working in Arakan throughout the season. It was under Mr. Haddock and Mr. Hardinge assisted by Maung Tha Byaw and Maung Shwe O.

It was arranged that Traverse Camp No. III under Mr. Hardinge was to survey Kyaukpyu, and Myebôn townships of Kyaukpyu district, and a part of Minhya township of the Akyab district, while Camp No. IV under Mr. Haddock was to undertake Ramree and Cheduba townships of Kyaukpyu district and all the tract that was to be surveyed in Sandoway. Traverse Camp No. III supplied plots to Cadastral Camp No. I regularly except for a time when sickness interfered with progress of work and Traverse Camp No. IV supplied plots to Cadastral Camp No. II without any hitch whatever.

The total number of theodolite stations fixed was 28,424, of which 20,486 were permanently marked with pipes or zinc tubes. The latter are not considered satisfactory by Mr. Clancey, who explains why it was necessary to resort to them, and it may be advisable to substitute clay cylinders or stones for them. This matter will be considered and the preservation of the marks will be attended to by the Superintendent of Land Records, who will shortly be appointed. * A considerable number of survey marks was destroyed wantonly by the villagers, but this sort of obstruction was readily crushed by the Deputy Commissioner, Mr. Leeds, who acted vigorously.

During the season the area traversed was 1,803 square miles, while the area cadastrally surveyed was 1,346 square miles, of which 213 square miles is in Bassein, 261 in Thayetmyo, 738 in Kyaukpyu, and 134 in Sandoway. The total cost including estimated expenditure up to the end of the work is Rs. 2,11,054, of which the traverse survey cost Rs. 79,683, being at the rate of Rs. 44 per mile, as compared with Rs. 46 in 1891-92, while the cost of the cadastral work including holding-marking was Rs. 1,23,153 or Rs. 75 per mile as compared with Rs. 58 per

mile in 1891-92, the higher rate being, as explained by Mr. Clancey, due to the unhealthiness of the climate, to the average area of the fields being very small indeed, to a larger area having to be surveyed on the triangulation system, and to the country being difficult to travel in, and to distances being very great.

The area of land to be assessed as shown by the survey is 166,672 acres as compared with the thugyis' area of 110,074, an increase of 56,598 acres, which area would have been assessed at Rs. 83,801. The increase in area due to this year's survey is 51.42 per cent. and in revenue practically the same. The cost of this year's work will be repaid by the increase in revenue in less than three years.

The local Survey Party has been working now for four years, during the first two of which, however, the traverse plots were supplied by a Survey of India Party, No. 12. The surveys have been carried on in ten districts of Lower Burma. The traverse survey covered 5,677 square miles, of which 2,287 square miles were done by the Survey of India. The Local Party cadastrally surveyed 4,637 square miles. The cost of the work was Rs. 8,21,207 or, at the rate of Rs. 138 the square mile, the cost of the traverse work being Rs. 65 and that of the detail work Rs. 73.

The result of the four years' work has been that the area assessed has increased by 178,143 acres or 48 per cent., and the revenue, exclusive of cess, by Rs. 2,80,199 or 50 per cent., so that at a total cost of Rs. 8,21,207 the *annual demand* has been enhanced by Rs. 3,08,218 (including cess).

There is now no doubt about the success of this survey and the success is assuredly due in the first place to the officer in charge (Mr. Clancey), who has displayed signal ability, tact, and perseverance in accomplishing this great work. Mr. Clancey had in the first place to get his party together, for he had not even the nucleus of a party to start with. Certainly he was fortunate in obtaining the assistance of the Myoòks, who have done such good work, and of Mr. Hardinge, who has developed under Mr. Clancey's guidance into a capable officer, and later the assistance of Mr. Haddock, whose mature experience was of great service. But the rank-and-file were recruited here and there, many having passed the Survey schools no doubt, but few having had any extensive experience of practical work in the field, and the theodolite surveyors have been almost entirely trained after joining Mr. Clancey.

In the next place the Party had to work in several districts at one time, and within one district the detachments were often scattered about, the Survey of India had completed all the large open plains and the local Party has had to work in narrow valleys, in swamps, and in islands off the Arakan coast over which cyclonic storms swept as early as April. In the first and last seasons especially the party had to work in very unhealthy localities, and it must have been extremely hard to keep the men together under the circumstances. For having so successfully overcome these and many other difficulties Mr. Clancey deserves very great credit indeed.

Mr. Clancey acknowledges the good services of his Assistants. Mr. Haddock he describes as a "very capable, energetic, and valuable officer" who has "performed his important duties in a highly efficient and satisfactory manner." Mr. Hardinge has done "exceptionally good work, especially in the last two years, when he has held important professional charge." Mr. Clancey also records his opinion of the good work done by Myoòks Maung San Dun, Maung Tun, Maung Tha Byaw, and Maung Pyu Than, and also that of Maung Shwe O, Maung Luyi, and others, of whose work a full account will be found in the Appendix.

The accuracy of the survey by local agency has now been tested by supplementary survey. The Director of Land Records examined the survey in Prome, Thayetmyo, and Bassein districts during the year. In Bassein Mr. Wilson inspected a number of kwins which had been surveyed by the local Field-to-field Party under Mr. Clancey and he found that "the survey and holding-marking was good in all cases." He remarked of Wettigan kwin in Prome that it was "one of the kwins surveyed by Mr. Clancey's party and the survey is distinctly good although difficult." In Thayetmyo the Director found that the survey in two kwins was wrong, but elsewhere both the survey and holding-marking

done by Mr. Clancey's party was good. The Superintendent of Land Records in charge of Prome and Thayetmyo districts found that the maps prepared by the local Survey Party were very correct. One kwin, however, had to be re-surveyed.

Mr. Ford, the Superintendent of Land Records in Hanthawaddy, a Survey Officer of long experience, makes the following remarks about the correctness of the maps prepared by the local Survey Party:—

"During the field season of 1892-93 no fresh kwins in the three circles of Bawlé, Aingkalaung, and Myaungtanga were found to have been wrongly surveyed. Small errors were found, but these form a very small percentage of the work, perhaps not more than one field in a thousand being wrong. From my experience and the report of the testing by Inspectors, I should say that 97 per cent. of the work has stood the test thoroughly; in some cases fields that had not become permanent were surveyed as such, necessitating a re-survey, but the errors found in the year were of a minor nature and have been corrected by the thugyis."

The Superintendent of Land Records in Tharrawaddy reports that the inspection during the year has led him to consider that the work of the local Field-to-field Party in that district was good and the majority of the errors found were in holding-marking, *i.e.*, not in survey at all. In two kwins, however, the work was found to be inferior.

In the Henzada district the Superintendent of Land Records reports a few trifling errors in the interior details and some mistakes in holding-marking, but says that otherwise the survey was on the whole accurate.

The Superintendent of Land Records in Bassein (Mr. Beechey) reports that the survey work done by the local Party was very good in all but six out of 439 kwins surveyed. Regarding the survey of these six kwins the Superintendent makes the following remarks:—

"The surveys of seven holdings in one of them (the six kwins) was found to be absolutely fudged, necessitating a report to the Director and a re-survey of the kwin. The survey work in the remaining five kwins was found to be very carelessly done and such as to lead one to presume that the Inspectors' check lines, if any, had been most carelessly done if not fudged. However, the survey in these five kwins did not necessitate rejection of any of the sheets as the parts found carelessly done were corrected by the Land Records Department surveyors."

On this Mr. Clancey remarks that when the kwin above referred to was re-surveyed it was found that only three entire holdings were fudged, the remainder being well done.

RECORDS.

16. The records in possession of circle thugyis are on the whole well kept. They are inspected and examined by Township and Subdivisional Officers and in some cases by Deputy Commissioners, but in circles under supplementary survey, where the records are more numerous and more valuable, the records are in most districts regularly inspected by the Superintendents and Inspectors of Land Records.

The Deputy Commissioner of the Pegu district (Mr. Fraser) deserves credit for his careful and systematic inspection of circle thugyis' offices. He inspected the offices in 23 circles and recorded in each case an inspection note, a translation of which is furnished to the thugyi. Every thugyi in the district has a portion of his house railed off as an office, and the condition of these offices is very good.

In the Hanthawaddy district the Superintendent did not visit any of the thugyis' offices during the recess as the surveyors were called into the headquarters of the townships. The Superintendent's office inspections in the dry weather were confined to "calling to obtain maps," the stock in hand being checked in only one case. In the Tharrawaddy district all records in thugyis' offices were inspected by the Land Records staff in the recess and were generally found to be in very good condition.

The records in thugyis' possession in Prome are reported by the Superintendent of Land Records to be in very good condition, but the rooms in which they are kept are not suitable, and their houses are thatched and often are quite close to other houses. However, the Prome thugyis are not so well off as those of Pegu and cannot afford to set apart such good rooms as offices.

In the Bassein district the thugyis' offices were inspected principally by the officers of the Land Records Department, but also by District Officers. They are

in good order and rooms have been set apart for the custody of the records. Four of the thugyis' houses were burnt and it is to the credit of the thugyis that in three cases all the records (except two maps) and other Government property were secured while the thugyis lost their own goods.

In the Thongwa district the condition of the thugyis' offices is yet satisfactory, but supplementary survey has not been established in this district and improvement may be looked for.

The Deputy Commissioner of Henzada inspected thugyis' records as did his Subdivisional and Township Officers, and he certifies that they are well kept. The Superintendent reports that separate rooms are provided by thugyis for registers and maps and the thugyis take great care of Government property in their charge. In the Thayetmyo district but few thugyis have houses suitable for the custody of records. They are, however, comparatively a poor lot of men and, as in Prome, only gradual improvement can be expected.

In Akyab the records in thugyis' houses were inspected in many cases by the Deputy Commissioner and by the Subdivisional and Township Officers as well as by the Superintendent and Inspectors of Land Records. Still the Deputy Commissioner finds that their condition as yet is hardly satisfactory. In Sandoway the Deputy Commissioner found the records in good order.

The Subdivisional and Township Officers of Amherst inspected thugyis' offices and found them in fair order on the whole, but some of the records were not properly kept. In the Shwegyin district the thugyis' records were on inspection found by the Deputy Commissioner and his Subdivisional and Township Officers to be in fairly good condition, while in Toungoo these records are said to be in good condition, but it is not stated by whom that fact was ascertained. In Tavoy the Deputy Commissioner (Captain Cronin) reports that in many cases important registers had not been kept up by thugyis and in only one case did he find a proper room set apart by the thugyi for his office.

The revenue record-rooms at district headquarters have been in many cases inspected by the Financial Commissioner, the Commissioner of the District and by the Director of Land Records. It is generally found that the record-rooms are well kept and that the rules for arrangement and custody are followed, which shows no doubt that Deputy Commissioners can be trusted to manage and supervise the record-rooms. Perhaps in some cases the responsibility of the Akunwun for the condition of the revenue record-rooms has not been sufficiently insisted on and orders will shortly be issued on this point. In Pegu, however, these records are examined once a fortnight by the Akunwun, and they are in good order.

The revenue record-room at Akyab was inspected by the Financial Commissioner and Director of Land Records, who were satisfied that it was well kept. The Commissioner of Arakan inspected the Sandoway record-room and found it in good order. In Kyaukpyu the Financial Commissioner found the records at headquarters still kept in a wooden building, but they are shortly to be removed to a masonry building.

In the Hanthawaddy district the Deputy Commissioner regularly inspects the record-room. The space at present available for revenue records at Tharrawaddy is insufficient, but a new building is being erected. This record-room was inspected by the Director of Land Records, who found it in good order. The condition of the records of the Rangoon Town district is now good. It is reported that the Grant volumes and the Transfer registers have been re-bound and that they are carefully arranged in the strong room. The office is under the immediate charge of the Akunwun, but is regularly inspected by the Deputy Commissioner (Major Temple), who has, the Commissioner writes, done much to bring his office into good order.

The revenue record-room at Bassein was inspected by the Financial Commissioner and by the Director of Land Records and found to be in good order on both occasions. The Deputy Commissioner inspected all the Subdivisional and Township revenue offices, except two, which were inspected by the Subdivisional Officer, and these offices were found to be in fair order. The revenue record-room at Henzada was inspected by the Commissioner and is visited and supervised by the Deputy Commissioner. The district record-room in Thayetmyo was inspected by the Financial Commissioner and found to be in good order. A new record-room is required and it is intended to provide for it in the budget for 1894-95.

The record-room at the headquarters of Amherst district was inspected by the Financial Commissioner and found to be in good order. The Commissioner remarked that there used to be delay in sending the records from Township and Subdivisional offices to headquarters, but that this is not now the case.

The records at headquarters of the Shwegyin district are reported to be in good condition, those at subdivisional and township headquarters were found by the Deputy Commissioner to be in fairly good order.

The Toungoo record-room was inspected by the Commissioner and defects pointed out have since been corrected. The records at headquarters of Mergui were inspected by the Financial Commissioner, and their condition was not quite satisfactory, but they are reported to be now in good order, and in this district the records at township headquarters receive more attention than formerly, owing no doubt to all offices having been carefully and regularly inspected by the Deputy Commissioner. The Financial Commissioner inspected the record-room at Tavoy and found it to be in good condition.

LAND REVENUE-ROLL AND OTHER ANNUAL RECORDS.

17. The subject of the preparation of the revenue-roll and other annual records will be noticed firstly in connection with districts under supplementary survey and then in the remaining districts or portions of districts.

The total area under supplementary survey in the year was 16,830 square miles as compared with 14,002 square miles in the year 1891-92, the following areas being brought under supplementary survey for the first time:—

						Square miles.
Prome	...	...	...	...	...	410
Bassein	...	...	...	...	...	391
Akyab	...	...	...	...	...	6
Thongwa	...	...	...	...	...	1,741
Thayetmyo	...	...	...	...	...	280

A tract newly taken up in Thongwa is that which was settled by Mr. Ma... in 1891-92, and in the other districts the new tracts are those surveyed by the local Field Party under Mr. Clancey in the same year.

The area held under temporary exemption in the tracts that were under supplementary survey was 4,527,822 acres as compared with 3,707,252 acres in 1891-92, the area under paddy-land being 4,226,615 acres, and that under garden and miscellaneous 301,207 acres as compared with 3,473,560 and 233,692 acres respectively in 1891-92. The increase is due in some districts to larger tracts being under supplementary survey, but there has also been a very large increase in the area under cultivation.

In Pegu district the area assessed (or temporarily exempted) shows an increase of 37,331 acres owing to extensions of cultivation throughout the district generally, while the revenue demand rose by Rs. 3,30,611, of which Rs. 2,24,000 was due to the higher rate of assessment and the rest to extensions of cultivation and to a smaller area being assessed at the fallow rate of 2 annas the acre.

In the Hanthawaddy district there was an increase of 30,767 acres, which was for the most part in land under paddy. The assessment in this district rose from Rs. 12,28,652 to Rs. 12,77,742, the increases being due to gradual extension of cultivation.

In the Tharrawaddy district the area assessed or held under temporary exemption is 16,225 acres more than in 1891-92, the increase being largely due to grants made in the year (8,491 acres being granted). The revenue demand rose from Rs. 6,24,655 to Rs. 6,80,555 owing to the total area assessed being larger and to the area assessed at fallow rates being less than in 1891-92.

In Prome, with an increase of 410 square miles in the tract dealt with, the area occupied and assessed or held under temporary exemption is only 24,657 acres more than in 1891-92, the increase being due, it is reported, solely to new circles being brought under supplementary survey.

In the Bassein district the tract under supplementary survey rose from 2,603 square miles to 2,994 square miles, some of the circles surveyed by the local Field-to-field Party being included for the first time. The area assessed or

temporarily exempted was 662,878 acres as compared with 599,228 acres in 1891-92 or an increase of 63,650 acres in the tract under supplementary survey this year as compared with that in last year's tract. But after allowing for the area assessed by thugyis in 1891-92 in the tract now for the first time brought under supplementary survey it is found that the net increase in the area assessed or held under temporary exemption for the year is 38,767 acres.

This is due in the tract formerly under supplementary survey (where the increase is 21,737 acres) to extensions of cultivation, but in the circles newly brought under supplementary survey, in which the increase amounts to 17,030 acres, to errors in the assessments by the thugyis before regular survey.

In the Thongwa district the area assessed or temporarily exempted in the tract under supplementary survey was 779,170 acres or 556,486 acres more than was under supplementary survey in 1891-92, in which year, however, the thugyis recorded an area of 357,959 acres in the circles which have since been brought under supplementary survey, so that the net increase in this year is 198,527 acres, of which 182,170 acres are in the tract newly brought under supplementary survey, and this increase is of course largely due to survey, but in the circles already under supplementary survey there was an increase of 16,356 due to extensions of cultivation.

In the Henzada district the increase of 25,922 acres is partly due to extension of cultivation, the area under paddy having increased by 8,733 acres, but the increase under Garden and Miscellaneous is largely owing no doubt to there having been a temporary decrease in the year 1891-92 of 12,710 acres in the area under such cultivation.

In the Thayetmyo district the area dealt with is 280 square miles with 49,892 acres occupied for purposes of cultivation. It is said that the thugyis' figures for previous years cannot be given, but it is estimated that the increase due to survey is approximately 30 per cent.

In the Akyab district the total area of the tract under supplementary survey was 6 square miles more than in 1891-92 and the area assessed or temporarily exempted was 502,901 acres as compared with 487,261 acres in 1891-92. The increase of 15,640 acres is mostly due to gradual extension of cultivation in all circles but two.

The total cost of supplementary survey in Lower Burma rose from Rs. 1,09,141 to Rs. 1,22,904, the increase being for the most part due to new tracts being taken in hand, for the increase in Bassein, Thongwa, and Thayetmyo, in which districts tracts came under supplementary for the first time, was Rs. 13,919. In Pegu, Hanthawaddy, Prome, Henzada, and Akyab the expenditure was somewhat lower than in 1891-92, but in Tharrawaddy there is an increase of nearly Rs. 2,000, due to the Superintendent drawing a higher rate of pay than before and to abnormal expenditure on furniture and survey marks.

The cost of supplementary survey per square mile has fallen from Rs. 7-12-9 to Rs. 7-4-10 and the cost per acre of land assessed or temporarily exempted fell from 5'65 pies to 5'21 pies the acre, the rate in Pegu being only 3'59 pies, while in Thongwa, a new and very difficult district, the cost was only 4'01 pies. The rate should be very low in Pegu, but it will be advisable not to attempt to lower the rate in Thongwa, where there is a large amount of new land being taken up every year. The rate in Thongwa would no doubt have been considerably higher if it were not that the operations in the tract recently taken up were only carried on for about half the year.

The Superintendents of Land Records were the same in number as in 1891-92 as no new appointments were made. The three Land Records staff. probationers also remained unchanged, one of them (Mr. Wood) taking charge of Thayetmyo under the supervision of the Superintendent of Land Records in Prome, while the others were employed one in Prome and the other in Thongwa.

There were 43 Inspectors of Land Records as compared with 38 in the year 1891-92, there being an Inspector appointed for Thayetmyo, an additional one for Bassein, and seven instead of four in Thongwa. The following table gives the number and salaries of each class of official connected with the supplementary survey :—

Statement showing the number and salary of each class of official connected with supplementary survey.

District.	AREA OF TRACT UNDER SUPPLEMENTARY SURVEY.		Salaries of Superintendents.	INSPECTORS.				THUGYIS.				THUGYIS' ASSISTANT SURVEYORS.				Remarks.
	Gross area.	Area assessed or held under temporary exemption.		Number.	Salary.	Average area of tract under each Inspector.	Average area assessed or held under temporary exemption under each Inspector.	Number.	Average annual earnings.	Average area of circle.	Average area assessed or held under temporary exemption in each circle.	Number.	Salary.	Average area of tract under each surveyor.	Average area assessed or held under temporary exemption under each surveyor.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Sq. m.	Acres.	Rs.		Rs.	Sq. m.	Acres.		Rs.	Sq. m.	Acres.		Rs.	Sq. m.	Acres.	
Pegu ...	2,019	829.359	450	4	60—100	505	207,340	38	2,630	53	21,825	59	19,864	34	14,057	
Hanthawaddy ...	1,818	581.482	500	4	60—100	454	145,370	37	2,024	49	15,716	36	15,890	50	16,152	
Tharrawaddy ...	1,211	366.069	250	4	50—80	303	91,517	27	1,349	45	13,558	44	14,029	28	8,320	
Prome ...	1,676	318.420	300	4	60—80	419	79,605	58	545	29	5,490	40	14,234	42	7,960	
Bassein ...	2,994	662.878	350	9	50—100	333	73,653	42	1,347	71	15,783	70	24,810	43	9,470	
Henzada ...	1,785	437.651	200	5	50—80	357	87,530	51	1,052	35	8,581	41	15,255	44	10,674	
Akyab ...	1,845	502.901	225	5	50—100	369	100,580	66	955	28	7,620	52	22,137	35	9,671	
Thongwa ...	3,202	779.170	225	7	50—50	457	111,310	40	2,407	80	19,479	42	19,403	76	18,552	
Thayetmyo ...	280	49.892	...	1	60	280	49,892	21	517	13	2,376	15	1,608	19	3,326	
Total ...	16,830	4,527,822	...	43	...	391	105,298	380	1,377	44	11,915	399	147,230	42	11,348	

There are now 399 circles under supplementary survey in Lower Burma, but there are only 380 taikthugyis in those circles. The difference is owing to thugyis in some cases having charge of more than one circle, but also to village headmen being placed in charge of the collection of revenue instead of circle thugyis when vacancies occur. Of the circle thugyis 237 have qualified in surveying and 199 actually took part in the preparation of the maps and registers.

In the Pegu district there are ten thugyis out of 38 who have not passed in surveying. The qualified thugyis surveyed 135 kwins, doing three or more each, but it is said that the taikthugyis did not do their work so well as last year, and the thugyis generally made over as much of their work as possible to their surveyors, who as a rule worked well. The revenue-rolls were punctually submitted.

In the Hanthawaddy district there are five thugyis out of 37 who have not passed the examination in surveying. The revenue-rolls were submitted punctually, but the work had been somewhat hurried over and many kwins had to be re-visited.

In the Tharrawaddy district out of 29 thugyis there are 20 qualified surveyors, of whom 18 took part in the supplementary survey and finished 95 kwins. Their work, though better than last year, cannot be called good. The surveyors have been somewhat careless owing, it is said, to the fact that circle thugyis are not to be appointed in future, so that surveyors have not the same prospect of promotion to thugyiships as before, and some of those who worked as surveyors when they could look forward to becoming circle thugyis have now become traders. However, it is not likely that there will be any insufficiency of surveyors in the coming season. The revenue-rolls were late in seven circles in this district owing, except in one case, to the instructions about fallow assessments being issued somewhat late. However, these instructions were carried out in full, all rolls were submitted in duplicate for the first time, and the revenue was collected in good time.

In Prome out of 50 thugyis only 10 took part in the survey work and only two did well. Nothing is said of the conduct of the surveyors, except that two were removed and eight were fined. The rolls were punctually submitted, but their preparation was in some circles hurried on by a most injudicious and uncalled for order of the Subdivisional Officer of Prome, and the Director had to bring the matter to the notice of the Financial Commissioner.

In the Bassein district out of 47 thugyis 33 are qualified surveyors, but only 22 took part in the survey, while seven deliberately disobeyed the orders that they were to do so. Only three thugyis are reported to have done really well, and with very few exceptions they were indifferent and gave but little assistance. The surveyors too did not work so well as formerly knowing, it is said, that there were no others available if they were removed. The revenue rolls were punctually submitted except in two circles which were newly brought under supplementary survey and the maps for which were not received in time.

In Thongwa out of 40 thugyis 26 are qualified surveyors and they were ordered to survey at least five kwins each, which they did. Ten thugyis are said to have worked well, while the rest were indifferent and negligent. The general conduct of the surveyors was not satisfactory, many of them were very careless and serious errors were found in their surveys, and only nine are said to have done really well. At the same time it is pointed out that these surveyors had a very large amount of land newly taken up to deal with and the increase in the area assessed is very high. The revenue-rolls of all circles were punctually submitted, except in one case, which was partly owing to the maps being received late and partly to the thugyi obstructing operations.

In the Henzada district out of 47 thugyis five managed their circles without the assistance of surveyors and the Superintendent considered their work satisfactory. Thirty-seven thugyis took part in the survey and the others assisted their surveyors. Eleven of the surveyors are said to have worked well, but 12 were punished and they still are in many cases careless. Revenue-rolls were punctually submitted.

In Thayetmyo the introduction of supplementary survey was not well arranged, and it is hoped that the Deputy Commissioner will see that in the coming season there is no repetition of what occurred in 1892. The Superintendent

reports that the thugyis gave their surveyors absolutely no help and indeed "deliberately went out of their way to obstruct the work. They took no notice whatever of orders issued by the officer in charge of the Supplementary Survey." The surveyors, however, worked well, considering the difficulties with which they met and all the revenue-rolls were submitted in good time except those of three circles, which were a few days late.

The Commissioner makes the following remarks on the introduction of supplementary survey in Thayetmyo:—

"The thugyis should have been promptly taught to accept the inevitable instead of being lightly fined. The Deputy Commissioner should not have contented himself with asking for assistance in getting out of his difficulties and endeavouring, as he did, to divest himself completely of responsibility. He could probably have done a good deal to allay the feeling aroused against the survey. In the face of active obstruction on the part of thugyis and indifference to inspection on the part of District Officers, I can scarcely congratulate the Deputy Commissioner and his staff on the helpful nature of the services rendered by them."

The attitude of the thugyis in Thayetmyo is most unsatisfactory, and it is unfortunate that the Deputy Commissioner failed to put down the obstruction at once. Mr. Campbell failed in a very important duty in not promptly suppressing the barefaced insubordination of the thugyis, and the Financial Commissioner hopes that the Commissioner's warning will have a good effect. Supplementary survey is to be introduced for the first time into four or perhaps five districts this year, and it is hoped that the Deputy Commissioners of those districts will understand that they are responsible for proper arrangements being made and carried out. They are provided with competent Superintendents, who supervise the survey; but, if thugyis are allowed to set at naught the authority of the Superintendent and Inspectors, no good progress can be looked for.

In Akyab six thugyis out of 63 managed their circles without assistance, but only four others took part in the supplementary survey. Seven surveyors are mentioned as having done good work, but it was necessary to punish many of the others. The Superintendent takes pains to persuade the young boys on passing out of the Survey school to undergo some further practical training. He has induced several to go out in the district and join other surveyors while waiting for vacancies.

The conduct of the Inspectors has steadily improved. When a Director of Land Records was first appointed the amount of work done by the Inspectors was in many cases quite inadequate and often badly done. No doubt one or two of the Superintendents required them to proceed systematically and to inspect a sufficient quantity of work, but this was not always the case even when Superintendents were men of standing and experience.

The inspection of the field work is the most important part of the Inspector's duty, and steps are now taken to insure (a) their checking the work in a sufficient number of kwins, (b) the proper selection of the kwins for inspection, and (c) a sufficient amount of inspection in each kwin; for it is no advantage to have a large number of kwins checked if they are kwins in which the work is easy and extensions are few. Now there has been on the whole a sufficient amount of sound inspection, all three points above referred to having been carefully attended to.

In all the 43 Inspectors checked 4,560 kwins as compared with 3,449 kwins checked by 38 Inspectors in 1891-92, the average number of kwins checked by an Inspector being 106 as compared with 91 in 1891-92.

In the Pegu district all the Inspectors checked a large number of kwins and their work was good, except in the case of one, who failed to give satisfaction, though he tried to do his best. In Hantawaddy too a large number of kwins was checked and only one out of the four Inspectors failed in his duty. He was reduced.

In Tharrawaddy the number of kwins checked rose considerably. Three of the Inspectors worked hard and the fourth was in bad health. This is a very satisfactory change in Tharrawaddy, where the Inspectors used to be notorious for neglecting their work.

In Prome one Inspector worked very well, the work of two was fair, but it was necessary to reduce the fourth, who neglected his duty.

In Bassein, where the work of the Land Records staff has improved immensely, eight Inspectors checked 1,020 kwins as compared with 809 checked by the same number in 1891-92. The ninth Inspector lately appointed checked 22 kwins. In the year 1889-90 the seven Inspectors checked only 268 kwins, so that in this respect the change is very great. The quality of their work has been satisfactory throughout the year.

In Thongwa the number of kwins tested by Inspectors was 516 out of 1,315, or very much less than half. This is not sufficient. Further, the quality of the work was not good, for errors were found in the kwins which had been inspected by three of the Inspectors. Now that the local Field-to-field Survey Party is to be broken up, there will be numbers of first class surveyors available and such Inspectors as still persist in neglecting their duty should be replaced by competent and willing men. However, it is satisfactory to know that at least one Inspector in this district works really well.

In Henzada the Inspectors are now being treated with too much clemency. Where an Inspector who is described in the district report as "an entirely useless man," whose "work is most unreliable," is retained, there can be only one result, and the work of the district will certainly deteriorate. If this does occur the Deputy Commissioner will be responsible, as the Director has given him ample warning. Two of the Inspectors in Henzada have, however, done well.

In Thayetmyo the Inspector fortunately worked very well indeed or the thugyis' obstruction would have led to still more serious results.

In Akyab the Inspectors checked more than half the kwins, all except one inspecting over 100 kwins. All the Inspectors in this district have worked well. The Superintendent (Maung Tha Do Pru) keeps them well in hand.

While the field work is no doubt the most important there is much to be done in the recess which requires careful attention. The revision of the area statements especially is a most important work. Then it has been discovered that in the course of time the areas of holdings as given in the revenue-roll differ somewhat from those got by taking out the areas from the maps and the area statements. The correction of such errors is heavy work, but it is being steadily attended to.

The Superintendents and probationers checked 992 kwins as compared with 769 in 1891-92. The Superintendent in Bassein checked 161 kwins, many of which were doubtless small, still it was necessary to examine them. Mr. Beechey has certainly done a good year's work and he deserves credit for the improvement he has effected in the Bassein district, which is very marked. Mr. Munro has also had a difficult task to perform in Thongwa and he has done all that could be expected of him. His establishment is not yet in first-rate order, but he himself has worked very well, as has the probationer who assisted him Maung Pe Maung. The Financial Commissioner considers that these two officers have acquitted themselves very creditably. The work in both districts is arduous and complicated and demands a deal of personal labour. Mr. Munro in Thongwa was occasionally saddled with an undue amount of responsibility in the land administration, especially with respect to grant work. Deputy Commissioners must remember that Superintendents of Land Records are not Judicial Officers. Mr. Palmer in Tharrawaddy had a very heavy season's work and deserves credit for having at last induced the Tharrawaddy Inspectors to see that it was necessary either to work hard or to retire. These are the three Superintendents who during the year have had the best opportunity of distinguishing themselves and they have all shown that they are capable men and have not spared themselves. In Pegu, Hanthawaddy, and Akyab the Superintendents also worked very well. The Deputy Commissioner of Pegu reports that Mr. Torrens "worked hard" and "the result is more inspection and thoroughness of work by his subordinates." The Deputy Commissioner of Akyab (Mr. Irwin) who has always taken a keen interest in supplementary survey, writes of his Superintend-

ent Maung Tha Dō Pru that he "has performed his duties with zeal and energy." He has a thorough grasp of his work and does it well."

Inspection of supplementary survey by Deputy Commissioners, and Subdivisional and Township Officers.

No great improvement has taken place in the amount of inspection work done by Deputy Commissioners, and Subdivisional and Township Officers in the year under review. In 1888-89 the Deputy Commissioners of the seven districts then under supplementary survey checked the field work in 115 kwins. In 1889-90 the number rose to 123. In these seven districts the Deputy Commissioners in 1891-92 checked 187 kwins, but in the year under review only 101 kwins. The Deputy Commissioners of Hanthawaddy, Thongwa, and Thayetmyo did not check any field work at all. The amount of field inspection done by most Subdivisional and Township Officers is insufficient. The Subdivisional Officers of Thongwa tested on the average six kwins each, and the nine Township Officers tested only nineteen between them. From the annual report of Thayetmyo it appears that the Subdivisional and Township Officers did no testing at all. The Myoök of Thayetmyo, however, distinguished himself by re-surveying some holdings and reporting that the areas were wrong. On examination, however, it was found that the survey was right and his areas were quite incorrect. The Deputy Commissioner of Hanthawaddy did not check any kwins this year. This is said to be due to changes of officers. If Mr. Macrae had remained in charge throughout the year, he would certainly have checked the work with his usual zeal, for both in 1890-91 and 1891-92 the number of kwins checked by him in this district was far in excess of that checked by any other Deputy Commissioner in Burma. Pegu has the best average of inspections, namely, Deputy Commissioner (Mr. Fraser) 26 kwins, Subdivisional Officers 26 each, Township Officers 20 each. It was Mr. Fraser's good example that made the difference in this case no doubt, but in Bassein, while the Deputy Commissioner inspected 27 kwins, the Subdivisional Officers visited only 11. In Prome, Henzada, and Akyab the Subdivisional Officers did well. The Township Officers' average was poor in Tharrawaddy, although in that district three of them have been relieved of all civil work, but in Hanthawaddy, Prome, Bassein, Henzada, and Akyab the Township Officers did very fairly well.

The Director inspected the work in all the districts under supplementary survey. In Pegu he found that the field work was fairly correct and better than last year. He noticed that the areas given in the revenue-roll did not in all cases agree with those got from the map and area statements. The office generally was in good order, but some errors were found in area statements and grant registers.

The Hanthawaddy headquarters office was found by the Director to be in good order and the field work in the kwins he inspected was on the whole good. One Inspector was found, however, to have neglected his duty, having omitted to check extensions.

In Tharrawaddy the office was on the whole found to be in good order, but some errors were found in the grant registers.

The office at Prome was found to be in very good order. The field work was found to be in "Wettigan circle distinctly bad," in one circle good, and in the others fair. The Director made the following remarks:—

"I am only surprised that I found any correct work at all, as the Subdivisional Officer of Prome and the Township Officer issued orders to the thugyis to have all revenue-rolls submitted by the 31st December. It is physically impossible for any *taiksayè* or any other person in a circle like Wettigan to do the work properly in this time."

The Director found that the Supplementary Survey Records at Bassein were well arranged, but the balance of instruments as shown in the stock book did not agree exactly with the stock in hand and some of the grant registers were irregularly kept. The field work generally was good and the Director recorded that, "Mr. Beechey deserves credit for the general good condition of the work in his district, which from a supplementary survey point of view is a very difficult one."

The Director found the office at Henzada in good order, but some errors were noticed in area statements, and grant registers were not properly kept up. The field work in the district the Director found to be inferior and the work of

two Inspectors distinctly bad. It was found that the areas of holdings as given in revenue-rolls did not agree with those got from the map and area statement.

In Thongwa the Director found that the work in the tract newly taken up was good on the whole and added that it reflected great credit on Mr. Munro, the Superintendent. But two of the Inspectors were not nearly careful enough.

The field work in Akyab was found by the Director to be very fair and, considering that the crops were still on the ground, as good as could be expected.

The Financial Commissioner desires to record his appreciation of the care and pains bestowed by Mr. Wilson, the Director, on the Land Records Work. The duties of the Director when thoroughly performed demand much personal labour and also exposure. Mr. Wilson has never spared himself in his hard work and has set an example to his large staff, which will assuredly have its effect in stimulating them to greater efficiency.

The total number of permanent survey marks in the tract under supplementary survey in Lower Burma is 190,680. Of these 99,431 were visited during the year, 7,321 were reported to be missing, and 10,314 were found broken, and of those missing or found broken 11,796 were replaced. Except in Henzada and Thongwa the marks missing or found broken are being promptly replaced and this work should be attended to in those two districts.

The work of protecting these marks is on the whole being steadily proceeded with. It was found necessary to postpone it in Thongwa, which was very unfortunate, as it will give much more difficulty hereafter than would have been the case if it had been promptly attended to from the first.

The Superintendents in Pegu and Hanthawaddy report that no kwins will require re-survey at the time of settlement as the supplementary survey is bringing the maps fully up to date in all cases.

It is, however, estimated that the following areas will have to be re-surveyed in other districts:—

District.	Number of kwins.	Area. Square miles.
Bassein	3	1'42
Henzada	50	80'02
Akyab	143	47'17

All Superintendents who now report that kwins will require re-survey at the time of re-settlement should next year re-consider their estimates after perusing paragraph 13 of the Director's report for the year 1891-92, and they should explain fully why the Land Records staff cannot deal with these kwins.

In the circles which have not come under supplementary survey the land revenue-rolls are punctually submitted. This is only natural as they are comparatively simple and the serious errors which are almost invariably found at the time of cadastral survey show that circle thugyi in unsettled districts take no pains whatever to record accurately the areas liable to assessment. It cannot then be said that the rolls are correctly prepared, nor that they are fully checked, but this is hardly possible where there are no maps. The areas have in some cases been tested by the District Surveyors and the rolls have been examined by Subdivisional and Township Officers, but it has been found by experience again and again that this does not insure accuracy where there has been no regular survey. The area which has not come under supplementary survey is fortunately being very rapidly narrowed.

No doubt these revenue-rolls * are carefully examined by Akunwuns and sometimes by Township Officers and the columns are correctly totalled and the revenue demand is accurately calculated on the area as stated by the circle thugyi, and to this extent in most districts the rolls are properly checked, but as the foundation of the whole assessment in these unsurveyed circles, namely, the area for assessment is well known to be incorrect, it cannot be claimed that the

* The Directions state very clearly that the Capitation-tax rolls are not to be noticed in this section and yet several Deputy Commissioners discuss the preparation of these rolls in this part of their district reports.

rolls are accurate, except in Rangoon Town district in which the error in area is no doubt very small indeed.

TRANSFERS OF LAND AND PARTITIONS.

18. The total area of land sold in Lower Burma in the year was 280,291 acres as compared with 263,686 acres in 1891-92, while the area transferred by gift was 16,828 acres and on succession 27,944 acres.

The area of land sold in the different divisions was as follows.—

District	1891-92		1892-93.	
	Acres.	Rate per acre	Acres	Rate per acre.
		Rs.		Rs.
Arakan	20,143	7 0	19,981	5 6
Pegu	162,579	15 4	163,878	15 2
Irrawaddy	66,134	17 4	69,901	11 5
Tenasserim	14,830	2 9	26,531	10 2
Total	263,686	10 9	280,291	12 4

In the Akyab district the purchasers of paddy-land were principally cultivators. The selling-rate rose from Rs. 11'39 the acre to Rs. 12'97.

In the Pegu district the area sold was 97,572 acres and most of this land is passing from Burmese cultivators into the possession of Chetties, other natives of India, and non-agricultural Burmans. The Commissioner, whose remarks are quoted in the Appendix, considers that this is a very serious matter. In the Hanthawaddy district the area sold was 36,048 acres as compared with 32,293 acres in 1891-92. In Tharrawaddy the area of land sold was nearly the same as in 1891-92, but the rate per acre rose from Rs. 20 73 to Rs. 22'86.

In Bassein the area sold fell from 30,331 acres in 1891-92 to 22,132 acres in the year under review. The land sold in this district passes to a great extent into the hands of money-lenders, but the Commissioner remarks that with Karens this is not the case to any extent. The Commissioner believes that in Thongwa speculators are acquiring an interest in land, and he suggests that a "remedy" may lie in giving advances to needy Upper Burman cultivators to prevent "their having to borrow at starting" from money-lenders. The Commissioner of the Irrawaddy Division will no doubt, when the time comes, ask for a large allotment for agricultural loans.

In Henzada land sold passes, it is said, principally into the hands of other cultivators, which is also the case in Thayetmyo. In the former district the area sold rose from 10,782 acres in the year 1891-92 to 13,277 acres.

In Amherst the area of land sold rose considerably. The purchasers are in most cases natives of India who, however, are cultivators. In the Toungoo district, on the other hand, Natives of India have not acquired land, as yet to any extent.

The total area of land mortgaged in Lower Burma during the year was 112,747 acres as compared with 63,326 acres in 1891-92, and the sum for which it was mortgaged was Rs. 19,34,281 as compared with Rs. 10,71,419 in the year 1891-92. The area of land previously mortgaged which was redeemed during the year was 49,660'44 acres as compared with 35,152'82 acres in 1891-92. In Prome, while the area mortgaged in the year fell from 6,515 acres to 4,750 acres, that redeemed rose from 1,083 acres to 3,116 acres owing no doubt to the harvest being a good one. In Bassein in the same way the area mortgaged was less and that redeemed more than in 1891-92.

TENANT OCCUPANCY.

19. The total area sublet to tenants during the year in the Arakan, Pegu, and Irrawaddy divisions was 772,245 acres as compared with 722,954 acres in the year 1891-92. The area sublet and rents paid were as follows:—

	Area sublet in acres.		Incidence of rent per acre.	
	1891-92.	1892-93.	1891-92. Rs.	1892-93 Rs.
Arakan	61,146	62,554	5.90	6.58
Pegu	396,697	420,240	8.32	6.56
Irrawaddy	265,111	289,451	7.31	6.23
Tenasserim	No statistics yet available.			

It will be noticed that in the Pegu and Irrawaddy divisions the incidence of rent per acre fell, but this was owing to rents being paid in produce and the price of paddy was lower in 1893 than in 1892, but in Akyab in 1892-93 the incidence of rent was Rs. 6.75 as compared with Rs. 6.49 in 1891-92. On the other hand, garden land was let in this district at a rate of Rs. 5.80 the acre against Rs. 6.57 in 1891-92.

In the Pegu district the area sublet was 271,836 acres as compared with 246,185 acres in 1891-92, the landlords being in many cases Rangoon money-lenders who are buying up the land.

In the Hanthawaddy district the area sublet was 90,533 acres or 3,541 acres less than in 1891-92. In Tharrawaddy the area sublet was 45,038 acres, or 2,875 acres more than in 1891-92. Owing to prices of produce being lower the money rates of rent fell considerably. In Thayetmyo the average land sublet fell somewhat owing, it is said, to a succession of bad seasons which made cultivators careful about taking land in this district.

The Financial Commissioner has read the remarks and figures contained in paragraph 12 of Mr. Hall's interesting note on sales, transfers, and rents, dated the 4th September last. It is clearly shown there that rents in the areas selected for examination vary inversely with the period of occupancy, that is to say, the longer the occupancy the lower the rent; the shorter the occupancy the higher the rent. This is intelligible and reasonable and shows that a rent basis for revenue rates should be very carefully scrutinized and that only the comparatively permanent tenancies should be used as indices to fair rent values.

GRAZING-GROUNDS.

20. The following table shows the number and area of new grazing-grounds reserved during the year under review in each district in Lower Burma in which new reserves were taken up and also the area of grazing-ground formerly reserved but thrown open for cultivation in the same year:—

District.	New grazing-grounds reserved.		Grazing-grounds formerly reserved now thrown open.
	No.	Area.	Area.
		Acres.	Acres.
Akyab	23	2,459	*
Pegu	4	4,099	100
Hanthawaddy	...	...	434
Bassein	13	1,563	683
Thongwa	93	12,874	...
Henzada	21	2,553	...
Amherst	2	243	...
Shwegyin	11	3,828	† 129
Tavoy	57	14,324	...
Total	224	41,943	1,346

The number and extent of encroachments on reserved grazing-grounds are very serious. Prosecutions are instituted, but the fines imposed do not appear

* Two grazing-grounds abolished; area not given. | † Decrease on re-measurement.