

REPORT

ON

# THE SETTLEMENT OPERATIONS

IN THE

## THÔNGWA DISTRICT

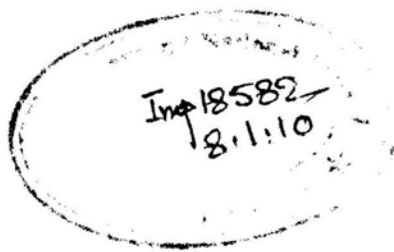
SEASON 1890-91.



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From Commissioner of the Irrawaddy Division, to the Director of the Department of Land Records and Agriculture, Burma,—No. 926-2-S.T., dated the 9th March 1892. 1

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# RESOLUTION

ON

## THE REPORT ON SETTLEMENT OPERATIONS

IN THE

### THÔNGWA DISTRICT

### SEASON 1890-91.

Extract from the Proceedings of the Chief Commissioner, Burma, in the Revenue Department,—No. 2S.-12,  
dated the 19th May 1892.

#### READ—

Report by Mr. H. M. S. Mathews, Settlement Officer, on the settlement work of the year 1890-91 in the Thôngwa district.

Letter No. 926-2S.T. from Commissioner, Irrawaddy Division, dated the 9th March 1892, to the Director of the Department of Land Records and Agriculture, Burma, reviewing the same.

**RESOLUTION.**—The settlement programme of 1890-91 (not 1891-92, as the Commissioner states in his review) embraced the

Description of settled area.

cadastrally surveyed tracts of the Thôngwa, Dedayè, and Pyapôn Townships, including a gross area of 1,454 square miles, of which 631 square miles or 404,026 acres (43 per cent. of the whole) were under cultivation. These three townships are the extreme deltaic tract of the district and extend to the sea. A huge jungle tract of 2,000 square miles on the south-west coast, which is very sparsely populated and still, for the most part, unreclaimed, has been excluded from survey, and the settlement operations now under review did not touch it.

2. The population of the area under settlement was 93,889 in 1881. The recent (1891) census shows the present population to be 192,919. The increase (105 per cent.) is

Growth of population.

enormous. The Karens show a growth of only 41 per cent. The Burmans are now some 115 per cent. more numerous than they were ten years ago. The Talaing population is three times larger than it was in 1881. The abnormal growth of the Burman, Shan, and Talaing sections is largely due to immigration, partly from neighbouring districts, and (as regard Burmans) to a large extent from Upper Burma. The Karen rate of growth is the result of natural increase. It is very satisfactory to find the sturdy and industrious Karen peasantry multiplying in a country in which their pluck and energy have already done so much.

3. Exact statistics of the occupations of the people are not yet available, but the capitation returns and the Settlement

Occupations of the people.

Officer's enquiries point to a proportion of 65 per cent., or nearly two-thirds of the entire population, as being agriculturists and 13 per cent. as fishermen. The remaining 22 per cent. are non-agriculturalists and include traders, salt-boilers, doctors, actors, and menials of various sorts.

Thus it appears that in the centre and south of the district the people are more agricultural than in the north. The fishery class is a large and important one.

4. The mortality amongst the plough cattle, especially buffaloes, is found to be greater than in the tract to the north which was examined in the previous year. The percentage of deaths is 16.3 against 5.1 last year, and the proportion of working cattle to the area under cultivation is much smaller. In the tract settled in 1889-90 there was one plough beast to every three acres. In the tract under report there is only one animal to every 14 acres. The liability of the cattle to disease is enhanced by the extra work which they have to do, and both combine to raise the rates of hire. The Settlement Officer reports that 200 baskets are often paid for the use of a pair of buffaloes which is equivalent to nearly ten baskets per acre of the average paddy holding. This is a heavy charge on the cultivator; but notwithstanding the enormous importance of their cattle the people do not appear to be more solicitous for their welfare than their neighbours in the north.

Cattle statistics.

5. The bullocks are generally stall fed during the rains and looked after in the dry weather, but the buffaloes are let loose on the huge grazing-grounds, and left to the mercy of hiring graziers, each of whom has charge of about 100 animals. The ordinary grazing-fee is ten baskets of paddy per beast; and where special precautions are taken, and the cattle are kept within a limited space, the fee rises to 20 or 25 baskets. Thus, the loss from deaths and the grazing-fees are a heavy charge on the cultivator. The system of large grazing-grounds is condemned by the Settlement Officer and with some reason. Mr. Mathews advocates the selection of small areas of suitable land as likely to prevent the deadly effects of contagion. The Settlement Officer's recommendations should be adopted wherever possible. Experience in the newly reclaimed Ma-ubin island has proved that the small local grazing-grounds are much safer for the cattle. Mr. Mathews' remarks in paragraph 16 in regard to allotment of new land in rectangular blocks with broad pathways between should be carefully borne in mind; and the Commissioner should require all officers who are empowered to make grants to adopt this system wherever practicable. This partition of the land in the Ma-ubin island has enabled the cultivators to have half an acre each of good wholesome pasture at their doors for their cattle, and in other respects the arrangement has been found to answer well.

Grazing-grounds.

6. Mr. Mathews' remarks in paragraphs 20 to 23 are interesting. The success of the Ma-ubin embankment, in the interests, both of the people, and financially for the Government, has been phenomenal. It now pays annually in revenue nearly 30 per cent. on the capital outlay, and may be expected to pay considerably more when the new settlement rates come in force. The protection which it has afforded from inundation has enabled an area of 108,871 acres of virgin soil to be brought under cultivation during the seven years since its completion in 1884. The attention of the Public Works Department is called to these statistics as showing the immense value of works of reclamation of this kind to the country. Every such work adds to the resources both of the people and of the State, and there can be no better investment of public funds.

Reclamation embankments.

7. Of the total cultivated area (404,026 acres), there are 353,773 acres under paddy and 16,221 acres under garden and miscellaneous cultivation. The remaining 34,032 acres are lands held under various periods of exemption, which do not therefore fall within the present assessment proposals.

8. The Settlement Officer has made a careful classification of the large paddy area (95.76 per cent. of the whole) for purposes of obtaining a basis for assessment. He has first grouped the kwins and villages in three great tracts which he calls Soil tracts. The distinguishing feature of each of these tracts is, however, not so much the comparative quality of its preponderating soil as the comparative productiveness of its land over a period of years. The grouping has in effect been according to the results of the crop measurements. The three tracts may thus be more properly called Productiveness tracts. Within these tracts the soil is classified kwin by kwin into 1st class and 2nd class according to quality, for which the crop cuttings afforded the standard. The comparative values of the soils are as follows:—

Tract	I	{	Class I	...	...	...	50	} Baskets per acre.
			Class II	...	...	...	40	
Tract	II	{	Class I	...	...	...	40	
			Class II	...	...	...	30	
Tract	III	{	Class I	...	...	...	40	
			Class II	...	...	...	25	

9. Having made this first general division of the country and determined the subdivisions of individual kwins into the two sub-classes of soil of varying fertility, the Settlement Officer proceeded to make a further analysis of the tract based on facilities for disposal of produce. This analysis resulted in a division of the country into three blocks, according to position with reference to facility or difficulty, cheapness or dearness of carriage of paddy. Between the first and second block and between the second and third block, the difference in respect of cost of carriage by cart or by boat or both by cart and boat, to Rangoon, was Rs. 4 per 100 baskets of paddy, thus—

Tract I—Rs. 6 per 100 baskets.

Tract II—Rs. 10 per 100 baskets.

Tract III—Rs. 14 per 100 baskets.

10. The next process is the valuation of the produce. The Settlement Officer adopted the market rate of Rs. 80 per 100 standard baskets at Rangoon (which is the mart for the produce of the tract) as a fair average value. It is Re. 1 lower than the lowest average touched in Rangoon during the last five years. Deducting from this general market-rate the cost of carriage in each tract the Settlement Officer obtained the following deduced local market rates:—

Tract I—Rs. 74 per 100 baskets,

Tract II—Rs. 70 per 100 baskets,

Tract III—Rs. 66 per 100 baskets,

or a difference of Rs. 4 per 100 baskets in each. The averages of the local prices of paddy (Statement No. II, Appendices) for the last four years, ascertained by enquiry in the villages, correspond closely with these deduced rates.

11. The three analyses above described (1) fertility or productiveness, (2) cost of carriage to market, (3) local market values, yield a graded scale of gross produce and its money value to the cultivator, and this is the first basis of the assessment.

Combination of the above tracts for obtaining the gross value of the produce.

12. In order to obtain the net value of the produce, *i.e.*, the surplus from which the land revenue is to be paid, the next process was to ascertain the cost of cultivation and the cost of living of the cultivating family. Mr. Mathews has gone carefully into this. An examination was made of 6,791 heads of cultivating families holding 145,463 acres or about one-third of the entire cultivated area. The details are given in Statements VIIIA and VIIIB condensed in paragraph 69 of the report. It was found that the gross cost of living and cultivation varied from Rs. 18 to Rs. 15 per acre. In the tract reported on last year the corresponding gross cost varied from Rs. 16 to Rs. 14 per acre. The high rates of cattle hire noticed in a previous paragraph partly account for this.

Cost of living and assessment.

13. Combining all the data obtained in the way described, the Settlement Officer ranged the lands under seven assessment divisions, each with a first class and a second class soil, and found that the net profits of the paddy holdings (exclusive of those which were insignificant in area and were cultivated by market gardeners solely for raising rice for food) in these divisions varied from Rs. 4 to Rs. 19 per acre. He has now proposed the following rates in the seven assessment divisions. In juxtaposition to his proposed rates are shown the rates which would result if half of the net profits were fixed upon, and the rates of rent paid by tenants:—

Formation of assessment tracts for paddy.

Assessment Division.				Proposed rates.	Half net profit rates.	Rates of rent paid by tenants.
				Rs.	Rs.	Rs.
Tract I	Class I	...	...	8.00	9.50	6.79
	Class II	...	...	2.88	5.80	
Tract II	Class I	...	...	2.75	8.50	5.75
	Class II	...	...	2.18	5.00	
Tract III	Class I	...	...	2.68	7.50	5.99
	Class II	...	...	2.00	4.20	
Tract IV	Class I	...	...	2.50	6.30	5.81
	Class II	...	...	2.00	2.60	
Tract V	Class I	...	...	2.88	5.50	4.70
	Class II	...	...	1.88	2.00	
Tract IV	Class I	...	...	2.25	5.70	8.15
	Class II	...	...	1.75	2.40	
Tract VII	Class I	...	...	2.60	5.50	0.84
	Class II	...	...	1.50	0.25	

N.B.—The area of the lands of Tract VII is only 1,298 acres and the lands are for the most part cultivated by market gardeners not for profit (which is made on the garden cultivation) but for food.

14. The half net profit rates in the majority of the assessment divisions are much higher than the proposed rates. In the best lands they are more than three times higher. So that judged by the criterion of actual profits the rates proposed are certainly not high. An examination of the rates of rent paid by tenants leads to the same conclusion. These rents in five out of the seven assessment divisions, which include almost the entire cultivated area, are rather higher than the average of the half net profit rates.

Comparison of proposed assessment rates with tenant rates and profits obtained by cultivators.



15. The Officiating Chief Commissioner after conferring with the Settlement Officer and carefully considering the statistics contained in the report and the grounds on which the assessment proposals are based, finds that the proposed rates are very moderate. They are equivalent roundly to a share of about one-twelfth of the gross produce raised and they run to rather less than one-half of the average rent paid by tenants. Mr. Smeaton therefore approves the rates. But he thinks that the Assessment Divisions (Tracts) II, III, and IV may, with convenience and advantage, be combined into one, assessed at the slightly lower rates proposed for No. IV, and that the Assessment Divisions (Tracts) V and VI may also be combined and assessed at the slightly lower rates proposed for No. VI. The Commissioner makes a general suggestion for simplifying the classification by combining the Settlement Officer's assessment tracts into three groups. But he does not say which are the tracts to be grouped into one or which of the Settlement Officer's proposed rates should be adopted for each group. The classification of land under paddy cultivation for purposes of assessment, and the rates to be applied, will now be as follows:—

Group.	Settlement Officer's tracts included in group	RATES PER ACRE SANCTIONED.	
		Soil.	Rate.
			Rs. A. P.
I	I	1st class	8 0 0
		2nd class	2 0 0
II	II	1st class	2 8 0
		2nd class	2 0 0
III	III	1st class	2 4 0
		2nd class	1 12 0
IV	IV	1st class	2 0 0
		2nd class	1 8 0

16. The Settlement Officer's rates on the seven assessment divisions proposed by him would have resulted in a total new revenue demand (excluding cess) of Rs. 7,97,868. The financial result of the revised classification and rating now sanctioned is a demand (excluding cess) amounting to Rs. 7,65,251, or an increase of 34.6 per cent. on the current demand of Rs. 5,68,329.

17. The Settlement Officer found the area under gardens to be 14,497 acres and the area under miscellaneous crops 1,724 acres. He proposes to assess all garden lands at Rs. 3 and all miscellaneous lands at Rs. 2 per acre without distinction of tract. The value of garden and miscellaneous produce raised is considerably higher than the value of a corresponding crop of paddy on the same area. The people (*vide* Statement No. IX) themselves admit an average net profit, after deducting liberal amounts for cost of living and cultivation, of Rs. 8 per acre. It is notorious that garden lands are more valuable (*vide* Statement XIA) than paddy-lands, and that as shown in last year's report they are very much underassessed. The Officiating Chief Commissioner, however, agrees with the Commissioner that garden cultivation should be encouraged. He therefore sanctions the very moderate rates of

6 RESOLUTION ON THE REPORT ON SETTLEMENT OPERATIONS IN THE THONGWA DISTRICT, SEASON 1890-91.

Rs. 3 per acre on garden land and Rs. 2 per acre on miscellaneous cropped land as proposed by the Settlement Officer. He also sanctions the rate of 4 annas per tree on all solitary fruit trees.

18. The financial result of the entire assessment as now approved is a total demand on all descriptions of land (including fruit trees) of Rs. 8,13,116 against a current demand of Rs. 6,00,386, being an increase of Rs. 2,12,731, or Rs. 35.4 per cent. on the expiring demand.

Financial results of revised assessment on all classes of land.

By order of the Chief Commissioner,

F. C. GATES,  
*Officiating Secretary.*

# REVENUE DEPARTMENT.

## NOTIFICATION.

*Dated Rangoon, the 21st May 1892.*

No. 162.—Under the provisions of section 24 of the Burma Land and Revenue Act, 1876, the Chief Commissioner sanctions the following rates which shall be for the term of 15 years the maximum rates of assessment within the kwins and circles of the Thongwa district hereinafter mentioned, and such rates shall take effect from the 1st July 1892.

Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
I.	Ma-ubin myoma	593	Mayan	...				
		603	Ma-ubin myoma	...				
		604	Tayoklat auk	...				
		608	Gayet ani	...				
		609	Peingayet taung	...				
		610	Tayoklat alè	...				
		611	Tayoklat atet	...				
		612	Petkaw	...				
		613	Ngapè-o	...				
		615	Peingayet myauk	...				
		616	Putgayet	...				
	Minbaw	586	Kyonsòk	...				
		587	Tapat	...				
		588	Letkòk	...				
		590	Minbaw	...				
		591	Tanbingwè	...				
	Seiktha	544	Mogaung	...				
		545	Kyontón	...				
	Kyònmangè	674	Hnetgyitaung	...				
		675	Damyachaung	...				
		676	Teinbin	...				
		677	Lintun	...				
		695	Ahu	...				
	Wakamè	696	Meikthalin	...				
		793	Kyagyaung	...	3 0	2 6	3 0	2 0
		794	Shwemèchaung	...				0 4
		796	Yamanè	...				
		797	Payagale	...				
		798	Kyeingyaung	...				
		799	Awabyan	...				
		800	Gönmin	...				
		801	Taingkwi	...				
		806	Kyungale	...				
	Onbin	807	Yebuwa taung	...				
		809	Yebuwa myauk	...				
		810	Wakamè	...				
		826	Zebyugòn	...				
		827	Thabyuzeik	...				
	Singu	828	Tabè	...				
		829	Migyaungaing	...				
		831	Kyungya	...				
		697	Nyaungyaung	...				
		698	Thabyuzelk	...				
	Kyaiklat	701	Gwegyaung	...				
		705	Migyaungyan	...				
		706	Latagi	...				
		707	Pozan auk	...				
		708	Pozan atet	...				
	Kyaiklat	783	Kyaiklat	...				
		791	Tedegu	...				
		792	Chaukpin	...				

Tract.	Name of circle.	Kwin No.	Name of kwin.	Paddy-land.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
II	Ma-ubin myoma	605	Kyônkalaing	...				
		606	Kyônsein	...				
		607	Wakamauk	...				
		582	Yegyaw	...				
		583	Kanu	...				
	Minbaw	584	Kyigyaung	...				
		585	Alangale	...				
		589	Alangyi	...				
		594	Tugyaung	...				
		595	Ngapigyaung	...				
		596	Acha	...				
		598	Kyônkamein	...				
	Seiktha	599	Einyigyi	...				
		532	Kyôntanaw	...				
		534	Bamain myauk	...				
		536	Kazingayet	...				
		546	Natsin	...				
		547	Nyaung-bat	...				
		548	Nyaungbingayet Myauk	...				
	Yelégale	556	Ngagigayet	...				
		557	Yelégale atet	...				
		558	Yelégale auk	...				
		571	Kyintheyo	...				
		572	Alangyi	...				
		576	Kyônshwe	...				
		577	Kyônwgale	...				
		578	Kyônwgagi	...				
		579	Aungmun	...				
		580	Manpat	...				
		581	Aingkyat	...				
	Wakamè	819	Alôkgyi taung	...				
		820	Kunpalaing	...				
		821	Yebyuyo	...				
	Ônbin	825	Kyônbaing	...	2 8	2 0	3 0	2 0
		833	Awabyan	...				0 4
	Pyapôn myoma	1064	Kyônzôk	...				
		1065	Thuka	...				
		1066	Alanôk	...				
		1076	Kyônkyaik	...				
		1077	Pyamut	...				
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		1082	Asigalè	...				
		1084	Thè-eng	...				
	Taungbogyi	719	Sanlet	...				
		720	Kyôntani	...				
		728	Le-engdan	...				
		730	Tôngyi	...				
		731	Yôndaik	...				
		732	Taungbogyi	...				
		733	Kyangzu	...				
		736	Thuta	...				
		741	Dawehmaing	...				
		746	Letkôk	...				
	Singu	747	Apya	...				
		753	Botesa	...				
		700	Kanaung	...				
		711	Bônôn	...				
		712	Dayegyo	...				
		715	Wagauk	...				
		716		Kakayan	...			
		717	Kywelemyat	...				
		748	Kyônkalun	...				
		751	Kyôntagyi	...				
		752	Kimmungyaung	...				



Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
II—continued.	Kyaiklat	758	Kunpalaing	...				
		759	Thayetngu	...				
		761	Shaukpingwè	...				
		762	Kvònkayan	...				
		763	Natsin	...				
		764	Kyònkālut	...				
		767	Bònlò	...				
		768	Ngapigyaung	...				
		769	Polu	...				
		770	Achan	...				
		771	Ngapwedan	...				
		772	Alandut	...				
		773	Kyònthi	...				
		774	Sakangyi	...				
		781	Tabogòntaung	...				
		784	Kanaung	...				
		787	Mayan anauk	...				
		788	Mayan ashe	...				
		789	Kalayāt	...				
	Kyòntòn	1085	Kulan myauk	...				
		1086	Ma-ubin	...				
		1087	Lindaing	...				
		1088	Kangyi	...				
		1089	Thitpyugyaung	...				
		1090	Yòksaing	...				
		1091	Myogaung	...				
		1092	Pobò	...				
		1093	Kalagyi	...				
		1094	Akaw	...				
		1095	Kala	...				
		1096	Kakayan	...				
		1098	Kazaung	...				
		1099	Kulantaung	...				
		1100	Kwinwaing	...				
		1101	Thanlike	2 8	2 0	3 0	2 0	0 4
		1107	Hnet-u	...				
		1108	Thetkegòn	...				
		1109	Mayan ashe	...				
		1116	Ase	...				
		1117	Poyaung	...				
		1118	Thumataik taung	...				
		1120	Lamugyi	...				
		1121	Danongyaung	...				
		1123	Paweing	...				
		1124	Kyònthabyu	...				
		1125	Danongyaung myauk	...				
		1126	Mezale	...				
		1128	Tugyaung	...				
		1129	Hlezeik	...				
		1130	Sandi	...				
		1131	Kyaikpi	...				
		1137	Talu	...				
		1138	Kalaukpòn taung	...				
		1139	Kyònpa	...				
		1140	Kalaukpòn myauk	...				
		1141	Kunpalaing	...				
		1142	Seinghaing	...				
		1143	Manu	...				
		1144	Kazandaung	...				
		1145	Pabezu	...				
		1146		Gònyindan atet	...			
		1147		Gònyindan auk	...			
		1148		Kunbingyaung	...			
		1149		Mayewa	...			
		1150		Gwegyaung	...			
		1151		Kalaukpònwa	...			

Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
II—continued.	Kyōntōn—concl'd	1152	Kyōnsalu	...				
		1153	Tingyaung	...				
		1258	Masoyein	...				
	Minbaw	597	Paukkon	...				
	Seiktha	531	Ketkugyi	...				
		533	Kyudaw	...				
		537	Kalaukseim	...				
		538	Hminbyaung	...				
		539	Bilin	...				
		540	Kyōnpyitgōn	...				
		541	Kyōnkazin	...				
		542	Seiktha	...				
		543	Kuttaw	...				
		540	Nyaungbingayet	...				
		550	Kywegat	...				
	Yelēgale	552	Chaungbyagyi	...				
		553	Hmanbin	...				
		554	Gōnmingyi	...				
		555	Paungyo	...				
		559	Momaka	...				
		560	Kywegyan taung	...				
		561	Thutegōn	...				
		562	Motani anauk	...				
		563	Motani ashe	...				
		564	Ketkugale	...				
		565	Payangōkdo	...				
		566	Chaukywa	...				
		567	Kyagyaung	...				
		568	Akegyi	...				
		569	Kyweguyo	...				
		570	Kyōnpalet	...	2 8	2 0	3 0	2 0
		573	Poka	...				0 4
		574	Sinthe	...				
		575	Thebyu	...				
	Pyapōn myoma	1068	Kundaing	...				
		1069	Kyōnwē	...				
		1073	Kyōnthin	...				
		1074	Pettan	...				
		1075	Bawmawgwe	...				
		1079	Kwinwaing	...				
		1080	Gwakwin	...				
		1083	Tanyi	...				
	Taungbogyi	721	Kadaik	...				
		722	Akyin	...				
		723	Kahmōn	...				
		724	Kayayo	...				
		725	Pinledaing	...				
		727	Ma-uyo	...				
		729	Alan	...				
		737	Kywezagyet	...				
	Singu	710	Tanyun	...				
		718	Baligyan	...				
		749	Mategyi	...				
		750	Kyōntōn	...				
	Kyaiklat	760	Bamaw	...				
		765	Thandin	...				
		766	Dawhōn	...				
		775	Alanōk	...				
		785	Kakayan	...				
		786	Kanyingōn	...				

Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
II—continued.	Kyōntōn ...	1097	Thabye	...				
		1102	Myetka	...				
		1103	Kankwin	...				
		1104	Ngapēgyaung	...				
		1105	Maye-a-kaw	...				
		1106	Kwingyi	...				
		1110	Gayan	...				
		1111	Teingōn	...				
		1112	Kyaingsabo myauk	...				
		1113	Kyaingsabo taung	...				
	Kyōnmangē ...	1114	Sabale	...				
		1115	Kyōnkayaing	...				
		1119	Thumataik myauk	...				
		1122	Ywathit	...				
		1127	Pettan taung	...				
		1132	Sibwachaung	...				
		1133	Myamapaya taung	...				
		1134	Pettan myauk	...				
		1135	Kwedalin	...				
		1136	Thayutgyi	...				
	Kyōnmangē ...	1157	Wunlothaik	...				
		659	Kyōnta	...				
		660	Kanaung	...				
		661	Wedaung	...				
		662	Nyaungyaung	...				
		663	Bikalaing	...				
		664	Aga	...				
		665	Kyōnkyaik myauk	...				
		666	Kyōnkyaik taung	...				
		667	Atayaw ashe	...				
	Kyōnmangē ...	668	Myingagōn	...				
		669	Atyaw anauk	...				
		670	Kyōnmangē myauk	2 8	2 0	3 0	2 0	0 4
		671	Kyōnmangē taung	...				
		672	Kyōnmangē atet kyun	...				
		673	Kyōnmangē auk kyun	...				
		678	Thamepyewa	...				
		679	Thamepyegale	...				
		680	Kathabaung	...				
		681	Sabo	...				
	Dedayē myoma.	682	Thayagōn	...				
		683	Taungyagi	...				
		684	Kyōnthin	...				
		685	Pegōn	...				
		686	Ōnbin	...				
		693	Yegyaw	...				
		694	Kyōnmangē	...				
		860	Tawpayōn ashe	...				
		861	Gwakwin	...				
		862	Tawmalaw	...				
	Wakamē ...	863	Tawmat	...				
		873	Ywahaung	...				
		874	Dedayē	...				
		879	Thinbaungchaung	...				
		880	Neikban	...				
		795	Damathein	...				
		803	Singu	...				
		805	Bodōk	...				
		811	Tugyaung	...				
		812	Kyōnbōk	...				
	Tawhla ...	813	Sanmin	...				
		938	Leywa	...				
		940	Hlezeik	...				

Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND. *		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
II—concluded.	Tawhla—concl'd.	941	Chaungyi	...	...	...	...	...
		942	Leikkyun	...	...	...	...	...
		947	Ase	...	...	...	...	...
		948	Thanpet	...	...	...	...	...
		949	Meganan	...	...	...	...	...
		950	Kangwin	...	...	...	...	...
		951	Kyōnchin	...	...	...	...	...
		952	Kyōnchinkyōn	...	...	...	...	...
		953	Sinthe	...	...	...	...	...
		954	Kyōnkyat No. I.	...	...	...	...	...
		955	Kyunnyogi	...	...	...	...	...
		961	Pegyi	...	...	...	...	...
		966	Payagyi	...	...	...	...	...
		967	Damalein auk	...	...	...	...	...
		968	Damalein atet	...	...	...	...	...
		969	Kyōndu	...	...	...	...	...
		970	Tawhla	...	...	...	...	...
	Tomayan	926	Kadōn	...	...	...	...	...
		927	Sukalat	...	...	...	...	...
		928	Payagi	...	...	...	...	...
		929	Sitpin	...	...	...	...	...
		930	Thanbankyun	...	...	...	...	...
		931	Chaungyikyun	...	...	...	...	...
		932	Kukyun	...	...	...	...	...
		933	Mayankyun	...	...	...	...	...
		934	Shweatkyun	...	...	...	...	...
		935	Ngalatkyun	...	...	...	...	...
		936	Hmawbikyun	...	...	...	...	...
		937	Kyukyun	...	...	...	...	...
		881	Shwelinkyun	...	...	...	...	...
		882	Peitswekyun	2 8	2 0	3 0	2 0	0 4
		883	Madaukyun	...	...	...	...	...
		884	Hmeyetpakyun	...	...	...	...	...
		885	Teitpyaungkyun	...	...	...	...	...
		886	Kundaing	...	...	...	...	...
		887	Shwenyeinkyun	...	...	...	...	...
		888	Pathakyun	...	...	...	...	...
	Singu	889	Nga-aungkyun	...	...	...	...	...
		890	Kyauksalit	...	...	...	...	...
		891	Kyōnhmaw	...	...	...	...	...
		892	Hnakaungchaung	...	...	...	...	...
		893	Kayukwin	...	...	...	...	...
		894	Biluma	...	...	...	...	...
		895	Nyaunglan	...	...	...	...	...
		896	Kyōnkanan	...	...	...	...	...
		897	Udo	...	...	...	...	...
		903	Chaungyi	...	...	...	...	...
	Kyaikat	904	Yegangyaung	...	...	...	...	...
		699	Ngapigyaung	...	...	...	...	...
		702	Sukanan	...	...	...	...	...
		703	Thayagōn	...	...	...	...	...
	Ma-ubin myoma...	704	Thayawe	...	...	...	...	...
		778	Kyōnhla	...	...	...	...	...
		779	Kayingē	...	...	...	...	...
	Minbaw	782	Kwinbauk	...	...	...	...	...
		602	Ahek	...	...	...	...	...
	Seiktha	600	Kunsu	...	...	...	...	...
		601	Kyōnma	2 4	1 12	3 0	2 0	0 4
III	Seiktha	535	Indē	...	...	...	...	...

Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
III—continued.	Kyômnangè	658	Yemyotkwin	...				
		687	Mayan	...				
		688	Naungwaing	...				
		689	Chaungbya	...				
		690	Lamugyi	...				
		691	Tingôkgyi	...				
		692	Kyôntama-Yemyot	...				
		857	Ônhnègan taung	...				
		858	Ônhnègan myauk	...				
		859	Tawpayôn anauk	...				
	Dedayè myoma	864	Tawkamè	...				
		865	Tawkama	...				
		866	Aseit	...				
		867	Indu ashe	...				
		868	Indu anauk	...				
		869	Thègôn anauk	...				
		870	Akègyi	...				
		871	Alôkgale	...				
		872	Singu	...				
		875	Pathi	...				
	Wakamè	876	Thègôn ashe	...				
		877	Zayatgyi	...				
		878	Thandin	...				
		802	Payagyaung	...				
		804	Sinthe	...				
		808	Yègyaw	...				
		814	Thamin ashe	...				
		815	Thamin anauk	...				
		816	Kyônthin	...				
		817	Alôkgyi myauk	...				
	Ônbin	818	Chaungbya	...				
		822	Abaungyi	...				
		823	Pein-yo	...				
		824	Pyindaung	2 4	1 12	3 0	2 0	0
		830	Tamut	...				
		832	Mezaligan	...				
		834	Tamanwa	...				
		838	Taman	...				
		839	Kywegu	...				
		840	Nyinaung	...				
	Tawhla	841	Lamuwa	...				
		842	Kyônkayaing	...				
		844	Ônbin	...				
		845	{ Myingagôn	...				
		846	{ Maung So's Grant	...				
		847	Kaya	...				
		939	Gwagyi	...				
		943	Hmawbi	...				
		943	Kyônda taung	...				
		944	Kyôntauk	...				
	Tawhla	945	Poya	...				
		946	Kyônda myauk	...				
		956	Thinbawkyun	...				
		957	Thandikyun	...				
		958	Thandikwin	...				
		959	Kabalu	...				
		960	Kyôndaye	...				
		962	Alègôn	...				
		963	Kimmungôn	...				
		964	Nyaungwaing	...				
	Tawhla	965	Kyônchin	...				
		971	Kambala	...				
		972	Ngahla	...				
		973	Yegyaw	...				
		974	Neyauka	...				
		977	Polekyagankywezagyet	...				
	Tawhla	978	Tamangyaung	...				
		979	Thègôn	...				

Fract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
III—continued.	Tomayan	898	Payangòkdo	...				
		899	Kyaiklat	...				
		903	Kyònkala	...				
		901	Yegan	...				
		902	Kyatsinbyo	...				
		905	Kywegyaung	...				
		906	Tamatakaw	...				
		907	Kawet	...				
		908	Tokwin	...				
		909	Kayin	...				
		910	Kywezagyettawchat	...				
		911	Tawkyaik	...				
		912	Tumyaung	...				
		913	Byuchaung	...				
		914	Shankan	...				
		915	Sagyin	...				
		916	Mayan ashe	...				
		917	Tawkade	...				
		918	Kywezakyunkyònkanaan	...				
		921	Thandaik	...				
		922	Kyònkana	...				
		923	Kyòndat	...				
		924	Mayan anauk	...				
		925	Kwinlya	...				
	Pyapòn myoma	1043	Akyi anauk	...				
		1044	Akyi ashe	...				
		1045	Kyòнку	...				
		1046	Apyaung	...				
		1047	Pyapòn myoma	...				
		1048	Onbin ashe	...				
		1049	Kyònmangè	...				
		1053	Thaleik	...				
		1054	Bozwa	2 4	1 12	3 0	2 0	0 4
		1055	Shankwin	...				
		1056	Shankyun	...				
		1057	Kyònta	...				
		1061	Sitgòn	...				
		1062	Kyònwa ashe	...				
		1063	Kyònwa anauk	...				
	Taungbogyi	734	Kyònkyaik	...				
		735	Danaw	...				
		740	Thanatka	...				
		742	Kyònpa	...				
		744	Tanyi	...				
		745	Kyònkabin	...				
		754	Kundaingyi	...				
		755	Danòngyaung myauk	...				
		756	Danòngyaung taung	...				
		757	Bamaw	...				
	Singu	709	Damayaik	...				
		713	Singu	...				
	Thazi	1002	Azòkgyi	...				
		1003	Azòkgale	...				
		1004	Alanpalut	...				
		1005	Kyòntama	...				
		1006	Kyònkano	...				
		1007	Ngutaw	...				
		1010	Kani	...				
		1011	Adun	...				
		1012	Thameintaw taung	...				
		1015		Alan	...			
		1016		Achagale	...			
		1023		Tònle	...			
		1024		Danòngyaung	...			

Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
III—continued.	Thazi—concl'd.	1025	Tamangyi	...				
		1026	Kayaingbaw	...				
		1027	Lamu	...				
		1028	Letkôk	...				
		1029	Acha atet	...				
		1030	Kankwin	...				
		1031	Dattawkwin	...				
		1032	Acha auk	...				
		1034	Danikyun No. 2	...				
		1035	Danikyun No. 1	...				
	Kyaiklat	1036	Aukkwingyi	...				
		1037	Thazi	...				
		776	Pyindaung	...				
	Kyôntôn	777	Pabezu	...				
		780	Tabogôn myauk	...				
		1154	Kyawzin	...				
		1155	Wayekaing	...				
		1156	Payataung	...				
		1159	Kanaung	...				
		1161	Alan	...				
		1162	Sitsalidôn	...				
		1163	Pattaw	...				
		1165	Yegyaw	...				
		1166	Wedaung	...				
		1167	Padiyo atet	...				
		1168	Padiyo auk	...				
		1170	Kyôntôngyi	...				
	Pyindayè	1171	Tanyi	...				
		1172	Nônkaw	...				
		1173	Kyônthi	...				
		1174	Kyugyaung	...	2 4	1 12	3 0	2 0
		1175	Watamuw	...				0 4
		1176	Myitgale	...				
		998	Kyônkadun	...				
		999	Aukkaba	...				
	Seiktha	1000	Byaingkazi	...				
		1001	Kyetpamwezaung	...				
	Ônbin	551	Sunthaik	...				
		835	Tamawgyi	...				
		836	Tamawbya	...				
		837	Gayetkyi	...				
		843	Pa-aunggyi	...				
		848	Mayan taung	...				
		849	Tanyi ashè	...				
		850	Tanyi anauk	...				
		851	Pankadat	...				
		852	Thègôn	...				
		853	Kwagale anauk	...				
		854	Teintabin	...				
	Tawhla	855	Kwagale ashè	...				
		856	Mayan myauk	...				
		975	Payangôkdo	...				
		976	Le-engzu	...				
		980	Myetkagôn	...				
		981	Nabebin	...				
		982	Kyogya	...				
		983	Kundaing No. I	...				
		984	Kundaing No. II	...				
		985	Kyônthin	...				
		986	Thôndat	...				

Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
III—concluded.	Tawhla—concl'd.	987	Kyónlut ...					
		988	Thaukgya ...					
		989	Danôngôn ...					
		990	Mangegale ...					
		991	Naukbyando ...					
		992	Kyôndamin ...					
		993	Kyônkanan ...					
		994	Mangegyi ...					
		995	Kwinbôn ...					
		996	Kadakwin ...					
		997	Lattagi ...					
	Tomayan	919	Tawi ...					
		920	Kywesagyetykyônkanan ...					
	Pyapôn myoma	1038	Pagauk ...	2 4	1 12	3 0	2 0	0 4
		1039	Achagale ...					
		1040	Kyônlat ...					
		1041	Anyet ...					
		1042	Achin ...					
		1050	Kyônkayaing ...					
		1051	Ônbin anauk ...					
		1052	Bôndaleik ...					
		1058	Mantawpôn ...					
		1059	Hmawaing ...					
		1060	Tawechaung ...					
		1067	Tamin ...					
		1070	Talun myauk ...					
		1071	Wadu ...					
		1072	Talun taung ...					
	Taungbogyi	738	Kyônwa ...					
		739	Kundaingale ...					
		743	Gayan ...					
	Singu	714	Asugyi ...					
	Thazi	1008	Payagyi anauk ...					
		1009	Theingôn ...					
		1013	Gayetgyi ...					
		1014	Thameintaw myauk ...					
		1017	Thêgôn ...					
		1018	Nyaungkaya ...					
		1019	Payagyaungbya ...					
		1020	Kyaikkaba ...					
		1021	Achan ...					
		1022	Kyônwa ...					
		1033	Hmawbi ...					
	Kyaiklat	790	Taungyi ...					
	Kyôntôn	1160	Kyônbaing ...					
		1164	Yebyuagaung ...					
		1169	Watamutkywezayet ...					
	Ma-ubin myoma...	614	Kywezayetthaung ...					
IV	Seiktha	168	Pekyun ...	2 0	1 8	3 0	2 0	0 4
		169	Bamani taung ...					
		170	Yebawkun taung ...					
		171	Kyunpyat myauk ...					
		172	Thaungkyun anauk ...					
		529	Shwehle taung ...					
		530	Thaungkyun ashe ...					
	Yelêgale	166	Poingngu ...					
		167	Yelêgale thaung ...					



Tract.	Name of circle.	Kwin No.	Name of kwin.	PADDY-LAND.		Garden-land.	Miscellaneous.	Solitary fruit-trees.
				First class soil.	Second class soil.			
				Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.	Rate per acre. Rs. A.
IV—concluded.	Maletto	617	Singu ...	2 0	1 8	3 0	2 0	0 4
		618	Singukyun ...					
		619	Mithwegyaung ...					
		620	Gayetpadók ...					
		621	Alan ...					
		622	Ngapè-o ...					
		623	Tanitaung ...					
		624	Tayòklat ...					
		625	Sitkaing ...					
		626	Maletto ...					
		627	Yemyotlaha anauk ...					
		628	Yemyotlaha ashe ...					
		629	Thaungza ...					
		630	Adun ...					
		631	Thòndattaw ...					
		632	Tani ...					
		633	Migaungye ...					
		634	Thayetngu ...					
		635	Leengzu ...					
		636	Thònyaing ...					
		637	Tatapaw ...					
		638	Palaung ...					
		639	Zwetpagan ...					
		640	Padók ...					
		641	Ngathalaukngu ...					
	Thòngwa	642	Kawetkin ...	2 0	1 8	3 0	2 0	0 4
		643	Tatapaw ...					
		644	Thònyaing ...					
		645	Thòngwa ...					
		646	Pandaw ...					
		647	Kanaungtaung ...					
		648	Pandabut ...					
		649	Tanbingwe ...					
		650	Tapat ...					
		651	Ngapègyaung ...					
	Taungbogyi	652	Achan ...	2 0	1 8	3 0	2 0	0 4
		653	Yegyaw ...					
		654	Taman ...					
		655	Kyaiklat ...					
		656	Kadatlami ...					
		657	Lahakaingdaw-Yemyòk...					
		726	Faungyochoang ...					

By order,

F. C. GATES,  
Officiating Secretary.

From D. NORRON, Esq., Commissioner of the Irrawaddy Division, to the Director of the Department of Land Records and Agriculture, Burma,—No. 926-2-S.T., dated the 9th March 1892.

I HAVE the honour to submit the report with its connected maps and statements on the settlement operations in the Thongwa district of this division during the season of 1891-92.

2. The tract settled lies in the south of the richest district in Burma. It extends to the sea coast, and barring 2,000 square miles of jungle on the south-west, comprises the whole of the townships of Thongwa, Dedayè, and Pyapôn, where three-fifths of the present land revenue demand of the district accrues. The total area treated amounts to 1,453.67 square miles and consists of rich alluvial islands surrounded on all sides by rivers and creeks, whose banks, northwards, are fringed with gardens and nearer the sea with mangrove jungles; 404,026.14 acres (43.42 per cent. of the total area) are under cultivation. The population, which has more than doubled in the last decade, now numbers 192,919 souls, and the principal products of the tract indicate the chief employments of the people. These products, in the order of their importance, are paddy, fish, mangoes, plantains, cocoa, and betel-nuts, dhani, sugarcane, salt, and fuel.

The chief towns or trade centres in the tract are Pyapôn (800 houses), Dedayè (650 houses), Kyaiklat (630 houses), and Ma-ubin, the district headquarters, with its 558 houses. The very existence of these towns depends on their anchorages and other facilities for the export of garden produce, fish, and paddy to the Rangoon market; and throughout the whole tract it should never be forgotten that a bridge may block a navigable creek without opening a passable roadway. The Ma-ubin embankment (74½ miles long) is now quite a feature of the country and has proved an immense financial success.

3. The general condition of the people in the settlement tract is good and their standards of living are high and comfortable, and it is especially satisfactory to notice that, with the exception of the fishermen, they are learning slowly, but I hope surely, to build themselves substantial and commodious dwelling-houses. The average area of agricultural holdings is large (for paddy-land 24.03 acres) and tends to increase; and 29.11 per cent. of the total area under rice is worked by tenants paying average rents ranging from Rs. 6.79 in the first to Rs. 3.15 in the sixth assessment tract.

4. The following circumstances bear with greater or less directness upon the question of the proper assessment of the land revenue, so I give them prominence here. Much of the land in the tract has been brought under cultivation so recently that it has not yet attained its full producing power, but on the other hand nearly all the paddy grown is of the late variety which yields short crops when the ripening showers of October and November fail as they did this season. The calamities to which the tract is peculiarly subject are floods—spring tides—in the south and freshets in the north, the incursion of crabs, of wild elephants, and of pigs and the ravages of cattle-disease. The last cattle-disease ranks first in importance. It will be easily understood that bullocks from Upper Burma run but a poor chance of surviving even one season of hard work in the heavy and mosquito-laden swamps of Thongwa. The Settlement Officer has under rather than over estimated the effect of cattle-disease when calculating the cost of production. In February last bullocks fresh from Upper Burma were selling at Dedayè for over Rs. 200 a pair. With regard to floods I may say that the success of the Ma-ubin embankment should encourage Government to invest more money in similar highly productive works. The average cultivating family in the tract can only work 12 to 15 acres, but the holdings measure from 21 to 24 acres, and the difference is tilled by hired labour engaged at very high rates of wage. Again, in Pyindayè indebtedness is serious. Here the holdings are the largest and the cattle-disease has been most severe, and the system of advances from Rangoon rice merchants through local money-lenders and paddy-brokers has resulted in the practical insolvency of over 23 per cent.

of the cultivators; the rates of interest demanded and paid are so extortionate that these advances amount almost to expenditure rather than to mere investments of borrowed capital. However, this indebtedness such as it is, has absolutely no connection with the present very moderate rates of assessment. I may remark incidentally that had Rules 3 and 40 of the rules under the Burma Land and Revenue Act been strictly observed, it would have been impossible for clerks, traders, and other land-jobbers to have obtained grants of most of the land in the Ma-ubin circle.

5. We now come to the rates of assessments proposed by the Settlement Officer. As the cost of living and of cultivation is practically constant throughout the area dealt with, the paddy-land has been split up into seven assessment tracts according to varying fertility and cost of carriage. The soil in each tract has also been classed as either of first or of second quality. The varying fertility has been shown according to crop cutting experiments conducted in 757 large and selected fields, and the cost of carriage means the varying cost of cart and boat hire to the Rangoon market.

After a most careful consideration of the facts and arguments set out in the fifth chapter of Mr. Mathews' report, I am unable to admit that this elaborate classification of assessment tracts is necessary or desirable. This elaboration would have been both necessary and desirable had the proposed rates amounted to anything like one-half the net profits demandable by the State, or had they approximated too closely to the rates paid by tenants throughout the tract. But the proposed rates are considerably less than half the theoretically demandable rates, and they are even less than half the average tenant rates; the Settlement Officer has no doubt felt himself bound by the amount and incidence of the present revenue, and these have been small and light because thugyis in charge of unduly large circles have in the past submitted grossly inaccurate area statements. As the estimated outturn is very moderate and has a tendency to advance steadily in value; as the agricultural holdings are large and have room for further expansion; as the allowances for hired labour are most liberal, the general condition of the people good, and their comfort and affluence likely to be increased by the present influx from Upper Burma, and as full allowance has also been made for all ordinary calamities except perhaps for that of cattle-disease, I beg to suggest that the Settlement Officer's seven tracts be doubled up into three groups of two soil classes after the manner of the final classification and rating sanctioned last year.

From the following statement it will be seen at a glance that both the theoretical and tenant rates indicate that the rates now to be sanctioned may safely be pitched slightly higher than those fixed in the tract settled last year:—

Theoretical rates.		Tenant rates.		RATES	
				Sanctioned.	Proposed.
1889-90	1891-92	1889-90	1891-92	1889-90	1891-92
Rs.	Rs.	Rs. A. P.	Rs.	Rs. A. P.	Rs.
5.80	8.44	7 4 0	6.79	{ 8 0 0 }	{ 8.00 }
5.09	7.59	.....	5.75	{ 2 4 0 }	{ 2.88 }
4.07	6.56	.....	5.99	.....	{ 2.75 }
4.86	5.06	4 14 5	5.61	{ 2 8 0 }	{ 2.18 }
2.89	4.18	.....	4.70	{ 2 0 0 }	{ 2.68 }
3.04	4.47	.....	3.15	.....	{ 2.00 }
1.57	.99	2 11 0	.84	{ 2 0 0 }	{ 2.50 }
2.84	.....	.....	.....	{ 1 8 0 }	{ 2.00 }
.....	.....	.....	.....	.....	{ 2.88 }
.....	.....	.....	.....	.....	{ 1.88 }
.....	.....	.....	.....	.....	{ 2.25 }
.....	.....	.....	.....	.....	{ 1.35 }
.....	.....	.....	.....	.....	{ 2.00 }
.....	.....	.....	.....	.....	{ 1.50 }

Rents are highest in Seiktha where they average over Rs. 8.82 per acre, and lowest in the less fertile soil of Dedayè. The average tenant rent amounts to Rs. 5.63 per acre or more than three times the incidence of the present land revenue as against an average of only Rs. 4-14-5 per acre in the tract for which rates were fixed last year.

6. The rates for garden lands and miscellaneous cultivation should, I think, be fixed as proposed by the Settlement Officer. They might fairly be higher but for the immense importance of encouraging such cultivation in this one-crop country.

7. In conclusion I may say that when it became evident that revised rates could not be sanctioned in time to take effect during the current year, I wrote to the Deputy Commissioner of Thongwa directing that as much use as possible should be made of the corrected areas when checking thugyis' assessment-rolls at the existing rates of revenue.

# REPORT

ON

## THE SETTLEMENT OPERATIONS

IN THE

### THÔNG WA DISTRICT

### SEASON 1890-91.

#### CHAPTER I.

##### GENERAL DESCRIPTION OF THE COUNTRY.

THE tract settled during the season under report consists of the southern portion of the Thôngwa district and completes the work of settlement in the area cadastrally surveyed. The statement given below shows the settled area by circles.

District.	Township.	Name of circle.	Serial No.	Cultivated area.	Gross area.	Square miles.	Percentage of cultivated to gross area (columns 5 and 6).	Remarks.
1	2	3	4	5	6	7	8	9
THÔNGWA.	Thôngwa.	Ma-nbin ...	1	14,759·25	21,760·69	84·00	67·82	The western portion of Kyóntón with an area of about 150 square miles is not included, having been surveyed on the 4-inch scale. Only four kwins of Pyindayè are included, and large jungle blocks in Pyapón and Thazi are excluded.
		Minbaw ...	2	24,750·91	81,514·88	49·24	78·58	
		Seiktha ...	3	17,936·87	42,005·10	65·68	42·70	
		Yelégale ...	4	22,949·83	57,954·95	90·50	89·59	
		Maletto ...	5	4,448·09	120,701·88	188·69	8·68	
		Thôngwa ...	6	8,703·05	44,895·62	69·37	8·84	
		Kyónmangé ...	7	22,135·41	48,428·95	67·85	50·97	
		Total ...		110,688·41	861,816·57	565·84	80·59	
	Dedayè.	Dedayè Myoma	8	26,349·86	81,583·18	49·27	88·56	
		Wakame ...	9	19,784·65	26,320·42	41·18	74·97	
		Ónbín ...	10	29,884·54	38,961·63	60·89	76·70	
		Tawhla ...	11	29,230·11	86,089·80	185·45	38·72	
		Tomayan ...	12	25,748·75	54,699·81	85·46	47·06	
		Total ...		130,948·91	288,204·84	872·19	54·97	
	Pyapón.	Pyapón Myoma	13	19,757·40	86,962·81	57·75	58·45	
		Taungbogyi ...	14	20,401·20	57,196·28	89·87	85·66	
		Singu ...	15	28,226·58	40,956·08	68·99	68·91	
		Thazi ...	16	18,880·61	87,179·30	58·09	49·80	
		Kyaiklat ...	17	81,451·08	44,481·67	69·50	70·70	
		Kyóntón ...	18	40,888·77	106,975·89	165·59	38·11	
		Pyindayè ...	19	8,888·23	7,581·01	11·85	50·62	
		Total ...		162,893·82	880,893·04	516·14	49·16	
		GRAND TOTAL...		404,026·14	980,858·97	1,458·67	48·42	

2. This area lies within the lower delta of the Irrawaddy and extends to the sea coast, except in the south-west, where a tract of some 2,000 square miles, in which there is little but jungle, has been excluded from survey and settlement. The surface of the country is low and flat, falling gradually and insensibly as it approaches the sea. In the southern portions of the Dedayè and Pyapôn townships ridges of sand, rising a few feet above the general level of the country, occur here and there. From their formation these ridges, now far inland, were clearly once sea beaches similar to those found further south on the coast. A reference to Index Map No. 2 attached to this report will explain the general features of the tract. The large and deep rivers run from north to south and are connected by creeks, which in places are shallow and only navigable for boats of heavy draft at certain stages of the tide. Throughout the tract these rivers are in the dry season affected by the tides, but the large volume of sweet water running through them preserves their freshness until within some 20 or 30 miles of the sea.

3. The excellence of the river water is an immense boon to the inhabitants for, although water is obtainable a few feet below the surface of the soil, it is rarely drinkable, the sub-soil being impregnated with saline substances to such an extent that the water is quite bitter. Nearer the sea, where the river water is salt, excellent well water can be obtained on the sand ridges previously mentioned. Where they do not exist, however, the supply of drinking water is dependent on rain-water tanks. The water from these tanks is fair during the cold weather, but towards the end of the hot season the tanks rapidly dry up, those which do retain fresh water till the end of the rains very often furnishing only a muddy mixture, which would be rejected by persons living in more favourably situated places. As regards the water-supply of the larger towns Pyapôn probably fares worst, although numerous tanks have been dug and improved, both by public-spirited individuals and by Government.

4. In the northern portion of the tract the banks of the rivers are usually bordered with mango and plantain gardens; but as the sea is approached these gardens disappear and are replaced by the tree jungle peculiar to mangrove swamps.

5. The statement given below shows in parallel columns the figures for the census of 1881 as compared with those of 1891. The comparison is interesting, and shows the enormous development which has taken place in this part of the country, even within so short a period as ten years.



District	Township.	CIRCLE.	POPULATION BY CENSUS OF 1881.									POPULATION BY CENSUS OF 1891.									Percentage of increase.
			Occupied houses.	By races.							Occupied houses.	By races.									
				Total persons.	Burmans.	Karens.	Shans.	Talaings.	Natives of In-dia.	Others.		Total persons.	Burmans.	Karens.	Shans.	Talaings.	Natives of In-dia.	Others.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Tabungwa.	Thongwa.	Ma-ubin	525	3,451	1,952	1,087	8	248	156	...	1,793	10,786	6,496	2,966	40	576	600	108	212.5		
		Minbaw	212	1,834	1,118	578	4	131	8	...	920	5,458	3,309	1,488	20	288	300	53	197.6		
		Seiktha	600	3,368	1,565	1,665	7	121	10	...	1,356	7,414	5,445	1,826	10	87	10	36	120.1		
		Yei-gale	276	1,611	749	796	3	58	5	...	1,156	6,814	4,846	1,826	7	87	11	37	322.9		
		Maletto	259	5,516	3,396	1,974	35	93	18	...	1,604	10,311	6,124	2,851	10	1,254	32	40	86.9		
		Thongwa	561	3,477	2,079	1,284	12	87	15	...	890	4,947	3,160	1,506	11	263	1	6	42.2		
		Kyom-mangé	1,745	10,177	6,602	3,295	50	208	22	...	1,905	10,814	8,069	2,600	12	102	20	11	6.2		
		Total	4,178	29,434	17,456	10,679	119	946	234	...	9,630	56,544	37,449	15,063	110	2,657	974	291	92.1		
	Dedayé.	Dedayé	1,581	7,794	6,323	698	53	634	86	...	2,653	15,399	12,357	425	142	1,733	589	153	97.5		
		Wakame	1,464	7,438	5,057	1,792	103	444	42	...	1,923	10,257	7,722	1,831	32	451	179	42	87.8		
		Onbin	871	4,707	3,202	1,134	65	230	26	...	1,750	11,079	8,554	1,439	148	902	24	17	135.3		
		Tawhla	825	4,388	3,453	247	52	631	5	...	1,193	10,262	8,144	904	116	994	90	14	133.8		
		Tornayan	975	5,431	4,274	804	64	782	6	1	1,601	9,801	8,636	51	46	813	227	28	80.4		
		Total	5,666	29,758	22,809	4,175	337	2,771	165	1	9,120	56,798	45,413	4,650	479	4,993	1,109	254	90.8		
	Pyapón.	Pyapón	1,278	7,317	5,962	749	11	397	98	...	2,448	14,361	9,595	429	7	3,636	439	255	98.2		
		Taungbogyi	...	2,239	1,393	725	8	107	11	...	...	10,434	7,169	2,780	60	355	55	16	366.0		
		Singú	891	4,771	2,976	1,545	7	222	21	...	...	9,483	6,166	2,780	60	356	55	16	97.7		
		Kyaiklat	1,785	9,849	6,129	3,190	15	471	44	...	...	20,130	15,530	2,698	144	880	575	303	104.3		
		Kyánton	1,080	5,944	3,288	2,187	8	455	5	1	3,578	17,471	11,207	4,234	99	1,712	102	57	193.9		
		Thazi	769	4,490	4,035	187	45	200	23	...	1,358	6,602	4,063	278	765	1,445	38	18	47.0		
		Pyindayé	27	187	172	6	1	8	...	...	187	1,146	478	8	28	562	36	34	508.5		
		Total	5,760	34,697	23,955	8,589	90	1,860	202	1	...	79,577	54,208	13,267	1,163	8,946	1,800	693	129.3		
	GRAND TOTAL		15,624	93,889	63,720	23,443	546	5,577	601	2	...	192,919	137,070	32,980	1,752	16,496	3,885	1,238	105.4		

REPORT ON THE SETTLEMENT OPERATIONS IN THE THONGWA DISTRICT, SEASON 1890-91.

6. These figures show that the percentage of increase in the total population has been 105.4 per cent. While the increase in the Burman population has been slightly in excess of this rate, that of Shans, Talaings, and Natives of India, has greatly exceeded it. Karens, on the other hand, showing a much slower rate of increase. The column "Other races" includes Chinese, who generally reside in the towns, and some Karenni agriculturists found in the south of the Ma-ubin island and in Tomayan. The abnormal increase in the number of Talaings is probably only apparent, being due to the more careful classification of persons who were in 1881 included under the head of Burmans. The decade has seen the reclamation of the six circles which form the Ma-ubin island. This reclamation provided over 100,000 acres of rich and easily worked land, and in the Thongwa township produced a large influx of population. The Dedayè township again, partly because of the high sandy ridges which intersect it and form admirable sites for villages, has proved a great attraction to emigrants from Upper Burma; while the Pyapôn township has drawn and is drawing a steady flow of Talaing and Shan-Talaing cultivators; these people, with their families and cattle, migrating from the more densely settled portions of Hanthawaddy and Pegu. The greater portion of the population being agricultural, is dispersed in small hamlets which have sprung up in every direction; but to meet the wants of this large and increasing population, several towns have gradually, and in some cases rapidly, become places of considerable importance.

7. The statement of occupations given below is taken from the thugyis' capitation-rolls, and gives some idea of the distribution of the various industries amongst the population. Agriculturists are in the majority, except in the Malletto and Thongwa circles of the Thongwa township, where there are large and unculturable areas in which the streams and pools form valuable fisheries and support a large population. These fishermen are almost invariably of Talaing extraction. Karens, on the other hand, are almost invariably cultivators; while the more versatile Burman turns his hand to anything or nothing as the fit takes him. As usual, the thugyis have failed to distinguish between the different occupations of the persons classed as coolies. Of the 14,730 persons thus classed it is probable that half are agricultural labourers, one-third boat coolies, the remaining sixth being employed on work connected with fisheries. This would make the cultivators 65 per cent. and the fishery workers 13 per cent. of the total population. The proportion of traders, shopkeepers, advocates, and other well-to-do classes is materially reduced by the exclusion of persons assessed to income-tax in the towns of Ma-ubin, Dedayè, Kyaiklat, and Pyapôn.

Statement of persons assessed to capitation-tax.

Occupation.	NUMBER ASSESSED.					Remarks.
	Thongwa.	Dedayè.	Pyapôn.	Total.	Percentage of total number assessed.	
1	2	3	4	5	6	7
Cultivators ...	5,771	5,204	9,529	20,504	47.85	
Traders ...	825	874	1,116	1,815	4.24	
Coolies ...	2,791	5,848	6,591	14,730	84.87	
Inland fishery workers ...	1,579	75	696	2,350	5.49	
Sea fishery workers ...	62	141	651	854	1.99	
Artizans ...	324	150	821	795	1.86	
Shopkeepers ...	204	487	579	1,270	2.96	
Sawyers, rice-millers, &c. ...	74	27	118	219	.51	
Artists, wood-carvers, &c. ...	10	16	4	30	.07	
Advocates, clerks, &c. ...	4	6	12	22	.05	
Doctors and medicine vendors ...	106	42	58	206	.48	
Actors and musicians ...	...	14	...	14	.03	
Salt-boilers ...	...	10	...	10	.02	
Barbers, dhobies, &c. ...	16	9	10	35	.08	
Total ...	11,266	11,908	19,635	42,854	100.00	



8. Towards the southern portion of the tract the cultivator has in many places to protect his holding from the influx of high-water spring-tides. This protection he obtains by the construction of small embankments, which, however, are little larger than ordinary field bunds. Buffaloes are more extensively used than bullocks in most places, but in the Ma-ubin island and other areas now opening out, bullocks will probably become much more numerous as the land gets into thorough working order, and the preliminary clearing operations, for which buffaloes are so useful, are completed. On newly cleared land after the trees have been cut and burnt two crops of sugarcane are often taken off the ground before paddy is planted. In such ground ploughing operations cannot be satisfactorily carried out till the tree roots have rotted away, a process which may take four or five years. After the cane has been cropped, and pending regular ploughing, the ground is simply cleared of weeds, scratched up, and planted with paddy. In tree jungle, such as this, the cost of clearing is considerable, and the land does not attain its full producing powers until the seventh or eighth year. In grass jungle, however, full crops should be obtained by the fourth year; the crops, even in the first year, bringing in a considerable return. Holdings being large, and labour very expensive, much of the land is sown and not planted. The same cause occasions the perfunctory performance of other agricultural operations, with the result that a large proportion of the cultivated area is not bearing full crops. The desire to acquire land is so great that men get hold of more land than they can work properly. They raise short crops, get into debt, and disappear as landowners, to appear again as tenants or petty traders. Nearly all the paddy grown is of the late variety, the land lying too low and being too flat to permit of any large extent of early paddy.

9. The following statement gives some interesting information concerning prices and hire of cattle, rates paid for labour, and outturn obtained. The figures are averaged from the statements of the cultivators, taken in a large number of the kwins brought under settlement. Many of the labourers are Upper Burmans who come down for the season and return after the harvest. During the period of engagement, these men are either fed by the landowners, or are given an allowance for food. Where, however, the remuneration given is a fixed proportion of the outturn, food is not supplied. The figures given in this statement will be more fully commented on later, when considering the subjects to which they refer.

Rates for hire of cattle and labour, together with other agricultural statistics.

Township.	Circle.	CATTLE.					OUTTURN PER YOE.		LABOUR (WAGES).						Wages for whole season.	Remarks.
		Prices per full grown animal.		Hire per yoke.		Grazing charge per animal.	Buffaloes.	Bullocks.	Ploughman.		Ploughman's Assistant.		Reaper.			
		Buffaloes.	Bullocks.	Buffaloes.	Bullocks.				Rupces.	Baskets.	Rupces.	Baskets.	Rupces.	Baskets.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
THONGWA.	Ma-ubin, Minbaw, Seiktha, Yelégale, Taungbogyi, Singu.	Rs. 89	Rs. 92	Baskets. 130	Baskets. 110	Baskets. 11	Baskets. 817	Baskets. 583	55	118	45	78	49	60	Bkts. 160	<p><i>Wages.</i>—Near Ma-ubin gangs of natives are hired for reaping at Rs. 70 per 20-acre holding. This method is practised owing to the land being laid out in 20-acre lots. Other methods of payment for reaping are one-fourth of the outturn, or 1 sheaf in 5.</p> <p><i>Cattle.</i>—One yoke of buffaloes can plough 20 acres of low-lying land, or 10 acres of high land. One yoke of bullocks can plough 12 and 6 acres of each kind of land respectively.</p> <p><i>Wages</i> for harvesting are sometimes one-fifth of outturn for "ngasein" paddy, and one-fourth of outturn for "bawynt" paddy.</p> <p><i>Harvesting</i> is often paid at one-fourth of outturn and sometimes at two-ninths of the outturn.</p> <p><i>Grazing.</i>—Where cattle are grazed in the kwin on the field bunds 20 to 25 baskets are paid to the grazier for each animal. In Tomayan as much as Rs. 3 per mensem is sometimes paid for grazing, herdsmen collecting straw and cutting fodder.</p> <p><i>Outturn.</i>—A field 50 fathoms square (2.06 acres) is said to produce 100 baskets if ploughed, and 80 baskets if simply weeded before planting.</p> <p><i>Outturn and Labour.</i>—One yoke of buffaloes with a ploughman and one assistant can work a 600-basket holding. With two assistants a 1,000-basket holding can be worked.</p> <p><i>Wages.</i>—Hire for reaping field 40 fathoms square, (1.82 acres) Rs. 5 to Rs. 6; for ploughing same Rs. 5.</p>
	Thongwa	88	95	150	150	10	...	...	...	...	...	...	...	...	...	
	Kyönmanget	76	95	125	100	10	800	400	...	100	60	...	55	60	...	
DEDAYE.	Wakame	89	96	157	128	10	800	400	96	100	70	...	50	65	...	
	Dedaye	80	98	200	150	10	...	...	...	80	...	70	...	...	...	
	Tawhla	80	81	194	138	10	937	675	...	123	...	78	...	70	...	
	Tomayan	97	101	165	129	10	640	540	...	100	...	88	68	...	...	
	Onbin	90	...	193	150	10	783	600	...	113	...	80	50	60	...	
PYAPON.	Pyapön	87	72	160	150	10	800	650	...	123	...	100	58	...	...	
	Thazi	94	94	190	150	10	1,000	...	...	120	...	100	40	68	...	
	Pyindfye	85	75	200	125	10	800	500	...	120	...	95	...	85	...	
	Kyöntön	78	79	184	106	10	960	640	...	112	...	83	...	63	...	

10. Floods are not as destructive in the lower as in the upper part of the Delta, where the flood-water rises higher and takes longer to drain away. Some damage is done in the lower lying kwins by spring tides, which at harvest time occasionally inundate the fields, soaking the sheaves, if they are, as is usual, left lying on the ground. The same portions of the tract are liable to incursions of crabs, which coming up from the sea spread in myriads over the land, destroying the germinating grains of paddy and the infant plants where they have just sprouted. These small crabs are known as kunpaga (ကုန်ပခါ) and appear in the kwins in June and July, leaving again in August. The cultivators believe that paddy sown while the crabs are in the kwin will not germinate; a result attributed to some deleterious effect, which these crustaceans have on the water which they inhabit. There is no doubt that in many cases paddy nursery fields have to be carefully banded and baled, in order to expel the crabs and ensure the presence of nothing but pure rain-water. Depredations caused by birds to the ripening grain are not as serious as in the Shwelaung township; but in the Ma-ubin island, and in the southern parts of the Dedayè township, much damage is occasionally done by wild elephants and other animals. Encouraged by the rewards given by the Government, the Karens have been very active in slaughtering these animals; so that the large herds, which formerly lived in the centre of the Ma-ubin island, have been thinned down to a few animals, and these will probably disappear very shortly. Near the sea, portions of the sand ridges, which generally line the coast, are sometimes washed away, allowing the sea a means of ingress. The damage done to the crops in this way is rarely extensive and does not extend over any great area.

11. The rainfall as a rule is plentiful and sufficient. Occasionally an early cessation of the rains, through the absence of the ripening showers of October and November, causes a short crop, but this rarely amounts to anything like a calamity. A more serious matter is the falling of heavy showers when the paddy has been reaped and is being threshed. For losses incurred on this score the cultivators themselves are partly responsible. A temporary roof over the threshing floor, and a little straw thatching over the stacks of unthreshed sheaves, would shield them from the falling rain; while a little care devoted to the choice of a high-lying field, together with the construction of an enclosing bund and drain, would protect every thing from water lying on the ground.

12. Cattle-disease is not less prevalent in this part of the district than elsewhere. Its effect on the cost of cultivation is very marked, for as will be seen from the statement given under paragraph 9, the hire for buffaloes is often 200 baskets of paddy per yoke, or nearly 10 baskets per acre. When it is considered that the price of a pair of buffaloes is only about Rs. 175, and that the cost of keep is small, it will be seen that the risks from death must be very great to induce the cultivator to hire animals in preference to keeping them. In considering these figures it is, however, necessary to remember that the hire is paid after the crop is harvested, while animals, if purchased, have to be paid for nearly a year earlier. At present most of the animals are imported from up country. Such animals are, without doubt, more liable to disease than animals bred locally, and thereby inured to the worries of the mosquitoes and accustomed to the fodder. It is thus possible that in time, with locally-bred animals, the losses by disease may decrease; but under the present careless system of grazing it is feared that this is unlikely. In the northern portion of the tract the animals mostly come from Tharrawaddy, though some come from Lemyethna in Bassein. Further south Pegu furnishes most of the importations, though Tharrawaddy also does its share.

13. The statistics relating to cattle are given in Statement No. I of the appendices. The figures are obtained from two sources, i.e., from the district records and from statistics collected during settlement operations. As usual there is a very great discrepancy between the statements thus obtained, but there is little doubt that

the mortality shown in the settlement statements is fairly correct. From information collected, and the figures now tabulated, it is difficult to deduce the indirect causes which determine local variation in mortality. The availability of large grazing areas does not seem to have invariably, or even generally, an appreciable effect on the well-being of the animals. Kyôntôn, Thazi, and Tawhla, which show the largest mortality, have all considerable areas available for grazing. At the same time this should not condemn the system of providing grazing areas; but rather the reservation of blocks of waste so extensive, that the cattle cannot be properly tended.

14. On comparing the number of animals with the total area under paddy cultivation, it will be seen that there is only one animal for every 12 acres, while in last year's tract it was less than 3 acres. Allowing that a certain proportion of these animals were only used for carting, the proportion in last year's tract was probably about one animal for 5 acres. Of course half-grown animals not fit for the plough have to be deducted, and there is little doubt that the number of acres cultivated for each plough animal available, is not less than 14 acres in the tract settled this year. No one animal can properly plough 14 acres, and admitting that the work may be done in a perfunctory manner, there is little doubt that the animals are often overworked; this overwork combining, with other causes, to swell the list of casualties amongst these animals. Not less troublesome than in Yandoon and Pantanaw townships, the mosquito swarms over the whole settled area. Special precautions have therefore to be taken to protect the animals, increasing considerably the cost of cattle-keeping.

15. Cultivation exists in such solid blocks that the reservation of small grounds, suitable for the use of one or two neighbouring villages, was not found practicable in most cases. Enormous blocks, several thousands of acres in extent, are in some cases devoted to grazing; although they are not as a rule formally reserved for that purpose. As large areas appear to be a mistake, recommendations have been made for the allotment within them of blocks for cultivation. These allotments for cultivation, while curtailing the total area available for grazing, split it up into small blocks and thus afford means for segregating the cattle in case of disease. This will also put a stop to the system by which animals are sent from far distant places and handed over to graziers. The only interest of these graziers is to protect the animals entrusted to their care from bodily injury, such injuries rendering them liable to the owners. With more contracted grazing-grounds, the occupation of the large graziers, with their herds of 100 to 150 head of cattle, will be gone; while the cattle using the grounds will be limited to those belonging to the neighbourhood, tended either by the owners themselves, or by their friends and relations.

Township.	Circle.	GRAZING AREA.			NUMBER OF CATTLE.			Total area cultivated.	Percentage of grazing to total area.	Area of grazing per animal.	Remarks.
		Proposed for reservation.	Already reserved.	Total area.	Buffaloes.	Bullocks.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12
		Acres.	Acres.	Acres.				Acres.			
THONGWA.	Ma-nbin ...	395.82	463.49	858.81	743	926	1,669	14,759.25	5.81	.51	Most of the cattle of the garden-owners of Maletto and Thongwa have been recorded in the circles where they are used.
	Minbaw ...	427.29	...	427.29	1,294	1,213	2,507	24,750.91	1.72	.17	
	Seiktha ...	1,725.82	1,655.73	3,381.55	588	1,221	1,809	17,936.87	18.85	1.86	
	Yelégale ...	1,718.85	...	1,718.85	1,235	1,027	2,312	22,949.83	7.48	.74	
	Maletto ...	...	...	...	152	115	267	4,448.09	...	...	
	Thongwa ...	...	1,409.89	1,409.89	169	53	222	3,703.05	38.07	6.85	
DEDAYE.	Kyön-mangè ...	1,758.93	...	1,758.93	1,395	378	1,673	22,185.41	7.94	1.05	Figures for the grazing-grounds of Pyapôn, Thazi, and Pyindayè are not included as they fall within the area excluded from survey and settlement.
	Dedayè ...	...	589.02	589.02	245	270	515	26,349.86	2.23	1.14	
	Wakame ...	68.96	...	68.96	1,175	639	1,814	19,734.65	.84	.08	
	Ônbin ...	...	...	...	1,911	415	2,326	29,884.54	...	...	
	Tawhla ...	1,665.55	1,121.04	2,786.59	1,503	709	2,212	29,236.11	9.53	1.25	
PYAPÔN.	Tomayân ...	800.00	2,007.18	2,807.18	865	90	455	25,743.75	8.96	5.07	Most of the Ônbin cattle are grazed in Pyapôn or Tawhla. Many of the cattle from the Dedayè township and Kyön-mangè are grazed in the Tunte township of Hanthawaddy.
	Pyapôn ...	2.00	...	2.00	2,158	119	2,277	19,757.40	.01	...	
	Taungbogyi ...	993.45	4,974.34	5,867.79	2,304	422	2,726	20,401.20	28.76	2.15	
	Singu ...	124.72	100.00	224.72	1,445	904	2,349	28,226.58	.79	.09	
	Thazi ...	12.43	...	12.43	1,728	160	1,888	18,330.61	.06	...	
	Kyaiklat ...	221.87	...	221.87	1,958	780	2,688	31,451.03	.70	.08	
	Kyôn-tôn ...	4,959.14	1,400.00	6,359.14	1,648	757	2,405	40,388.77	15.74	2.64	
	Pyindayè ...	8.18	...	8.18	587	455	1,042	8,838.23	.08	...	A percentage of the cattle not employed in ploughing, such as cart-animals used in towns, and animals kept for milk, have unavoidably been excluded from the returns.
	Total ...	14,877.51	13,620.69	27,998.20	22,553	10,603	33,156	404,026.14	6.93	.84	



16. Most of the bullocks are stall-fed during the rains; while during the dry weather, although generally allowed to graze at will, they are more or less looked after. In the Ma-ubin island, the system by which land was allotted in rectangular blocks of 20 acres has been a great success, while the intervening paths, some 13 feet in width, have proved an immense boon to the cultivator. In addition to affording free access to every holding in the kwin, these paths give half an acre of grazing space for every holding of 20 acres. When it is remembered that in low-lying clay lands, like those of Thongwa, the field bunds are of the lightest and smallest description, the importance of these paths will be at once recognized. In their absence the old system of large grazing-grounds must be tolerated; but in laying out land for new grants the path system, though somewhat costly, should not be overlooked. Small grazing-grounds of about 100 acres should also, from time to time, be reserved wherever houses are springing up, and a large village is likely to be established.

17. The period during which the cattle have to be grazed extends from August to the middle of December, *i.e.*, from the time when the ploughing operations cease to the time when the crop is reaped, and animals are required for threshing and carting. For this period the ordinary rate paid to the grazier is 10 baskets per animal. As a rule this period is divided into two parts, the first lasting till the end of October being known as the "monsoon spell," and the second the "dry-weather spell." For each of these spells the fee is five baskets, and it is optional with the cattle-owner to take back his animals if he does not find them thriving at the end of the first spell. Where the grazing-grounds are large, the graziers generally band together in parties of three or four, and take mutual charge, so-called, of from 60 to 150 head of cattle. A hut is built on some comparatively high portion of the grazing-ground, and there the graziers live, the animals wandering about during the day and being tethered near the hut at night. Sometimes the animals are not even tethered in this way, but are simply collected and driven back to the neighbourhood of the hut every few days. The discomforts caused to the animals by flood was mentioned in last year's report. This season, on one grazing-ground, it was pointed out that during freshets in the river the only comparatively dry spots were a few mounds which form the sites of some ruined pagodas. It also appeared that from these places the cattle swam off in the mornings to the portions of the plain less deeply inundated where they pastured during the day; while occasionally the herdsmen had to follow in boats with paddle and sail to collect their scattered animals. The above remarks refer to buffaloes only; bullocks, as may be supposed, could not stand this sort of thing; and in the case of buffaloes the mortality amongst young and weakly animals is necessarily heavy.

18. In places where the grazing-grounds are contracted, or the cattle-owners require special care taken of their animals, the charges for grazing run up to as much as 20 to 25 baskets for the grazing season; the animals, mostly bullocks, being either fed on the field bunds or stall-fed on cut fodder, the grazier also keeping up fires at night to drive off the mosquito. After the harvest the animals are almost invariably turned loose in the kwin to graze at pleasure, no grazing charges being then incurred. In Tomayan, however, and in one or two places where grass and water are scarce, the animals are grazed by paid herdsmen for a couple of months after harvest. For this the rate paid is about Rs. 1-8-0 per mensem; the herdsmen collecting straw, &c., for fodder, and watering the cattle from wells or tanks. At one village in the above circle an excellent arrangement was observed for watering cattle from a tank. The tank was fenced, the water being raised from it by an ordinary hoist. Thence the water was led in bamboo ducts to a trough, made of an old boat, which stood under an open thatched shed outside the enclosure. Here the cattle watered, and the waste water drained away through open channels to lower ground beyond, where in the muddy pools thus formed the buffaloes obtained the luxury of a wallow. The man working the hoist was paid by a resident of the village. His pay was

8 annas a day, and for this he hoisted water three times daily for from 80 to 90 animals from February to the beginning of the rains. The appreciation of this arrangement was marked by the eagerness with which the cattle collected at the trough as soon as the man appeared to work the hoist.

19. The lower portion of the Delta is well wooded, the banks of the streams and rivers being lined with fringes of trees, which furnish an abundant supply of fuel. As soon, however, as cultivation begins to extend this timber is cleared away, large stretches of paddy, across which one may journey for long distances without coming across a single tree, taking its place. Fortunately, much of the timber on the banks of the streams grows in the mud, where the land is so low as to be unculturable; if this were not the case there would not be a tree left in some circles. As these trees protect the banks from erosion, their presence is valuable, and it has been proposed to protect them by reserving land for a width of about 200 feet on both banks of the streams. A note on this subject will be found in Statement XIV of the appendices attached to this report. Few of the trees met with produce timber valuable for house-building or similar purposes. The material for permanent buildings is generally imported, the numerous rivers forming convenient and inexpensive highways, on which the material can be transported in the form of rafts. The posts of good houses are generally of pyingado, which is brought from the Arakan hills in the west of Bassein; while pyinma is also imported from Thigwin in the same district.

20. The settlement tract includes the area protected by the Ma-ubin island bund, which is  $74\frac{3}{4}$  miles in length. After the Henzada embankment, this may be considered the most important reclamation work of its kind which has been undertaken in Lower Burma. In some ways, although a smaller work, it is more interesting than the Henzada embankment, for the difference in the condition of the area and population, before and after protection, is more strongly marked. In 1876, shortly after the formation of the district, it was recognized that something could and should be done to improve the neighbourhood of the town of Ma-ubin, which had been chosen as the headquarters of the district. Ma-ubin was then only a small village in which resided a few Talaings, who worked the neighbouring fisheries. While along the bank, in a narrow strip of garden land, were scattered the houses of the Karens who then formed the agricultural population, such as it was. The state of affairs is described in the following words in a letter written by Colonel Horace Brown, Commissioner of Pegu, in 1879, when recommending the construction of the bund:—

"At the present time the whole island is a swamp, producing nothing but myriads of mosquitoes and a few fish, with a narrow fringe of garden land along the river bank."

In spite of these drawbacks Ma-ubin, from its central position, was chosen as the district headquarters by Sir Ashley Eden, then Chief Commissioner. District officials, who apparently did not appreciate the choice, ironically, it may be presumed, dubbed it the "Garden of Eden" in consequence. For some years after its establishment the advisability of moving the headquarters to Yangoon was seriously discussed. This was, however, vetoed by Colonel Horace Brown, who was of opinion that, although the mosquito plague of Ma-ubin might be trying, yet it was by no means evident that the scents of Yangoon, resulting from the ngapi trade, might not be worse.

21. Although the reclamation of the island was first suggested in 1876 it seems to have been lost sight of till 1879, when the Deputy Commissioner revived the project. At first it was proposed to limit the reclamation works to an area of about 5 square miles, lying immediately at the back of Ma-ubin town, but finally it was decided to include the whole island in the scheme. Work was commenced in 1882, and was practically completed in 1884. Some alterations, however, have since been necessitated by changes in the channels of the main river and by insufficient allowance for height of floods. The beneficial effect of the embankment was felt even before it was completed, land previously 8 to 10 feet under

water during the rains being left high and dry. At first the people distrusted the bund, and grants were not taken up with great rapidity, but when the success of the work was seen, applicants flocked in, while now after nine years the greater portion of the island is nothing but a huge paddy-plain.

22. From the following statement it will be seen that 106,827·25 acres have been brought under cultivation by the Ma-ubin bund, while a considerable area still remains available for cultivation. The cultivators in the circles of Maletto, Thongwa, and Kyonmangè, say that the flood-level in those circles has been considerably raised by the construction of the bund and complain that large areas have in consequence been abandoned. Column 5 of the statement shows the area of those lands which have been thrown up since that time. That the flood-level is somewhat higher than it used to be in parts of the Thongwa and Kyonmangè circles appears evident. In other parts, however, some of the abandoned land has been thrown up, not because it is more badly flooded than it used to be, but because the original cultivators have taken up better land inside the bund.

*Effect of Government Embankment.*

Name of circle.	AREA OF CULTIVATED LAND CULTIVABLE BEFORE CONSTRUCTION OF BUND.		Area of cultivated land rendered culturable by construction of bund.	Land thrown out of cultivation in consequence of construction of bund.	Total area.	Remarks.
	Garden and miscellaneous.	Paddy.				
1	2	3	4	5	6	7
	Acres.	Acres.	Acres.	Acres.	Acres.	
Ma-ubin ...	1,664·55	...	18,094·70	...	14,759·25	The figures include those for grants still under exemption.
Minbaw ...	1,051·75	...	23,699·16	...	24,750·91	
Seiktha ...	1,646·55	...	16,290·82	...	17,936·87	
Yelégala ...	888·21	...	22,616·62	...	22,949·88	
Maletto ...	8,928·35	...	...	519·74	4,448·09	
Thongwa ...	2,981·81	526·41	...	194·83	8,708·05	
Kyonmangè ...	1,802·11	19,641·74	...	1,191·56	22,185·41	
Taungbogyi ...	456·95	8,185·59	16,670·78	137·88	20,401·20	
Singu ...	412·85	11,814·05	16,499·68	...	28,226·58	
Total ...	18,778·18	84,617·79	108,871·26	2,044·01	159,811·19	

23. The statement given below shows that the embankment produces a direct revenue of 28·94 per cent. on its capital cost. Financial results of the Ma-ubin embankment. To this, however, must be added the amount of export duty, bringing up the interest obtained on the money expended to 70·96. There are still 18,170 acres of reclaimed area temporarily under exemption, and some 42,000 acres of waste, also reclaimed, which are available for cultivation. When this all comes under assessment the return for the money expended will thus be very much larger than it is at present. In explanation of the figures given in the statement it should be noted that the fishery revenue of the island in 1881 was Rs. 63,240, the present revenue being Rs. 22,185. In calculating depreciation the original value of the fisheries has been increased by 54 per cent., that being the normal increase since 1881 of fishery revenue in places unaffected by the bunds. It should also be observed that the capital cost of the bund is liable to increase. This is due to the cost of retirements which become necessary whenever the river changes its course and approaches the bund so closely as to be dangerous. The most rapid changes are taking place at the north end of the island, where sections of the bund have twice been retired and further retirements will probably still be necessary.





24. The fisheries falling within the settled area are very numerous and produce an annual revenue of Rs. 3,26,410. Those in the Maletto circle are the most valuable in the district. Nearer the sea extensive fisheries are also met with, though they are less numerous than in Maletto. As has already been pointed out in previous reports extensions of cultivation by curtailing the breeding places of the fish have a detrimental effect on the neighbouring fisheries. In fact agriculture and fisheries are entirely antagonistic, and their management where they are co-existent is decidedly difficult. In the Thongwa district the question of precedence between these two industries is constantly arising. The tendency is certainly to sacrifice the fisheries to cultivation, and the result of embanking the Ma-ubin island at any rate seems to justify this principle. Bunds and fishing screens have an injurious effect on the streams where they are erected. By checking the current they induce deposits in the bed of the stream which thereby becomes shallow. As agriculture extends and villages are established, these fishing bunds and screens, besides injuring the drainage, become a serious bar to navigation. Where the streams are of considerable size and the entrance of large boats is prevented, the local value of paddy is sometimes affected by as much as Rs. 5 per hundred baskets. This necessitates a decrease in the assessment rates of from 2 to 3 annas per acre. In other places, notably in the southern part of the Ma-ubin island and in Kyaiklat, the fishery lessees after closing the mouths of their fisheries are in the habit of flushing the channels at spring tides through sluices in their bunds. This brings the fish down to the lower parts of the fishery and facilitates their capture. The ingress of this water damages low-lying land where paddy reaping is necessarily somewhat late, and occasionally it even reaches the threshing floors on the higher lands. It would be well to prohibit the flushing of these channels altogether; or, if permitted at all, no water should be let in before March. Recommendations on these subjects will be fully dealt with in the Fishery report now under preparation. Here it will be sufficient to remark that the recommendations made include the removal of bunds on large streams in the Thazi and Tawhla circles, while it is also proposed to exclude from the leased fisheries numerous small streams which the villagers, either by bunding up or digging out, will be able to improve for the benefit of the neighbouring cultivation.

25. As might be expected from the numerous waterways and the nature of the country nearly all transport of merchandise is carried on by river. Roads are few and far between, and with the exception of the road from Ma-ubin to Yelégale, a distance of 9 miles, there are none of any length. With the numerous creeks which intersect the country in all directions roads are not a matter of vital importance in most places. In the Ma-ubin island, however, where the streams have been closed by the bund, several additional roads are required to facilitate the carriage of produce to the river bank and to encourage the establishment of villages in the interior. In other parts of the settled tract the bridging of creeks is all that is as a rule required for land communications. The most important point to be looked to in stream-bridging is the ensurance of sufficient headways for the boats using the stream. Large Burmese boats with carved and lofty sterns require a headway of about 15 feet; and if this is not allowed the bridge becomes an injury instead of a benefit to the neighbourhood. As the banks of the streams are very low, high bridges necessitate the construction of extensive earthworks to serve as approaches. These earthworks are a source of weakness; for unless carefully looked after they sink, and, leaving gaps at the ends of the bridge, render it impassable for carts. For cross-country tracks, constructed for the conveyance of produce, bridges over large streams are not perhaps very often necessary, the stream very probably forming the most convenient place for loading the paddy into boats plying to Rangoon. In order to avoid the necessity for raising the bridge and its approaches it might be possible to make one of the centre spans of the bridge movable. Some simple contrivance with levers on counterpoises for lifting a section of from

10 to 12 feet of the floor of the bridge would perhaps be practicable, this width being sufficient to allow boats of all sizes to get past without difficulty. While on the subject of communications it should be remarked that the To river between Dedayè and Ma-ubin forms the route followed by the main lines of steamers belonging to the Irrawaddy Flotilla Company. Up and down more than twenty steamers pass every week along this river in the dry weather; but when the river is high during the monsoon they are not so numerous; many of the up-steamers then following the Yandoon creek, which is a shorter route. Steamers run twice a week to Kyaiklat, Pyapôn, and Kyaikpi; while during the fine weather one of these boats weekly extends its trip to Pyindayè on the sea coast. Steam launches ply between Yelégale and Yandoon: an arrangement which gives to the latter place much of the local trade which would otherwise benefit the Ma-ubin bazaar. Other launches ply between Kyaiklat, Pyapôn, and Kyauzan in the Kyôntôn circle, while occasional launches and small steamers also come up from Rangoon calling in at the larger villages of Tani and Thongwa in the Maletto and Thongwa circles. Besides the Central Post office in Ma-ubin, there are branch or village post offices in Dedayè, Pyapôn, Kyaiklat, Kyaikpi, and other places. Ma-ubin is the only place connected with the telegraph system; but the administration of the district, to say nothing of local trade, would be benefited by the establishment of telegraph communication between the district headquarters and the towns of Pyapôn and Kyaiklat.

26. Pyapôn, which also includes the village of Thazi, and contains altogether about 800 houses, is perhaps the most important of the larger towns. It is the headquarters of the Pyapôn subdivision, which has an area of 2,600 square miles, with a population of about 150,000 persons. Large numbers of the townspeople are employed on the sea fisheries, and for a great portion of the dry season are absent from their homes. Dedayè, with 650 houses, is the headquarters of the Dedayè township. It used to be a Talaing village, but now it is more Upper Burman than anything else. A narrow sandy ridge, some miles in length, stretches away from the back of the town; this forms the site of an extensive Upper Burman village, or series of villages, containing some 400 houses. At the extremity of this ridge, near the river, rises the Tawchat Pagoda (တောင်စာပေတော်), a handsome edifice in which the inhabitants of Dedayè take great pride. Third on the list, but by far the most vigorous of the three, stands the town of Kyaiklat, with 630 houses and a rapidly increasing community of energetic traders. This place is not at present a township headquarters, but it should be made one; for standing as it does near the junction of a number of rivers, which form regular channels of communication with the surrounding country, its future importance is ensured. Again, from the fact that the Kyaiklat bazaar produces a revenue of about Rs. 1,637 per mensem against Rs. 831 at Pyapôn and Rs. 813 at Dedayè, it may be seen that Kyaiklat forms a centre to which a large rural population comes to buy the necessaries and luxuries of life. Ma-ubin, the headquarters of the district, contains only 558 houses, while its bazaar brings in the small revenue of Rs. 669 per mensem. At a first glance the progress of Ma-ubin, which has been the headquarters of the district for 16 years, has been slow. This is not to be wondered at, when it is remembered that until the Ma-ubin island was reclaimed, some eight years ago, the town was surrounded by an almost continuous waste of grass and swamp many miles in extent. With the reclamation of the island and the birth of numerous agricultural villages now springing into existence Ma-ubin will in time perhaps become a centre of trade as well as the administrative centre of the district. Amongst the more important villages are Maletto with 165 houses, and Tani with 420 houses; both fishing villages situated in the Maletto circle. In the Thongwa circle opposite Tani is the fishing village of Thongwa with 250 houses; while in the Tawhla and Dedayè circles the adjoining villages of Tawhla and Tawpayôn include 240 houses, the inhabitants being mostly agriculturists. Thameintaw with 400 houses in the Thazi circle is an important village; while Kyônmangè and numerous other villages are already large and growing places.



27. All paddy, except that retained in the country for food or seed, eventually finds its way to Rangoon; but as the most of it is laden on boats at the river bank, nearest to where it is grown, there are few local export markets of real importance. The sites of riverside villages, however, have in many cases been chosen on account of being convenient anchorages; here the boats congregate and load the paddy obtained from the country at the back of the village. Ma-ubin again, lying at the extremity of the Yelegale road, is the depôt through which is exported much of the paddy grown in the northern part of the Ma-ubin island. In the dry season the river bank is lined with temporary granaries, in which some thousands of tons of paddy are stored pending exportation to Rangoon when prices become favourable.

28. In comparison with paddy there are really no products which can be said to be of importance. Mangoes and plantains are largely grown on the banks of the rivers in the Thongwa township. Cocoanuts and betel-nuts are grown in considerable quantities, while dani is now cultivated very extensively on the islands of the Tawhla and Tomayan circles, and is also found on most of the tidal creeks where the water is brackish. The leaves of the dani form excellent thatch, of which large quantities are manufactured for sale and export. To village, in the Tomayan circle, is the only place in the settled area where salt is still manufactured. At this place there are six manufactories working on two different systems. The first system is by boiling the brine concentrated by evaporation in shallow open tanks formed like paddy-fields, while the second is by washing, in a strainer, earth which has become saturated with saline substances, the liquid obtained being then evaporated by boiling. This industry is the feeble remnant of the extensive and profitable operations which at one time furnished employment to a large number of persons. Since then, the competition of imported salt, the enhancement of the composition paid to Government, and the superior attractions of paddy cultivation have brought the industry to its present moribund condition. The forests produce large numbers of trees, which, although not remarkable for production of fine timber, furnish a considerable variety of dye-stuffs, while the wood itself is exported to Rangoon in considerable quantities for fuel. Endeavours were made some years ago to utilize the stalks of elephant (kaing နီဒါ) grass for the manufacture of paper. The stalks were cut in lengths, washed and beaten until the fibre was separated from all glutinous and extraneous matter. The fibre thus obtained was favourably reported upon as paper stock both in India and England; but the prices offered for the stock were too low to make its profitable production a possibility. Under more favourable conditions, however, with a local demand for the fibre, there is reason to believe that its production would be a financial success.

## CHAPTER II.

### GENERAL CONDITION OF THE PEOPLE.

29. The recent census shows the total population of the tract to be 192,919. The total cultivated area is 404,026.14 acres; so that there are 2.09 acres per person, while last year there was less than one acre per person. The density of this population per square mile is 133; the density in Thongwa being 100, in Dedaye 153, and in the Pyapon township 154. In considering these figures it is necessary to remember that the more sparsely populated portions of the Pyapon township have not been included in the settled area, so that the average density of the whole township is very much less than is given above.

30. With the object of obtaining trustworthy statistics of the condition of the agricultural population enquiries were instituted over a wide field; 6,731 paddy cultivators working in 233 kwins being examined in all. The figures thus obtained have been tabulated in Statement VIII of the appendices. Referring to these figures it will be noticed that besides being given in groups by circles

they have been classified by races, while these classes have again been subdivided under the heads of landowners and tenants. Under the head of Burmans are included Talaings. Burman (Sgau) and Talaing (Pwo) Karens have been grouped together; while the class "Other races" includes Karennis, Shans, and Natives of India.

31. From these figures it is found that the average number in the cultivating family is 5.1: Burman families averaging 5.0, while Karen families, of which the children remain longer with their parents than Burmans, average 5.3. The families of cultivators belonging to other races average only 4.4; the average being reduced by the fact that many of the natives have not married in this country, but periodically return to their wives and families in India.

32. The cost of living, averaged from the figures for all the cultivators examined, has been found to be Rs. 209 per family, or Rs. 9 per acre; while last year it was Rs. 193, or Rs. 12.5 per acre. As the holdings are larger than last year the cost of living per family is naturally larger; while the fact that the cost per acre is less shows that the increased cost of living per family is due more to the increased size of the holding than to a higher style of living. The average cultivating family is only able to cultivate about 12 to 15 acres, and as the average holding measures 21 acres this necessitates the extensive employment of hired labour. Although the actual charges for wages are debitable to the cost of cultivation, the increased stock of food-paddy, with increased charges for other classes of food consumed by the permanent labourers, raise the cost of living per family. At the same time as might be expected the cost of living has not increased in the same ratio as the acreage, and the rate per acre has therefore fallen. Leaving the above figures and considering those which have been tabulated by races it will be seen that the Karens live better than the cultivators of other races. This applies even to Karen tenants who, as a class, though naturally not so well off as the landowners, yet show a rate of living per acre higher than the landowners of other races. The houses in the older villages are substantial structures, and in the gardens which fringe the banks of the rivers the homes of the cultivators are sound and well constructed buildings. In the Christian Karen villages of the Ma-ubin island and its neighbourhood, the houses, solidly built of timber with shingle or iron roofs, are expensive and convenient structures. This indicates a high standard of well deserved prosperity, resulting from steady thrift and good husbandry on the part of the Karen cultivator.

33. Turning now to the cost of cultivation the average cost for all classes will be found to be Rs. 165 per family and Rs. 8 per acre, against Rs. 83 and Rs. 5 in last year's tract. It will thus be seen that the charges per family on this head have increased in more rapid proportion than the acreage of the holding. This is almost entirely due to the extravagant use made of hired labour, which costs an average of nearly Rs. 5 per acre, while in last year's tract, although the charges were high, they were less than Rs. 3 per acre. Hire of cattle amounts to nearly a rupee per acre, while the charge incurred annually through losses of cattle by death amounts to more than a rupee per acre. From enquiries made it has been ascertained that the cost of labour per acre, where hired labour only is used, amounts to Rs. 9 per acre, while the average expenditure per 21-acre holding on this head amounts to Rs. 95. This shows that of the entire holding an area averaging 10 acres is worked with hired labour, the cultivating family working the remainder. If, however, the case of the Burman and Karen cultivator is taken separately, it is found that the average cost of labour per holding is Rs. 123 and Rs. 57 respectively. As the average Burman holding is 23 acres, and the Karen holding is 19 acres, this shows that while the Karen agricultural family with its own hands cultivates 13 acres the Burman only cultivates 9 acres. The advantage thus obtained by the Karens is probably partly due to greater diligence and partly to the system under which Karen villagers, who are generally relations, mutually assist one another. Considering these facts it is not

surprising to find that with a higher standard of living the Karen by economical working of his holding is able to show a larger balance of profit than the more careless and easy-going Burman. While turning to the figures for indebtedness the Karen is seen to have a tremendous advantage over the Burman whose indebtedness, however, though considerable, is a good deal less than the profits which he obtains from his land. The figures for Karennis, Shans, Natives of India, &c., who fall under the head of "Others," show that, like the Karens, these classes make very satisfactory profits from their land, although, unlike them, their indebtedness is decidedly heavy.

34. The question of indebtedness has been more thoroughly dealt with in the following statement, which shows that only 6·3 per cent. of the debtors are practically insolvent; although of course some of the others may become so if they happen to be visited by some unlooked for calamity. The only circle in which the average indebtedness exceeds the net income is the part of Pyindayè which has been brought under settlement. Here the cultivators are new arrivals, who in their anxiety to secure large areas have incurred heavy liabilities which have been increased by the severity of cattle-disease. There is no reason to doubt that the majority of these people, with a run of a few good seasons, will succeed in extricating themselves from debt; but if cattle-disease increases or crops fail for one or two seasons it might certainly be advisable to assist them with agricultural loans. The heaviest incidence of indebtedness per acre is found in the Tawhla circle, but the Tomayan circle probably does not differ from it to any great extent. In both these circles the indebtedness appears to be the result of the facility with which credit can be obtained from the Dedayè and Rangoon money-lenders. In some cases the indebtedness met with consisted of advances made by Rangoon paddy-millers or their regular brokers. This is, however, unusual, most of the money being provided by local money-lenders and boat-owners, who in their turn get the money from the millers and their brokers.

*Return of Indebtedness.*

Township.	Circle.	Month in which examined.	TOTAL NUMBER OF CULTIVATORS.		PERCENTAGE OF CULTIVATORS.		PERCENTAGE OF INDEBTEDNESS CLASSIFIED.			AMOUNT OF DEBT.			INCIDENCE OF INDEBTEDNESS.		PERCENTAGE OF REASONS FOR INCURRING DEBT.				Remarks.
			Examined.	Indebted.	Not indebted.	Indebted.	Able to pay in one year.	Not able to pay in one year, but able to pay eventually.	Hopelessly involved.	Percentages of debts classified.		Total amount of debts.	Average amount of debt per person examined.	Average net income per person examined.	For expenses of cultivation.	For home expenses.	For purchase of land.	For purchase of cattle.	
										86 per cent. and under.	Over 86 per cent.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
THONGWA.	Ma-nbin Myoma	January	895	197	50.1	49.9	43.1	53.3	3.6	2.6	97.4	Rs. 31,106	Rs. 78.7	Rs. 105.0	51.3	20.8	3.0	24.9	Debts classified under column 8, as payable in one year, are those where the debt is not more than one year's net income after deducting all expenses of living and cultivation. Debts under column 9 are those amounting to more than one year's net income, but are not more than one year's gross income. Debts classified as those of persons hopelessly involved are debts amounting to more than one year's gross income.
	Minbaw	Do.	940	497	47.1	52.9	44.7	51.3	4.0	19.1	80.9	1,01,016	107.4	167.6	30.6	8.4	12.1	48.9	
	Seiktha	February	441	140	68.3	31.7	37.1	60.0	2.9	5.6	94.4	24,475	55.4	283.1	57.9	5.0	13.6	23.5	
	Yelegale	Do.	346	201	41.9	58.1	36.8	53.2	10.0	2.6	97.4	54,809	158.4	194.1	63.7	22.4	1.0	12.9	
	Maletto	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Thongwa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Kyomance	March	452	213	52.9	47.1	45.1	49.8	5.1	12.0	88.0	38,594	85.3	140.8	49.3	14.1	8.9	27.7	
	Dedaye Myoma	Do.	150	84	44.0	56.0	26.2	59.5	14.3	4.8	95.2	31,725	211.5	152.0	8.3	22.6	3.6	65.5	
	Wakame	Do.	252	111	56.0	44.0	40.5	50.5	9.0	15.8	84.2	29,508	117.0	157.3	25.2	32.4	9.1	33.3	
	Onbin	Do.	456	386	48.2	51.8	41.5	49.2	9.3	22.2	77.8	69,680	152.8	250.1	38.1	2.1	6.4	53.4	
	Tawhla	April	225	154	81.6	68.4	32.5	49.3	18.2	9.8	90.2	67,468	299.8	207.6	2.0	28.6	12.3	57.1	
	Tomayan	Do.	115	83	27.8	72.2	54.3	37.3	8.4	14.0	86.0	33,940	295.1	438.0	12.0	21.7	...	66.3	
	Pyapon Myoma	Do.	147	76	48.3	51.7	22.4	69.7	7.9	10.1	89.9	20,605	140.0	59.2	2.6	29.0	1.3	67.1	
	Taungbogyi	February	886	100	74.1	25.9	53.0	46.0	1.0	45.2	54.8	13,450	34.8	153.1	5.0	52.0	17.0	26.0	
	Singu	March	945	553	41.5	58.5	43.6	53.2	3.2	7.0	93.0	1,17,513	124.3	254.0	39.6	4.2	7.8	48.2	
Thazi	April	237	156	34.2	65.8	44.2	42.3	18.5	32.2	67.8	64,720	273.0	275.1	27.6	...	7.0	65.4		
PYAPON.	Kyaiklat	March	440	174	60.5	39.5	52.3	45.4	2.3	3.7	96.3	31,295	71.1	183.9	7.4	42.0	8.6	42.0	
	Kyanton	May	742	272	63.3	36.7	49.6	47.8	2.6	6.5	93.5	60,922	82.1	188.8	35.6	18.1	5.9	50.4	
	Pyindaye	April	62	88	38.7	61.3	34.2	42.1	23.7	48.9	51.1	21,780	351.2	317.0	21.1	...	2.6	76.3	
Total			6,781	3,285	51.2	48.8	42.9	50.3	6.3	13.6	86.4	8,12,601	120.7	198.0	33.2	14.6	7.8	44.4	



35. The condition of non-agriculturists varies within very wide limits, the prosperous Chinese or Burmese trader of the larger towns occupying the top rung of the ladder, while the Upper Burmans, who with wife and family support themselves upon the father's earnings as a coolie and the mother's earnings as a bazaar-seller, take up a position at the lower end. Occupying intermediate positions are small boat-owners, traders, and shopkeepers who are also in comfortable circumstances, though liable, like all speculators, to sudden changes of fortune. Fishery lessees should not be omitted, and although the dwellings in fishing villages are not as a rule imposing (a fact often due to the unsuitability of the site) the people themselves are generally prosperous and would be more so but for the fact that they are careless and unthrifty. Amongst other petty traders must not be omitted the ubiquitous Chittagonian pedlars, whose boats are met on every creek and who provide most of the clothing purchased by the rural population.

36. The total area of the settled tracts is 1,453.67 square miles, with a cultivated area of 404,026.14 acres or 43.42 per cent. of the gross area. The culturable waste area available for cultivation amounts to 223,864.08 acres, or 24.06 per cent. of the total area. Of this culturable area, however, some 35,000 acres consist of land suitable only for dry-weather cultivation, such as chillies, tobacco, sessamum, &c. In the Thongwa township, the waste comprises extensive plains covered with long grass, the greater portion of the area lying in Thongwa and Maletto and being flooded and unculturable. Further south in Pyapôn and Dedayè these grass plains are replaced by forests of more or less density, the trees bordering the banks of the streams being everywhere more numerous than further inland. Land thrown out of cultivation appears in every circle to a small extent. The abandonment of this land is generally caused by the availability of large areas of fertile land, which the cultivators take up in preference to their old holdings. In Maletto the large area thrown out of miscellaneous cultivation is to a great extent due to the cultivation being of a shifting nature. As was pointed out last year, changes in the river channels affect the islands and sandbanks on which this cultivation is situated, large areas being often rendered unculturable.

In the present year floods also caused a certain area to be thrown out of cultivation.

Township.	Circle.	Under paddy cultivation.	Fallow.	Miscellaneous.	Orchard garden.	GRAZING-GROUND.		Village-site.	LAND THROWN OUT OF PADDY CULTIVATION.		LAND THROWN OUT OF GARDEN AND MISCELLANEOUS CULTIVATION.		Monastic and pagoda land.	Road or canal.	TREE OR BUSH JUNGLE.		GRASS JUNGLE.		Under water.	Total area.
						Culturable.	Unculturable.		Culturable.	Unculturable.	Culturable.	Unculturable.			Culturable.	Unculturable.	Culturable.	Unculturable.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
THONGWA.	Maubin ...	Acres. 11,654.06	Acres. 1,440.04	Acres. 16.34	Acres. 1,548.01	Acres. 558.81	...	Acres. 157.66	Acres. 242.94	...	Acres. 49.87	...	Acres. 36.48	Acres. 197.25	Acres. 17.12	Acres. 101.20	Acres. 1,961.09	Acres. 1,737.65	Acres. 1,941.37	Acres. 21,780.00
	Minbaw ...	22,345.90	1,356.16	14.03	1,031.72	277.29	...	139.93	240.52	...	18.57	...	15.46	57.75	1,943.64	7.51	2,234.04	...	1,800.25	31,514.88
	Seiktha ...	15,379.40	910.92	603.69	1,042.86	3,221.33	160.22	213.56	432.83	...	420.17	...	15.38	177.65	1,853.98	1,735.50	8,974.11	1,043.64	5,819.86	42,005.10
	Yelegale ...	20,098.43	2,518.12	64.16	260.05	1,650.03	68.82	174.29	736.83	...	20.35	...	9.03	127.86	2,282.05	57.46	14,503.63	7,480.56	6,804.19	57,954.05
	Maletto ...	96.41	423.33	881.93	3,040.42	...	...	235.69	100.53	...	2,210.03	74.52	10.07	44.50	567.85	3,569.39	2,347.65	73,760.42	33,382.84	120,761.38
	Thangwa ...	623.00	98.24	52.97	2,928.84	...	1,169.89	38.56	541.5	...	41.55	...	19.13	20.70	3.26	31.15	4,762.32	29,712.95	4,595.91	44,305.62
	Kyomange ...	18,683.07	2,150.23	4.49	1,297.62	101.56	1,657.37	161.88	195.03	...	5.32	...	18.15	7.55	1,225.11	1,224.06	5,550.51	7,047.85	4,064.15	43,423.85
	Total	88,872.97	8,897.11	1,637.82	11,270.52	5,949.02	3,296.30	1,111.57	2,002.83	...	2,709.76	74.52	132.70	633.28	8,693.61	6,756.17	40,363.35	120,783.07	58,507.58	361,816.37
DIDAYE.	Dedaye ...	24,482.24	1,747.25	1.72	118.65	195.69	303.33	328.24	183.44	...	2.06	...	98.66	93.22	551.63	...	1,263.82	31.21	2,042.12	31,533.18
	Wakame ...	18,407.77	1,075.12	18.45	233.31	68.96	...	182.22	82.96	...	...	...	27.03	13.08	2,175.42	334.63	1,536.04	76.45	2,068.07	26,320.42
	Onbin ...	27,975.03	2,470.67	...	138.84	...	...	257.27	132.14	...	...	...	32.61	65.99	3,262.13	63.40	2,665.06	92.86	2,504.94	38,951.63
	Tawhla ...	26,245.06	2,192.60	...	798.45	2,786.59	...	212.77	346.80	...	5.42	...	23.57	51.13	19,570.65	12,483.12	7,144.57	1,664.54	13,164.08	86,580.20
	Tomayan ...	24,014.85	698.50	...	1,030.40	2,000.86	6.32	214.62	734.15	...	7.80	...	7.01	86.15	11,032.72	3,641.13	2,109.74	264.61	7,884.61	54,690.81
	Total	120,434.95	8,144.14	20.17	2,319.65	5,062.10	399.63	1,135.83	1,539.49	...	15.28	...	188.78	310.81	37,498.55	16,522.28	14,719.52	2,129.67	27,683.77	238,204.84
PYIN.	Pyapon ...	18,479.77	1,021.48	...	256.15	2.00	...	190.22	152.40	...	...	...	50.58	54.08	3,179.16	35.38	9,874.93	699.40	2,945.66	36,062.81
	Tanabogyi ...	18,564.74	1,379.51	...	456.95	5,807.02	60.77	167.89	665.45	...	39.71	...	15.17	34.28	3,612.40	304.25	17,998.03	4,505.13	3,565.39	57,199.28
	Singa ...	25,738.40	2,075.33	4.80	408.05	3.44	121.38	243.35	331.13	...	8.32	...	29.26	34.75	3,878.32	227.91	5,106.48	460.52	2,284.04	40,556.08
	Thapi ...	17,489.19	672.06	...	169.36	11.68	75	189.51	36.69	...	...	...	24.94	42.24	5,162.75	692.62	9,161.39	732.24	2,662.98	37,179.30
	Kyauklat ...	22,636.30	1,665.60	...	148.93	221.87	...	301.22	312.45	...	...	...	49.64	61.83	3,385.77	148.46	5,484.35	142.82	2,922.24	44,461.67
	Kyaukse ...	39,689.64	905.79	148.19	295.15	4,009.43	2,659.73	462.36	434.51	...	8.90	...	24.66	64.26	19,396.94	1,047.63	24,642.22	5,199.85	7,629.34	105,975.69
	Pyindaye ...	2,589.80	248.43	...	...	3.18	...	25.59	85.99	...	...	...	5.81	11.84	1,018.61	...	2,078.60	363.80	122.16	7,561.01
	Total	159,538.04	7,968.20	152.99	1,734.59	10,056.62	2,842.52	1,568.14	2,018.92	...	55.93	...	200.76	301.87	39,633.95	2,619.25	74,353.79	12,123.76	32,161.71	330,333.04
GRAND TOTAL		361,840.96	25,049.45	1,810.97	15,324.76	20,919.74	6,538.47	3,875.34	5,561.24	...	2,540.77	74.52	522.24	1,245.06	86,025.51	25,897.70	129,436.26	135,026.50	108,353.06	930,350.95

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37. The average area of paddy holdings is 24.03 acres, that of gardens 5.30 acres, and that of miscellaneous cultivation 3.85 acres. These areas are obtained from the Settlement Registers, while the figures for paddy holdings, obtained from the general agricultural statistics, are also shown in the statement given below. The area actually worked by each person is that recorded in the agricultural statistics, and in the case of larger holdings is often only a portion of the total holding. The average holding as deduced from these statistics is therefore smaller than that obtained from the Settlement Registers, which give the total area held and not only that which is worked.

*Average area of Holdings Circle by Circle.*

Circle.	PADDY-LAND.		GARDEN-LAND.	MISCELLANEOUS LAND.
	From Settlement Registers.	From general agricultural statistics.	From Settlement Registers.	From Settlement Registers.
1	2	3	4	5
	Acres.	Acres.	Acres.	Acres.
Ma-ubin Myoma ... ..	19.41	16	7.25	2.82
Minbaw ... ..	21.09	19	7.81	...
Seiktha ... ..	16.26	17	5.28	8.64
Kyónmangè ... ..	10.61	17	4.01	2.24
Wakame ... ..	22.13	19	1.69	2.68
Ōubin ... ..	35.86	29	3.13	...
Singu ... ..	25.81	20	3.60	1.91
Kyaiklat ... ..	25.08	18	4.11	...
Yelepalè ... ..	22.77	21	4.02	2.82
Pyapón Myoma ... ..	22.35	20	2.42	...
Taungbogyi ... ..	21.73	18	4.17	...
Kyóntón ... ..	20.95	21	3.40	2.84
Uedayè ... ..	34.20	31	4.70	.86
Tawhla ... ..	31.74	28	3.69	...
Tomayan ... ..	40.08	34	6.52	...
Thazi ... ..	33.32	33	5.42	...
Pyindayè ... ..	41.86	40	...	...
Maletto ... ..	5.51	...	6.29	4.42
Thóngwa ... ..	6.48	...	6.92	.71
Total ... ..	24.03	21	5.30	3.85

38. Although there are no trustworthy statistics giving the average size of holdings in former times, there is no doubt that the area is largely increasing. In this the tract differs from that settled last year; the reason probably being that the reclamation of the Ma-ubin island and the immigration of well-to-do cultivators from the Hanthawaddy district produced a land fever. This has led the more prosperous to buy up extensive areas, as a speculation, upon which large profits may be realized later on. The following statement gives the total area of paddy-land held by persons owning 100 or more acres. Where persons own two or more holdings in different kwins, it is possible that some of the holdings have been overlooked; the number of large holdings now shown, though fairly correct, being probably under the mark. The details from which these figures have been collected do not include the holding of Maung So in the Ōubin circle, which he obtained under the Waste Land Rules of 1865, and which has an area of 1,067.46 acres. Excluding this holding, which was obtained under exceptional circumstances, the largest holding measures 506 acres, and is also in the Ōubin circle. There is also one holding over 400 acres in extent, four between 300 and 400 acres, and 16 between 200 and 300 acres. Although a considerable portion of the area thus held by large owners has been acquired by purchase, a much larger area has been taken up by the owners under grants. It is satisfactory to find that nearly half the total area is cultivated by the owners themselves, while tenants work a much smaller proportion.

*Statement of Holdings of 100 acres and over 100 acres in area.*

Serial No.	Name of circle.	AREA OF HOLDING.				Number of holdings.	Remarks.
		Worked by self.	Worked by tenant.	Not worked.	Total area.		
1	2	3	4	5	6	7	8
		Acres.	Acres.	Acres.	Acres.		
1	Ma-ubin ...	226.64	169.56	84.21	480.41	8	
2	Minbaw ...	804.72	439.88	162.98	907.08	8	
8	Seiktha ...	15.58	100.01	...	115.59	1	
4	Yelegale ...	877.04	474.29	88.06	934.89	7	
5	Kyönmange ...	...	844.88	75.05	919.43	6	
6	Dedayé Myoma ...	1,858.92	1,061.69	168.15	3,088.76	28	
7	Wakame ...	116.55	546.00	114.39	776.94	6	
8	Onbin ...	1,675.82	485.04	2,688.25	4,849.11	27	
9	Tawhla ...	1,490.25	1,641.18	517.78	3,649.21	24	
10	Tomayan ...	1,998.36	1,965.12	195.18	4,158.66	81	
11	Pyapôn Myoma ...	226.61	196.40	4.65	427.66	4	
12	Taungbogyi ...	569.25	91.58	2.21	663.04	6	
13	Singu ...	342.59	606.77	81.97	1,031.33	6	
14	Thazi ...	2,089.56	405.53	233.69	2,678.78	21	
15	Kyaiklat ...	1,026.82	474.56	315.04	1,816.42	10	
16	Kyöntôn ...	1,010.61	865.07	19.89	1,895.57	10	
17	Pyindaye ...	...	391.82	84.97	426.79	8	
18	Thongwa ...	Nil	Nil	Nil	Nil	...	
19	Maletto ...	Nil	Nil	Nil	Nil	...	
	Total ...	13,279.32	10,258.38	4,731.47	28,269.17	196	

39. The only grant made under the rules of 1865 is that of Maung So, which is included in Kwin No. 845 (Myingagôn) situated just below Pyapôn in the Onbin circle. Grants made under old rules. Maung So's grant. Maung So obtained this grant in 1867, the area given on the deed being 331 acres. In 1879 the area within the boundaries given on the deed was measured and found to contain 1,100 acres. Although Maung So's title to exemption under the grant only extended to the area of 331 acres specified in the original document, it was ruled that the surplus area amounting to 769 acres should not be assessed until the grant area fell under assessment. The cadastral survey carried out prior to settlement operations found the total area of the kwin to be 1,431.51 acres. Of this area 1,067.46 acres are under cultivation. It has now been ruled that the cultivated area in excess of 331 acres shall be assessed at the current rates, which shall be subject to revision at the settlement now in progress. Under this authority the excess area has been classified in the same way as other settled areas, and falls within Assessment Tract V described in Chapter V. Maung So, unlike most of the other waste land grantees, resides on his land and has established upon it a village of some 60 houses, with two small outlying hamlets. Some of the land is worked by his sons as tenants, but there are numerous others. The development of the grant has been satisfactory, although ordinary extensions of cultivation in the neighbouring kwins and circles have now left the grant kwin in a comparatively backward condition, as regards the proportion of cultivable waste to cultivated area. The area under cultivation, as mentioned above, has not yet been assessed, and the tenants are paying rents, amounting to one-seventh of the gross outturn, instead of one-tenth, which is the amount often paid in fully assessed kwins. The total amount paid by tenants was this year 4,639 baskets. It is noticeable that, although the kwin has been cleared by tenants, without any great expenditure of capital on the part of the grantee, the land has been mortgaged for Rs. 8,700. The grantee appears to get on very well with his tenants, though he complains of occasional difficulties in collecting his rents. There have been trifling disputes with the cultivators of neighbouring kwins regarding the unauthorized grazing of cattle within the grant area, but they were settled without difficulty.



40. Another waste land grant falling within the Tawhla circle and measuring 354 acres 3 annas 8 pie was made to a Mr. Lucas's grant. Mr. Aviet in 1866. In 1879-80 the grant had been practically abandoned, while the cultivators for some time had been assessed for land revenue. The Government then took over the land formally and paid a considerable sum as compensation to the successor-in-interest of the original grantee.

41. The absence of trustworthy statistics connected with the former condition of the tenant classes renders it impossible to make any comparison between their past and present condition. Condition of tenants. There is reason to believe, however, that the condition of the tenants has improved with the increased value of the crops; but if rents continue to rise further improvement can scarcely be expected. As mentioned in previous reports, the line between the landlord and tenant classes cannot be very firmly drawn. Between the classes of the prosperous landowner with extensive estates, and the impecunious but light-hearted tenant, who, possibly with no experience, has lately taken to agriculture and is burdened with debt there is certainly a wide space. These are, however, the two extremes, and between them range the intermediate ranks occupied by solvent tenants, of whom some have acquired small holdings of their own, although for various reasons they also rent and work land belonging to others. Statement VIII of the Appendices gives some interesting figures relating to the present condition of the tenant classes. Remembering therefore that these figures include persons who in some cases own land of their own, it will be understood that the condition of the tenants proper is perhaps a little below the average thus obtained. Comparing the figures relating to the cost of living recorded for tenants, with those recorded for the corresponding classes of landowners, it will be seen that the difference in the standard of living, although not very considerable, is distinctly lower. As might be expected, the cost of cultivation is also appreciably lower; for although the tenants often have to hire cattle from the landowners, they employ much less hired labour. This increased diligence on the part of the tenant apparently results from the knowledge that a large proportion of the outturn will necessarily be swallowed in the payment of rent to the landlord. A certain anxiety about the margin left for the cultivator himself is thus created, and he is induced to put forward his best efforts. The slightly larger outturn per acres, shown by the tenants as compared with the landowners, is probably due to the fact that the outturns admitted by tenant cultivators are correct. Landowners, on the other hand, although wonderfully straightforward in giving information about their holdings, are inclined to slightly underestimate the average outturn, by giving figures for the crops obtained in exceptionally bad years. The statement given below shows that 29.14 per cent. of the total area under paddy is held by tenants, a slightly greater proportion than in last year's tract, where the area rented was also very large. In Ma-ubin, Kyônmangè, and Wakame, the proportion rented is the largest, being over 40 per cent. in each case. Much of the land in Ma-ubin circle is owned by clerks, traders, and others, whose only interest in their land is to sell it well, or screw a heavy rent out of the less fortunate new arrivals. In Kyônmangè the landowners have in many cases migrated to the Ma-ubin island and made new clearings there, their original holdings being worked by tenants. In Wakame there are large numbers of newly arrived Upper Burmans. These people have not yet been able to acquire land, and as the landowners find it easier to draw rents than to work the land themselves, large areas are let. Turning to rents it is found that they are highest in Seiktha, where they average Rs. 8.32 per acre; while they are lowest in Dedayè, where the soil is much less fertile. The average rent paid amounts to Rs. 5.63 per acre, or more than three times the incidence of the present land revenue. The highest and average rents paid in the tracts settled last year were considerably below those now met with, while the average incidence of the rent was much less than three times the revenue.

District	Township	Circles	Total area of paddy in circle.	Number of landholders.	Number of tenants.	AREA RENTED.			Amount of rent not including reveque.	Amount of revenue paid by tenant.	Total amount of rent and revenue paid by tenant.	Total outturn of land rented.	Average price of paddy per 100 Government baskets.	Value of outturn.	Outturn per acre.	Total rent per acre paid by tenant, columns 7 and 12.	Incidence per acre of present revenue on paddy land in same circle.	Percentage of rented to total area, columns 9 and 4.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
THONGWA	THONGWA.		Acres.			Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Baskets.	Rs.	Rs.	Bkts.	Rs.	Rs.		
		Maubin	13,094.70	245	288	4,909.55	249.68	5,249.23	36,033.60	606.89	36,640.56	268,041.92	65.98	1,76,854.06	53.61	7.32	2.38	40.08	
		Minbaw	22,699.16	306	375	6,238.86	109.49	6,348.35	42,387.09	1,075.43	43,462.52	267,968.87	67.26	1,80,234.52	42.95	6.06	2.08	26.78	
		Seiktha	16,290.32	352	394	5,831.71	235.77	6,067.48	47,271.20	1,301.15	48,572.35	288,264.62	65.16	1,74,814.26	46.00	6.32	1.96	37.24	
		Yelagala	23,616.63	319	365	5,880.87	504.81	6,385.68	36,381.01	1,759.74	38,140.75	263,856.83	65.21	1,72,061.04	44.87	6.48	1.56	28.23	
		Maletto	519.74	5	6	14.25	32.73	46.98	...	66.44	66.44	672.97	63.26	425.78	47.22	4.66	1.50	9.03	
		Thongwa	721.24	3	3	30.09	5.61	35.70	131.65	21.75	153.40	1,476.55	65.61	90.576	49.07	5.09	1.82	4.94	
		Kyanmangé	30,833.30	465	596	8,590.66	703.19	9,293.85	46,613.52	3,978.08	50,591.60	309,950.55	72.25	2,17,376.77	35.03	5.88	1.65	44.61	
		Total	97,775.98	1,088	1,017	31,585.99	1,841.28	33,427.27	208,816.16	8,809.48	217,627.64	1,371,250.31	...	9,22,735.19	43.41	6.89	1.88	34.18	
	DEDATE.	Dedaye	26,229.49	235	276	8,336.89	444.61	8,771.50	28,261.61	5,649.09	33,910.90	221,379.41	67.85	1,50,185.57	26.58	4.07	1.47	33.44	
		Wakame	19,482.90	397	477	8,047.39	380.03	8,427.42	38,839.85	6,183.40	45,023.25	295,290.54	69.54	2,05,324.18	36.68	5.59	1.98	43.35	
		Onbin	23,745.70	308	438	10,577.75	710.81	11,288.56	36,891.35	11,143.05	48,034.40	297,039.36	69.50	2,06,442.36	28.08	4.54	1.87	37.95	
		Tawhia	28,437.06	231	330	8,230.60	444.85	8,675.45	34,246.05	6,026.35	40,272.40	270,184.91	64.48	1,74,215.23	32.83	4.89	1.72	30.50	
		Tomayan	24,713.35	206	273	7,763.07	73.41	7,836.48	38,861.77	12,613.78	51,475.55	264,992.12	72.03	1,90,847.32	34.13	6.63	1.92	31.70	
		Total	128,609.09	1,375	1,786	42,945.70	2,053.71	44,999.41	1,77,100.83	41,617.67	2,18,718.50	1,348,856.34	...	9,27,014.65	31.40	5.09	1.78	34.93	
	PYAPON.	Pyapou	19,801.25	217	250	4,477.69	234.21	4,711.90	12,806.37	6,501.61	19,307.96	149,049.97	66.83	99,010.09	33.28	4.31	1.56	24.10	
		Taungbogyi	19,244.25	152	170	2,889.69	165.40	3,055.29	11,426.80	1,782.61	13,209.41	119,626.33	64.28	77,024.36	41.46	4.57	1.05	15.31	
		Singu	27,813.73	276	353	6,169.52	217.44	6,386.96	35,619.73	2,335.63	37,955.36	243,663.79	76.08	1,85,379.41	39.49	6.15	1.33	22.96	
		Thasi	18,161.26	189	200	5,162.18	44.29	5,206.47	17,649.15	6,942.52	24,591.67	184,896.94	65.85	1,21,754.63	35.82	4.76	1.23	28.05	
		Kyaiklat	31,302.10	409	508	8,806.87	423.19	9,230.06	45,734.31	2,463.26	48,197.57	354,988.24	70.41	2,49,912.01	40.30	5.46	1.42	29.49	
		Kyontau	39,945.43	228	283	5,185.91	89.87	5,275.11	22,816.85	2,373.75	25,190.60	192,369.75	73.06	1,38,421.18	37.08	4.85	.86	13.20	
		Pyindaye	3,838.23	13	16	436.17	18.88	455.05	1,126.09	997.77	2,123.86	16,656.24	69.13	9,848.63	36.18	4.87	1.88	11.86	Only 4 kwins.
		Total	160,806.24	1,474	1,780	33,127.56	1,193.28	34,320.84	1,47,181.30	23,337.15	1,70,518.45	1,361,300.26	...	8,82,020.51	38.07	5.14	1.30	21.38	
	GRAND TOTAL		386,890.41	4,537	5,583	107,659.25	5,088.27	112,747.52	5,33,100.29	73,764.30	6,06,864.59	3,961,406.91	...	27,31,770.35	38.98	5.63	1.61	29.14	

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42. Some clue to the reasons which lead to the renting and letting of land will be found in the subjoined statement. A very large number of the cases where land is let are attributed to sickness and death in the cultivating family, but there is little doubt that laziness is in many cases the real cause. The proportion of non-agriculturists who hold land is not large, most of the large landowners, as was pointed out in paragraph 38, cultivating a portion of their land themselves. The landowners falling under the head of "Wishing to trade," are rarely genuine agriculturists; but rather jacks-of-all trades, who try a little agriculture occasionally when sufficiently energetic. Those renting land on the grounds that the holding is too far from home to work conveniently have in many cases taken up fresh land elsewhere and have moved their residences thither. Under the last head are classed those who do not work their land for reasons ranging from evil omens to imprisonment for serious crimes. The reasons given for renting land show that 40 per cent. of the persons who work in this way are regular tenants, who have not the means to acquire land. It will be seen that these tenants rarely cultivate the same holding for any length of time; 99 per cent. of all the tenants having been in occupation of the holdings which they now cultivate for less than five years. Persons who have just immigrated, naturally form a large proportion of the tenants; while 10 per cent. of the tenants themselves own land, though it is insufficient for their requirements. This large and increasing tenant class is not to be overlooked. The presence of a large community, very slightly attached to the soil which it works, is liable to restlessness and movement when attracted elsewhere by lower rents, thus constituting an element antagonistic to effective administration. To transform these people into a permanently-settled population by giving them a direct interest in the soil would be highly beneficial, and besides increasing the contentment of the cultivators themselves would facilitate the satisfactory working of the newly introduced regulations for village administration.

REASONS FOR LETTING.			REASONS FOR RENTING.		
Serial No.	Reasons.	Percentage of cases.	Serial No.	Reasons.	Percentage of cases.
1	2	3	4	5	6
1	Sickness or old age of cultivator ...	18.10	1	Own land flooded ...	.47
2	Death of member of family ...	6.80	2	Own land barren ...	.28
3	Not being a cultivator ...	5.22	3	Wishing to cultivate independently, being previously a field labourer.	4.75
4	Holding too small to work profitably	4.48	4	Wishing to cultivate independently, being previously a petty trader or of other occupation.	1.22
5	Land mortgaged with possession and leased by the mortgagee.	.92	5	Own land sold because of debts ...	2.02
6	Owner wishing to trade ...	11.00	6	Own land mortgaged with possession.	1.22
7	Death of cattle ...	4.45	7	Separating from parents and setting up house.	4.25
8	Cattle sold on account of poverty...	.22	8	Own land let because far from house or because its position is considered unlucky.	.88
9	Inherited land ...	1.01	9	Just immigrated ...	25.52
10	Large landowner ...	28.85	10	To plant nurseries ...	.07
11	Wanting to clear new land ...	1.12	11	Annually rents land not being able to purchase it.	41.16
12	Heirs inheriting land too young to work.	.82	12	Own land not sufficient...	18.85
13	Land distant from house ...	10.28	13	Other reasons ...	7.86
14	Other reasons not falling under the above.	12.28			
	Total ...	100.00		Total ...	100.00

Tenants classified.					Percentage.
Under five years' occupation	...	...	...	...	99.05
Over five years' occupation	...	...	...	...	.95
Total	...	...	...	...	100.00



## CHAPTER III.

## PAST ASSESSMENTS AND FISCAL HISTORY.

43. The extraordinary growth in the assessment during the last 20 years is shown in Statement IV of the appendices. The rate of increase has been exceedingly rapid, and with few exceptions the growth from year to year has been steady. The reasons for such fluctuations as have occurred are, as a rule, closely allied with those which produce fluctuations of area and will be fully dealt with in Chapter IV. Here it will only be necessary to state that the check to expansion in 1875 was caused by severe floods, while the increase of 1879 was caused by a summary enhancement of rates which took effect over the whole district. This enhancement in some cases amounted to as much as 25 per cent.; it was justified by the fact that the prices of produce had risen enormously since the original rates of assessment had been determined. The depression due to the disturbances which followed on the annexation of Upper Burma in 1885 was of short duration. It must be noticed, however, that the rapid rate of expansion which has since been the rule is not only due to the fact that the country returned to a state of peace, but more to the reclamation of the Ma-ubin island, where large areas have fallen under assessment.

44. Going back to a period previous to the annexation of Pegu it is found that cultivation was then limited to small areas sufficient to produce the crops required for the home consumption of the fishing population.

It is natural to suppose that the energies of the officials were directed more towards the collection of the capitation and fishery taxes, which produced a large revenue, than towards the less important dues leviable upon the land. In fact, in many places, no land revenue appears to have been collected, a result which, in some cases, was probably due to the fact that the landowners were in the service of Government. In others these men earned their exemption from land revenue by payment of contributions levied for the support of Government servants who were practically quartered upon them. Where regular assessments were enforced the rates varied, but where plough-cattle were regularly used it took the form of a plough-tax, while in other places, where the cultivation was carried on by annual clearing away of the grass jungle, the rate levied was on the da, or rather the man who used it. In Thazi the annual rate was 30 ticals per plough, while in Kyônmanè it was a tical per da. Without statistics of the areas on which these assessments were levied it is not possible to accurately obtain their incidence. The area then worked with one plough was, without doubt, much larger than at present, for it was then customary to use two yoke of oxen for each plough, one yoke being worked in the morning and the other in the afternoon. In this way the outturn obtained from one plough would probably be something between 1,000 and 1,500 baskets. In Thazi, where this information was collected, there was some local demand for paddy, and the price varied from 10 to 15 ticals for 100 baskets. Taking the average of these figures for outturn and value, the total value of the outturn is found to be over 150 ticals, so that the assessment was about one-fifth of the outturn. The average outturn, as given by the Thazi cultivators, is 32 village baskets per acre, so that the area assessed at 30 ticals, and which produced 1,250 baskets, might have been, perhaps, 89 acres, giving a rate per acre of  $1\frac{1}{3}$  ticals, or just about one rupee. It must be remembered, however, that these figures, although interesting as probabilities, cannot be accepted as facts in the absence of data relating to areas and outturn obtained; while as to the area cleared by one da no information whatever is available. If, however, the ordinary cultivator was not more energetic than his successor of the present day the results would not be extensive.

45. Although settlements of portions of the districts were effected in 1861 and again in 1871 and following years, no records whatever are now available, though the settlements themselves are remembered and mentioned

Methods adopted at previous revisions of rates.

by the older residents. A village, or party of cultivators, contracted to pay for a term, generally of ten years, a fixed sum as revenue on a certain definite area. The area thus assessed included large extents of waste in which extensions of cultivation would be made without increase of assessment. A settlement of this kind, met with in the Kyaiklat circle, was made in 1861. It included the greater portion of the present Kyaiklat circle and most of the neighbouring circle of Singu. The revenue then paid was Rs. 4,310, the present revenue on the same area being about Rs. 50,000.

46. The amount of the present assessment in the year of settlement was including cess Rs. 6,60,424-08. Excluding cess the amount was Rs. 6,00,385-53, or three-fifths of the total assessment of the district. Including fallow and fruit tree rates the average incidence of this assessment on the total assessed area is, without cess, Re. 1-62 per acre. In Statement XII of the appendices will be found the incidence in detail by kwins and tracts. Map No. I graphically demonstrates the present rates of assessment. From this it will be seen that the classification adopted was very rough, the rates practically being two only. The first or Rs. 2-8-0 rate includes the eastern side of Ma-ubin island and the greater portion of the Dedayè township, while the Rs. 2-4-0 rate includes the whole of the Pyapôn township and the remaining area in the Ma-ubin island. Proximity to the Rangoon market evidently governed the classification of the kwins, but no discrimination was made for variations in the cost of cart-hire. Why the solitary kwin of Ahu No. 696 opposite Kyaiklat should have been assessed at a special low rate is a mystery, unless it was done with the object of encouraging the original Karen cultivators; the kwin itself being fertile and conveniently situated.

47. Statement V of the appendices shows that the average amount of arrears during the last few years was 1-30 per cent. of the total assessment. In the Thazi and Pyindayè circles, where the arrears are over 5 per cent., there is some indebtedness, on which comment was made in paragraph 34. Where the opening out of the country is still in progress, as it is in these circles, temporary embarrassment is not surprising. There is no reason, however, to believe that the incidence of the present demand is too high; while the proposed demand, though 21 per cent. greater than it is at present, will be paid without difficulty. In Statement VI of the appendices are tabulated the figures for the remissions which have been granted on account of land revenue and cess during the last four years. The average annual area on which remissions have been granted amounts to 58 per cent. of the total area under assessment. Of these remissions 88 per cent. were made on account of floods, 9 per cent. on account of incorrect measurements, and 3 per cent. in consequence of the cultivators absconding.

48. In a country which has opened out within a comparatively short time and where extensive areas are only now being brought under cultivation, it is not to be expected that land would change hands at very high prices. Except in Thongwa, where a small area fetched over Rs. 25 and which, though planted with paddy at the time, was really garden-land, the prices range below Rs. 15 per acre. It is also noticeable that, whereas the average area of paddy-land transferred in each transaction was last year only 12 acres, it this year amounts to 22 acres, corresponding with the increase in area of the average paddy holding. At present over 6 per cent. of the total cultivated area is changing hands by sale annually, a large proportion, which will probably decrease as the population settles down permanently. Until paddy was exported largely the value of land was almost nil; although garden-land, valuable from its proximity to a village, or of exceptional excellence, occasionally fetched high prices. Within the last few years the price has risen very considerably. Land in parts of Tomayan which some five or six years ago changed hands for Rs. 400 to Rs. 500 now fetches Rs. 900 to Rs. 1,000. These are the rates which have been given for an area producing 1,000 baskets. Taking the average outturn per acre to be 30 village baskets, as calculated from Statement VIII of the appendices, we find this area to be about 33 acres. The price per acre obtained for

this land five or six years ago was, therefore, about Rs. 14, while now it is Rs. 29. These, however, are somewhat exceptional prices, the inflation being the result of purchases made by Natives of India and others, with capital borrowed in Rangoon. In spite of the facilities given for the allotment of waste land, it is not unusual for grants to change hands for Rs. 2 to Rs. 4 per acre immediately after issue, and before the land has been cleared. This is the case in the Ma-ubin island, where many of the grants are mortgaged to money-lenders, in Yandoon, and other places, as soon as the grants deeds are obtained from the Revenue office. The area under garden and miscellaneous cultivation which changes hands is small, and although the average price per acre obtained is high, being Rs. 42 and Rs. 13 respectively, this has scarcely the same bearing on the condition of the people, as is exerted by the increasing value of paddy-land. Accidents of position, in the case of garden-land, govern the prices so largely that deductions from the figures obtained for the small area sold are scarcely safe.

*Annual sales of Land (average of four years).*

Township.	Circle.	PADDY-LAND.					GARDEN-LAND.					MISCELLANEOUS.				
		Number of sales.	Area sold.	Price paid.	Rate per acre.	Percentage of total area.	Number of sales.	Area sold.	Price paid.	Rate per acre.	Percentage of total area.	Number of sales.	Area sold.	Price paid.	Rate per acre.	Percentage of total area.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
			Acres.	Rs.	Rs.			Acres.	Rs.	Rs.			Acres.	Rs.	Rs.	
THONGWA.	Ma-ubin	52	633.06	9,459.30	11.34	0.37	4	21.63	553.75	25.60	1.81	...	...	...	...	...
	Mitubaw	93	1,015.37	19,634.00	12.15	0.82	4	11.21	346.25	30.88	1.08	...	...	...	...	...
	Seiktha	82	1,312.67	14,301.25	10.81	0.05	3	11.35	893.60	34.24	1.11	1	6.46	20.75	3.21	1.07
	Yelegale	69	1,500.39	11,466.75	7.64	6.63	...	...	...	...	...	...	...	...	...	...
	Maletto	2	0.07	50.75	8.86	1.16	10	53.16	2,421.25	45.54	1.75	5	25.38	450.00	10.56	2.87
	Thongwa	2	8.30	211.25	25.45	1.16	14	58.60	3,968.75	44.70	3.03	1	.42	1.25	2.07	.79
	Kyounnangé	69	1,210.03	12,907.75	10.58	5.81	7	29.44	1,613.75	54.81	2.27	...	...	...	...	...
	Total	360	6,486.49	67,881.25	10.45	6.63	43	215.89	9,290.25	43.13	1.95	7	32.23	442.00	13.71	1.96
DEDAYE.	Dedayé	52	1,651.63	12,644.62	7.65	6.29	1	.80	142.50	237.50	.51	...	...	...	...	...
	Wakame	55	1,220.80	10,318.25	8.45	6.27	3	6.70	298.75	34.34	0.73	...	...	...	...	...
	Oubin	70	1,958.91	24,070.50	12.28	0.50	1	.32	78.75	240.00	.23	...	...	...	...	...
	Tawhla	57	1,471.97	14,027.25	9.52	5.18	1	5.50	456.25	82.95	.09	...	...	...	...	...
	Tomeyan	30	1,352.52	19,544.00	14.45	5.46	2	17.10	240.00	14.03	1.66	...	...	...	...	...
	Total	274	7,056.95	80,604.62	10.62	5.05	6	32.22	1,216.25	37.74	1.89	...	...	...	...	...
FRANCA.	Pyap'an	60	1,250.54	9,147.12	7.31	6.41	...	...	...	...	...	...	...	...	...	...
	Taungbogyl	67	1,346.44	9,989.00	7.35	6.75	1	3.11	80.00	25.72	.66	...	...	...	...	...
	Singu	80	1,847.30	13,458.50	6.74	6.64	2	1.88	13.75	7.31	.47	...	...	...	...	...
	Thazi	33	1,077.88	5,950.37	5.52	5.59	...	...	...	...	...	...	...	...	...	...
	Kyathlat	98	1,098.40	15,074.75	7.57	6.35	...	...	...	...	...	...	...	...	...	...
	Kyentan	116	2,428.19	21,492.25	8.86	6.28	...	...	...	...	...	1	1.30	2.50	1.92	.88
	Pyindaye	7	812.14	1,891.50	6.06	8.13	...	...	...	...	...	...	...	...	...	...
	Total	459	10,245.88	75,928.50	7.41	6.36	3	4.99	93.75	18.78	.28	1	1.30	2.50	1.92	.88
	GRAND TOTAL	1,101	24,387.77	2,24,868.37	9.19	6.20	53	262.80	10,609.25	41.96	1.64	8	33.53	444.50	13.26	1.65

19. The amount raised per acre on mortgages of paddy-land is slightly greater than that obtained by sale. It would be greater but for the fact already mentioned that

considerable areas are mortgaged when first taken up before their value has risen with their cultivation.

*Land mortgages.*

Township.	Circle.	PADDY-LAND.					GARDEN-LAND.					MISCELLANEOUS.					Remarks.
		Number of mortgages.	Area mortgaged.	Sum for which mortgaged.	Rate per acre.	Percentage of total area.	Number of mortgages.	Area mortgaged.	Sum for which mortgaged.	Rate per acre.	Percentage of total area.	Number of mortgages.	Area mortgaged.	Sum for which mortgaged.	Rate per acre.	Percentage of total area.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
			Acres.	Rs.	Its.			Acres	Rs.	Its.			Acres	Rs.	Its.		
THONGWA.	Ma-ubin	34	579.15	7,800.00	13.46	4.42	...	...	...	...	...	...	...	...	...	...	...
	Minbaw	67	1,303.30	12,050.00	9.24	5.49	...	...	...	...	...	...	...	...	...	...	...
	Seiktha	63	1,217.26	12,438.00	10.21	7.17	1	6.63	80.00	12.21	.63	...	...	...	...	...	...
	Yelegale	53	1,302.01	11,230.00	8.62	5.75	...	...	...	...	...	...	...	...	...	...	...
	Maletto	1	2.08	15.00	7.21	.40	4	17.69	235.00	13.13	.20	...	...	...	...	...	...
	Thongwa	5	30.15	440.00	14.59	4.18	2	9.71	2,300.00	23.68	.23	...	...	...	...	...	...
	Kyounmangé	73	1,227.05	15,238.00	12.41	5.88	3	5.26	425.00	79.20	.41	...	...	...	...	...	...
	Total	295	5,661.00	59,211.00	10.45	5.78	10	39.59	3,040.00	76.78	.35	...	...	...	...	...	...
DEDAYE.	Dedaye	50	1,738.32	19,109.00	11.02	6.02	...	...	...	...	...	...	...	...	...	...	...
	Wakame	46	1,144.88	11,683.00	10.23	5.87	...	...	...	...	...	...	...	...	...	...	...
	Onbin	59	3,317.43	20,732.00	6.24	11.05	...	...	...	...	...	...	...	...	...	...	...
	Tawhla	80	2,955.29	34,727.00	11.75	10.39	...	...	...	...	...	...	...	...	...	...	...
	Tomayan	62	2,515.54	30,169.00	15.57	10.17	...	...	...	...	...	...	...	...	...	...	...
	Total	298	11,671.46	1,25,630.00	10.76	9.05	...	...	...	...	...	...	...	...	...	...	...
PYAPON.	Pyapon	59	1,327.43	13,885.00	10.46	6.80	...	...	...	...	...	...	...	...	...	...	...
	Taungbogyl	43	888.42	8,363.00	9.41	4.45	...	...	...	...	...	...	...	...	...	...	...
	Singui	62	1,385.47	15,529.00	11.20	4.95	...	...	...	...	...	...	...	...	...	...	...
	Thuzi	51	1,623.35	20,734.00	12.77	8.73	...	...	...	...	...	...	...	...	...	...	...
	Kyalklat	69	1,702.90	14,766.00	8.67	5.44	...	...	...	...	...	...	...	...	...	...	...
	Kyouton	94	2,150.87	21,350.00	9.92	5.88	...	...	...	...	...	1	6.97	50.00	7.17	4.70	...
	Pyinlaye	16	1,029.38	12,567.00	12.40	25.61	...	...	...	...	...	...	...	...	...	...	...
	Total	394	10,107.82	1,07,194.00	10.60	6.29	...	...	...	...	...	1	6.97	50.00	7.17	4.55	...
	GRAND TOTAL	688	27,440.28	3,92,035.00	10.64	7.08	10	39.59	3,040.00	76.78	.35	1	6.97	50.00	7.17	.38	...

50. The reasons given for selling and mortgaging land have been tabulated in the following table, but the information obtained cannot be said to be very valuable. Under sales 19.94 per cent. are said to be caused by the vender moving near his relations or because his house is far distant. Such sales are generally followed by the acquisition of fresh land elsewhere. They denote that there is still plenty of land available for cultivation and show that, attracted by rumours of more fertile and better situated areas, the people are still somewhat restless and migratory. Losses caused by poverty occasion some 15.96 per cent. of the sales, a proportion which is by no means large, considering that many of the cultivators have commenced work quite lately with little or no capital of their own. Land obtained on inheritance is very often sold and includes 18.89 per cent. of the total sales. These, however, should scarcely be included amongst ordinary sales as the land in many cases remains in the family. The purchaser, under the ordinary rules of inheritance, being generally one of the heirs who, where the property is too small for division, buys out the shares of the co-heirs. Under mortgages 63.77 per cent. of the cases recorded are credited to poverty brought about by various causes. Such mortgages include the very numerous cases previously mentioned, where newly acquired land is mortgaged, in order to raise money for the purchase of cattle and other expenses incidental to the starting of cultivation.



*Reasons for selling and mortgaging land.*

Serial No.	Reasons.	PERCENTAGE OF CASES.		Remarks.
		Average annual number of persons selling.	Number of persons mortgaging.	
1	2	3	4	5
1	Poverty caused by reasons other than loss of cattle or failure of crops.	10.62	25.13	
2	Poverty caused by failure of crops ...	.26	.40	
3	Poverty caused by loss of cattle and purchase of new animals.	5.08	38.24	
4	Being a money-lender or of occupation other than a cultivator.	.84	.50	
5	Abandoning agriculture ...	3.96	...	
6	Holding too small ...	8.27	...	
7	Inherited more land than he can work ...	19.89	.50	
8	Land barren ...	1.44	.80	
9	Land flooded ...	2.30	1.30	
10	Moving near relation ...	19.94	1.00	
11	Sickness or old age of cultivator or family ...	6.81	2.60	
12	Death of cultivator or member of family ...	6.20	3.20	
13	Land far from home or other holding ...	9.20	.50	
14	Reasons other than above ...	11.69	26.33	
	Total ...	100.00	100.00	

## CHAPTER IV.

## PROGRESS OF THE COUNTRY SINCE THE LAST REVISION OF RATES.

51. As has been remarked in the previous Chapter the last revision of rates took place in 1879, when a summary increase, amounting in some cases to 25 per cent., was imposed in all circles. It will, however, be interesting to go back further than this, and trace from year to year the extraordinary development of the three townships which have been brought under settlement. With this object in view Statement No. VII of the appendices, showing the assessed area for the past 20 years, has been prepared. From this it will be seen that the percentage of increase in area during this period has been 648.83. Taking the three townships separately it should be noted that the development of Dedayè and Pyapôn has been brought about by ordinary extensions of cultivation, due to the immigration of Burmans from Upper Burma and Talaings from Hanthawaddy and Pegu. The Thongwa township, on the other hand, owes its rapid growth to the construction of the Ma-ubin bund; the area thus reclaimed having been taken up by cultivators from the Shwelaung and Yandoon townships and from Bassein. Turning to the figures of the statement the rapid growth from 1871 to 1875 will be noticed. During this period a severe famine occurred in Bengal, and large quantities of rice being required for export prices rose considerably, while under the stimulating prospect of the large and certain profits, which thus appeared within reach, extensive areas were rapidly brought under cultivation. Much of this land was taken up on borrowed capital, and with cattle-disease and low prices in 1874-75, followed by severe floods in 1875-76, reaction set in, the increase during the next few years being much less rapid. Besides affecting the growth of the total assessed area it will be noticed that these calamities resulted in a large proportion of that area being left fallow. In the district administration report of 1876-77 the Deputy Commissioner attributes the increase of fallow to:—

"Large areas being exhausted, especially in Dedayè, while the rates on some of the kwins in that circle appear too high."

Although the soil of the Dedayè circle is somewhat sandy and poor, it is still worked at a profit, and the exhaustion does not appear to have been as serious as was imagined. The unequal pressure of the rates was an evil which has been put right on settlement. Allowing these causes to have had some effect, the real facts appear to be those which have now been given above. In 1878-79 the floods were not so high, and large areas of fallow were brought under cultivation; the same cause, however, prejudicially affected the miscellaneous cultivation which, being peculiar to the islands and sandbanks of the river, depends on the higher floods for the fertilization of considerable areas. In 1879-80 floods were very heavy and did considerable damage. The progress of cultivation received a considerable check in consequence. Although the fallow area apparently diminished, this was due to the fact that a considerable extent was included under area for which remission was granted. This check was followed by recovery, the increase next year being very marked. This was apparently the result of a fairly distributed rainfall with normal rises in the river, and was also affected by an influx of population from Upper Burma, caused by the disturbances which had there taken place on the death of King Mindôn. In 1881-82 the increase of the previous year continued, though prices ruled very low and cultivators did not make their usual profits. The result of this was very marked in 1882-83, when the fallow area increased, and the steady growth in the area actually cultivated came almost to a standstill. Floods also at this time had their share in checking the enterprise of the agriculturists. With deficient rainfall, and a cyclone just before harvest time in November, the crops of 1883-84 were light; while the above causes, added to floods in the river, again checked the growth of the cultivated area and increased the area assessed as fallow. Combined with the above causes the construction of the Ma-ubin island embankment caused a rush for land within the protected area, the cultivators in many cases abandoning their original holdings or allowing them to remain unworked. With closer scrutiny of claims for fallow assessment, the area assessed as temporarily uncultivated was very considerably reduced in 1884-85; but there was a decrease in the assessed area, the check to expansion appearing to result from low prices in Rangoon. 1885-86, with an abundant rainfall in the lower delta, saw a good crop, which was, however, damaged by rains at harvest time. The benefit of the Ma-ubin island embankment began this year to make itself felt, large areas in the south of the island coming under assessment. Unfortunately the disturbances following the annexation of Upper Burma counteracted the healthy expansion which should have been felt in 1886-87 as a result of the embankment; and for the second time in 20 years there was a net decrease on the total cultivated area. With freedom from disturbance and an abundant rainfall the year 1887-88 was marked by rapid expansion. Large areas within the Ma-ubin bund began to fall under assessment, while elsewhere the increase, though not so rapid, was steady and satisfactory. In 1888-89, though the ripening showers at the end of the rains were scanty, the progress of cultivation was not checked; and the next year, following with a sufficient rainfall, saw this progress continued. During the harvest season heavy showers did some damage to the crops. The year of settlement showed no retardation in the rate of progress; the season being a fair one, although severe floods in the Irrawaddy caused considerable areas to be thrown out of cultivation.

52. The areas assessed circle by circle, as recorded in the thugyi's registers, and as found after cadastral survey and settlement, are shown in the following statement.

Comparison of assessed areas. As might be expected, the overgrown circle of Kyôntôn, which measures altogether about 200 square miles, shows very large undermeasurements. These amount to 116·47 per cent. of the assessed and settled area. The circles of Taungbogyi and Singu are only now opening out, while the area of Tawhla is very large. For the undermeasurements in these circles there is therefore some excuse; but this can scarcely be said of the compact and long occupied circles of Dedayè and Kyaiklat, where the measurements are also shown to be very incorrect. In Maletto the thugyi's assessed area is found to be in

excess of that obtained on settlement. This is almost entirely due to the inclusion, within the area under miscellaneous cultivation, of land which the original occupants had abandoned, but which the thugyi continued to assess. The inaccuracy of the measurements denotes a necessity for reducing the area of the thugyis' charges. It is true that inaccuracy is still met with where the circles are smaller; but in many of those now coming under settlement it is quite impossible for the thugyi to be in touch with his people as they live a couple of days' journey away. Proposals for altering the boundaries of nine of the present divisions, so as to form them into 16 circles, have been sent to the Deputy Commissioner. If the introduction of the village system is to be postponed, the division of the circles as now proposed appears to be very necessary and should put the State to no extra expense, while it will increase the efficiency of District administration.



Comparison of assessed areas.

Township.	Circle.	PADDY CULTIVATED AND FALLOW.			GARDEN.			MISCELLANEOUS.			TOTAL AREA.			Remarks.
		Thugyis' area.	Settlement area.	Percentage of difference.	Thugyis' area.	Settlement area.	Percentage of difference.	Thugyis' area.	Settlement area.	Percentage of difference.	Thugyis' area.	Settlement area.	Percentage of difference.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
THONGWA.	Ma-nbin ...	Acres. 12,592.25	Acres. 12,811.08	1.73	Acres. 1,254.25	Acres. 1,606.40	28.07	Acres. ...	Acres. 16.54	...	Acres. 13,846.50	Acres. 14,434.02	4.24	
	Minbaw ...	18,125.25	20,465.23	12.91	902.87	983.52	8.93	...	14.00	...	19,028.12	21,462.75	12.79	
	Seiktha ...	13,361.75	16,015.57	19.86	477.75	994.58	108.18	630.75	603.69	- 4.29	14,470.25	17,618.84	21.72	
	Yelegalè ...	14,060.13	17,370.42	23.54	24.00	256.26	967.75	63.00	62.05	- 1.50	14,147.13	17,688.73	25.03	
	Maletto ...	829.25	519.74	- 37.32	2,839.63	3,020.77	6.37	1,480.87	881.93	- 40.44	5,149.75	4,422.44	- 14.12	
	Thongwa ...	567.75	689.04	21.36	2,265.63	2,892.87	27.68	29.50	48.27	63.62	2,862.88	3,630.18	26.80	
	Kyónmangé ...	15,236.88	20,719.58	35.98	620.25	999.82	61.19	...	4.49	...	15,857.13	21,723.89	36.99	
	Total ...	74,773.26	88,590.66	18.47	8,384.38	10,754.22	28.26	2,204.12	1,630.97	26.00	85,361.76	100,975.85	18.29	
DEDAYÉ.	Dedayé ...	17,222.00	26,215.99	52.22	129.00	118.65	- 8.02	41.50	1.72	- 95.85	17,392.50	26,836.36	51.42	
	Wakame ...	15,915.63	19,329.91	21.45	110.25	220.27	99.79	...	18.45	...	16,025.88	19,568.63	22.10	
	Onbin ...	22,569.88	29,375.89	30.15	175.63	129.63	- 26.19	...	...	...	22,745.01	29,505.02	29.72	
	Tawhla ...	19,516.00	27,365.44	40.22	337.00	782.88	132.30	...	...	...	19,853.00	28,148.32	41.78	
	Tomayan ...	17,816.25	24,289.40	36.33	612.50	1,026.89	67.57	75	...	...	18,429.50	25,315.79	37.86	
	Total ...	93,039.26	126,576.13	36.04	1,364.38	2,277.82	64.65	42.25	20.17	52.26	94,445.89	128,874.12	36.45	
PYAPÓN.	Pyapón ...	12,452.50	17,799.14	42.93	277.00	256.15	- 7.52	...	...	...	12,729.50	19,055.29	41.83	
	Taungbogyi ...	9,044.75	15,006.48	65.91	103.25	389.14	276.89	...	...	...	9,148.00	15,395.62	68.29	
	Singu ...	15,359.50	23,955.17	55.96	98.00	299.60	205.71	...	4.80	...	15,457.50	24,259.57	56.94	
	Thazi ...	14,465.62	16,675.33	15.27	176.25	169.36	- 3.90	...	...	...	14,641.87	16,844.69	15.04	
	Kyaiklat ...	18,644.25	29,845.23	60.07	77.25	68.92	- 10.78	...	...	...	18,721.50	29,914.15	59.78	
	Kyóntón ...	14,704.40	31,628.16	115.09	61.00	282.24	362.63	...	68.11	...	14,765.40	31,978.51	116.57	
	Pyindayé ...	2,988.25	3,696.51	25.80	18.25	...	...	...	...	...	2,956.50	3,696.51	25.02	
	Total ...	87,609.27	138,606.02	58.20	811.00	1,465.41	80.69	...	72.91	...	88,420.27	140,144.34	58.49	
GRAND TOTAL		255,421.79	353,772.81	38.50	10,559.76	14,497.45	36.99	2,246.37	1,724.05	23.25	268,227.92	369,994.31	37.94	

## 53. Growth of population has been dealt with in paragraphs 5 and 6 of

Growth of population.

Chapter I, where the census figures show the enormous increase which has taken place in the last decade. Going back, however, to a much earlier period, although there are no figures to deal with, a retrospective glance will be of interest. Prior to the annexation of Pegu in 1854, and for some time afterwards, the lower Delta was very sparsely inhabited; a few fishing villages, separated by extensive tracts of tree and grass jungle, being scattered over the country. In Burmese times this country was under the jurisdiction of the Dala Wun, who resided at Dala opposite Rangoon, and whose immediate subordinates and executive officers were the Penins or Captains of the Royal boats. These officials who resided in villages, of which many have now sunk into obscurity, exercised jurisdiction over areas which more or less correspond in size to the present townships. Attracted by the richness of the delta lands, immigrants from Upper Burma and other parts of the country began to pour in steadily as soon as it was discovered that paddy cultivation was a profitable employment. Now that the greater portion of the reclaimed area in the Ma-ubin island has been taken up the rush of immigration is likely to diminish, but the demand for labour and the large areas still imperfectly cultivated for want of a sufficient population will probably draw large numbers, especially to the Pyapôn township.

## 54. The statement showing the tenures of landowners does not call for

Areas held under various tenures.

much remark. In the Thongwa township the four circles of Ma-ubin, Minbaw, Seiktha, and Yelegalè include few landholders; the area thus occupied being limited to the strip of garden land along the river bank which existed before the bund. Considering the facilities which were given for taking up grants, the large area in Ma-ubin and Minbaw, which has been occupied under squatters' title, is remarkable. Transactions in land have been so numerous, and landowners are so careless about their grant deeds, that in some cases, although every reasonable facility is given them, they are unable to show how the land was originally occupied. This probably accounts for a portion of the large area returned as in temporary occupation; while a considerable portion was doubtless occupied without grant, in order to avoid the delay and possible opposition connected with the issue of grants. With the exception of the Tomayan circle the greater portion of De-dayè has now been settled for some time, and the majority of the persons occupying land have held it for over 12 years. In Onbin the rush for land was so great and the period of exemption given for the light grass-covered waste was so short, that new-comers did not trouble to take out grants, the area in temporary occupation being therefore very large. The Pyapôn township includes the circles of Taungbogyi and Singu which fall within the Ma-ubin island, while the greater portion of Kyôntôn has also been recently settled. In fact, the Pyapôn Myoma and the Kyaiklat circles are the only ones which have been under cultivation for any time, the proportion of landholders in the township being therefore very small.

**Tenure Statement.**

Township.	Circle.	OWNERSHIP.			Leasee.	NOT OWNERSHIP.			Total area.	TENURE-HOLDERS.		Total.
		Landholder, section 7, Act II of 1876.	Grantee under section 18, Act II of 1876.			In temporary occupation under section 19, Act II of 1876.		Other kind of revenue such as taung-kyā.		Over 12 years.	Under 12 years.	
			Revenue paying.	Temporarily exempt from revenue.		Area.	Duration of occupation.					
1	2	3	4	5	6	7	8	9	10	11	12	13
		Acres.	Acres.	Acres.		Acres.		Acres.	Acres.			
TUDOWA.	Ma-ubin Myoma	1,590.95	8,268.57	825.23	...	9,574.50	...	...	14,759.35	198	714	912
	Minbaw	2,256.87	8,378.44	8,288.16	...	10,827.44	...	...	24,750.91	232	1,110	1,342
	Seiktha	851.92	18,860.86	823.03	...	2,901.06	...	...	17,936.87	316	1,465	1,781
	Yelegala	430.93	12,016.78	5,261.10	...	5,241.02	...	...	22,949.88	96	1,114	1,210
	Maletto	3,394.89	...	25.65	...	1,027.55	...	...	4,448.09	597	815	912
	Thongwa	8,079.19	82.65	72.87	...	5,18.34	...	...	3,708.05	502	120	622
	Kyomungè	16,724.09	824.94	411.52	...	4,174.95	...	...	22,185.41	1,014	504	1,518
	Total	28,828.75	88,882.24	9,707.56	...	34,264.86	...	...	110,688.41	2,955	5,342	8,297
DEDAY.	Dedayè Myoma	23,727.70	452.01	18.50	...	2,176.65	...	...	26,849.86	728	247	975
	Wakame	17,780.97	908.11	166.02	...	884.55	...	...	19,734.65	828	217	1,045
	Onbin	18,859.11	497.47	879.52	...	10,148.44	...	...	29,884.54	587	861	948
	Tawhla	14,589.82	6,348.46	1,087.79	...	7,265.04	...	...	29,236.11	447	676	1,125
	Tomayan	19,976.56	1,965.31	427.96	...	3,873.92	...	...	25,748.75	474	826	800
	Total	94,884.16	10,141.86	2,074.79	...	23,848.60	...	...	130,948.91	3,064	1,829	4,893
PYAPON.	Pyapôn Myoma	9,095.22	5,358.91	1,702.11	...	8,606.16	...	...	19,757.40	489	545	1,034
	Taungbogyi	1,478.05	5,775.89	5,005.58	...	8,141.68	...	...	20,401.20	97	1,065	1,162
	Singu	10,883.95	5,512.32	3,967.01	...	7,863.20	...	...	28,226.58	538	784	1,317
	Thazi	7,658.93	2,768.06	1,485.92	...	6,442.70	...	...	18,880.61	202	393	595
	Kyaiklat	16,468.22	3,507.55	1,536.88	...	9,938.38	...	...	31,451.03	647	787	1,334
	Kyontôn	9,219.81	12,468.06	8,410.26	...	10,290.64	...	...	40,888.77	408	1,652	2,060
	Pyindaye	1,106.21	2,125.12	141.72	...	465.18	...	...	3,888.23	24	76	100
	Total	55,885.89	87,510.91	22,249.48	...	46,748.04	...	...	162,398.82	2,400	5,252	7,652
	GRAND TOTAL	179,098.80	86,084.51	24,081.83	...	104,861.50	...	...	404,026.14	8,419	12,423	20,842