

THE RICE INDUSTRY OF BURMA,

1852 to 1940

by

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## ABSTRACT

This study begins with a discussion on the ban on rice exports imposed by the Burmese kings and the expansion of rice cultivation, the growth of the main ports -- Rangoon, Bassein, Akyab and Moulmein -- and the setting up of rice firms in the early British period. It is apparent from the brief account of the geography of Burma in Chapter II that vast stretches of land in the delta and coastal plains of Lower Burma are eminently suited to paddy production. The expansion of paddy acreage, cultivation methods, and the work of the Agricultural Department are described. The system of assembling and marketing the crop from the threshing floors to the mills is considered next, followed by an account of the changing patterns of location, ownership and size of mills as well as milling functions and mill products.

The next chapter considers the supply of Burman and Indian labour in paddy production and the rice mills. Land tenure problems, consisting mainly of the loss of land by small owner-cultivators to absentee landlords and the deteriorating tenancy conditions, and the attempts to bring about legislation to restrict land alienation and improve tenancy conditions are discussed in Chapter VI.

The supply of and demand for agricultural credit as well as the causes of indebtedness are presented in Chapter VII.

Chapter VIII discusses the various markets for Burma rice and the competition, especially from Siam and Indo-China, encountered in these markets. Finally, the concluding chapter shows the importance of the rice industry in the economy of Burma, traces the main factors in its development, points out the shift of population to Lower Burma due mainly to this development and attempts an assessment of the shares of the profits of the rice industry accruing to the various participants.



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S.S.H.

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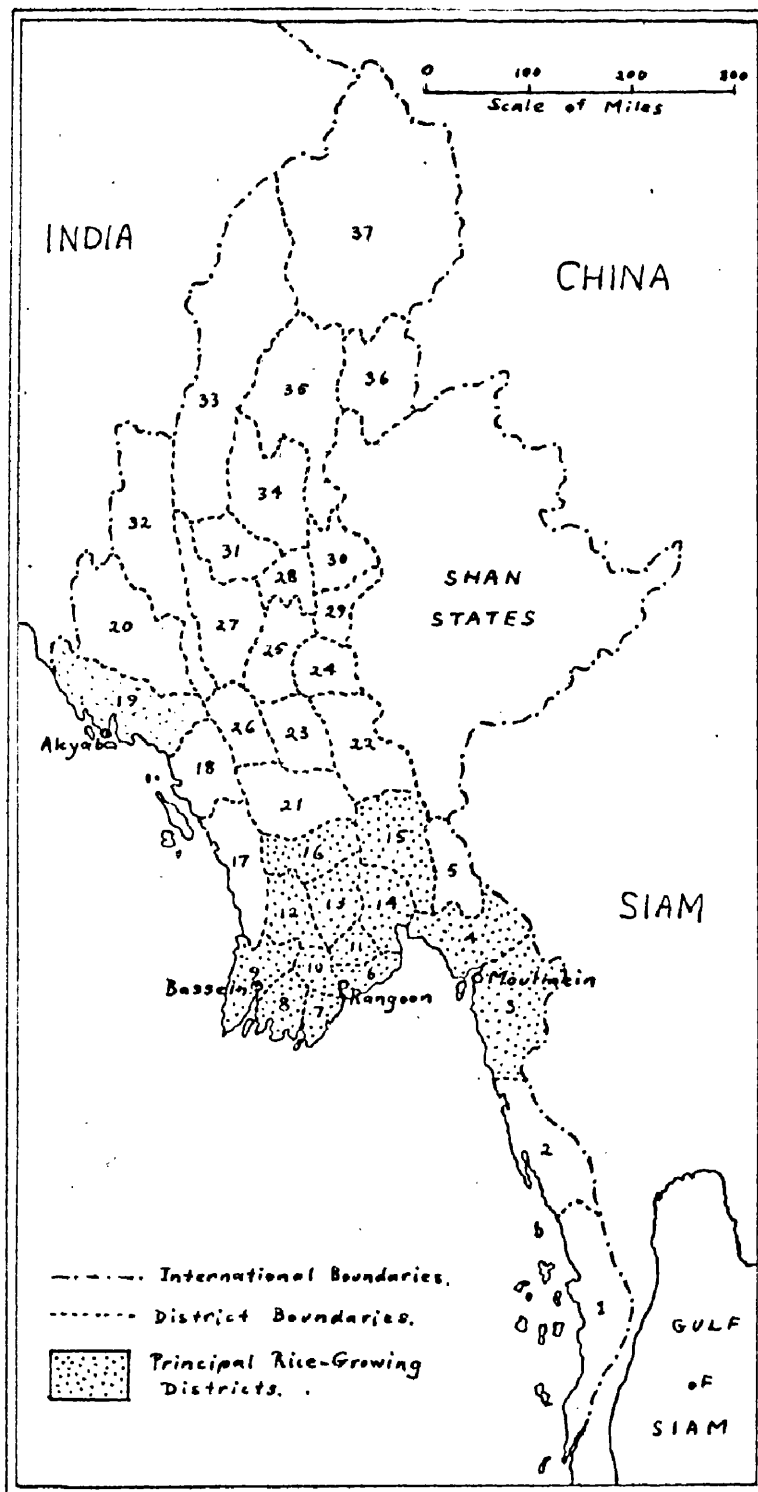


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# MAP OF BURMA

Showing Location of Districts in 1931.



1. Mergui
2. Tavoy
3. Amherst
4. Thaton
5. Salween
6. Hanthawaddy
7. Pyapon
8. Myaungmya
9. Bassein
10. Maubin
11. Insein
12. Henzada
13. Tharrawaddy
14. Pegu
15. Toungoo
16. Prome
17. Sandoway
18. Kyaukpyu
19. Akyab
20. Arakan
21. Thayetmyo
22. Yamethin
23. Magwe
24. Meiktila
25. Myingyan
26. Minbu
27. Pakokku
28. Sagaing
29. Kyaukse
30. Mandalay
31. Lower Chindwin
32. Chin Hills
33. Upper Chindwin
34. Shwebo
35. Katha
36. Bhamo
37. Myitkyina

## CHAPTER I

## INTRODUCTION

Rice (Oryza Sativa Linn) has been cultivated in Burma from prehistoric times but Burma began to develop into the chief rice-exporting country of the world only about a century ago. Before then rice was mainly cultivated for domestic consumption and for a small, irregular internal trade, mainly from Lower to Upper Burma. The earliest account we have of Burma's external rice trade is probably the one by Duarte Barbosa who mentioned that much rice was shipped from Pegu to Malacca and Sumatra in the beginning of the sixteenth century.<sup>1</sup> At that time Pegu was an independent kingdom peopled by Talaings (known also as Mons or Peguans). Their kings appeared to have viewed trade in a favourable light for during their time trade was much less hampered than after Pegu became subject to the Burmese.<sup>2</sup>

In the first half of the seventeenth century, the Dutch, who were very active in the East Indies at the

- 
1. Duarte Barbosa, A Description of the Coasts of East Africa and Malabar in the Beginning of the Sixteenth Century (London: Printed for the Hakluyt Society, 1866), p.183.
  2. The Burmese ruled the delta intermittently from the eleventh century onwards. The most recent periods before the arrival of the British were in the second half of the sixteenth century and from 1757 to 1826.

time, frequently went to Arakan for rice and slaves.<sup>1</sup> As might be expected of a maritime people, the Arakanese were much more willing than the Burmese to take part in external trade. They permitted the export of rice but regulated it by putting an officer in charge so as to prevent a shortage.<sup>2</sup> Arakan was a separate kingdom till 1785 when the Burmese conquered the country and extended the restrictions and regulations on foreign trade to Arakan as well.

The Burmese forbade the export of many products, including rice, rubies and precious metals, the outflow of which was thought to diminish the wealth of the country.<sup>3</sup> At the same time many obstacles were put in the way of trade in other articles and every possible pretence was used for exacting extra dues. Captains of ships had to comply with tiresome regulations. Should anything be amiss goods were liable to confiscation, crews were sometimes enslaved and even whole ships seized. This was in accordance with Burmese customary

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1. D.G.E. Hall, "Studies in Dutch Relations with Arakan," Journal of the Burma Research Society, Vol. XXVI (Rangoon, 1936), pp.11-16.
  2. G.E. Harvey, History of Burma (London: Longmans, Green & Co., 1925), p.146.
  3. Ibid., p.350. These ideas have been compared to those underlying the Mercantilist Theory. In the barter economy of Burma rice was the most important commodity as it served as a medium of exchange besides that of being the staple food. It was also used to pay rents, wages and taxes.



law which gave the king absolute power over everything in his dominions. Seafaring men, therefore, tended to give the Burmese coast a wide berth. Moreover, Burma lay off the main sea routes and most of her goods could be bought in Malacca.<sup>1</sup>

While foreign trade as a whole was far from thriving, the rice trade was practically non-existent. This was due to the prohibition on the export of rice by the King and Court of Ava.<sup>2</sup> When Captain Hiram Cox came to Rangoon in 1796 as British Resident he reported that abundant rice was obtainable in Rangoon at only eight annas per maund<sup>3</sup>,

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1. Ibid., p.205; and The British Burma Gazetteer, compiled by H.R. Spearman, 2 vols. (Rangoon: Printed at the Government Press, 1880), Vol.I, p.458.
  2. Harvey, op. cit., pp.350-51, gave the following explanation: "There was no regular surplus for export, because a self-contained population whose numbers are stationary grows only enough for its own support. Government was never stable and at any moment the king in his palace was liable to be cut off by rebellion from Kyaukse and the Delta, the main sources of his supply. He habitually brought large quantities of rice from such places and stored it in the palace against the possibility of seige, and down the Irrawaddy river there were grain depots, as at Myanaung and Bassein, where food was supposed to be, and sometimes was, stored for dispatch to hungry districts. The king lived, to an extent hardly realisable to-day, in continual dread of famine in the capital, and famines are constantly mentioned in the chronicles."
  3. This is equivalent to slightly less than Rs. 3 per 100 baskets, which is a ridiculously low price compared with later prices. (See Table III.2 on p.112 below.) Paddy prices in Burma were usually quoted by the 100 baskets. The weight of the standard, 9-gallon government basket was 46 lbs. of paddy. 100 baskets were approximately 4,600 lbs. or 41 cwts.

and more often than not surplus rice was left rotting in the fields because it could not be exported and ships were allowed to carry only as much as they required for the journey.<sup>1</sup>

Under the Burmese Government, therefore, there was no incentive for the farmers to grow more rice than the amount required for domestic consumption, for seed and a little extra to exchange for other commodities. Furthermore, much agricultural land, including rice fields, was laid waste every now and then in the interminable wars and frequent raids among the Burmese, the Talaings, the Arakanese and the Siamese. The Irrawaddy-Sittang delta region, once well-populated and prosperous and later to become the most important paddy-growing region in Burma, was devastated and greatly depopulated in the mid-eighteenth century following a series of unsuccessful Talaing uprisings against the Burmese conquerors. On the failure of each revolt the rebel leaders still at large would emigrate with their families and followers to Siam. The Burmese would then punish the people by burning and destroying the towns and villages, killing wherever they

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1. D.G.E. Hall, Europe and Burma (London: Oxford University Press, 1945), p.13.

went and selling vast numbers into slavery in Upper Burma. Mass emigrations into Siam became very frequent. The population in Pegu grew fewer and large stretches of cultivated land relapsed into jungle.<sup>1</sup>

When the British acquired Arakan and Tenasserim in 1826 and Pegu and Martaban in 1852 they found most of the land covered by dense jungle interspersed with swamp and salt marsh -- "tall jungle and high grass, where the elephant dwelt and the tiger held dominion."<sup>2</sup> There were only a few scattered villages practising shifting paddy cultivation in small clearings in the jungle. Agriculture was mainly for subsistence purposes. Along the coast salt-boiling, fishing and pottery-making were important occupations and there was a thriving export trade in dried and salted fish.

The abundance of cultivable, fertile land accounted for the lack of a definite land tenure system. "The people had no idea of property; land, to them, was a free gift of nature to be cleared and cultivated at will, and then returned to the community."<sup>3</sup> The soil was so lightly

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1. Harvey, op. cit., pp.180-81 and pp.234-36.
  2. J.S. Furnivall, An Introduction to the Political Economy of Burma (Rangoon: Burma Book Club, second revised edition, 1938), p.48.
  3. J.S. Furnivall, "Land as a Free Gift of Nature", The Economic Journal, Vol. XIX (London: 1909), p.554.



worked that the law of diminishing returns began to operate after two or three years and the cultivators preferred to move off to virgin ground or to land that had been abandoned for a period long enough for it to recuperate rather than to work the soil more intensively. This common practice of abandoning land and the lack of a developed land tenure system greatly perplexed the first generation of British revenue officials. Later officials were also troubled by the astonishing frequency with which land changed hands.<sup>1</sup> The main reason for this was the marked absence among Burman paddy farmers of that sentimental attachment to the ancestral plot typical of other

---

1. The land market of Burma has been often compared with a stock exchange market. In 1895, D. Smeaton wrote of the Burman cultivator in tracts under the influence of the ports that he "is fast being changed from a peasant into a professional paddy grower or purveyor and in his eyes one field or farm differs from another solely or chiefly in the quantity of paddy which it is estimated to produce. He regards his land very much as a stockbroker on 'Change regards the stocks which he holds for the time being; he treats it as floating marketable stock and is just as keen to buy in and sell out according to the turn of the paddy (and therefore of the land) market as is the most professional stockbroker when handling the most fluctuating foreign securities." Quoted by C.W. Dunn, "General Characteristics of Agricultural Economy in Burma," Agriculture in Burma, a collection of papers written by government officials for the Royal Commission on Agriculture, 1926-28 (Rangoon: Supdt., Government Printing and Stationery, Burma, 1927), p.21.



peasant populations in other parts of the world. This, in turn, can be attributed to the fact that the idea of land-ownership became important only as recently as the latter half of the nineteenth century.

The early practice of shifting cultivation and frequent abandonment of land, however, did not imply a nomadic existence. The village remained where it had first been founded; the field hut of the individual cultivator might move often from spot to spot but it always remained within easy reach of the village.

As mentioned earlier, Britain acquired the two coastal provinces of Arakan and Tenasserim in 1826 after successfully concluding the first Anglo-Burmese War. All restrictions on trade were removed. Akyab at once became the leading rice port, exporting mainly to India. As early as 1845-46<sup>1</sup>, the rice exports from Akyab were 74,023 tons valued at Rs. 1,256,543 and in 1853-54, 85,999 tons valued at Rs. 3,051,272.<sup>2</sup> But the remarkably rapid development of Burma's rice industry really began after the vast, flat Irrawaddy-Sittang delta plains came

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1. This was the fiscal year. Up to 1866-67, the fiscal year began on 1st May and ended on 30th April; but from 1867-68 onwards, it began on 1st April and ended on 31st March.

2. British Burma Gazetteer, Vol. I (1880), p.460.

under British rule in 1852 when, as a result of the Second Burmese War, Britain took over the provinces of Pegu and Martaban. In 1886 Upper Burma lost her independence and the whole of Burma became part of British India.

The coastal and delta regions of Lower Burma are eminently suited to paddy-growing. The physical requirements of the paddy plant met with so satisfactorily here are, firstly, a climate that combines a high temperature with a very regular and heavy monsoonal rainfall, ample enough for rice, and secondly, a surface covering of old alluvium consisting mostly of very heavy clay underlain by an impervious substratum of old sandstone, which helps maintain the water in the fields throughout the growing season. In fact, these conditions favour rice to the exclusion of any other crop.

Paddy can be grown almost anywhere in Burma. In Upper Burma, the most important paddy-growing regions are the dry zone and the districts lying immediately to the north of it. About one-half of the crop in Upper Burma is grown under irrigation from canals, lakes and tanks.<sup>1</sup>

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1. The paddy-growing districts in Upper Burma were Mandalay, Kyaukse, Minbu and Meiktila districts where most of the crop was grown under canal irrigation; Shwebo and Yamethin districts where half the crop was grown under irrigation; Pakokku, Sagaing, Bhamo, Katha and Upper Chindwin districts where about two-thirds of the crop was rainfed; and Thayetmyo, Lower Chindwin and Myitkyina districts where the crop was almost entirely rainfed. J.W. Grant, The Rice Crop in Burma: Its History, Cultivation, Marketing and Improvement ("Agricultural Department, Burma: Agricultural Survey No. 17 of 1932"; Rangoon: Supdt., Government Printing and Stationery, Burma, reprint 1949), p. 7.



The Upper Burma crop is of no importance in external trade as practically all is for local consumption. The most important and regular surplus-producing regions in Burma, therefore, are the coastal strips of Arakan and Tenasserim and the deltas and lower reaches of the Irrawaddy and Sittang Rivers. The crop here is almost entirely rainfed and accounts for over 80 per cent of the rice production in Burma, and the whole of the exportable surplus.

Given the necessary inducements a farmer in any of the above-mentioned areas in Lower Burma could easily grow two to three times the amount of rice he needed for home requirements. But there was no incentive to do so during the immediate pre-British period since exports were prohibited and the rice trade with Upper Burma was spasmodic and mainly confined to emergencies. Once the prohibition on the export of rice was removed by the arrival of the British, therefore, paddy cultivation in Lower Burma at once expanded at a tremendous pace.<sup>1</sup>

The work of converting the jungle and swamp into paddy fields was undertaken by the settled farmers and immigrants from other parts of Burma which were less suited to paddy-growing or were comparatively over-

1. In 1830, 66,000 acres in Lower Burma were under rice; in 1860, 133,000 acres; in 1890, 4,398,000 acres; in 1920, 8,588,000 acres; and in 1940, 9,932,000 acres. See Table II.5, p.39 and Appendix II.A. pp.349-51 below.

populated. The task confronting these pioneers was far from easy. They had to face difficulties usually prevalent in any frontier districts which are for the time being beyond the range of established forces of law and order. Disputes over land were often settled by the dah (Burmese knife or dagger) and unscrupulous men of wealth employed bodies of armed retainers, men of bad character, whose function was "to over-awe and over-ride, by open violence if necessary, those who in any way opposed the interests of their employers."<sup>1</sup> Sometimes the settler would be driven off his land the moment he had cleared it; or worse still, when the paddy was ripe for harvest, these bullies would pounce upon the cultivator, carry off his crop and burn his field-hut into the bargain. Different bands of retainers often struggled against one another for possession of a particular piece of land. Famous pitched battles were fought with fifty to eighty to a side.<sup>2</sup>

Another difficulty confronting the settler was the corruption of the subordinate Land Records staff. In

1. U Tin Gyi, Report on the Original Settlement Operations in the Labutta Township of the Myaungmya District, Season 1924-25 (Rangoon: Supdt., G.P.S., Burma, 1926), p.11.
2. Ibid., p.10.

return for bribes they were ready to assess a man as the owner of a large piece of land which had undergone the mere formality of a little clearing and planting. There were even reports that an organisation existed the main business of which was to establish spurious evidence of occupation. At the same time bona fide but far from wealthy cultivators faced all sorts of obstacles and inconveniences when putting forward their claims.<sup>1</sup>

No less trying and even more wearing was the unceasing struggle to wrest a living from the land. Thick jungles had to be cleared and kept constantly in check and swamps drained. Sometimes the abundant rainfall, on which the cultivator depended, resulted in heavy floods which would destroy the crop completely. Parrots, crabs, wild pigs, rats and insects threatened the standing paddy while tigers, wild elephants, and snakes threatened his life and that of his cattle. Malnutrition and overstrain from excessive hard work often lowered resistance to the dreaded jungle-fever, malaria. Sometimes whole families would be wiped out and even where it was not fatal it

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1. E.G. Pattle, "Some Factors Affecting the Economic Position of Agriculturists," Agriculture in Burma (1926-28), p.113.

seriously sapped the energy and physique.<sup>1</sup>

But despite all these difficulties the expansion of paddy acreage continued at a very rapid rate. The incentive lay in the newly developed demand for rice as expressed in the price. In 1840, the price was Rs.8 per 100 baskets at which price it was not worth the farmer's efforts to reap and convey the rice to an export port. By 1855 the price had risen to Rs. 45 and fluctuated between Rs. 50 and Rs. 55 from 1860 to 1870. By 1880 it reached Rs. 85 and by 1890 it rose to Rs. 95, around which figure it fluctuated till the end of the century.<sup>2</sup>

1. S.G. Grantham, Report on the Settlement Operations in the Myaungmya District, Season 1916-19 (Rangoon: Supdt., G.P.S., Burma, 1920), pp.26-27, gives this graphic description of the early days of colonization: "The soil did not really laugh with a crop when it was tickled with a hoe; it was equally likely to give an ugly leer, and often the crop would not be sufficient for the food of the family if there had been much fever early in the season or at harvest time. And the loans that were necessary initially to provide food and clothes were to be obtained only at a distance at high rates of interest, which in a year of fever could not be paid but must go to swell the debt which, as it grew, first nibbled at the morale of the pioneer and finally swallowed him up completely. There was some gambling no doubt to while away the ennui of fevered bodies in the stormy days towards the end of the rains, but the failures were due not to that nor to weakness of character but to the immensity of the difficulties. Whole families and even whole settlements succumbed to the fever; others who failed financially generally owed the first difficulty to a season of fever which increased the debt beyond their power to meet its interest."

2. J.W. Grant, op.cit., p.55.



This increase in price was brought about by the growing demand for rice in many parts of the world.

Population was increasing in most countries and rice came within the reach of many poor people to whom it was a luxury until the paddy-fields of Burma, Siam and Indo-China were developed on a commercial basis. In Europe, rice was increasingly becoming known and used as a cheap staple food, as starch for sizing textiles, as fodder for cattle and pigs, for brewing and for mixing with wheat flour in bread-making.

The early supplies to Europe came from Italy. It was superseded early in the eighteenth century by rice from Carolina, Bengal and Madras. Rice was then imported into Europe in the form of milled rice which was remilled on arrival, and remilling was essential because milled rice quickly deteriorated and lost much of its flavour in the overheated holds of badly-ventilated ships during the long sea voyage. In the early part of the nineteenth century an improved machine for separating the husk without excessive grain breakage was developed in Europe and rice was then imported in the unhusked state, that is, as paddy. The danger of deterioration was very much less for paddy, since the husk protected the grain. To husk and

polish the rice, a flourishing rice milling industry sprang up in Europe, with the main centres in London, Liverpool, Bremen and Hamburg. The American Civil War and the abolition of slavery disrupted the flow of rice from Carolina. Many paddy fields and much expensive equipment were destroyed in the fighting and through neglect. The negro slaves, once liberated, were reluctant to work in the malaria-infested, swampy rice-fields.<sup>1</sup> Many years were to pass before exports of rice from the Southern States of the U.S.A. became important again.<sup>2</sup>

In Europe, merchants and millers had to look elsewhere for rice to keep their business and mills going. Naturally their attention was drawn to British-administered Lower Burma with its settled government and its fast expanding rice production. Up to then, most of the Burman exports had gone to India. With the arrival of the European merchants and millers, notably the British and the Germans, and with them the great European shipping and banking companies, Burma's rice trade developed and grew until it dominated the whole Burman economy.

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1. H.B. Proctor, Rice: Its History, Culture, Manufacture, and Food Value (London: W.Dunham, 1882), p.12.
  2. The U.S., together with Spain and Italy, became established again in the rice market of Europe just after the First World War.  
Report of the Rice Export-Trade Enquiry Committee  
(Rangoon: Supdt., G.P.S., 1937), p.8.



One of the earliest accounts we have of a European rice firm setting up business in Burma was that of Messrs. Joseph Heap and Sons, Ltd. In 1864 these rice millers of Liverpool sent their sailing ships to Burma to obtain 1,000 tons of cargo rice<sup>1</sup> for their mills in Liverpool. A representative was stationed in Rangoon.<sup>2</sup> Other European firms soon followed this lead, and stationed themselves at the four main ports of Rangoon, Akyab, Bassein and Moulmein.

These big rice-milling and exporting firms formed the link connecting the increasing supply of marketable surplus paddy in Burma to the growing demand for rice in Europe and other parts of the world. They provided the

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1. Rice from the field has to undergo several milling processes before it is ready for consumption. Below is a list of terms given to rice at different stages of preparation:
    - (1) "Paddy" is rice with the husk intact.
    - (2) "Husked rice" or loonzein is rice from which the husk only has been removed. The bran layers and the greater part of the germ are retained.
    - (3) "Milled rice" is rice from which the husk, most of the bran layers and the greater part of the germ have been removed by power machinery. At this stage rice is ready for consumption. Rice is milled to various degrees; if milled to a high degree it is called "white rice".
    - (4) "Polished rice" is produced by the further milling of white rice to improve its appearance by having it polished, glazed and sometimes oiled.
    - (5) "Cargo rice" is a mixture of loonzein and partially milled rice with up to 20 per cent paddy.
  2. The Burma Rice Trade (Rangoon, June 1928). Typescript found in the history file of Messrs. Steel Brothers & Co. Ltd., p.1.

necessary capital, enterprise, technological knowledge and business skill which made the demand in Europe effective in Burma. The importance of the advent of the European firms was brought out by the fact that most of the rice exports which previously went to India went to Europe instead soon after their arrival,<sup>1</sup> and it was not till the turn of the century when the Indian and Chinese businessmen exporting mainly to Asia came more prominently into the picture that rice exports to Asian countries began to increase in importance and eventually to outstrip the quantity of rice exported to Europe.<sup>2</sup>

Almost all the rice exports of Burma passed through one of the four main ports -- Rangoon, Bassein, Akyab and Moulmein. The first to become important as a rice port was Akyab, the port of the province of Arakan which came under British rule in 1826. But when Pegu came under British control the port of Rangoon developed very rapidly and by the early 1860's exports of rice from Rangoon outstripped that from Akyab.<sup>3</sup> Where exports to Europe were

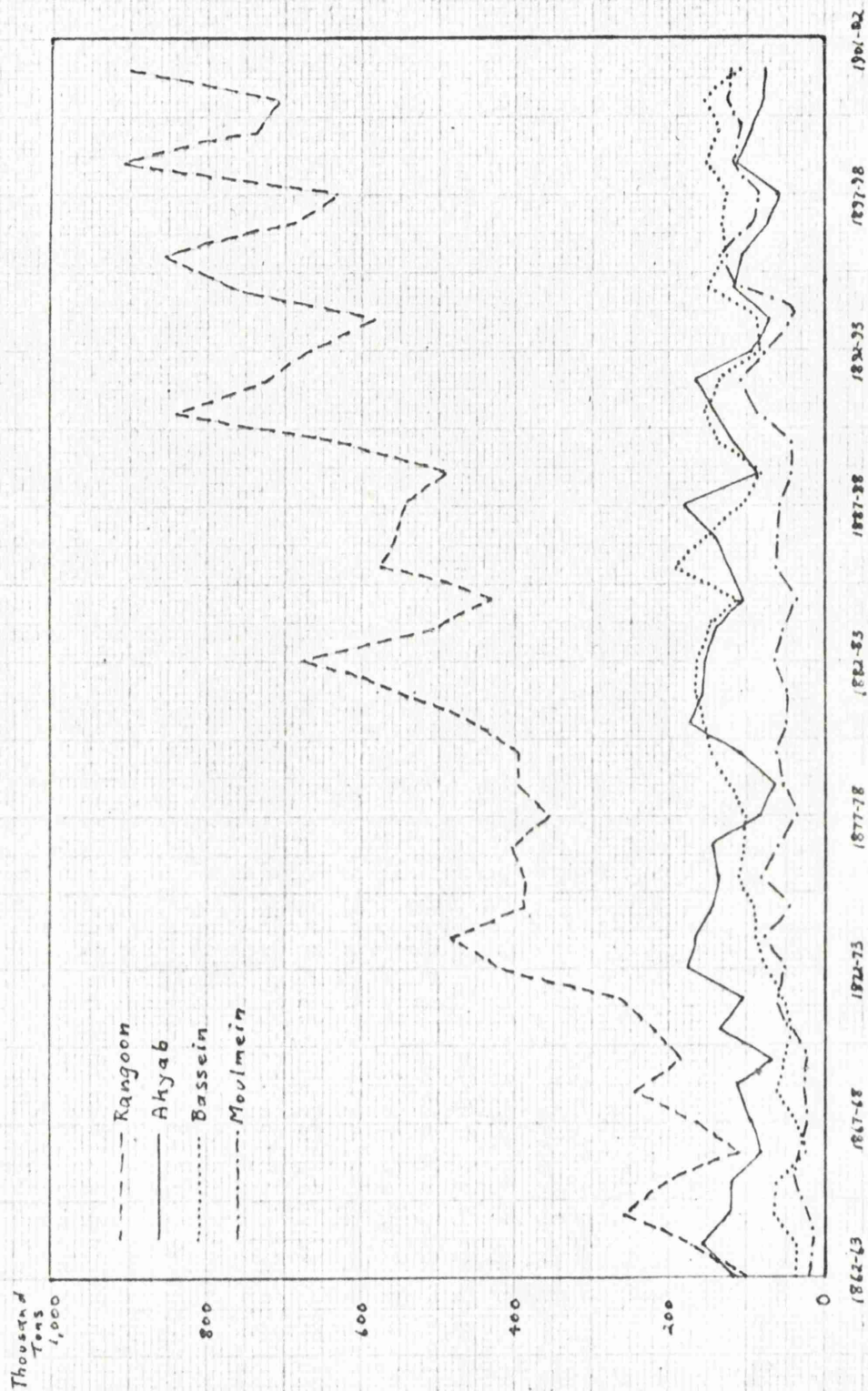
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1. In 1845-46, out of about 74,000 tons of grain exported from Burma, 6,500 tons went to Europe and 36,100 tons went to India. (British Burma Gazetteer, Vol. I (1880), p.460.) In 1870-71, out of 440,000 tons exported, 353,400 tons went to Europe and 23,800 tons went to India. (Report on the Administration of Burma 1873-74, p.86.)

2. See Table VIII.1 on p. 297.

3. See Graph I.2 on p. 17 and Appendix I.A on pp. 346-47.

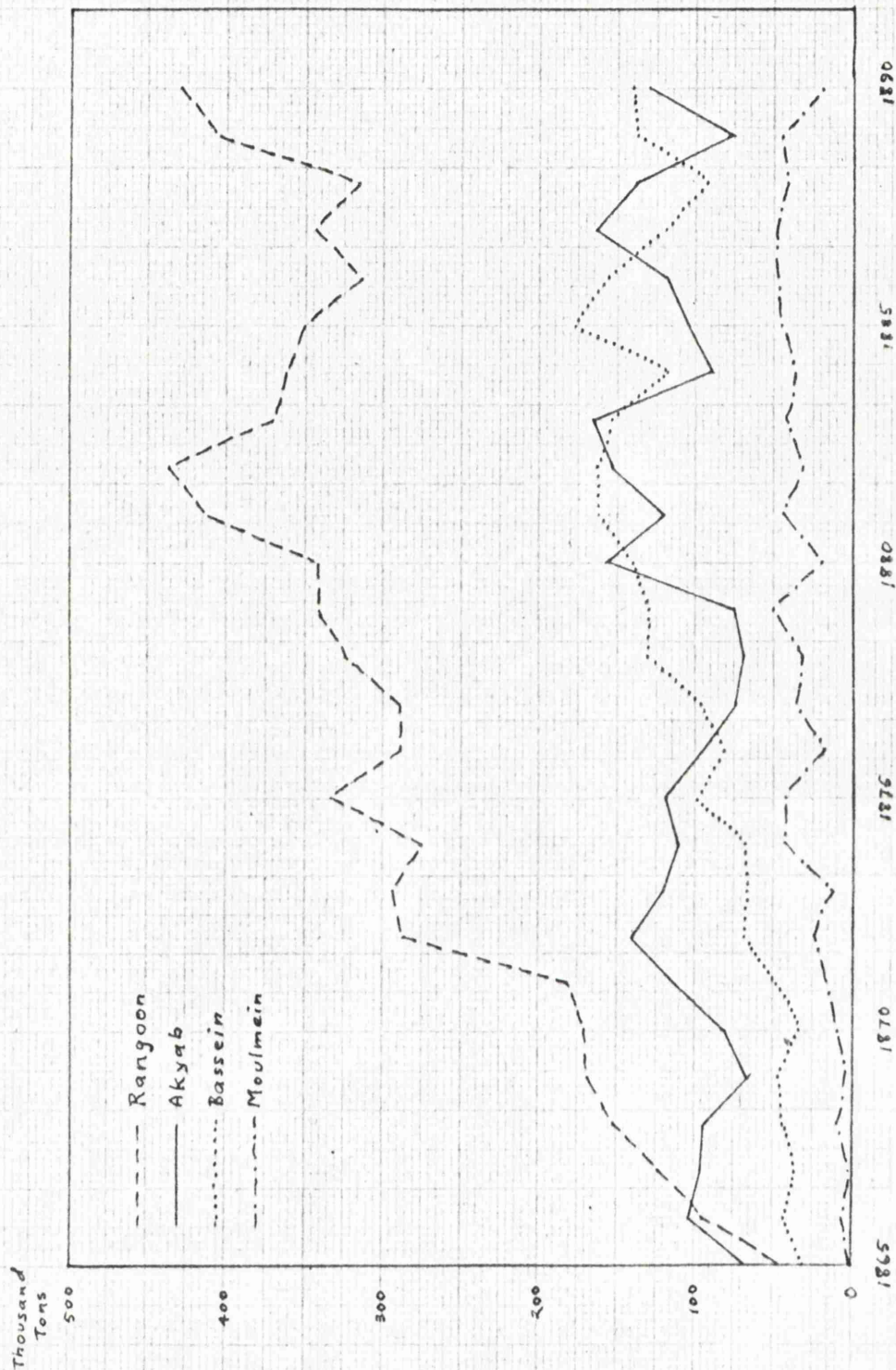
Graph I: Exports of Rice from Rangoon, Akyab, Bassein and Moulmein to all Countries, 1862-63 to 1901-02.



Source: Appendix I.A on pages 346-47.



Graph II: Exports of Rice from Rangoon, Akyab, Bassein and Moulmein to Europe, 1865 to 1890.



Source: Appendix I.B on page 348.

concerned Rangoon overtook Akyab in 1867.<sup>1</sup> This was despite the fact that Akyab's rice trade had a head start of about twenty-eight years. Rangoon, however, was better situated not only as a port of call for ocean-going steamers but also as regards its hinterland. Situated at a point where several distributaries of the Irrawaddy River converged, Rangoon was the natural outlet for the more recently opened but very rapidly developing area of the Irrawaddy delta. This vast expanse of flat fertile land, intersected by numerous creeks which afford a cheap and convenient means of communication as well as help drain the surplus water from the paddy fields, has become the most important rice-producing area in Burma. On the other hand, Akyab serves a much smaller rice-producing region -- the narrow coastal strip of Arakan. Beyond this the land is too mountainous and dry for paddy cultivation. Another reason for Akyab's slower rate of development was perhaps that Arakan was comparatively better developed and more densely populated when the British first arrived on the scene than was Pegu, so that there was less room for expansion. By the 1860's paddy was cultivated on almost all the more suitable land and paddy cultivation was being pushed to marginal areas.

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1. See Graph II 2 on p.18 and Appendix I.B on p.348.

Akyab did not remain for long even as the second rice port of Burma. About 1877, Bassein, serving the western portion of the Irrawaddy-Sittang delta region, replaced Akyab as the second rice port in exports to Europe as well as all rice exports.<sup>1</sup> By about 1895 Moulmein, main outlet for the paddy grown on the narrow coastal strip of Tenasserim, began to export more than Akyab.<sup>2</sup> Moulmein's faster rate of growth in rice exports was due to its being less developed when the British first arrived and therefore having more room for expansion.

An event which accelerated the development of all four rice ports was the opening of the Suez Canal in 1869 and the passing through of the first steamer loaded with rice in 1872. No one can deny that the direct and indirect effects of the opening of the Canal played an important part in influencing the growth and composition of the rice trade. But, on the other hand, many writers on the subject have vastly exaggerated the importance of this event. Some accounts have it that there was no rice trade of any significance before 1869 but once the Canal

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1. See Graphs I and II on pp. 17 and 18, and Appendices I.A and I.B on pp. 346-47 and 348.

2. See Graph II on p. 18 and Appendix I.B on p. 348.



was opened a flourishing rice trade at once sprang up. From the statistics available it can be seen that the rice trade developed as soon as the prohibition on the export of rice was raised by the British, thus freeing native enterprise. Rice was exported in considerable quantities in the 1830's. By 1840 Akyab was exporting 74,500 tons of rice and by 1855, 162,000 tons. In 1852 Pegu came under British control and production and exports increased by leaps and bounds. By 1866 364,000 tons were exported from Lower Burma. The rice trade continued to grow at a phenomenal speed and by 1870 about 484,000 tons were exported.<sup>1</sup> Therefore the continuous and marked increase in the exports of rice in the 1870's was not entirely due to the Suez Canal. These accounts also explain away the increase by pointing out that since the journey was halved, freights were lower. This was not true in the early days of the Canal. Steamships were still more expensive than sailing vessels to run and maintain and there were all sorts of port dues and pilotage fees to pay. In fact for ten years or more after the opening of the Canal many merchants still preferred to send rice via the Cape, using the cheaper sailing

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1. The figures are taken from various Administration Reports.

vessels.<sup>1</sup> Moreover, there was no advantage to be gained in dumping all rice cargoes on the European market at the same time.

This does not mean to say that the Suez Canal did nothing for the rice trade. The opening of the Canal together with the development and improvement in the construction of steamers meant that the journey to Europe was not only shorter but quicker. This affected the type of rice exported.

Hitherto rice was exported mainly in the form of cargo rice.<sup>2</sup> Unhusked rice, though excellent for the journey because of its better keeping qualities, used up much valuable space and freight had to be paid on the worthless husk. On the other hand, husked rice, and more so in the case of milled or white rice, deteriorated very quickly during the long journey in unventilated, overheated and often damp holds. The sending of cargo rice, a mixture of husked rice and paddy was found to be the best solution. Merchants discovered that this form of rice was the most remunerative to export as it meant least cost where freight rates and loss through deterioration were concerned. The

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1. J.W. Grant, op. cit., p.32. See Appendix I, C on p.

2. See footnote 1 on p. 15 above for the terms applied to rice at various stages of milling.



cargo rice was then remilled and polished in the mills in Europe. But the shorter quicker journey, using steamers via the Canal, meant that there was less time for husked or even white rice to deteriorate. Mills which formerly could produce cargo rice only now had new machinery installed to produce white rice as well. By 1888, almost all the millers in Rangoon had white rice machinery ~~in-~~stalled in their mills; by 1905, millers had installed them on an extensive scale in Akyab, Bassein and Moulmein.<sup>1</sup> The mills in Europe gradually lost much of their business and had to confine themselves increasingly to polishing and retouching the rice. By the end of the century more white rice was exported than cargo rice.

Another effect of the Suez Canal was less direct. The opening of the Canal was followed by a period of accelerated economic development of the countries which were thus brought closer to the European market. Plantation industries expanded in Ceylon, Malaya and the Dutch East Indies, which required the employment of cheap labour, supplied mostly by rice-eating labourers. With the increase in prosperity and the growth of population, resident as well as temporary, the demand for rice in these countries grew.

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1. Burma Rice ("Burma Pamphlet No. 4"; London: Longmans Green & Co., Ltd., May 1944), p.13.

Table I.1: Annual Average Number and Tonnage of Steam and Sailing Ships Cleared from Burma for Foreign Ports.

Period	Steam Ships		Sailing Ships	
	Number	Tonnage	Number	Tonnage
1876-77 to 1880-81	309	244,199	451	345,795
1881-82 to 1885-86	362	362,663	398	327,914
1886-87 to 1890-91	369	441,492	229	214,039
1891-92 to 1895-96	335	520,164	199	181,995
1896-97 to 1900-01	371	642,837	118	87,134

Source: Annual Reports on Trade and Navigation.

For annual figures see Appendix I.C on p.

As freight rates for steamers were progressively lowered following improvements which cheapened the cost of maintaining and running them, steamers gradually replaced sailing ships in the rice trade. From the 1880's onwards there was a marked decline in the employment of sailing vessels and by 1900 almost all rice exports were carried by steamers, as can be seen in the above table. The use of steamers meant that there was less dependence on seasonal monsoonal winds. Sailing ships had to sail off before the south-west monsoon began in about early May. This meant glutting the rice markets at the time when rice shipments from Siam and Indo-China were also arriving. Besides, mills had to work for twenty-four hours a day when the ships were due to leave while at other times

there was hardly enough work to keep the mills going. The same was true though to a lesser degree with regard to railway trucks and paddy boats. Steamers helped to spread the shipments to Europe over a wider period which meant that a better price could be obtained. But the problem of glutting still remained, though somewhat lessened, due to the system of assembling paddy for the ports, which will be dealt with in a later chapter.

## CHAPTER II

## PADDY PRODUCTION

Paddy cultivation probably dates back to the earliest age of man, and long before the era of which we have historical evidence it was probably the staple food and the first cultivated crop in Asia.<sup>1</sup>

The origin of rice is shrouded in antiquity. In the classical Chinese language rice culture and agriculture are synonymous, and in numerous Asian languages rice and food are synonymous, suggesting that rice was already the staple crop and food when the languages were first taking shape and that of course occurred long before recorded history. The earliest historical references were found in Chinese writings of about 2,800 B.C. when it was recorded that the ceremonial sowing of paddy was reserved for the Emperor alone, the less important cereals were delegated to be sown by less exalted members of his family.<sup>2</sup>

There has been much controversy about the place of origin of cultivated forms of rice. On mainly botanical evidence, the Philippines, mainland Southeast Asia, India, the Southwest Himalayas and Africa have been put forward as places of origin. E.B. Copeland, however, used linguistic evidence in addition to botanical evidence and

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1. D.H. Grist, Rice (London: Longmans, Green & Co. Ltd., third edition, 1960), p.4.

2. Ibid., p.4.

came to the conclusion that rice was first cultivated in mainland Southeast Asia. Most writers on the subject have since agreed with Copeland that mainland Southeast Asia has the strongest claims to be regarded as the place where rice was first cultivated.<sup>1</sup>

#### 1. Requirements of the Paddy Plant.

The paddy plant (Oryza Sativa Linn) is found under widely differing climatic conditions due to the great diversity of countless paddy varieties. The plant thrives within about 45° latitude north and 40° south of the Equator. The bulk of the crop is planted in the humid regions within the tropics but the highest yields are recorded in countries enjoying sub-tropical and warm temperate climates.<sup>2</sup>

The altitude at which the plant can grow depends on the latitude. It can grow as high as 10,000 feet in the Himalayas, but because of the importance of water control in the growing of the plant the extensive rice areas of the world are concentrated in the level or gently sloping land in river basins, deltas, coastal regions and flat lowlands.

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1. E.B. Copeland, Rice (London: Macmillan & Co. Ltd., 1924), pp. x, 3; and Grist, op. cit., p.4.
  2. The high yields in these countries are due to a variety of reasons among which are the more intensive forms and better methods of cultivation adopted, the greater use of manures and fertilizers, the more common practice of crop rotation, the japonica type of paddy cultivated, the longer hours of sunshine in the summer due to the clearer skies and the longer hours of daylight, and the greater range of diurnal temperatures leading to less development of the straw but the development of better and more abundant grains. For details, see Grist, op. cit., pp.197, 358-362.

Paddy is best grown in regions experiencing definite seasons of high temperature and prolonged sunshine. The average temperature required throughout the growing period ranges from 68° to 100°F. Low temperatures may retard growth and development but certain varieties are found, for example the mayin paddies in Upper Burma, where temperatures as low as 50°F and below cause no ill effects.<sup>1</sup>

The plant does not grow well when the sunshine period is cut short either by clouds or by the shade of trees and tall weeds. But certain varieties found in India and Thailand are known to grow successfully under the shade of trees. On the whole, however, the paddy plant like most other green plants is "light loving".<sup>2</sup>

Soils best suited to paddy cultivation are of a heavy and almost impervious nature, such as heavy clay, through which water will not seep easily. For the same reason and especially in areas where the top layer is light in texture, an impervious substratum or subsoil below the reach of the roots but not too far down is also desirable. The supply and control of water are in fact more important than soil conditions. With the proper use of water, of fertilizers and the selection of suitable varieties, paddy can be grown on any soil that can support plant life. But the extensive rice areas of the world are found mostly on

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1. Grist, op. cit., p.11.

2. Ibid., p.10; and Copeland, op. cit., p.40.



land with heavy soils. Copeland made this observation:

The important question is not as to the soils which will produce a good crop, but as to the production of a long succession of good crops. Taking account of the permanency with which land must be devoted to lowland rice, and of the cost of water and the risks involved in its waste, it can be said flatly, and as a remarkably invariable rule, that lowland rice is a plant adapted to heavy soils, and that only heavy soils are by their character suited to rice.... Water which percolates or seeps through the ground, downward or laterally, is wasted; and whatever it may take with it is also lost to the rice. The soil through and from which the least water can get away is in that respect the best. (1)

The typical rice field is a "field of standing water". Dry or upland paddy is cultivated in a manner more similar to that of other cereals, that is, without surface water, but the area occupied by dry paddy is insignificant compared with wet or lowland paddy. The minimum amount of water necessary for the latter varies with the soil and the climate. Roughly, water requirements (supplied by means of irrigation works as well as rainfall) seem to be from 15 to about 35 inches per month. Very little paddy is grown in areas with less than 40 inches of rain in a year. But an excessive rainfall can be just as bad as a deficient rainfall because it can lead to destructive floods. Rainfall at harvest is everywhere regarded as disadvantageous as it causes damage to the crop and increases the cost of harvesting.

Grist made the following statement with regard to the amount of water required in the field at different stages

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1. Copeland, op. cit., p.45.

of the plant's development:

It is generally agreed that paddy should be planted in a well-soaked field but with little standing water, and the depth of water should be increased with the plant's growth until the depth is from 6 to 12 inches. This applies to transplanted paddy; other conditions are desirable with broadcast or drilled paddy. When the paddy flowers the water should be gradually drawn off till at harvest time the field is dry. During growth of the plant the water should not be stagnant but gently flowing. It is important that the soil should be well aerated. (1)

It can be seen, therefore, that areas such as that found in Monsoon Asia which experience seasonal alterations of a wet period during which the plant can be grown followed by a dry period when the paddy matures and is harvested are particularly suited to paddy cultivation. Less suitable areas, however, are not ruled out. There are some paddy varieties which can stand drought while others can be grown on land with water up to 15 feet in depth. The tadaungbo variety, for example, developed by the Burma Agricultural Department in the 1910's, can be grown in areas flooded up to 6 or 7 feet in depth. The use of this paddy permits the cultivation of land which would otherwise lie waste. Also while some varieties must have fresh water, others can withstand brackish water. The latter are especially useful in coastal areas.

It has been established that breezes or gentle movements of the air help paddy plant development by preventing saturation of the air around the leaves, but violent winds

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1. Grist, op. cit., p.28.



damage the small embankments or bunds which regulate the water level in the fields through wave action and often ruin the crop. Typhoons which sweep the east coast of Asia and the adjoining islands are extremely harmful because of the force of the wind and because they cause heavy floods. Strong winds also lead to lodging and shattering.<sup>1</sup>

## 2. Physical and Climatic Conditions in Burma.

A brief account of the geography of Burma will make apparent at once the reasons for the dominant position occupied by paddy cultivation in the Burman agricultural landscape.

Burma lies mainly in the tropics, extending from latitude 10° N. to 27° N. There are three main mountain systems, all stemming from a tangled core of mountains in the north and sweeping southwards. The eastern-most system forms the Shan plateau occupying the whole of the eastern portion of the country and tapering off southwards towards the Kra Isthmus. This isthmus portion of Burma is known as Tenasserim. The Arakan Yoma, on the west, extends southwards cutting off the Arakan Division from the rest of the country, and lying between these two is a low ridge

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1. Copeland, op. cit., p.41.

"Lodging" occurs when the plants, bearing a considerable weight at the top as the ears fill, are blown over by the wind or have fallen down of themselves, so that the ears are submerged; and "shattering" is the premature shedding of the grain.

of hills, the Pegu Yoma, which divides the central basin. There are three large rivers flowing in the general direction of north to south -- the Irrawaddy River, which drains about two-thirds of Burma's surface and is navigable for 900 miles from its mouth, the Salween River and the Sittang River. The vast, flat Irrawaddy-Sittang delta lands and the coastal strips on either side are the principal rice-producing regions.

The soils of Burma are mainly alluvial. Old alluvium is found in the low-lying plains of the delta and lower reaches of the Irrawaddy River and its many tributaries, in the plains along the banks of the lower reaches of the Sittang and Salween Rivers and their tributaries and in the coastal plains of Arakan and Tenasserim. The soils here may be classed as fairly heavy clays or clay loams with a heavier subsoil overlying at greater depths slaty blue clay, sand and gravel. During the dry season the topsoil bakes into a cement-like hardness so that cultivation can only be carried out at the break of the monsoon and no crop can be grown except with well irrigation during the dry season.<sup>1</sup>

The soils of Upper Burma seem to be more diversified consisting mainly of light alluvial sandy soils. Paddy is

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1. J.W. Grant, The Rice Crop in Burma ("Agricultural Department, Burma: Agricultural Survey No. 17 of 1932"; Rangoon: Supdt., Govt. Printing and Stationary, Burma, reprint - 1949), p.5; and Annual Report of the Rice Research Officer, Burma, 1933-34 (Rangoon, 1934), p.1.

not so important here though the main difficulty lies not in the soil but in the inadequate water supply.

Burma has a typical monsoon climate with three clearly distinguishable seasons. The hot wet season lasts from about the end of May when the southwest monsoon brings rain "with the abrupt violence characteristic of an Indian monsoon"<sup>1</sup> till the middle of October. The wettest months are from June to September. During the rainy period the temperature ranges from a mean maximum of about 90° F. to a mean minimum of about 75° F. In contrast to the sudden change from the dry to the wet season and vice versa the cool dry spell in December and January changes gradually into the hot dry season which lasts till about the middle of May. During the short cool spell, the mean maximum temperature is about 85° F. and the mean minimum temperature is about 65° F. From February to May the temperature rises to a mean maximum of about 100° F. and a mean minimum of about 75° F.<sup>2</sup>

The country may be divided into three main regions:<sup>3</sup>

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1. E.H.G. Dobby, Southeast Asia (London: University of London Press Ltd., seventh edition, 1960), p.152.
  2. Grant, op. cit., p.5.
  3. Crop statistics are not available for some parts of the wild, mountainous and sparsely populated northern region of the country and the vast Shan Highlands in the whole of the east, which was administered separately from the rest of Burma. These areas, therefore, are left out in the present survey.

1. The Lower Burma Wet Zone.
2. The Upper Burma Dry Zone.
3. The Northern Wet Zone of Upper Burma.

The Lower Burma Wet Zone. This zone covers the four administrative divisions of Lower Burma, namely, Arakan, Irrawaddy, Pegu and Tenasserim. These may be re-grouped into two sub-zones, one consisting of Arakan and Tenasserim and the other Pegu and Irrawaddy.

Arakan and Tenasserim though geographically apart have many features in common. They are both long and narrow with hills running north to south which form their eastern boundaries and both have narrow strips of flat land drained by numerous short, swift rivers lying between the hill ranges and the sea on the west. The rainfall is about 200 inches or more per annum. Paddy is cultivated almost exclusively on the narrow coastal strips and it is the main crop further inland. It accounts for the bulk of the cultivated acreage<sup>1</sup> in all the districts comprising the two divisions as can be seen in the following table.

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1. This is the total sown acreage, including matured and failed areas, but it does not include fallow acreage.



Table II.1 : Paddy Acreage and Total Cultivated Acreage in Each District of Arakan and Tenasserim Divisions, 1936 - 37.

District	Area under paddy	Area under all crops	Per cent of (1) to (2)
	(1)	(2)	(3)
	<u>In thousands of acres</u>		
Akyab	696	743	93.7
Arakan Hill Tracts	10	13	76.9
Kyaukpyu	186	210	88.6
Sandoway	95	110	86.4
ARAKAN DIVISION	998	1,066	92.7
Salween	25	30	83.3
Thaton	677	759	89.2
Amherst	508	593	85.7
Tavoy	116	164	70.7
Mergui	88	163	54.0
Toungoo	471	544	86.6
TENASSERIM DIVISION	1,886	2,253	83.7

Source: Season and Crop Report for 1936-37. This year is used as a fairly representative year.

Note: Taungya cultivated area (see pages 53-54) is not included.

Lying to the east of Arakan and north of Tenasserim are the Pegu and Irrawaddy Divisions. A large part of it in the south is the vast Irrawaddy-Sittang deltaic plains. Over much of this "one can journey for scores of miles without encountering any heights of more than a few feet. The creeks and channels which intersect it and which ebb and flow with the tide offer the only relief from its unending flatness."<sup>1</sup> The rainfall varies between 80 and 130 inches, and it diminishes rapidly inland. The bulk of Burma's rice is produced in this swampy tract where about 90 per cent of the cultivated area is occupied by paddy, as shown in the following table. This is the region which

<sup>1</sup>. Rice ("Department of Agriculture, Burma: Markets Section Survey No. 9"; Rangoon: Supdt., Government Printing and Stationary, Burma, 1940), p.10.

Table II.2 : Paddy Acreage and Total Cultivated Acreage in Each District of Pegu and Irrawaddy Divisions, 1936 - 37.

District	Area under	Area under	Per cent of
	paddy	all crops	(1) to (2)
	(1)	(2)	(3)
	<u>In thousands of acres</u>		
Rangoon	3	4	75.0
Pegu	1,035	1,062	97.5
Tharrawaddy	586	668	87.7
Hanthawaddy	827	873	94.7
Insein	550	587	93.7
Prome	377	440	85.7
PEGU DIVISION	3,378	3,634	93.0
Bassein	878	950	92.4
Henzada	581	732	79.4
Myaungmya	912	963	94.7
Maubin	506	584	86.6
Pyapon	726	741	98.0
IRRAWADDY DIVISION	3,603	3,970	90.8

Source: Season and Crop Report, 1936-37.

enables Burma to become the chief rice-exporting country of the world. It is clear that the topography, temperature, soil and water supply here are ideal for the cultivation of the paddy plant.

The Upper Burma Dry Zone. To the north of the Lower Burma Wet Zone lies the dry zone of Upper Burma, an extensive area of undulating country lying in the centre of Burma and traversed from north to south by the Irrawaddy River. The rainfall is about 25 to 40 inches in a normal year, but it is unevenly distributed, concentrated in a few torrential downpours and very uncertain so that sometimes there is extreme scarcity. Paddy is grown in scattered areas in narrow valleys and in places where local catchment basins, tanks, canals and streams are used

to supplement the rainfall. Paddy is grown for local consumption only and accounts for roughly about a third of the cultivated acreage. (See Table II.3) Other important crops are millet, sesamum, groundnuts, cotton, maize, pulses, grams, peas and beans. Due to the precarious rainfall and the practice of growing paddy wherever and whenever possible, the acreages under the different crops tend to vary considerably from year to year. In addition to this diversified, mainly subsistence agriculture, cattle are bred and reared on a large scale for draught purposes and for sale to other parts of Burma where climatic conditions are less suited to cattle.<sup>1</sup>

Table II.3 : Paddy Acreage and Total Cultivated Acreage in Each District of the Dry Zone of Upper Burma, 1936 - 37.

District	Area under paddy	Area under all crops	Per cent of (1) to (2)
	(1)	(2)	(3)
	<u>In thousands of acres</u>		
Thayetmyo	92	236	39.0
Minbu	144	310	46.4
Magwe	102	633	16.1
Pakokku	98	601	16.3
<b>MAGWE DIVISION</b>	<b>436</b>	<b>1,780</b>	<b>24.5</b>
Mandalay	122	200	61.0
Kyaukse	136	214	63.6
Meiktila	104	458	22.7
Myingyan	43	768	5.6
Yamethin	262	477	54.9
<b>MANDALAY DIVISION</b>	<b>668</b>	<b>2,117</b>	<b>31.6</b>
Shwebo	612	780	78.5
Sagaing	64	632	10.1
Lower Chindwin	115	128	89.8
<b>PART OF SAGAING DIV</b>	<b>791</b>	<b>1,540</b>	<b>51.4</b>

Source: Season and Crop Report, 1936-37.

1. See below pp. 66-70 for a detailed account on cattle.

Table II.4 : Paddy Acreage and Total Cultivated Acreage in Each District of the Northern Wet Zone of Upper Burma, 1936 - 37.

District	Area under paddy	Area under all crops	Per cent of (1) to (2)
	(1)	(2)	(3)
	<u>In thousands of acres</u>		
Myitkyna	102	114	89.5
Katha	209	225	92.9
Bhamo	35	36	97.2
Upper Chindwin	76	598	12.7
PART OF SAGAING DIV	422	973	43.4

Source: Season and Crop Report, 1936-37.

The Northern Wet Zone of Upper Burma. This zone lies north of the Upper Burma Dry Zone and consists mainly of forested hills and valleys. The rainfall varies from 70 to 80 inches per annum. Wet paddy is grown on the lowlands and dry paddy on the hills, but cultivation generally is unimportant due to the uneven terrain, difficult communications, sparse population and unhealthy conditions. With the exception of Upper Chindwin, paddy occupied about 90 per cent of the total cultivated acreage. (See Table II.4.)

### 3. Expansion in Paddy Acreage.

As can be seen from Tables II.5 and II.6,<sup>1</sup> the total paddy acreage increased steadily and rapidly throughout

1. See Appendix II.A., pp.349-51 for the annual figure.



Table II.5 : Annual Average Acreage of Paddy Land in Lower and Upper Burma, 1830 to 1940.

Period	Lower Burma	Upper Burma	Total	Lower Burma	Upper Burma	Total
	<u>In thousands of acres.</u>			<u>Per Cent.</u>		
1830	66	-	-			
1835	235	-	-			
1845	354	-	-			
1855	993	-	-			
1860	1,333	-	-			
1863 to 1870	1,597	-	-			
1871 to 1880	2,411	-	-			
1881 to 1890	3,791	-	-			
1891 to 1900	5,430	1,391	6,821	79.6	20.4	100
1901 to 1910	7,300	1,962	9,262	78.8	21.2	100
1911 to 1920	8,261	2,105	10,366	79.7	20.3	100
1921 to 1930	9,347	2,224	11,571	80.8	19.2	100
1931 to 1940	9,795	2,398	12,193	80.3	19.7	100

Sources: Annual Reports on the Administration of Burma;  
Annual Season and Crop Reports; and Grant,  
op. cit., Appendix I, p.40.

- No records.

Table II.6 : Average Annual Increase of Paddy Land in Lower Burma, 1863 to 1940.

Period	Average Annual Increase in Lower Burma	
	<u>In thousands of acres.</u>	
1863 to 1870	50	
1871 to 1880	140	
1881 to 1890	141	
1891 to 1900	196	
1901 to 1910	113	
1911 to 1920	93	
1921 to 1930	84	
1931 to 1940	36	

Sources: Annual Reports on the Administration of Burma;  
and Annual Season and Crop Reports.

the period under review. The rate of expansion slowed down a little in the twentieth century especially in the 1900's and the early 1930's. In 1907 the Chettiar moneylenders called in many of their loans due to the money stringency resulting from the collapse of the money market in the United States. This was the main cause of the lower rate of development, for cultivators found it difficult, if not impossible, to get loans to clear new land. Among the reasons for the slowing down during the world-wide trade depression of the early 1930's were the greatly reduced paddy prices, the contraction of agricultural credit due mainly to the reluctance of moneylenders to give loans secured on land mortgage, the greater expenditure of capital required for reclaiming the remaining waste land and the increasing scarcity of easily-cleared waste land suitable for paddy cultivation.

The expansion in paddy acreage occurred mostly in Lower Burma. Throughout the entire period when comprehensive statistics on paddy acreage were recorded, about 80 per cent of the total paddy acreage of the country was located in Lower Burma.

Table II.7 : Annual Average Acreage of Paddy Land in Each Division of Lower Burma, 1867-68 to 1940-41.

Period	Arakan	Pegu	Irrawaddy	Tenasserim	Lower Burma
<u>In thousands of acres</u>					
1867-68 to 1870-71	378		979	338	1,695
1871-72 to 1880-81	407		1,588	416	2,411
1881-82 to 1890-91	546	1,513	1,153	579	3,791
1891-92 to 1900-01	706	2,017	1,742	965	5,430
1901-02 to 1910-11	836	2,610	2,410	1,444	7,300
1911-12 to 1920-21	909	2,889	2,815	1,648	8,261
1921-22 to 1930-31	940	3,291	3,328	1,788	9,347
1931-32 to 1940-41	987	3,337	3,571	1,900	9,795
<u>Per Cent.</u>					
1867-68 to 1870-71	22.3		57.8	19.9	100
1871-72 to 1880-81	16.9		65.9	17.2	100
1881-82 to 1890-91	14.4	39.9	30.4	15.3	100
1891-92 to 1900-01	13.0	37.1	32.1	17.8	100
1901-02 to 1910-11	11.4	35.8	33.0	19.8	100
1911-12 to 1920-21	11.0	35.0	34.1	19.9	100
1921-22 to 1930-31	10.1	35.2	35.6	19.1	100
1931-32 to 1940-41	10.1	34.1	36.5	19.4	100

Sources: Annual Reports on the Administration of Burma for the earlier years, and Annual Season and Crop Reports for 1901-02 onwards.  
See Appendix II.B on pp. 352-54 for the annual figures.

The above table shows that of the Lower Burma administrative divisions, Irrawaddy and Pegu accounted for the greater part of the paddy acreage, amounting together to about 70 per cent of the total paddy acreage in Lower Burma. Tenasserim accounted for a fairly stable proportion of the paddy acreage while the proportion in Arakan shrank gradually. But no division experienced any significant reduction in paddy acreage throughout the entire period.

#### 4. Yield Per Acre.

Table II.8 reveals that the average yield in Burma was low compared with the other important rice-producing and/or exporting countries of the world. The only country in the table recording a lower yield was Indo-China where there was a marked decline in the average yield within about 20 years. On the other hand, Japan, United States, Italy and Spain showed remarkable increases in their average yields. This was accomplished chiefly by the

Table II.8 : Annual Average Yield Per Acre in the Main Rice-Producing and/or Exporting Countries of the World, 1909-10 to 1913-14 and 1928-29 to 1932-33.(1)

Country	1909-10 to 1913-14	1928-29 to 1932-33
	<u>Quintals per hectare</u>	
China	-	26.8
India	16.6	14.6
Japan	30.7	35.0
Burma	-	14.3
Indo-China	15.6	10.6
Siam	-	16.3
United States	16.8	23.3
Italy	32.8	46.9
Spain	49.9	61.9

Source: Annuaire International de Statistique Agricole, 1922 and 1938-39. (Rome, The City: Institut International D'Agriculture, 1923 and 1939).

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1. These figures are used as a rough indication only, since methods of recording yields varied in different countries, for example, the average yield for India was based on the sown area while that for Burma was on the matured area only.



the greater use of chemical fertilizers, the development of improved seeds and the introduction of better cultivation methods.<sup>1</sup>

The average yield for Burma, however, declined a little, according to estimates made in official records, from about 1,600 lbs. per acre in the early 1880's<sup>2</sup> to just under 1,500 lbs. in the 1930's.<sup>3</sup> This was despite the efforts made by the Agricultural Department of Burma, which experimented with various ways of increasing yields among which the most important were the selection and distribution of improved seed and the use of chemical fertilizers. The cost of chemical fertilizers, however, was found to be too high in relation to the low money value per acre of a crop like paddy for profitable use in most years. The most practical line of approach appeared to be the selection and distribution of improved seed but this was a slow process and by the 1930's it was estimated that only about 8 per cent of the total paddy acreage was under improved seed, so that the average yield for the country remained largely unaffected by this method.<sup>4</sup>

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1. D. Hendry, Fertilizers for Paddy - Results Obtained on the Hmawbi Agricultural Station ("Department of Agriculture, Burma: Bulletin No. 25 of 1928"; Rangoon: Supdt., G.P.S., Burma, 1929), p.3.
  2. Administration Report, 1880-81, p.38; and Administration Report, 1883-84, p.24.
  3. Hendry, Fertilizers... (1929), p.2; and Grant, op. cit., p.16.
  4. Rice... (1940), p.60.  
See pp.59-66 below for an account on the Agricultural Department.

It was found that yields in the older-established paddy land remained stable, as in Hanthawaddy district where the average yields, as recorded by a series of Settlement reports from 1879 to 1933, showed no marked change.<sup>1</sup> As a general rule, yields on newly cleared land tended to increase rapidly until after a period when the most paying crop had been taken from the soil, when the yield began to decrease till it reached a fairly stable level at which the plant food used up by the annual crop was made good by the natural forces at work in restoring the soil. Over the whole period the average yield for the country declined slightly due to the extension of cultivation into marginal areas where yields were uncertain and low, since naturally the best lands were among the first to be taken up.

The yield in different parts of Burma was determined largely by the amount and distribution of the water supply and the type of soil, except in the irrigated tracts, which were mostly in the dry zone, where soil played the dominant role. The district yields in Lower Burma varied from 1,250 lbs. per acre in Prome and Mergui districts to 1,700 lbs. in Tharrawaddy, Myaungmya and Pyapon districts.<sup>2</sup> For revenue purposes land was

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1. Hanthawaddy District Settlement Reports, 1879-80, 1882-83, 1897-98, 1903-04, 1907-08, 1925-26 and 1930-33.

Settlement reports embody the work of Settlement Officers who surveyed and assessed an area for land revenue purposes.

2. See Appendix II.C on p.355 for the average yield of paddy per acre in each district.

divided into three classes. First class land was capable of producing 2,000 to 2,250 lbs. or more to the acre while third class land produced 1,000 to 1,250 lbs. per acre.<sup>1</sup>

The highest yields were obtained in the Pegu and Irrawaddy Divisions and the Akyab district of Arakan Division. Elsewhere in Lower Burma the yields were about 300 lbs. less to the acre due mainly to the uneven nature of the terrain and the liability to suffer from damage by floods in the low-lying areas and from an insufficient water supply on higher ground. Along the sea coast in the Amherst and Thaton districts of Tenasserim were very high yielding tracts but further inland damage from floods from the Salween River led to low yields in many of the inland tracts, thus bringing down the average for the districts.

The yields in Upper Burma were considerably less than in Lower Burma due mainly to an inadequate supply of water. The yields varied from 1,600 lbs. per acre in areas with canal irrigation to 1,000 lbs. to the acre in areas without canal irrigation.<sup>2</sup>

##### 5. Size of Farms.

Practically all paddy production was undertaken by small cultivators working on their own land or on rented land, despite the gradual expropriation of the small

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1. Grant, op. cit., p.16.

2. Ibid., p.16.

owner-cultivators by large landlords. Large-scale farming of the type common in the wheat exporting countries was almost unknown. The landlords, who were mostly non-resident non-agriculturists, generally preferred to divide up the land into small parcels and let them to tenants.

The size of the average farm, defined as the actual area worked by a cultivator as a farm unit with the help of his family and hired labour, varied a great deal from district to district but was in general a simple multiple of the area which could be ploughed by a pair of bullocks or buffaloes and therefore required the services of one ploughman. This area ranged from 6 to 7 acres in some localities to 25 acres in others. The number of acres in a farm varied from 10 to 100 acres, one to four or five yoke of cattle being employed. Generally more yoke of cattle were employed in those parts where each yoke covered a larger area.<sup>1</sup>

The most common size of a paddy farm was between 10 and 40 acres in Lower Burma and between 5 and 15 in Upper Burma.<sup>2</sup> Although the figures in Table II.9 are not based on sufficient data to give reliable averages for whole districts, they can be used to give an impression of the size of farms most frequently met with in the various districts.

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1. Report of the Burma Provincial Banking Enquiry Committee, 1929-30, Vol. I (Rangoon: Supdt., G.P.S., Burma, 1930), p.25.
  2. Ibid., p.25.

Table II.9 : Average Size of Farms in Selected Districts.

District	Number of acres per farm
Hanthawaddy	67
Insein	40
Pegu	35
Bassein	34
Myaungmya	26
Maubin	23
Thaton	18
Tharrawaddy	17
Akyab	17
Yamethin	14
Mandalay	8

Source: Report of the Royal Commission on Agriculture in India (London, 1928), Vol.XII - Evidence Taken in Burma, p.xxviii.

In the days of subsistence farming, farms were about 5 to 10 acres on the average. With the change to commercial agriculture, farms increased in size. In general, holdings tended towards the economic size, that is, the area which could be worked best by the cultivator with the help of hired labour using the primitive implements and the traditional methods of cultivation. Where labour could be obtained easily and cheaply as in Hanthawaddy district, which could draw on the vast pool of cheap Indian labour in the port of Rangoon, farms tended to be large. Large farms were also more frequently met with on flat and therefore more easily cultivated land such as



that of the Irrawaddy-Sittang delta.<sup>1</sup>

Fragmentation into scattered minute plots common in parts of India was rare in Burma. Parts of the Prome district and of the Arakan Division and a few areas in the dry zone were the only important places where it occurred. The smallness of farms in these areas could be attributed to the absence of fertile suitable waste land within easy reach, the large number of subsidiary industries undertaken by cultivators there and the greater practice of subsistence farming.

Burmese Buddhist inheritance customs required the division of property among all members of the deceased person's family, but excessive fragmentation was avoided. Where the holding was not extensive enough for proper cultivation by each heir, a common practice was for the several heirs to take turns in cultivating it; or the land might be let or sold and the rent or proceeds shared by the heirs; or one heir might take over the whole holding and pay off the other heirs with the money obtained by mortgaging the holding. Thus "the inheritance law leads to sales and indebtedness, and often as a consequence to transfers to non-agriculturists; but it does not lead to fragmentation."<sup>2</sup>

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1. J.S. Furnivall, "Land as a Free Gift of Nature," The Economic Journal, Vol. XIX (London, 1909), p. 556; and Administration Report on Pegu, 1855-56, p. 25.
  2. Banking Enquiry Report, 1929-30, Vol. I, p. 26.

## 6. Methods of Cultivation.

The implements used in paddy cultivation in Burma are all very simple and resemble more or less those in use in the other paddy-growing countries in Asia. The main implements are the plough (hte), the harrow (htun) and the rotatory harrow (settun) and all are light enough to be pulled by bullocks or buffaloes. The Burman plough consists essentially of a curved wooden share, shod at the point with iron, handles, and a pole for attachment to the yoke on the necks of a pair of cattle. The htun consists of a log of wood five to six feet in length with three to seven wooden teeth, a cross-bar to enable the cultivator to push it into the ground and to be lifted in turning and in freeing the harrow from weeds and two poles for attachment to the yoke. The rotatory harrow is of two types, the gwinset and the dahset. The dahset is slightly more elaborate and expensive. These are used to break up lumps of soil and to cut and bury weeds.<sup>1</sup>

Preparations for the coming season are made in April each year when the cultivator may hire a ploughman or two to help him. Bunds or small embankments (kazins), which divide the farm into fields so that the water in each field can be held at as uniform a depth as possible, are repaired and the implements got ready.

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1. Grant, op. cit., p.11.

Cultivation begins as soon as the first rains brought by the monsoon in May have softened the soil sufficiently to enable the implements to be used. The first fields to be cultivated are the nurseries which are usually about one-tenth of the area to be worked by the cultivator. The general practice is to plough the land once and to harrow it 10 to 12 times. When about four to six inches of the topsoil has been reduced to a fine soft mud and all weeds removed or buried, the land is ready for sowing.

In general, seeds are soaked in water and sprouted under a covering of leaves and sacking. Sprouted seeds are favoured as they germinate better and are less liable to be washed away. Before sowing, the water in the nursery is drained off and the sprouted seed scattered by hand at the rate of about 10 to 15 baskets per acre on the pasty glistening mud. After a few days water is allowed to remain on the land and the depth is increased following the growing height of the plants. The seedlings are transplanted after four to six weeks in the nursery when they have grown to a height of 18 to 24 inches.

While the seedlings are growing in the nursery the main fields are ploughed and harrowed over in the same manner as in the nursery, though usually less thoroughly. In some areas where labour is scarce or where the soil is not very fertile or where the water is too deep to allow

the operator to see the furrow, the plough is not used. Buffaloes are sometimes driven round and round by children until the soil is properly puddled. This was fairly common in the days of subsistence agriculture, but the custom gradually disappeared with the development of commercial agriculture.

From the middle of July till the end of August, transplanting goes on in most districts. In low-lying areas where the cultivators have to wait for the August floods to subside first and in areas where water is not sufficient, transplanting may be carried out later.

The seedlings are plucked and carried from the nurseries by men but the actual transplanting is customarily done by women and girls. The transplanters work in a line, moving backwards. Two to four seedlings are pushed into the soft mud by hand at distances of about 4 to 8 inches apart, the wider spacing being adopted on the better types of soil. This is done with remarkable speed and precision due to long practice. A. McKerrall remarked that in parts of Upper Burma transplanting was accompanied by the music of a Burmese band stationed on the edge of the field, but this custom was not observed in Lower Burma.<sup>1</sup>

In areas where the water is too deep for the hand method the seedlings are pushed into the soil with the help

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1. A. McKerrall, "Rice Cultivation in Lower Burma," Agricultural Journal of India, Vol. III (Calcutta, 1908), p.36.

of a three to four-foot long stick with a flat two-notched iron-piece at the end. For this arduous work which involves weeks of continual bending, stooping and working in sticky mud the transplanterers are customarily paid men's wages.

In some areas where the soil is poor or where labour is scarce or when sufficient seedlings cannot be raised in time, broadcast sowing is resorted to. This is found to be less satisfactory and the yields tend to be appreciably less than the transplanted crop.

After transplanting, the cultivator has little to do except to regulate the water level in the fields and to prevent the water from stagnating by working on the bunds and the drainage channels. Areas damaged by floods may have to be replanted. About a week or ten days before the crop matures, all the water is drained off the fields and the soil allowed to dry. If this is not done, ripening is uneven and the crop is liable to lodge.

A practice peculiar to Burma is the flattening of the standing crop in the same direction by the use of long bamboo poles laid across the plants. This is done to facilitate reaping since the violent storms which often occur at this time of the year may blow down the stalks in all directions.<sup>1</sup>

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1. Copeland, op. cit., p.268; and D. Hendry, "Rice in Burma: Production, Trade and Improvement," Tropical Agriculture, Vol. V (Trinidad, 1928), p.14.



Reaping is done by hand, using a small sickle with a finely serrated edge. For this operation labourers are in great demand. Before the Second World War, many labourers came from India while some came from Upper Burma. About a foot of the straw is removed with the grain, tied into bundles and left to dry for about a week in the fields. They are then tied into sheaves and carted to the threshing floor (talin), which is situated in the fields or just outside the village. A threshing floor is made by levelling and plastering a field with mud and cattle dung to give it a hard and smooth surface. The sheaves are placed round a central stake. Threshing is done by cattle going round the stake treading out the grain.

For winnowing, a tripod bamboo platform about eight feet high is erected, a man stands on it and basket by basket of threshed paddy is handed up to him. The paddy is allowed to trickle slowly to the floor and the breeze carries away the chaff, dust, light grains, straw, etc., leaving a fairly clean heap of paddy. Generally threshing and winnowing are carried out in January and February.

A different system of cultivation is practised for dry paddy which is grown in the thickly wooded hill areas where there is 50 or more inches of rain. This is known as shifting (taungya) cultivation or "fire farming" which is undertaken by hill tribes. During the dry season,

trees are felled and the timber and main undergrowth burnt. With the first rains the land is lightly tilled to work the ashes into the soil. Paddy is sown broadcast either alone or mixed with cotton seed. Nothing is done further till about September or October when the paddy is harvested. The same piece of land is cultivated for two to three years, after which it is abandoned for periods of seven to ten years and a fresh clearing made elsewhere. This paddy is for home consumption only.

Several millions of acres are estimated to be temporarily occupied in this manner at any time and even larger areas are left to jungle fallow. The authorities frown on taungya cultivation because much valuable timber is wasted and soil erosion is particularly damaging on land denuded of its forest covering. But taungya cultivation remains the basic and traditional form of farming for more than ten per cent of the population.<sup>1</sup>

## 7. Paddy Varieties.

Over one thousand named varieties are found in Burma but many of the vernacular names apply to the same variety grown in different localities. All the important varieties are broadly classified by cultivators according to the time they are ready for harvesting into: kaukyin or early

1. Rice... (1940), p.6; and V.D. Wickizer and M.K. Bennett, The Rice Economy of Monsoon Asia (Stanford, California: Food Research Institute, 1941), p.12.

rices with a growing period of 140-150 days and ripening in the middle or end of October, kauklat or medium rices with a growing period of 150-170 days and ripening about the middle or end of November, kaukkyi or late rices with a growing period of 170-200 days and ripening in the early part of December, and mayin or spring rices with a growing period of 140-150 days and planted in and around marshes in November and harvested about March the following year.<sup>1</sup>

Fluctuations in the growing period of each variety, however, are considerable. It varies according to the time of sowing, the water and soil conditions and character of the season.

Kaukkyi and kauklat varieties are the most important, together covering about 97 per cent of the total paddy acreage. Kaukkyi varieties are grown in the more fertile areas with an assured water supply up till the end of November. These areas are mainly low-lying with stiff soils, free from flood but capable of retaining the water for a considerable period after the monsoon is over. The irrigated tracts of Shwebo and Minbu are also suitable because of the adequate water supply through irrigation. These varieties comprise the big and bold types of Ngasein in Pegu, Irrawaddy and Arakan Divisions, all the Byat types in Tenasserim and most of the Midon types in the country.

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1. Grant, op. cit., p.7.

Kauklat varieties are cultivated on land where water drains off 10 to 15 days earlier than where the kaukkyi varieties are grown. They comprise most of the small-grained Ngasein types and all Letywezin and Emata types. They are the main varieties grown in the non-irrigated tracts of Upper Burma.<sup>1</sup>

Kaukyin varieties are comparatively unimportant and are cultivated in tracts where paddy cultivation is precarious due to a low rainfall or unsuitability of the soil. They are generally grown in Upper Burma. Lower Burma cultivators sometimes grow them in order to obtain early paddy for food before the main harvest.

The classification used by millers, brokers and traders is based not on life period but on the physical characters of the grain, though mainly according to its length and breadth and the ratio of length to breadth. This classification is adopted by the Agricultural Department in its work of seed improvement. All rices are classified into five main groups according to the length and breadth of the grain and the ratio of length to breadth, as in Table II.10 below. A "bold" grain is defined as one which is broad in proportion to its length. Ngasein, Midon and Byat groups are bold grains while Emata and Letywezin are thin grains. Generally bold grains suffer less breakage in milling than thin long grains but softness or hardness of the grain may modify this.

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1. Grant, op. cit., p.8.

Table II.10 : Burma - Classification of Paddy into Five Types According to Size.

Group Name	Dimensions of Grain				Description
	With Husk		Without Husk		
	Length in mm.	Length Breadth	Length in mm.	Length Breadth	
Emata	Over 9.40	Over 3.30	Over 7.0	Over 3.0	Long slender grain. Kernal translucent.
Letywezin	8.40 to 9.80	2.80 to 3.30	6.00 to 7.00	2.40 to 3.00	Slender grain. Kernal translucent.
Ngasein	7.75 to 9.00	2.40 to 2.80	5.60 to 6.40	2.00 to 2.40	Short medium grain. Kernal usually trans- lucent, sometimes with abdominal white.
Midon	7.35 to 8.60	2.00 to 2.40	5.00 to 6.00	1.60 to 2.00	Short roundish bold grain. Kernal opaque and chalky.
Byat	9.00 and upwards	2.25 to 3.00	6.40 to 7.35	2.10 to 2.25	Large broad grain. Kernal opaque and chalky.

Source: R.A. Beale, A Scheme of Classification of the Varieties of Rice Found in Burma ("Pusa Agricultural Research Institute Bulletin No. 167"; Calcutta: 1927), p.165.

Ngasein grains are bold, hard, fairly translucent, often with abdominal white. This group comprises the largest number of varieties, mills fairly well and is the most important and extensively cultivated group in Lower Burma. It constitutes the bulk of the rice exported from the ports of Rangoon and Bassein and is known abroad everywhere as "Burma Rice". Most of the exports to Europe are in this group.

The next most extensively cultivated group is the Midon group. The grain is softer and more chalky than the Ngasein type but because of its short plump round shape, its milling quality is high. It is popular for home consumption and commands a higher local price than Ngasein because of its better taste and easy digestibility. It is mainly exported to countries in the East and South-east Asia.

The grain of the Emata group is long and slender and therefore breaks easily on milling. But it is also hard and translucent so that a most attractive rice emerges after a high polish. It is exported mainly to the European market where appearance is of prime importance. Its chief competitors are Garden Siam and American Carolina types of rice. Prome District Emata rices, which are very good in quality, are the most well-known of this group. Due to the poor milling outturn Emata rices are sometimes parboiled, particularly the lower-grade qualities, and this lowers the milling wastage. Parboiled Emata rices are highly regarded by all parboiled rice-eaters.

Letywezin varieties lie midway between the Emata and Ngasein types in appearance, character and milling quality. They comprise a large number of varieties and are grown throughout the country. The bulk of the varieties grown in the irrigated as well as the non-irrigated tracts of



the dry zone of Upper Burma belong to this group.

The varieties comprising the Byat group are not important in trade. They are grown in small patches and are much appreciated for home consumption. The grain is large, bold, soft and chalky. Only the Tenasserim Division exports rice belonging to this group.

Each of the above groups is again subdivided by using the cultivator's grouping into early, medium and late maturing varieties but generally most varieties in the Ngasein, Midon and Byat groups are the long-lived kaukkyi rices, while the varieties in the Emata and Letywezin groups are mostly kauklat rices with an overflow into the kaukyin category.<sup>1</sup>

#### 8. The Agricultural Department.

The Department of Agriculture came into existence in Burma in May 1880 as a part of the Department of Land Records and Agriculture.<sup>2</sup> A separate Agricultural Department was established in October 1906, and in 1907 a central experimental farm was opened at Mandalay to deal with the improvement of the major crops grown in Upper Burma. In 1914, another central station was opened at Hmawbi, 36 miles north of Rangoon, which dealt almost exclusively with paddy. Other central stations were opened from 1924 onwards in Akyab, Myaungmya, Mudon and other places where work was

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1. Rice... (1940), pp.13-14.

2. Administration Report, 1881-82, p.4.

also concentrated on the paddy crop.<sup>1</sup>

The work of the Agricultural Department was concerned with the improvement of agriculture in general and of paddy cultivation in particular, since paddy was by far the most important crop in the agricultural economy of the country. The main lines of approach in the attempts to improve paddy cultivation were the selection, multiplication and distribution of better paddy seed, the study of soil conditions and manurial requirements, and the introduction of better implements and better methods of cultivation.

The work which achieved the quickest and most practical results was the selection of improved varieties of paddy and the multiplication and distribution of seed. It was found that a great number of different varieties were grown in almost every paddy field. This mixing might be accidental or intentional. The farmer might want early maturing strains so that he could have some paddy for subsistence before the main harvest. He might own a piece of land which was not uniform in the matter of soil, elevation, depth of water, etc., so that different varieties suited to different conditions were planted to obtain optimum yields.

This mixing of varieties was of little consequence in the days of subsistence farming but once paddy cultivation became commercialised it was found that consignments of mixed varieties were unfavourable to efficient milling.

1. Administration Report, 1906-07, p.31; and Grant, op.cit. p.34.

Irregularity of shape, size and hardness of grain, the presence of red grains<sup>1</sup> and awns<sup>2</sup> all contributed to greater wastage in the milling process and resulted in an inferior product. For export purposes a steady and large supply of a few standard grades of rice was better than an irregular supply of numerous and varying types of rice.

Copeland observed that:

Where rice is raised chiefly for export, it is an advantage to produce single types on a large scale. A large and uniform product can find and hold a market, while a small or unsteady or mixed product may remain at a serious commercial disadvantage. (3)

The Agricultural Department set out to improve the paddy crop by attempting to replace the mixtures of numerous varieties by a few strains of high yielding capacity and good quality suitable for cultivation under a wide range of conditions. For this three main methods were adopted -- pure line selection<sup>4</sup> with indigenous varieties, experiments with the best varieties from other countries, and hybridisation.

Pure line selection was found to offer the best hopes

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1. The cuticle or skin of the kernels of these grains is red instead of the usual cream or pale yellow, and a greater degree of milling is required to remove all traces of this skin.
  2. An awn or beard is a long spike attached to the husk. It is difficult to remove being more than twice as long as the grain itself and is of a tough wiry nature. Before milling, grains with awns must be passed through special awning machines. C.E. Douglas, Rice: Its Cultivation and Preparation (London: Isaac Pitman & Sons, Ltd., n.d.), pp. 10-11.
  3. Copeland, op. cit., p. 104.
  4. Pure line selection in rice is the selection of a single parent plant possessing the required characteristics, and the multiplication of this plant.

of improvement. Thousands of varieties were isolated and studied. Before distribution to cultivators the grain was subjected to a yield test extending over two or three seasons and a milling test to determine the amount of outturn and the milling quality. The pure strains which were finally distributed were all of superior quality and milled well in addition to being capable of yielding from 250 to 500 lbs. more per acre than local varieties. Millers were willing to pay premiums of Rs. 5 to 15 per hundred baskets of paddy grown from these pure strains since an increased milling outturn of around 3 baskets of white rice was obtained. Thus cultivators of pure strains benefited not only from the higher yield but also from the higher prices offered by brokers for undiluted, improved paddy.<sup>1</sup>

Over a hundred of the best varieties grown in other main rice-producing countries were tried both in Lower and in Upper Burma. The best varieties from Japan, Europe and America were studied but these sub-tropical and temperate strains all proved precocious when grown under the tropical conditions of Burma and produced very low yields. Tropical strains from other countries were found to be inferior in quality and yield to the pure local strains. Hybridisation was also attempted but the results were disappointing.

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1. Grant, op. cit., pp. 34, 36; and A. McKerral, "Constitution and Work of the Agricultural Department, Burma," Agriculture in Burma (1927), p. 52.

The estimated area under improved strains in 1934-35 was 983,000 acres, yielding roughly 30 million baskets or 600,000 tons.<sup>1</sup> Thus they occupied only about 8 per cent of Burma's total paddy acreage but it was confidently expected by the Agricultural Department that their cultivation would greatly increase as their superiority over local ordinary varieties became more generally recognised.

Much more significant increases in yields than the use of improved seed could be obtained by the employment of manures and fertilizers.<sup>2</sup> The more important locally available manures were cattle dung, bats' guano, fish waste, bone-meal, rice bran, cotton cake and green manure crops. Of these, cattle dung was by far the most important in quantity and suitability. Roughly, about a pair of bullocks was required to work every 10 acres of paddy land and this pair was able to contribute to the manure pit in the course of a year about six tons of dung, according to records kept at the Hmawbi Agricultural Station. If carefully conserved, there would be therefore about six tons of cattle dung for every 10 acres of paddy land but unfortunately much was wasted. Cultivators were sometimes seen throwing it away into the nearest streams to avoid the trouble of storing, carting and using it on the land.

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1. The Annual Report on the Agricultural Department, 1934-35 recorded 344,000 baskets distributed direct from farms controlled by the Department. This was sufficient for about 350,000 acres.
  2. The use of fertilizers could increase the yield by as much as 50 per cent. Hendry, "Rice in Burma...", op. cit., p.14.

What usually happened was that the cultivator collected what had been carelessly stored in the open and used it on the nursery only. Analysis of the manure collected in this fashion revealed that it was very inferior indeed.<sup>1</sup>

Of the other manures mentioned above, bats' guano, fish waste and bonemeal were limited in quantity while rice bran and cotton cake fetched higher prices in other uses. Experiments on Hmawbi Station showed clearly that the use of these expensive manures increased the output considerably but resulted in a heavy monetary loss due to the low money value per acre of a crop like paddy. The growing of green manure crops before or after the paddy season was attempted by the Department but because the land baked rapidly into a cement-like hardness as soon as the rains stopped the attempts failed. During the dry season from November to May no plant growth was possible except with irrigation.

A series of experiments carried out at the Hmawbi experimental station established that the principal requirements of paddy on Burma soils were ammoniacal nitrogen and phosphate. To supply these requirements the artificial fertilizers sulphate of ammonia and superphosphate were found entirely suitable. These were cheaper than the indigenous manures already mentioned but the question of whether or not it was profitable to use them depended on the relative prices of the fertilizers and the paddy, as illustrated in the following figures.

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1. Hendry, Fertilizers... (1929), pp.4-5.



Year	Price of paddy per 100 baskets.	Value of average yield of 30 bkts. per acre.	Value of 30% increase resulting from use of fertilizers.	Cost of artificial fertilizers per acre.	Difference
	<u>Rs.</u>	<u>Rs.</u>	<u>Rs.</u>	<u>Rs.</u>	<u>Rs.</u>
1914	125	37.5	11.25	16.75	Loss 5.50
1928	170	51.0	15.30	13.25	Gain 2.05

In the development and introduction of improved implements used in cultivation, the Department also found that the cost of the implement to the cultivator was a very important factor to bear in mind. Improved ploughs, harrows, reaping machines, threshing and winnowing machines, carts and water lifts were introduced. One of the most successful of these attempts was the development of a cheap and improved plough called the theikpan plough, which proved popular among cultivators. This plough turned as well as cut an even furrow slice whereas the Burman plough only cut as it was more in the nature of a single-toothed harrow. The use of the theikpan plough improved cultivation and cut down costs as less harrowing was necessary after it than after the use of the ordinary plough.<sup>1</sup>

Seed rate and transplanting experiments also showed that cultivation costs could be lessened; cultivators were in the habit of sowing from 10 to 15 baskets of seed to the acre in their nurseries but it was found that equally good

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1. Grant, op. cit., p.11.

results were obtained with a seed rate of 5 baskets to the acre. It was also established that in transplanting, 2 to 3 seedlings per hole produced just as good results in certain areas as the usual practice of 5 to 6 seedlings. When the soil was good and well-prepared one seedling was just as good as the customary 2 to 3 seedlings in such fields.<sup>1</sup>

The staff of the Agricultural Department undertook much valuable research into the many aspects of agriculture in Burma. Findings were made public through publications such as the annual governmental and departmental reports, leaflets and bulletins in English and Burmese, contributions to the Agricultural Journal of India and several series of Surveys, Memoirs and Bulletins published by the Department itself. Besides research, the staff also taught at the Agricultural College at Mandalay, which was set up in 1924 and held short courses at the central farms to provide practical instruction for cultivators and their sons.<sup>2</sup>

#### 9. Cattle.

It has been said that the success of the paddy crop in Burma in any one year depended on three main factors: a regular and normal monsoon, good health among the cultivators and an adequate supply of plough cattle and absence of

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1. Grant, op. cit., p.4; and McKerral, "Agricultural Department...", Agriculture in Burma (1927), p.48.
  2. McKerral, "Agricultural Department...", Agriculture in Burma (1927), pp.41, 43.

cattle disease.<sup>1</sup>

Plough cattle were very important in the cultivation of paddy as they were essential to the efficient performance of the agricultural operations of ploughing, harrowing and threshing, besides pulling carts and providing the best type of fertilizer for Burma paddy soils -- cattle manure. Outside agriculture, cattle were also used for timber dragging (mainly by buffaloes), oil and sugar-cane crushing, cart racing, raising water, pack work and the provision of milk and beef. But as the Report of the Stock Breeding Committee in 1917 emphasized, the use of cattle in agriculture far outweighed in importance all other uses.<sup>2</sup>

Burman cattle were classified into oxen and buffaloes. Buffaloes were stronger and were more at home in the inundated paddy fields, but they cost more, were less docile, less able to work for long hours in the hot sun and were more lazy and unwieldy. The buffalo was described as "an animal with a very definite idea of the value of his own leisure, particularly on a hot day."<sup>3</sup> Moreover he was more susceptible to disease and was comparatively useless for transport purposes. The oxen, of which the bullock was the most common for draught purposes, were described as hardy,

1. D.F. Chalmers, "Marketing", Agriculture in Burma (1927) p.107.

2. Report of the Stock Breeding Committee, Burma, 1917, Chairman: A.E. English (Rangoon: Office of the Superintendent; Government Printing, Burma, 1918), pp.39, 44-45.

3. Report of the Royal Commission on Agriculture in India (1928), p.26.

plucky, active and good-tempered. The indigenous breed of cattle, though found to be poor producers of milk and not very good as beef, was eminently suited to the work in the paddy fields.<sup>1</sup>

Lower Burma, excluding the Arakan Division, was a cattle importing area. Though breeding was carried on in all districts the climate was unfavourable to breeding on a big scale and cattle had to be imported yearly from Upper Burma, the Shan States, Arakan and Siam. The most important breeding area in Burma was the dry zone where the climate was particularly favourable. There were no big cattle ranches, however, the breeding being undertaken by cultivators as a means of supplementing their main source of livelihood from agriculture.

It was estimated by the Committee on Stock Breeding, 1917, that about 92,000 head were imported into the central Lower Burma districts yearly, out of which 45,000 were from the Upper Burma dry zone, 35,000 from the Shan States and 12,000 from Arakan.

In most cases the cattle were brought down by the owners themselves, travelling by road, rail, boat or raft. Some of the cattle markets in Upper Burma were used as collecting centres from which herds were driven south. In some areas it was the custom for buyers from Lower Burma

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1. Report of the Stock Breeding Committee, 1917, p.50;  
and G.H. Evans, Monograph on the Cattle and Buffaloes  
of Burma (Calcutta: Office of the Superintendent of  
Government Printing, 1905), p.30.

to come up to purchase cattle. On the whole, however, it was more common for cattle to be taken down to the delta districts to be sold than for Lower Burmans to travel to the cattle surplus areas.

The Committee on Stock Breeding, 1917, believed that the treatment of cattle by cultivators was on the whole very good. Accounts given in other publications seem to refute this. The undeniably high mortality rate in the Lower Burma Wet Zone was partly due to the beasts being neglected, overworked and underfed, and partly to the unsuitable climate and the bad working conditions. The mortality rate was certainly lower in the parts of the country where the climate was favourable.

The loss of cattle was a serious problem for the cultivator as the beasts had to be replaced to carry on cultivation. Money had to be borrowed and these loans might lead to indebtedness. The cost of a pair of bullocks in 1917 was about Rs. 70 in Arakan (where the beasts were smaller), Rs. 95 in the dry zone, Rs. 110 in the Shan States and Rs. 105 in Lower Burma, while the cost of a pair of buffaloes was about Rs. 105 in Arakan, Rs. 120 in the dry zone, Rs. 110 in the Shan States and Rs. 145 in Lower Burma.<sup>1</sup> But these prices gradually rose until by the late 1920's they were all approximately doubled.<sup>2</sup>

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1. Report of the Stock Breeding Committee, 1917, pp.42-43.

2. A. Mckerral, The Supply of Plough Cattle in Burma  
 ("Agricultural Department, Burma: Agricultural Survey  
 No. 7 of 1928"; Rangoon: Supdt., G.P.S., Burma, 1929),  
 pp.1-2.

To prevent, control and treat diseases, a Civil Veterinary Department was set up in 1876. It did much valuable work as, for example, in its use of preventive inoculation against the greatest killer-disease, rinderpest. The Department also trained each year hundreds of veterinary assistants who were sent out to all parts of the country to instruct cultivators in the proper care of their animals and in helping to prevent and confine outbreaks of disease. Other forms of work undertaken by the Department were the setting up and supervision of veterinary dispensaries from 1921 onwards, teaching and research by the staff in the Veterinary College in Insein, and the publication of simple pamphlets, manuals and handbooks in English, Burmese and Shan to inform and instruct the public on the proper care and treatment of animals.<sup>1</sup>

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1. A. McKerral, "Constitution and Work of the Civil Veterinary Department, Burma", Agriculture in Burma (1927), pp.55, 63-64.



## CHAPTER III

## ASSEMBLING THE PADDY CROP

With the establishment of the rice export trade a system of assembling the paddy from the paddy-growing tracts to the ports soon developed and assumed certain characteristics which remained without much modification throughout the period under consideration. At the ports the paddy was converted into rice in the big foreign-owned mills before being shipped to various markets abroad. The smaller mills in the interior of the country mainly catered for the domestic consumption market but some milled rice was sent to the ports to be exported. This chapter deals with the marketing and assembling of paddy from the primary producers via various intermediaries to the big milling and exporting firms at the ports.

1. Initial Disposal of the Crop.

A striking feature of the first stage of the assembling process -- the disposal of the crop by the cultivators -- was that the great bulk of the marketable surplus was sold or otherwise disposed of by the primary producers immediately after harvest in the first three

to four months of the calendar year,<sup>1</sup> the paddy market for the new crop each year opening about the middle or end of December. This rapid disposal of the crop was due mainly to the financial circumstances of the cultivators. Another reason was the lack of proper storage facilities among the cultivators.

The most important reason for the rapid disposal of the crop was the general poverty of the cultivators and their pre-harvest financial commitments. The new crop on the threshing floor might be taken to represent the farmer's assets but his liabilities had to be reckoned with. Either in cash (obtained from the sale of the paddy) or in paddy he had to pay his creditors either interest or interest and capital for loans obtained to cover cultivating and living expenses. He had to pay the Government the capitation tax due on January 1st and the land tax due on February 15th, both of them in cash.<sup>2</sup> He had to pay the landlord the rent if he was a tenant, and the balance of his labourers' wages. All these demands came together immediately

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1. It was estimated that "no less than 85 per cent of the exportable surplus leaves the hands of the cultivator in the first quarter of the year, while the remainder is also sold by the next quarter." Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade, Chairman: T. Couper (Rangoon: Supdt., Government Printing and Stationery, Burma, 1931), p.81.
  2. Ibid., p.56.

after harvest, as it was a well-known fact that the farmer's solvency deteriorated very rapidly as time passed after harvest. Thus, the average cultivator found he had to part with a substantial portion of the crop soon after harvest.

From the amount of paddy remaining the wunsa, or the amount of paddy needed for food till the next harvest, and the amount required for seed purposes, had to be put aside. If he still had paddy to dispose of as he pleased, the cultivator usually lacked proper and adequate storage facilities due to his poverty. But if paddy was not stored it deteriorated very quickly and tended to yield yellow discoloured rice when milled. Even when stored there was loss through shrinkage in the dry weather and depredations by various pests such as weevils and rats. Storing was even more difficult during the rainy season from May onwards due to the heavy downpour and the generally humid atmosphere. More often than not, therefore, the paddy for sale would be left on the open threshing floor and a long bamboo pole with a wisp of straw at the end would be hoisted to show that the farmer had paddy for sale.<sup>1</sup>

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1. D.F. Chalmers, "Marketing," Agriculture in Burma (1927), p.100.

The almost immediate disposal of the crop meant that the cultivator could not take advantage of the subsequent rise in the price of paddy which nearly always took place later in the season when supplies became scarce,<sup>1</sup> since he had to dispose of almost the whole of his crop at the cheapest time of the year.

## 2. Intermediaries.

As the cultivators lacked the means to hold back the crop, the function of spreading the flow of paddy from the interior to the ports over a longer period was performed by a multitude of intermediaries between the primary producers and the millers. About harvest-time or even earlier, many people, whose occupations might be anything during the rest of the year, took part in the rice trade. A host of agents or jungle brokers (taw-pwesa) who were usually local men would visit threshing floor after threshing floor.

The jungle-broker was not necessarily a man of means. Other intermediaries -- local dealers, speculators, local millers and the "big brokers" (pwesa-gyi), that is the agents of the big mills, were all ready to finance

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1. For seasonal fluctuations in paddy prices, see pp. 109-111 below.

him. The jungle-broker might buy the paddy outright from the cultivator after bargaining about the price and the measuring basket to be used, or he might obtain an option to buy a certain amount at a certain price per 100 baskets, fixing a date and hour up to which the option should hold good. Usually the onus of warning the broker of any change of mind before the date and hour fixed rested with the paddy owner -- cultivator or stock-holder -- but this right was exercised only if no money had changed hands by way of sealing the contract.<sup>1</sup>

The usual practice was for the jungle-broker, armed with his purchases and the options obtained, together with samples of paddy, to approach his principal and bargain for a flat rate. This rate was usually for delivery at the principal's godown, mill or collecting point and was always quoted exclusive of brokerage. When agreement was reached the principal would advance money to the jungle-broker who then bought up the rest of the paddy and arranged the carting to a godown, mill or the nearest collecting centre from whence the paddy would be taken to the godowns or big mills.<sup>2</sup>

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1. Report on the Marketing of Rice in India and Burma ("Agricultural Marketing in India: Marketing Series No. 27"; Delhi: Government Press, 1941), p.278; and Grant, op. cit., p.24.
  2. Report on the Marketing of Rice in India and Burma (1941), p.278.

The jungle-broker was not a broker in the usual sense of the term. He was paid a commission of about R.1 or Rs. 2 per 100 baskets of paddy the purchase of which he arranged. But he did not charge his principal the price he paid for the paddy. In fact, the difference between the price he paid the primary producer plus transport costs and the price he obtained from his principal was the reward for his astuteness -- in other words, a trader's profit or loss.<sup>1</sup>

Some paddy proceeded to the ports soon after harvest but some was stored by the better financed intermediaries -- the landlords, shop-keepers, moneylenders and others who performed the functions of paddy dealers and speculators as well.

Below is a table showing the monthly arrivals of paddy by boat and rail into Rangoon during 1934-36.<sup>2</sup>

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1. Some accounts have it that the jungle-broker did no trading of his own but in Burma where specialisation of functions was not at all advanced or established it is difficult to agree that jungle-brokers had only the function of brokering. When a hard bargain had been struck most probably the jungle-broker, unless prevented from doing so by lack of funds, would buy the paddy at once rather than allow the cultivator time to change his mind or let someone else with cash forestall him. Most probably therefore the jungle-broker bought paddy outright or paid some money by way of sealing the contract where terms were attractive, and obtained promises to sell from cultivators who had offered less attractive terms.
  2. These are the only available figures for monthly arrivals of paddy at a port. The pattern may be taken as roughly representing the monthly percentage variations within a year in paddy movement into the ports.

Table III.1 : Monthly Arrivals of Paddy by Boat  
and Rail into Rangoon, 1934-36.

Month	Tons	Per Cent
January	129,000	6
February	304,000	14
March	334,000	16
April	214,000	10
May	218,000	10
June	190,000	9
July	153,000	7
August	154,000	7
September	157,000	7
October	130,000	6
November	90,000	4
December	77,000	4
	2,140,000	100

Note: The figures refer to the average  
of the years 1934-36.

Source: Report on the Marketing of Rice  
in India and Burma (1941), p.89.

As can be seen from the table, the intermediaries, who obtained most of the surplus crop in the first quarter of the year, succeeded to a certain extent in spreading the flow of paddy into the ports more evenly. The bulk of the paddy, however, arrived in the first half of the calendar year.

The holding back of some of the paddy was due to the action of speculators who bought paddy with their own or



on borrowed money and stored it for a rise in the market. Though normally prices would gradually increase till about November when the new crop would be ready to come on the market, sometimes losses were sustained due to trade disturbances caused by combinations among the millers. On the other hand, fortunes were made occasionally due to great increases in demand arising from famines and shortages in the importing countries. Attracted by the huge profits sometimes made and by the spirit of gambling involved in speculation, Burman farmers from about 1910 were known to borrow on the security of land to build godowns and to buy and store paddy through the rains. One of the reasons for the loss of land by many Burman farmers from about 1913 onwards was indulgence in speculations which failed.<sup>1</sup>

Paddy that was not stored or milled in the interior was brought to the big mills where the receiving and buying of the paddy were supervised by mill brokers. Large mills usually had ten or twelve such brokers who liked to call themselves head-brokers, but they were in fact all on the same level.<sup>2</sup> The job was mainly brokering though they might do some trading on their own

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1. T. Couper, Report of an Inquiry into the Condition of Agricultural Tenants and Labourers (Rangoon: Supdt., G.P.S., Burma, 1924), pp.8-9.
  2. Report of the Burma Provincial Banking Enquiry Committee, 1929-30, Vol. I (Rangoon: 1930), p.104.

account as a sideline. Generally they were persons of considerable wealth and influence. They introduced dealers to the manager of a mill and helped in arranging their contracts for the supply of paddy and for money advances. Large dealers usually made their contracts directly with the manager and took advances directly from him; but each was associated with a particular broker to whom all his paddy was brought.<sup>1</sup>

About the turn of the century the number of small mills in the interior increased quite rapidly, and though much of their business was the milling of paddy for home consumption they also sold rice to the merchants at the ports to be exported. These mills experienced great difficulties during the late 1920's due to the general depression in trade and to the raising of freight rates on rice by the railways.<sup>2</sup> The hiring of mills to enterprising dealers and speculators became quite common and many mills worked for the big mills on a contract basis, some becoming mere branches of the big mills.<sup>3</sup>

In the movement of paddy from the threshing floors to the mills or godowns, the middlemen concerned were the

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1. Ibid., p.105.
  2. Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.36; and Report on the Marketing of Rice in India and Burma (1941), p.376.
  3. Interim Report... (1931), p.60; and Chalmers, "Marketing", Agriculture in Burma (1927), p.101.

various types of brokers, the moneylender, the land-owner, the trader and the speculator. But very rarely did a middleman confine himself to one particular function. As opportunities for gain arose each usurped the functions of the others. For example, the broker, though accepting a commission and possibly an advance from the buyer, made a profit out of the difference between the price he paid to the cultivator and the price he received from the miller, and was thus also a trader. Often he lent money to the cultivator to be repaid in the form of paddy at harvest time. Another example was the village shopkeeper who, in his sales of groceries and general stores, gave credit redeemable in paddy and thus managed to add to his usual trading business the functions of moneylender and speculator as well.

These intermediaries were often attacked for getting a large slice of the profits of the rice trade. They were looked upon with disfavour by government officials who argued that the millers should be rewarded for the enterprise, technical knowledge, organizational ability and capital they put into the rice industry and that the producers should also be paid reasonably for growing the paddy. The middlemen, however, were often depicted as

the "hawks that preyed on the simple Burmese cultivator"<sup>1</sup> and as parasites battenning on the cultivators.<sup>2</sup> Attempts were made from time to time to do without them. Some mills tried to establish buying stations in the interior but it was found that even to these stations the paddy was seldom brought by the cultivators direct and brokers and dealers were still necessary. Several cooperative societies were formed for the assembling of paddy to be jointly marketed. The main obstacle facing the societies was the difficulty which members found in raising money for their immediate needs after harvest while waiting for their crop to be sold. Other obstacles were lack of confidence in the managing committees and the difficulty of finding reliable managers and graders.<sup>3</sup>

From the experience of the millers and the societies it was found that the middlemen were not so dispensable after all. They were useful to the millers for they provided that intimate knowledge of local conditions which the millers lacked and they made possible a fairly smooth and regular flow of supplies from the interior.

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1. Shway Yoe, The Burman: His Life and Notions (London: Macmillan and Co. Ltd., 1882), Vol. I, p.297.
  2. Report on the Marketing of Rice in India and Burma (1941), p.280.
  3. Ibid., p.280.

### 3. The Measuring Basket.

One outstanding feature of the transactions in paddy at the various stages of assembly was the marked absence of uniform standards of measurement. Paddy was commonly sold by the hundred baskets but the capacity of a basket varied from about  $8\frac{1}{2}$  to over 9 gallons, holding from 44 to 54 lbs. of paddy.<sup>1</sup> The real connecting link between the various measuring baskets was the nozibu, the Milkmaid Brand condensed milk tin of 14 ounce size which came to be used increasingly to measure the capacity of baskets.<sup>2</sup> The government standard basket of 9-gallon capacity held 128 nozibu of paddy. The lichi tin which was about twice the size of the milk tin was also used to compare the capacity of baskets.<sup>3</sup>

The size of the basket, which was generally made of plaited bamboo with a rim of twisted wire or cane to act as a binder, varied from district to district, and from

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1. Grant, op.cit., p.28.

2. The Report on the Marketing of Rice in India and Burma (1941), on p.464, stated that so far as it could be ascertained, the use of the condensed milk tin was fairly general in Burma before the turn of the century. Originally, it seems to have been taken up by bazaar sellers who discovered that it contained the equivalent of the local measure known as la-me. An average Burman basket contained about 128 la-me. Since condensed milk was a favourite foodstuff in Burma, empty tins were easily obtainable and being of a standard size and the equivalent to a known Burman measure soon became very popular as a standard measure.

3. Report on the Marketing of Rice in India and Burma (1941), p.464.

village to village within a district.<sup>1</sup> Even the baskets used by the same individual might show variation according to whether the transaction was one of receiving or delivering the paddy. Many cultivators kept small-sized baskets for the specific purpose of paying wages. Very often the strand of twisted wire at the top of the basket was removed to lessen the capacity of the basket when measuring the wages. On the other hand, land-owners and moneylenders usually insisted on bringing their own baskets which were almost always larger than the customary village basket.<sup>2</sup>

Variations were not confined to size alone. The shape of the basket also varied, and the flexible material of which the basket was made, i.e., plaited bamboo, also lent itself to varying capacities. In addition, a basket could hold a greater or less quantity according to the way it was filled, the difference sometimes amounting to 4 lbs. in a basket.<sup>3</sup>

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1. In the neighbourhood of Kayan in the Hanthawaddy District the village basket held 120 nozibu, at Daunggyi in the Bassein District it held 128. Round Letpadan in the Tharrawaddy District it was the equivalent of 136 nozibu; 30 miles further north round Gyobingauk in the same district it was equivalent to 143 nozibu. Couper, Report on Agricultural Tenants... (1924), p.15.
  2. Ibid., p.16. The basket used by a Letpadan landlord was known as the "cart-breaker" and was said to equal 150 nozibu as compared with the village basket of 136. Such terms showing rueful appreciation were not uncommon.
  3. T. Couper, Report on Agricultural Tenants... (1924), p.17 and Banking Enquiry Report, 1929-30, Vol. I, p.103.

Despite these variations, however, there developed in individual village tracts an understanding as to what constituted a reasonable basket for that tract and what was the customary way for filling that basket. The size was usually determined in some way by the distance of that tract from a market or collecting point, having in mind the transport difficulties involved. Generally, the more remote the tract or the greater the transport difficulties, the larger the selling basket to offset transport costs. In this way the villager could have the comforting delusion that although the basket used for selling might be rather large, the rates per 100 baskets obtained by him was not much less than the rates ruling in the nearest town or collecting centre.<sup>1</sup>

But the practice of using varying baskets did not necessarily imply trickery. The labourer and the tenant were usually shown the basket to be used in measuring. In fact the choosing of the basket to be used would be one of the terms to be agreed upon before a transaction took place. This was also the case in paddy selling, where the basket size was taken into account when fixing the price. But as was to be expected, the buyer of paddy and the landlord, with their large turnovers, were more

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1. Report on the Marketing of Rice in India and Burma  
(1941), p.464.



able to convert quantities of varying baskets into terms of baskets which were market-quoted, and thus had some advantage over the seller and the tenant. In addition, the cultivators were usually unaware of or slower to know the current price in Rangoon and the relationship to that price of the corresponding price at the threshing-floor after allowing for the different system of buying and for the intermediate expenses.<sup>1</sup>

Thus the use of varying baskets meant that transactions were often conducted in an atmosphere of distrust and suspicion. Sometimes cultivators sought to counteract the disadvantages on their side by adulterating their produce with damaged grain, gravel and winnowings. "Buying and selling became something of a gamble in which the buyer pits his skill in manipulating quantities against that of the seller in adulterating down to the limit of acceptance."<sup>2</sup>

The disadvantages arising from the use of varying measuring baskets were commented upon strongly from time to time in various government publications. However, the

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1. Report on the Marketing of Rice in India and Burma (1941), p.465.
  2. Development of Standards - Quantity ("Department of Agriculture, Burma: Markets Section Bulletin No. 6"; Rangoon: Supdt., G.P.S., Burma, 1940), p.2.  
F. Noel-Paton, Burma Rice (Calcutta: Superintendent Government Printing, India, 1912), p.6, wrote: "The line between shrewdness and sharp practice becomes lost, and even a dealer whose intention is honest enough is often forced to guard himself from the risks of erroneous calculation or measurement by methods and tricks that would be unpardonable in a trade that was correctly organised."

difficulties in the way of enforcing the use of the government standard 9-gallon basket in all paddy transactions by law were many and quite insurmountable. The government lacked adequately trained and trustworthy staff in sufficient numbers to carry out such an operation. It was recognised that the widespread adoption of a standard measure could only come about gradually and very slowly, for the people had to be given time to learn and appreciate the advantages of using standard measures. A beginning was made in 1939 when the government adopted the thamada 'trade-mark' which was to be stamped on all tested and corrected baskets and weights.<sup>1</sup> The Markets Section in the Agricultural Department was to deal with the problem of the development of standards in quantity and quality. The first use of the mark was in making available to the public a tested 9-gallon basket and sets of tested weights. Local True Weights and Measures Committees were formed to test baskets and after correcting them, seal them with the thamadi mark.<sup>2</sup> In the first half of 1940 altogether 12,109 baskets were corrected and sealed. But there was hardly time for this movement to get under way before the war broke out near

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1. Development of Standards - Quantity (1940), pp.2-3.

2. Ibid., p.6; and Report on the Operations of the Department of Agriculture, Burma, 1939-40, p.14.

the end of 1941. It is interesting to note that the Markets Section found to their disappointment that "the baskets most readily submitted were not those out of which the biggest gains were being made."<sup>1</sup>

#### 4. System of Purchase in the Big Mills.

The big mills took delivery of the paddy either at a railway siding or river jetty built next to the mill. The actual receiving or bargaining and paying, as the case might be, was undertaken by mill brokers. But the mills bought the paddy on a system of measurement different from that used by middlemen in the interior. From about the 1890's onwards the weight-cum-volume system of measurement became established among the big mills at the ports.<sup>2</sup> The miller's basket was the government standard 9-gallon measure and the weight of paddy measured in a basket was taken into consideration in paying for the consignment.<sup>3</sup>

The price paid by the miller was stated in terms of a hundred 9-gallon baskets and was subject to a premium of  $2\frac{1}{2}$  per cent for each pound above 46 lbs. in the average weight of a number of sample baskets which were weighed during the measurement of the consignment. On the other

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1. Development of Standards - Quantity (1940), p.8.

2. Grant, op. cit., p.29.

3. Banking Enquiry Report, 1929-30, Vol. I, pp.102-103.

hand, deductions were made if the basket weight was under 46 lbs. Also deductions from the observed average weight *were* made by the big miller for paddy which had much damaged grain, empty husk, fine gravel, cement and other extraneous matter. But large consignments of uniform paddy might lead some mills to add to the average weight when calculating the price to be paid for the whole consignment.<sup>1</sup> During the 1920's the millers introduced the practice of cleaning some baskets of paddy after measurement so as to remove all foreign matter, and weighing the paddy afterwards.<sup>2</sup> This was obviously done to guard against adulteration.

Although the weight of a basket of paddy varied according to the shape and specific density of the grain, it was a useful indication of quality within a given type of paddy, such as the Ngasein group of paddies, which comprised the bulk of the rice exported from Burma. This weight-cum-volume system of buying paddy therefore had to some extent the effect of grading as heavy paddy was paid for not only on account of the extra weight but also at a higher rate, as illustrated by the following example.

Suppose a boat load of paddy measuring 1,000 baskets

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1. Banking Enquiry Report, 1929-30, Vol. I, p.102.

2. Ibid., pp.102-103.

was landed at a mill, the weight of each basket of paddy being 46 lbs. and the price of paddy Rs. 85 per 100 baskets. The seller would be paid Rs. 850 for the consignment. If the weight of the paddy was 50 lbs. to the basket, he would be paid for  $(2\frac{1}{2} \times 4)$  10 per cent more baskets, i.e., for 1,100 baskets, which meant Rs. 935. If the basket weight had not been considered then the better quality paddy would receive the same price as the inferior quality paddy. If weight alone had been considered the better quality paddy would fetch  $\text{Rs. } 85 \times 50,000 \div 46,000 = \text{Rs. } 924$ , which was less by Rs. 11 compared with the weight-cum-volume system.

The benefit of this system for the better quality paddy was reaped in great part by the various middlemen. Some accounts lamented that the cultivators did not benefit at all and thus had no incentive to improve the quality of paddy grown.<sup>1</sup> But as the middlemen would most probably pay a higher price for the heavier paddy due to competition, it was more likely that cultivators generally did receive better prices for better quality paddy. In fact, in some parts of the country it was common for middlemen to weigh samples of paddy by using a small balance against rupees to gauge the weight when

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1. D. Hendry, "Rice in Burma: Production, Trade and Improvement," Tropical Agriculture, Feb. 1928, Vol. V, No. 2 (Trinidad, 1928), p.34.

quoting the price.<sup>1</sup> However, D.F. Chalmers stated that "Collusion between the weighter, the broker and the tally clerk may lead to the transfer of this bonus to the most 'astute' person.... A good sample of paddy might be 'milked' for the benefit of a seller of a low grade."<sup>2</sup>

In up-country mills the Rangoon system of weight-cum-volume was not always adopted, and in some districts the paddy was bought entirely by weight, the quality of the sample being assessed mutually by the buyer and seller at the time of sale and the price fixed accordingly. Small mills which could mill separately a few hundred baskets at a time were in a better position to pay higher prices for specially good lots of paddy than the big mills which required ten thousand baskets at a time, so that a good deal of fair and indifferent paddy had to be mixed together to make up a milling lot.

In the early days of the rice industry, before the system of jungle-brokers had penetrated every nook and corner of the country and before financial circumstances deprived the cultivator of the right to dispose of the greater part of his crop as he pleased, many cultivators as well as local dealers brought down the paddy to the seaports and sold to the mill brokers directly themselves.

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1. Banking Enquiry Report, 1929-30, Vol. I, p.103.

2. D.F. Chalmers, "Marketing," Agriculture in Burma (1927), p.102.

They used sampans and paddy gigs to carry the crop. As competition among the various milling firms was very keen there soon developed a system of intercepting these boats. Brokers used to employ men in sampans to go up the river to meet the boats and bargain with the paddy-owners.<sup>1</sup> By the turn of the century, however, this practice was no longer common and almost all the paddy was brought down by intermediaries of one sort or another. Most probably the main reason for the disappearance of the cultivator from the scene was that as his financial position grew worse he had less and less paddy to dispose of as he wished until the amount left was so small that it could not be marketed profitably.

##### 5. Storage.

In the villages, paddy was stored almost always rather than rice as paddy kept better for a longer period. If hand-pounding was practised, the cultivators would husk a few days' supply at a time because hand-pounded rice, which was mainly for home consumption, was particularly liable to rapid deterioration due to the development of rancidity in the oil-bearing outer layers of the grain, which were only partially removed in the

1. J. Nisbet, Burma under British Rule and Before (London: Archibald Constable & Co. Ltd., 1901), Vol. I, p.432; Banking Enquiry Report, 1929-30, Vol. I, p.104; and Shway Yoe, op. cit., p.304.



hand-husking process.<sup>1</sup> If paddy was brought to the local mill to be processed into rice then larger lots would be kept. Rice was usually stored in earthen pots and small home-made bamboo and mud bins. The following description of methods of storage therefore mostly applies to paddy, except in the case of the mill godowns, which stored rice in great quantities as well.

Storage receptacles in the villages were of the simplest kind. The most common was the pok, a circular basket or tub made of split bamboo, flattened and plaited and plastered over with a mixture of cowdung and mud to prevent the grain escaping and to exclude rain and insects. Usually it was placed under cover on raised earth or on piles so that it was two to three feet above the general ground level. This was done as a precaution against floods. The pok might hold as much as 100 baskets of paddy. A piece of material, often jute sacking, was placed on top loosely as a sort of cover. The pok was used in the main for storing seed-paddy and the wunsa, the grain required for food till the next harvest.<sup>2</sup>

A more elaborate affair was the rectangular godown, also made of plaited bamboo with a roof of leaves of kaing grass. Some were on ground level but a considerable

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1. Report on the Marketing of Rice in India and Burma (1941), p.232.

2. Ibid., p.345.

number were raised on piles to a height of three feet or so from the ground. The floor was made of bamboo matting or plank and sometimes of both, the upper floor of bamboo matting and the lower one of plank while the space in between was filled with paddy husk to keep out the damp and to help support the weight of the stored paddy. This space offered ideal breeding grounds for the rice weevil. Rats also harboured here and consumed the grain. Sometimes corrugated iron sheets were used for the roof and the walls. The paddy was stored in bulk and was thrown in through a doorway which, as the heap of grain rose, was closed from the base upwards by dropping in successively a series of planks into vertical slots in the door posts.<sup>1</sup>

The big godowns belonged to the mills and the large stockholders. These were usually made of corrugated iron, though plaited bamboo was sometimes used for partitions and for the flooring.<sup>2</sup> Paddy was stored in bulk but rice was stored in bags ready for transference to ships.

The question of building storage elevators was brought up every now and then by enthusiastic officials but never seemed to result in anything concrete. It was

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1. Ibid., p.345.

2. Noel-Paton, op. cit., pp.8-9.

argued often that elevators would help to spread the flow of supplies of paddy to the mills and ports, and that of rice from these points to markets abroad.<sup>1</sup> All parties in the rice trade would then benefit, as the cultivators would not be forced to sell at the cheapest time of the year through lack of storage facilities while millers and merchants would benefit by not having to export at a time when both Siam and Indo-China were sending their rice exports abroad.

Another advantage to be gained by the use of elevators was the means afforded to store paddy according to type. This would result in more uniformity in the consignments reaching the mills, thus leading to less breakage and better quality when milled. Millers would then be able to pay higher prices, the benefit of which might eventually reach the cultivators who would then be encouraged to improve the quality of paddy they grew.

But the fundamental reason for the inability of the cultivators to hold back their crop was their weak financial position rather than lack of storage facilities. As for the mills, a few tried to build elevators for storing and moving paddy, but when it was found that the cost of building and maintaining them was very high

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1. Report on the Marketing of Rice in India and Burma  
(1941), p.346.

especially as the silica from the paddy husk took a heavy toll of the working parts with which it came into contact, the attempt was given up.<sup>1</sup>

Another factor against the building of elevators was that the mixing of varieties of paddy took place before the paddy arrived at the collecting centres rather than after it, which meant that elevators would not be able to do much about keeping the varieties separate. Thus, for the above reasons, though the subject cropped up every now and then in the 1920's and 1930's, very little was done towards building a network of elevators either in the interior or at the ports.

#### 6. Transport of Paddy.

Paddy sold on the talin or threshing-floor was carted to the nearest railway station or collecting point on the river for transshipment to the big mills, or it might be carted direct to local mills or godowns belonging to dealers. While paddy for storage, for the local mills and for transshipment by boat was always carted loose, paddy to be transported by rail might be bagged, bagging being required by the main railway lines. The charges for cart hire varied according to distance and locality and with the supply and demand for carts. Generally the

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1. Rice ("Department of Agriculture, Burma: Markets Section Survey No. 9"; Rangoon: Supdt., G.P.S., Burma, 1940), p.55.

charges were between 3 to 4 annas per cart per mile, the rate being lower over longer distances.<sup>1</sup> Carting and bagging expenses were always paid for by the jungle-broker or buyer. Often the carting was done by the cultivator who could use his bullocks for the purpose and thus earn a few extra rupees. From about the late 1930's onwards motor lorries were used on a small scale for transporting paddy from the threshing floor to the collecting point but the lack of good roads or of any road at all meant that bullock-carts were by far the most common form of conveyance for carrying paddy from the threshing floor.<sup>2</sup>

Travellers in Burma during the months of January, February and March could not fail to note the large heaps of paddy, often amounting to 1,000 to 2,000 tons at the collecting points alongside the railway lines and waterways of Lower Burma awaiting transport or a rise in the market. This storing for short periods in the open<sup>3</sup> by speculators tended to lessen the glut on the market at the beginning of the season, while the storing for longer periods in godowns by landowners, traders and speculators

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1. Report on the Marketing of Rice in India and Burma (1941), p.375; and Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.57. An average load for a bullock cart in level areas was about half a ton (24-25 baskets) or when steep banks had to be negotiated about a third of a ton (15-16 baskets).
  2. Grant, op. cit., p.24.
  3. These heaps were quite safe for a while as the rains rarely came before April when there would be light "mango" showers. But loss through theft was quite considerable even though watchmen were employed.

tended somewhat to steady prices throughout the year.

On the way to the collecting points and the mills many varieties of paddy were bulked together for convenient handling. Places where bulking did not involve mixing were those which grew one variety of paddy over a large area, for example, the Emata type of paddy grown over a wide area in the Prome District.<sup>1</sup> But such places were the exception. Mixing therefore was common leading to lack of uniformity in the grains. From the collecting points to the mills, either by boat or by rail, there was less mixing because of the quantities involved. But the damage was already done. The paddy which reached the big mills usually lacked uniformity, which meant that there would be more breakage during the milling process leading to greater loss and poorer quality.

The greater portion of the paddy was transported to the big mills in Rangoon and the other ports by boat, as the important paddy-growing tracts of Lower Burma were intersected by numerous navigable waterways, making this the cheapest and most satisfactory form of transport. Thousands of country boats known as paddy gigs or tonkins capable of carrying between 500 to 2,000 baskets (i.e., approximately 10 to 40 tons) propelled by sail and oar were engaged in this work. Many threshing floors were

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1. Banking Enquiry Report, 1929-30, Vol. I, p.106.

built near a navigable waterway with the intention of eliminating the cost of carting. The Irrawaddy Flotilla Company's paddy-steamers carried considerable quantities but their share was minute compared with that of the country boats, as steamer transport was more costly and therefore was only employed for long journeys and when supplies of a particular quality of grain were required within a short space of time.<sup>1</sup> Many of the big milling firms had fleets of barges, capable of holding from 2,000 to 2,500 baskets, which were hired out to their brokers and agents.<sup>2</sup>

Rail transport for paddy was not important in the low-lying areas of the delta and coastal regions where the bulk of the crop was produced. It was, however, widely used in carrying paddy grown on higher areas, the Henzada-Bassein line being the most important.<sup>3</sup> Rail paddy was generally considered inferior to paddy brought in by boat, excepting the Emata paddy brought in from Prome, which was a special type of grain cultivated extensively in that tract only. The reason for the difference in quality was that the crops grown on the higher-lying areas were usually the smaller-grained varieties of paddy and were more liable to suffer from

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1. Noel-Paton, op. cit., p.3.

2. Report on the Marketing of Rice in India and Burma (1941), p.375.

3. Ibid., p.375.

lack of sufficient rains at the end of the growing season than was the case on the lower-lying areas from which the paddy brought in by boat came. In addition, rail paddy was usually more mixed than boat paddy as it generally passed through more hands, since larger quantities had to be bulked together.<sup>1</sup> Also, the need to bag the paddy on almost all the railway lines, except certain lines behind Bassein, which had special covered wagons with drop doors, meant additional expenses in the cost of bags, bagging and handling.<sup>2</sup> Lower working costs and keen competition meant that water transport was cheaper than rail transport. Where the two were in competition, therefore, water transport was greatly preferred. It was mainly in the mid-zone and in the Upper Burma area, where navigable waterways were few, that the railway became an important carrier of paddy.

#### 7. Combinations or Price Agreements.

As most of the big milling and exporting firms at the ports were owned and managed by Europeans, they formed a very large part of the demand for paddy supplies. Quite early in the history of the rice trade, about 1870, groups of European millers and merchants got together and decided that the keen competition among themselves for paddy was

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1. Chalmers, op. cit., p.102.

2. Bagging was insisted upon by the Burma Railways Company because it took less time to load or unload bagged paddy than to handle loose grain in baskets. Noel-Paton, op. cit., p.3.



ruinous to their trade. This was especially the case when rice prices in Europe were low. "Combinations" or price agreements therefore were formed to buy paddy at a mutually-agreed price.

In the early days these combinations among the European merchants were often unsuccessful due to distrust, greed and lack of cooperation among the merchants. Shway Yoe (pseudonym of Sir James George Scott) in The Burman: His Life and Notions, gives this interesting account:

Then the English merchants held a meeting, and all pledged themselves not to give more than the current market rate for paddy. This seemed a fair enough agreement; but after a while it was found that the boats all gravitated towards one or two firms. A little investigation showed that this was due to the fact that though they paid the ordinary rate, according to the compact, they had a smaller measuring basket than their neighbours. Accordingly every one went on reducing the size of his basket until the system became as ruinously absurd as ever it had been before. Then there was another meeting, at which it was unanimously agreed that this state of affairs would never do, and that it was absolutely necessary to come to some definite understanding. A committee was appointed which, after some deliberation, concluded that, if, in addition to abiding by the market rate, every one were bound to use a basket of a certain fixed size, there would be no chance for unfair speculation. A standard basket was therefore fixed upon and the competitors were supposed to start fair again. But in no very long time, one firm put a false bottom in the basket, another wedged in a board; and so on till matters got back to the old way. This state of affairs is hardly creditable to mercantile honour, and it certainly is by no means profitable. (1)

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1. Shway Yoe, The Burman: His Life and Notions (London: Macmillan & Co. Ltd., 3rd edn., 1910), p.249.

Besides this "scandalous paddy morality", combinations were sometimes broken by the entry of a new firm into the market, offering a higher rate than the combination price. Or the sellers might take the grain to another port where prices were higher.<sup>1</sup>

By the 1890's, however, most of the possible loopholes had been quite effectively sealed by the organisers and combinations were fairly successful on the whole in keeping paddy prices low in years undisturbed by famine conditions in the importing countries. At such times, trade would be at a standstill for days and even weeks if sellers of paddy, i.e., brokers, speculators, traders and other middlemen, refused to accept the price offered and held back. Sometimes the tug-of-war was won by the sellers when European merchants became desperate due to contracts falling due, idle mills and the arrival of previously chartered ships, for demurrage had to be paid on ships which were in port longer than the stipulated number of days. At such times the combination price would be raised to attract supplies. At other times, when crops were harvested early, ships late in arriving,

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1. In June, 1880, the merchants in Bassein entered into a price agreement, each agreeing to take an equal share of what was brought to market. But the sellers simply took their paddy, amounting to several thousand tons, to Rangoon, where prices were higher. Annual Report on Trade and Navigation, 1880-81, p.44.

and no other buyers could be found, sellers would give in and accept the low prices offered. This tug-of-war had its effects on the milling season and occasionally mills might be idle during the early part of the year and very busy during the latter months because of the combinations.<sup>1</sup>

An idea of what a successful combination could bring about can be obtained by a study of the 1893 combination in Rangoon. In the previous two years the market had opened with high prices, in 1891 with Rs. 92 per 100 baskets and in 1892 the rate rose to Rs. 127 and stood as high as Rs. 138 in April 1892. The reason was the keen competition among the merchants due to the strong demand from Europe where the price of rice was high. But by the end of 1892 prices in Europe fell heavily. The millers of Rangoon got together and agreed not to pay more than an average of Rs. 77 per 100 baskets for the paddy bought throughout the 1893 season. The proportions of the crop to be shared among the members of the combination were agreed upon. This combination price was adhered to and influenced prices in the other seaports and in the interior. The sellers of paddy eventually gave in and despite the low prices in Europe

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1. Annual Report on Trade and Navigation, 1880-81, p.44.

for rice the millers reaped large profits. Firms which were considered rather shaky at the end of 1892 re-established a very sound position in 1893, and those that were previously flourishing made enormous gains. But the middlemen and cultivators suffered serious reductions in income. The quantity of rice exported decreased<sup>1</sup> and the import merchants incurred heavy losses due to the greatly reduced ability of the people to buy imported articles.<sup>2</sup>

But in the next year the "paddy ring" collapsed, not for the first time by any means, due to disagreements among the participants about the share of the paddy each firm should have. Certain firms insisted on a larger share of the paddy purchased while the firms which had enjoyed the lion's share refused to give in.<sup>3</sup>

The most notorious of these combinations was called the Bullinger Pool.<sup>4</sup> It was founded in 1921, and consisted of four of the largest rice-milling and exporting firms<sup>5</sup> in Burma. The firms were associated in a common

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1. The quantity of rice exported in 1891 was 771,830 tons; in 1892, 728,790 tons; and in 1893, 688,571 tons. Annual Report on Trade and Navigation, 1893-94, p.22.

2. Annual Administration Report, 1893-94, p.55; and Rangoon Gazette, August 11, 1893.

3. Nisbet, op. cit., Vol. I, p.438.

4. The name was a telegraphic address.

5. The firms were Steel Bros., Bulloch Bros., Ellerman's Arakan Rice and Trading Co., and the Anglo-Burma Rice Co.

buying and selling policy. Together they milled from a quarter to a third of the rice exported from Burma. But this did not indicate its real importance. Beside its own mills it gave paddy to be milled by certain selected millers on a milling hire basis.<sup>1</sup> Because it handled so large a proportion of the total supplies, the Pool was able to influence the price of paddy. This made it very unpopular and its operations became notorious throughout the country. The very low prices paid for paddy during the late 1920's and early 1930's,<sup>2</sup> at the time of the world-wide trade depression, led to agitation for a commission to examine the workings and implications of the Bullinger Pool. The Committee found that the low prices were mainly due to the depression in cereal prices throughout the world at that time rather than to the activities of the Pool, though it ~~was~~ admitted that the Pool's operations aggravated matters. In the end the Committee found "no case for governmental interference" though there were several vigorous dissenting opinions

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1. According to figures published by the Burmese Chamber of Commerce, quoted by E.H. Solomon, "Minute of Dissent," Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.92, the Pool was responsible for no less than two-thirds of the total rice exports of Burma during 1930.

2. See Table III.2 on p.112.

to the Committee's findings.<sup>1</sup>

Combinations were not confined to the big millers. There were accounts of combinations among dealers and speculators to hold back their crop in the hope of higher prices.<sup>2</sup> But these were much more difficult to organise and maintain and were on the whole much less effective.

#### 8. Finance.

At every stage of assembling and marketing the paddy crop, the participants involved, from the mill brokers down to the primary producers, were dependent on borrowed funds. Before the turn of the century, due to the keen competition to get supplies of paddy, the big mills at the ports gave large advances to their brokers and dealers,<sup>3</sup>

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1. See Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), pp.17-32.

Tharrawaddy U Pu, a member of the Commission, not only accused the Pool of deliberately depressing paddy prices but also of trying "to kill the competition of the small and poor district millers." He stated in the Minutes of Dissent attached to the Report, p.42: "It is rather a strange coincidence to find that the Bullinger Pool came into existence in 1921 and the freight rates of rice were increased in the year 1922 by the then British Railways Company, Limited." The rates on rice were raised so far above that on paddy that whereas gains were made previously when the rates on both were the same, losses were incurred in sending rice rather than paddy to the ports.

2. Annual Report on Trade and Navigation, 1879-80, p.30.

3. It was estimated in 1892 that considerably over 100 lakhs of rupees were advanced by mills to middlemen engaged in the paddy trade.  
Rangoon Gazette, February 18, 1893.

most of whom owned boats which were used as security against the loans.<sup>1</sup> The money was to be used in purchasing paddy from the interior after harvest. This practice soon developed into one of giving loans to cultivators before harvesting or even before the seed was sown in return for the prior right to buy certain quantities of paddy at ruling market rates at the time the producer chose to sell.<sup>2</sup>

It was found, however, that the system was not without its dangers. Heavy losses were sometimes experienced by the big mills due to a series of bad harvests or abscondings on the part of brokers and dealers or various misfortunes befalling the producers, such as illness, death, loss of cattle, gambling losses, etc. Therefore the millers became more cautious and gradually advances became less common. Brokers and dealers resorted to Chettyars instead.<sup>3</sup>

This system of advances strengthened the position of millers in combination to keep paddy prices low. Often when middlemen held out from selling, the merchants would threaten to send out notices to call in the loans unless

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1. Boats, however, turned out to be very unreliable security as it was found that the same boat was often used as security for loans from several firms, and attachment, therefore, proved very difficult. Rangoon Gazette, February 18, 1893.
  2. Report on the Marketing of Rice in India and Burma (1941), p.278.
  3. Banking Enquiry Report, 1929-30, Vol. I, p.105.

large quantities of grain were delivered to them. Usually this had some effect in bringing supplies to the market.<sup>1</sup>

The dealers and millers outside the ports, who worked on a smaller scale than those within the ports, as well as the smaller dealers and millers in the ports, borrowed as a rule from the Chettyars.<sup>2</sup> The usual form of security given was property, such as rice mills or land. If a person who had no considerable property wished to buy paddy to store for a rise in the market, i.e., to indulge in speculation, the Chettyar usually would lend on the security of the paddy itself up to two-thirds or three-fourths of the value of the paddy to be purchased, provided the Chettyar had his own watchman and his own lock on the godown. Millers outside the ports generally owned a piece of paddy land which served as security for advances, and also yielded them some paddy as rent and provided other paddy which they could buy at competitive prices; in fact, with a small mill the possession of some paddy land was almost a necessity.<sup>3</sup>

Loans taken by cultivators were usually repayable at harvest. This accounted in great part for the rapid disposal of the crop by the primary producers mentioned earlier. Lenders occasionally compelled borrowers to

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1. Annual Report on Trade and Customs, 1874-75, p.19.  
 2. Banking Enquiry Report, 1929-30, Vol. I, p.105.  
 3. Ibid., p.106.



sell their produce to them, but generally the current market price was paid. The main reason for this practice was not that the lender wanted to make an unfair profit but rather to prevent the cultivator from spending his money before paying his debts. However, borrowers still disposed of paddy surreptitiously.<sup>1</sup>

#### 9. Prices.

Generally, prices for paddy varied according to a number of factors such as the structure, shape and conformity of the grain, the place of transaction, the time of the year, and over a period of years.

As hundreds of varieties of paddy were grown throughout Burma, prices varied according to what grades of rice could be milled from the paddy and what the costs of milling would be. Prices for the different rice grades in turn, depended on the amount of brokens, the size of brokens, the presence of red grains and the degree of milling and polishing. This meant that paddy which could stand a great deal of milling and polishing without too much breakage could be milled profitably into higher grades of rice. Bold, hard, uniform paddy with no red grains and no damaged or yellow grains were paid higher prices. On the other hand, soft, chalky paddy, containing red grains and extraneous matter like stones, empty husk,

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1. Banking Enquiry Report, 1929-30, Vol. I, p.114.

damaged or defective grains, etc., would fetch lower prices.

The price of paddy was also determined by the distance and the transport costs involved in conveying the paddy to the ports. Transport costs were less for places served by boat than places served by the railway, which charged not only higher freight rates but which also required bagging for most of the lines. On the whole, therefore, boat paddy commanded higher prices than rail paddy. Another reason was that boat paddy tended to be bigger-grained as it came from the secure riverine tracts.

Paddy grown in certain areas commanded a premium by having proved itself by milling results over a long period to be superior compared with the paddy produced from other areas. This superiority was due mainly to climatic and soil conditions and to the availability of a reliable water supply. For example, the Kanaungto boat paddy derived from the secure lands of the delta obtained R. 1 or Rs. 2 per 100 baskets (46 lbs. each) or  $3\frac{1}{2}$  to 7 pies per maund more than boat paddy from other regions.<sup>1</sup>

The price of paddy was usually at its lowest at har-

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1. Report on the Marketing of Rice in India and Burma (1941), p.194.

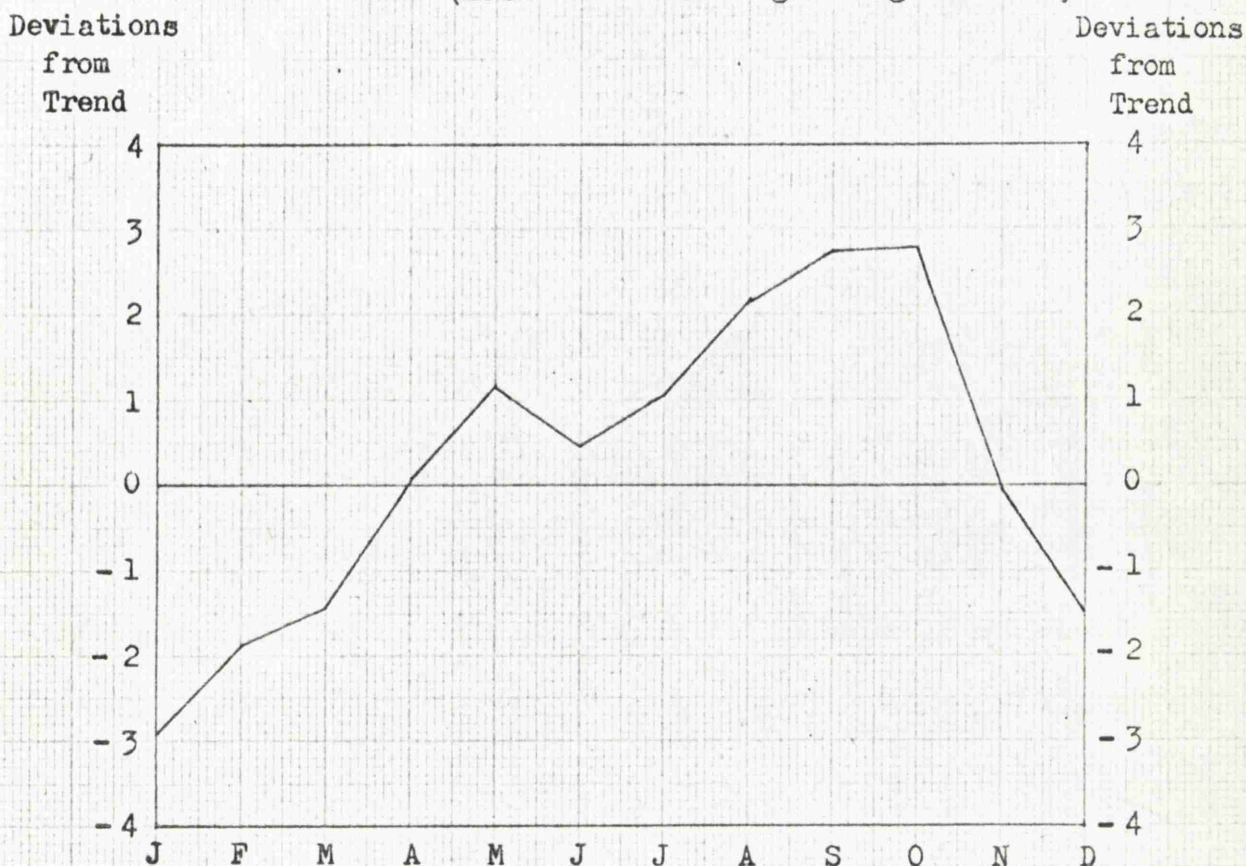
vest time and gradually increased till about October or November when the new crop would come on the market. This was due to the converging of the bulk of the supplies on the mills within a short period of time. Demand for rice, however, whether for food or for industrial purposes, was fairly constant throughout the year. Therefore, a large part of the yearly crop had to be stored either in the form of rice or of paddy. As supplies became scarce later on, prices rose. Also stock-holders had to be paid for building storage facilities, for tying up capital in rice or paddy, and for incurring the risks of theft, damage by pests, deterioration through moisture, and prices being depressed by unforeseen circumstances. Another reason for the low paddy prices at harvest and soon afterwards was that world prices for rice tended to be depressed at this time of the year as the main rice-exporting countries -- Burma, Siam, and Indo-China -- normally exported the bulk of the supplies at about the same time in the first half of the year.<sup>1</sup>

Below is a graph to illustrate the seasonal fluctuations in paddy prices discussed above.

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1. C.J. Robertson, "The Rice Export from Burma, Siam and Indo-China," Pacific Affairs, Vol. IX (Honolulu, 1936), p.245.

Graph III: Seasonal Variation in Wholesale Prices for  
Ngasein Paddy in Rangoon, 1934-1939.  
(Based on the Moving Average Method.)



Source: Appendix III, p.356 below.

The gradual increase in paddy prices after harvest was occasionally disturbed by combinations among the powerful rice firms. For example, should a combination be formed, say, at the end of June, prices in July might be lower than prices in June. On the other hand, famines or rumours of famines in the rice-importing countries might raise prices by a greater than "normal" increase.

Table III.2 : Wholesale Prices Per Hundred Baskets of Paddy in Rangoon from 1845 to 1939.

Year	Rs.	Year	Rs.	Year	Rs.	Year	Rs.
1845	8	1904	95	1916	110	1928	165
1855	45	1905	105	1917	105	1929	160
1860	45	1906	120	1918	100	1930	130
1865	50	1907	130	1919	140	1931	75
1870	70	1908	135	1920	180	1932	80
1875	65	1909	110	1921	190	1933	80
1880	100	1910	110	1922	195	1934	84
1885	95	1911	130	1923	180	1935	114
1890	95	1912	160	1924	195	1936	109
1895	95	1913	130	1925	195	1937	117
1900	95	1914	120	1926	190	1938	114
1901	95	1915	125	1927	180	1939	117
1902	100						
1903	110						

Sources: For the years 1845 to 1930 -- Grant, op. cit., p.140, and for the remaining years -- Report on the Marketing of Rice in India and Burma (1941), pp.566-67, obtained by converting prices per maund (82 2/7 lbs.) into prices per 100 baskets (4,000 lbs.).

Table III.2 above shows the wholesale prices of paddy in Rangoon from 1845 to 1939. With the arrival of the British, the prohibition on the export of rice ended and demand for paddy at once began to make itself felt. Prices increased, for though the supply of paddy, as indicated by rice acreages, grew steadily, the demand increased even faster. About the First World War, prices fell due partly

to the decreased amount of rice exported to the Western markets because shipping space was very scarce and expensive, and partly to the imposition of a maximum price limit on rice exported to India by the government. With the end of the war, prices rose again till they were almost Rs. 200 per 100 baskets in the early 1920's. By the late 1920's, however, prices declined and in the years 1931 to 1934 cultivators suffered greatly when paddy prices fell to around Rs. 80. The main reason for this fall was the world-wide trade depression when prices of all agricultural products fell more heavily than the already drastic fall in prices in general. From 1935 onwards paddy prices rose to about Rs. 110, around which figure it remained till the outbreak of the Second World War.

## CHAPTER IV

## MILLS AND MILL PRODUCTS

The development of the rice export trade of Burma was accompanied by an equally rapid expansion of the rice milling industry, for though a considerable quantity of paddy was exported, especially to India, the bulk of the grain was sent abroad in the form of milled rice of various grades, raw and parboiled. The big mills at the ports and subsequently an increasing number of small mills in the interior undertook the important task of milling the paddy assembled by middlemen from the producers into various grades of rice recognised in the markets abroad.

## PART I - MILLS

1. Growth and Distribution of Mills.

The establishment of British rule in Burma was soon followed by the founding of rice firms owned and managed by Europeans. Many were branches of firms already well-established in London, Liverpool, Hamburg or Bremen. The first few firms, established in the 1830's in Akyab and in the 1850's in Rangoon, Bassein and Moulmein,<sup>1</sup> did not set up rice mills immediately. Trade was conducted mainly in

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1. Mohr Brothers & Co., Ltd., one of the oldest rice firms in Burma, may be taken as an example. The firm was established in Akyab in 1837 and branches were opened in Bassein in 1858, and in Moulmein and Rangoon in 1859. Rangoon, however, soon became the head-quarters. A. Wright, H.A. Cartwright and O. Breakspear (editors), Twentieth Century Impressions of Burma (London: Lloyd's Greater Britain Publishing Co., 1910), p.206.

paddy while some hand-pounded rice was bought from the cultivators. At this time India was the most important market and took mostly paddy, while Malaya took mostly husked rice. The Western markets bought a mixture of both called "cargo rice".<sup>1</sup>

The first power-driven rice mill was established in Rangoon in 1861.<sup>2</sup> By 1940, about 700 mills were found all over the country. Column (3) of Table IV.1 shows the very rapid growth in the number of power-driven mills operating in Burma. However, the increase in the milling capacity of the country was much smaller than might be suggested by the increase in numbers, for the mills before the turn of the century, though fewer in number, were almost all big mills capable of milling from about 100 to 250 tons of paddy or even more in a 12-hour day, while a large number of those established from 1900 onwards in the interior of the country were small mills capable of milling from about 10 to 75 tons per day.<sup>3</sup> On the other hand, there sprang up after the turn of the century an unknown number of small up-country mills which were not enumerated under the successive Indian Factories Acts because they had less than ten employees each.

1. Annual Report on the Administration of Burma 1873-74, p.22. For the terms applied to rice at various stages of milling, see footnote 1 on p.'s.
2. J.W. Grant, The Rice Crop in Burma (Rangoon, reprinted 1939), p.30; and O.H. Spate, "Beginnings of Industrialization in Burma," Economic Geography, Vol. XVII (Worcester, Mass.: Clark University, 1941), p.79.
3. D. Hendry, "Rice in Burma...", op. cit., p.34. Mills were also termed "small" if less than 100 persons were employed.



Table IV.1 : Annual Average Number of Mills in Burma,  
1861 - 1939.

Period	Lower Burma (1)	Upper Burma (2)	Total (3)
1861	1	-	1
1867-69	8	-	8
1870-74	29	-	29
1875-77	45	-	45
1880-81	48	-	48
1892-94	53	-	53
1896-99	73	-	73
1900-04	100	-	100
1905-09	149	-	149
1910-14	206	17*	216
1915-19	292	26	318
1920-24	395	61	456
1925-29	507	71	578
1930-34	537	74	611
1935-39	588	78	666

\* Average of 1912-14; - No records.

Source: Figures are obtained from Annual Administration Reports for the early years and the Annual Reports on the Working of the Indian Factories Act for 1892 onwards.

For annual figures see Appendix IV.A on pp.357-58.

It should be noted that the number of new mills established each year was greater than the increase indicated in the table as mills were sometimes abandoned due to the winding up of the firm, destruction by fire, or the machinery becoming obsolete.

The reason for the relatively slow rate of increase in the number of mills during the nineteenth century was that most of the mills were situated in the ports where expansion of milling capacity was due more to the enlargement of

existing mills than to the erection of new small mills. The present century witnessed a much more rapid rate of growth in the number of mills consequent on the development of small mills dispersed throughout the paddy-growing regions of Burma.

Throughout the period under consideration, the rapid increase in the number of mills continued uninterrupted except for a very short period in the early 1930's when many mills had to close down mainly because of the credit squeeze brought about by the world-wide trade depression. Some, however, continued working under new owners. The number of mills fell from 613 in 1930 to 582 in 1931 but picked up again in 1932 when there were 599 mills and the number increased to 618 in the next year.<sup>1</sup>

It may be noted from columns (1) and (2) of Table IV.1 that the great majority of the mills were situated in Lower Burma. Figures prior to 1912 for Upper Burma are not available as the milling industry was either non-existent or very insignificant in the earlier period. As the practice of sending paddy to the local mills to be processed into rice for home consumption spread, mills were established in the more important rice-growing centres of Upper Burma such as the districts of Mandalay, Yamethin, Kyaukse, Shwebo, Sagaing and Minbu.<sup>2</sup>

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1. Figures are obtained from Annual Reports on the Working of the Indian Factories Act. See Appendix IV.A on pp.357-58

2. Grant, op. cit., pp.31 and 32.

Table IV.2 : Distribution of Mills in Lower Burma  
by Division, 1861 - 1940.

Year	Arakan	Pegu	Irrawaddy	Tenasserim	Total
<u>Number of Mills</u>					
1861	0	1		0	1
1871	1	17		3	21
1881	7	35		7	49
1892	9	25	8	10	52
1900	10	49	8	16	83
1910	11	115	13	25	164
1920	10	169	86	52	317
1930	9	271	183	75	538
1940	25	266	236	72	599
<u>Percentage</u>					
1861	0.0	100.0		0.0	100.0
1871	4.8	81.0		14.3	100.0
1881	14.3	71.4		14.3	100.0
1892	17.3	48.1	15.4	19.2	100.0
1900	12.0	59.0	9.6	19.3	100.0
1910	6.7	70.1	7.9	15.2	100.0
1920	3.2	53.3	27.1	16.4	100.0
1930	1.7	50.4	34.0	13.9	100.0
1940	4.2	44.4	39.4	12.0	100.0

Sources: Annual Administration Reports, Annual Reports on Trade and Navigation and Annual Reports on the Factories Act.

The relative importance of the four divisions of Lower Burma with regard to the number of mills in different years is indicated in Table IV.2. Throughout the whole period, the division of Pegu maintained its position as the most important region for the rice milling industry. Rangoon, the premier port of Burma, is situated in this division and the predominance of Pegu during the nineteenth century was due to the dominant role played by Rangoon. After about 1900 when small mills sprang up throughout all paddy-growing regions Pegu was still dominant because it contained some

of the richest paddy-growing tracts in Burma.

The importance of Irrawaddy emerged only in about 1920 when it accounted for the second largest number of mills. Before 1910 it was the division with the least number of mills while in 1910 it had less mills than Tenasserim but more than Arakan. The later predominance of this division was due to the development of up-country mills.

Tenasserim accounted for a somewhat steady proportion of the mills throughout the period. The ports of Moulmein, Tavoy and Mergui drew a number of mills in the early days. After about 1900 the number of mills in the ports increased very slowly but this was compensated by the gradual rise in the number of small mills established in the interior.

Arakan showed a declining proportion of mills. Almost all the mills in this division were situated in the port of Akyab. The narrow coastal strip was the only important paddy-growing area and as it was within easy reach of the port mills, there was less demand for up-country mills. The number of mills in the port of Akyab, however, increased very slowly and therefore this division returned the lowest proportion of mills in Burma after about 1900.

Table IV.3 shows the number of mills in the four ports of Rangoon, Bassein, Akyab and Moulmein and the percentage of these mills to the total in Lower Burma.

Table IV.3 : Number of Mills in the Four Main Ports of Burma, 1861 - 1930.

Year	Lower Burma	Four Ports	
		Number	Percentage
1861	1	1	100.0
1870	20	20	100.0
1881	49	49	100.0
1892	52	48	92.3
1900	83	69	83.1
1914	246	96	39.0
1930	539	86	16.0

Sources: Grant, op. cit., p.31; and Annual Administration Reports.

It may be observed from the table that up to about 1900 the bulk of the mills were situated in the ports. In fact, almost all the mills were clustered round the harbours and river approaches of the ports, around the very spots which saw the establishment of the first few mills in Burma. This was natural in the early days of British rule as the seaport towns were the first places where British control and influence could be exercised most effectively. Mill workers could be recruited from the population while accessibility to supplies of paddy and to markets abroad were provided by river, coastal and ocean transport. With the development of commerce and industry in general in the ports, other facilities came into being, not least of which was the growth of banking.

By the turn of the century when much of the jungle and marsh had been converted into paddy fields, small mills began to spring up around Rangoon along the main navigable waterways and railway lines. Many were established in Hanthawaddy district in the vicinity of Rangoon. Within a few years mills were established around the other ports as well and they soon spread outwards from the ports and into other districts, until by 1930, only about 16 per cent were situated in the four major ports.

The up-country mills were established mostly in the more important paddy-growing tracts such as the great Irrawaddy-Sittang delta covered by the Pegu and Irrawaddy divisions. The mills in the ports continued to increase in number but the rate of increase was much slower than that of the up-country mills. However, it is important to note that the mills in the ports grew in size<sup>1</sup> as well as in number whereas the up-country mills were almost all small ones.

## 2. Changing Patterns of Ownership and Size of Mills.

Table IV.4 indicates the number and percentage of mills belonging to each race. It may be observed that the growth

1. The average number of employees in mills in the combined districts of Akyab, Rangoon Town, Bassein, Amherst and Hanthawaddy was 86 in 1898 and rose to 156 in 1936. These districts contained the ports of Akyab, Rangoon, Bassein and Amherst and the suburbs of Rangoon respectively. Figures for the districts are used because comparable figures for the ports are not available. Divisional Reports on the Working of the Indian Factories Act in Lower Burma for the year 1898 and List of Industrial Establishments, 1936.

Table IV.4 : Distribution of Mills in Burma by Race of Owners, 1881 - 1936.

Year	Burman	Indian	Chinese	European	Unclassified	Total
<u>Number of Mills</u>						
1881	2	3	3	41	0	49
1898	10	7	10	45	0	72
1921	224	61	53	45	5	388
1929	336	151	75	39	8	609
1933	310	156	75	44	14	599
1936	334	186	91	32	12	655
<u>Percentage</u>						
1881	4.1	6.1	6.1	83.7	0	100.0
1898	13.9	9.7	13.9	62.5	0	100.0
1921	57.8	15.7	9.0	11.6	1.3	100.0
1929	55.2	24.8	12.3	6.4	1.3	100.0
1933	51.8	26.0	12.5	7.3	2.3	100.0
1936	51.0	28.4	13.9	4.9	1.8	100.0

Sources: For 1881, Annual Administration Report, 1880-81; for 1898, Divisional Reports on the Working of the Indian Factories Act for Lower Burma for the year 1898; for 1921, Report of the Burma Provincial Banking Enquiry Committee, 1929-30, Vol. 1; and for 1929, 1933 and 1936, List of Industrial Establishments, 1929, 1933 and 1936.<sup>1</sup>

in the number of mills belonging to Burmans was the most rapid. In the nineteenth century Burman mills were relatively unimportant but after 1900 they accounted for more than half the total number of mills. In the early days when mills were almost exclusively situated in the

1. For 1929, 1933 and 1936, the figures are worked out from the names of owners of mills found in the List of Industrial Establishments, 1929, 1933 and 1936. Though the general trends may be quite accurate, figures for any particular year may be in error to some extent because many Indian owners, due to race riots in the 1930's, took Burman sleeping partners to lend their names. (O.H. Spate, op. cit., p.83.) Therefore, Indian ownership of mills is slightly under-estimated and, conversely, Burman ownership of mills is slightly over-estimated.

ports, Burman participation in the rice milling industry was not significant. Other races, in particular Europeans, occupied a more advantageous position as they commanded greater financial resources, technical know-how and business experience. But in the present century, when much of the countryside had been put under paddy, Burmans found that they could compete quite effectively in the rice milling industry by establishing small up-country mills. These needed much less overhead expenses, were simpler in organisation and were easier to run. As these mills were set up in the heart of the paddy-growing areas, Burmans found that their local knowledge was an advantage.<sup>1</sup>

The steady growth of Burman mills was interrupted for a short period during the early 1930's when the credit squeeze and the low rice prices brought about by the great world depression as well as the competition of the powerful European-owned mills at the ports, especially the mills belonging to the members of the Bullinger Pool,<sup>2</sup> forced many small mill-owners to declare themselves bankrupt. Some mills worked under new owners, but others were forced to close down completely.

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1. For more details on the small up-country mills, see below pp. 135-39.
  2. For more information on the Bullinger Pool, see pp. 103-05, 133. In the early 1930's when many mills were forced to close down or to work far below their capacity because they could not get enough paddy at rates that would allow them to recover milling costs, mills belonging to members of the Bullinger Pool were observed to work at full load. E. H. Solomon, "Minute of Dissent," Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), pp. 78, 92.



The number and percentage of mills owned by Indians increased steadily though at a slower rate than that of the Burman mills. Indian merchants tended to concentrate on the export of rice and paddy rather than on the milling aspect of the rice industry. There were a few Indian mills in the ports in the early days but rice was obtained mainly from the European-owned mills. Many of the up-country mills came into the hands of Indian moneylenders and merchants after the original Burman owners had become insolvent.

Chinese mills occupied a similar though somewhat less important position as the Indian mills. The proportion of mills belonging to Chinese remained the most constant during the whole period. Like the Indians, the Chinese had some port as well as some up-country mills.

European domination of the rice milling industry was most marked in the early days. The percentage of 83.7 in 1881 fell to 62.5 in 1898. This was mainly due to the rapid growth of up-country mills which were almost all Asian-owned. By 1921 the pattern of ownership of mills had entirely changed. Burmans owned more than half the total number of mills while the percentage of European-owned mills fell to 11.6, although the number of European mills was the same for 1898 and 1921, namely 45 mills. This percentage further declined till by 1936 only 4.9 per cent were European-owned.

Table IV.5 : Distribution of Mill Employees in Burma  
by Race of Mill Owners, 1898 - 1936.

Year	Burman	Indian	Chinese	European	Unclassified	Total
<u>Number of Employees</u>						
1898	228	368	535	4,763	0	5,894
1929	11,927	7,148	3,641	15,002	957	38,675
1933	11,933	8,298	3,232	19,604	1,224	44,291
1936	12,638	10,185	5,186	15,860	792	44,661
<u>Percentage</u>						
1898	3.9	6.2	9.1	80.8	0.0	100.0
1929	30.8	18.5	9.4	38.8	2.5	100.0
1933	26.9	18.7	7.3	44.3	2.8	100.0
1936	28.3	22.8	11.6	35.5	1.8	100.0

Sources: Divisional Reports on the Working of the Factories Act, 1898; and List of Industrial Establishments, 1929, 1933 and 1936.

Table IV.4, however, does not take into account the productive power of the mills. To get a more accurate picture of the relative importance of the mills belonging to the four races, the productive power of the mills should be considered. One way of gauging the productive power and size of the mill is by the number of persons employed. The distribution of employees by the race of the mill-owners is presented in Table IV.5.

Though the number of Burman mills accounted for more than half the total number of mills in Burma after the turn of the century, the number of employees working in these mills accounted for only slightly more than a quarter of all mill employees.

Table IV.6 : Distribution of Mills by Race of Owners and Division, 1936.

Region	Burman	Indian	Chinese	European	Unclassified	Total
Arakan Division	4	4	1	6	0	15
Pegu Division	102	102	35	16	6	261
Irraw. Division	134	36	31	6	2	209
Ten. Division	43	24	23	4	2	96
Lower Burma	283	166	90	32	10	581
Upper Burma	51	20	1	0	2	74
TOTAL	334	186	91	32	12	655
<u>Per Cent Distribution by Race</u>						
Arakan Division	26.7	26.7	6.7	40.0	0.0	100.0
Pegu Division	39.1	39.1	13.4	6.1	2.3	100.0
Irraw. Division	64.1	17.2	14.8	2.9	1.0	100.0
Ten. Division	44.8	25.0	24.0	4.2	2.1	100.0
Lower Burma	48.7	28.6	15.5	5.5	1.7	100.0
Upper Burma	68.9	27.0	1.4	0.0	3.7	100.0
TOTAL	51.0	28.4	13.9	4.9	1.8	100.0
<u>Per Cent Distribution by Division</u>						
Arakan Division	1.2	2.2	1.1	18.8	0.0	2.3
Pegu Division	30.5	54.8	38.5	50.0	50.0	39.8
Irraw. Division	40.1	19.3	34.1	18.8	16.7	31.9
Ten. Division	12.9	12.9	25.3	12.5	16.7	14.7
Lower Burma	84.7	89.2	99.0	100.0	83.3	88.7
Upper Burma	15.3	10.8	1.1	0.0	16.7	11.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Note: Percentages do not always add up to 100.0 owing to rounding.

Source: List of Industrial Establishments, 1936.

Indian mills started off with less employees than the Chinese mills but by 1936 the number was almost double that of those in the Chinese mills. The least important in the number and productive power of mills, as indicated indirectly by the number of employees engaged, were the Chinese mills.

Though the proportion of European-owned mills decreased rapidly, the proportion of their combined productive capacity

did not fall so drastically. During the whole period European mill-owners dominated the rice milling industry where productive power was concerned. Even during the twentieth century, the comparatively few European-owned mills were responsible for milling no less than one-third of the rice exported from Burma.<sup>1</sup>

Table IV.7 : Distribution of Mill Employees by Race of Mill Owners and by Division, 1936.

Region	Burman	Indian	Chinese	European	Unclassified	Total
<u>Number of Employees</u>						
Arakan Division	378	1,212	94	3,009	0	4,693
Pegu Division	4,339	5,653	2,346	9,208	220	21,766
Irraw. Division	5,537	1,785	1,359	1,729	51	10,461
Ten. Division	1,321	1,088	1,297	1,914	483	6,103
Lower Burma	11,575	9,738	5,096	15,860	754	43,023
Upper Burma	1,063	447	90	0	38	1,638
TOTAL	12,638	10,185	5,186	15,860	792	44,661
<u>Per Cent Distribution by Race of Mill Owners</u>						
Arakan Division	8.0	25.8	2.0	64.1	0.0	100.0
Pegu Division	19.9	26.0	10.8	42.3	1.0	100.0
Irraw. Division	52.9	17.1	13.0	16.5	0.5	100.0
Ten. Division	21.6	17.8	21.2	31.4	7.9	100.0
Lower Burma	26.9	22.6	11.8	36.8	1.8	100.0
Upper Burma	65.2	27.3	5.5	0.0	2.3	100.0
TOTAL	28.3	22.8	11.6	35.5	1.8	100.0
<u>Per Cent Distribution by Division</u>						
Arakan Division	3.0	11.9	1.8	19.0	0.0	10.5
Pegu Division	34.3	55.5	45.2	58.1	27.8	48.7
Irraw. Division	43.8	17.5	26.2	10.9	6.4	23.4
Ten. Division	10.5	10.7	25.0	12.1	61.0	13.7
Lower Burma	91.6	95.6	98.3	100.0	95.2	96.3
Upper Burma	8.4	4.4	1.7	0.0	4.8	3.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: List of Industrial Establishments, 1936.

1. Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.79.

The distribution of the number and percentage of mills and mill employees by race of mill owners in 1936 is set out in Tables IV.6 and IV.7. In Arakan, European-owned mills were the most important in number and productive capacity (as indicated indirectly by the number of mill employees). The next most important mill employers were the Indians.

In Pegu, Burman and Indian owners were equally important in the number of mills and together accounted for more than three-quarters of the mills, but though the Europeans had the smallest number of mills, they were the most important in the number of employees due to the existence of a few very big European mills in Rangoon.

In number and in milling capacity Burman mills were by far the most important in the Irrawaddy division in 1936. This was due to the predominance of small up-country mills in Irrawaddy where the average number of employees per mill was only 53 compared with 65 for Tenasserim, 92 for Pegu and 335 for Arakan.<sup>1</sup>

Europeans had the lowest number of mills in Tenasserim but the largest number of mill employees. Burmans came second in the number and capacity of mills.

As for Upper Burma, Burman mills dominated in number and capacity while on the other extreme, Europeans owned no

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1. Figures calculated from data obtained from List of Industrial Establishments, 1936.

mill in this area. Much of the milling done here was for home consumption.

The data depicting regional distribution reveal that most of the mills belonging to each race were located in Lower Burma. Upper Burma was comparatively unimportant. Of the Burman mills and mill employees, most were situated in the Irrawaddy division, with Pegu, Tenasserim and Arakan, in that order, sharing the rest. Arakan was comparatively unimportant where Burman mills were concerned.

Pegu division, however, and not the Irrawaddy division, accounted for the greatest percentage of mills and mill employees belonging to the other three races. It contained more than half the total number of Indian and European mills and mill employees. Irrawaddy ranked next for the Indians and Chinese and Arakan for the Europeans. Tenasserim ranked lowest for European mills but Arakan was the least important for Indian and Chinese mills.

Taking Burma as a whole, Europeans owned the least number of mills but the greatest number of mill employees. Burmans owned the most number of mills and were second where mill employees were concerned. Indian mills were third, and Chinese last in both these respects.

The distribution of mills and mill employees in the districts of Akyab, Rangoon Town, Bassein, Amherst and

Hanthawaddy in 1898 and 1936<sup>1</sup> by race of mill owners is given in Table IV.8. These districts have been selected to indicate indirectly the number of mills in the ports as comparable figures for the ports are not obtainable.<sup>2</sup> Except for Hanthawaddy, these districts contained the ports of Akyab, Rangoon, Bassein, and Moulmein respectively. The district of Hanthawaddy has been included because mills situated along the short section of the Rangoon River between Rangoon Town and the Bay of Martaban were enumerated in this district. These mills, for all intents and purposes, could be considered to be in Rangoon.

Tables IV.8 and IV.9 show that in 1898 the great majority of the mills in the port districts were owned by Europeans. Asian mills were few and relatively insignificant. But by 1936, Burman, Indian and Chinese mills had increased to such an extent as to be each greater in number than European mills, with the Burmans owning the largest number of mills; but right up to World War II Asian mills were never as important as the European mills which dominated these five districts where productive capacity was concerned.

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1. Comparable figures are available for 1929 and 1933 besides the two years already given. But these years are too close to 1936 to be of much assistance in indicating trends in the changing patterns of ownership, location and size of mills.
  2. The figures for 1898 are closer to the actual port figures than the ones for 1936 since many mills were established just outside the ports in the twentieth century.

Table IV.8 : Distribution of Mills and Mill Employees by Race of Mill Owners and by Selected Districts, 1898 and 1936.

District	Burman		Indian		Chinese		European		The Pool		Total	
	1898	1936	1898	1936	1898	1936	1898	1936	1898	1936	1898	1936
<u>Number of Mills</u>												
Akyab	0	4	0	4	1	1	9	6	7	3	10	15
Rangoon Town	0	7	2	11	2	12	17	8	12	6	21	38
Hanthawaddy	7	18	2	13	4	2	5	7	2	3	18	40
Bassein	0	28	0	6	0	10	8	3	6	2	8	49
Amherst	0	14	2	8	2	8	5	4	3	3	9	36
Total	7	71	6	42	9	33	44	28	30	17	66	178
Total in Burma	10	334	7	186	10	91	45	32	30	17	72	655
<u>Number of Employees</u>												
Akyab	0	378	0	1,212	145	94	901	3,009	622	1,680	1,046	4,693
Rangoon Town	0	1,071	84	1,409	68	1,605	2,282	5,822	1,777	4,158	2,434	9,907
Hanthawaddy	154	443	92	360	133	95	229	3,364	107	3,269	608	4,262
Bassein	0	1,391	0	330	0	710	300	1,389	214	1,389	300	3,820
Amherst	0	306	156	494	144	740	272	1,914	682	1,794	1,272	3,454
Total	154	3,589	322	3,805	490	3,244	4,684	15,498	3,402	12,290	5,660	26,136
Total in Burma	228	12,638	368	10,185	535	5,186	4,763	15,860	3,402	12,290	5,894	44,661

Sources: Divisional Reports on the Working of the Indian Factories Act in Burma for the year 1898; and List of Industrial Establishments, 1936.



Table IV.9 : Percentage Distribution of Mills and Employees in Five Combined Districts by Race of Mill Owners in 1898 and 1936.

Year	Burman	Indian	Chinese	European (Pool)	Unclassified	Total
Mills						
1898	10.6	9.1	13.6	66.7	(45.4)	0.0
1936	39.9	23.6	18.5	15.7	( 9.6)	2.2
Employees						
1898	2.7	5.8	8.6	82.8	(60.1)	0.0
1936	13.3	14.6	12.4	59.3	(47.0)	2.0

Sources: Same as for Table IV.8

Table IV.10 : Percentage of Mills and Employees in Five Combined Districts to Total in Burma, by Race of Mill Owners in 1898 and 1936.

Year	Burman	Indian	Chinese	European (Pool)	Unclassified	Total
Mills						
1898	70.0	85.7	90.0	97.8	(100.0)	0.0
1936	21.3	22.6	36.3	87.5	(100.0)	33.3
Employees						
1898	67.5	90.2	91.6	98.3	(100.0)	0.0
1936	28.5	37.4	62.6	87.7	(100.0)	67.4

Sources: Same as for Table IV.8.

The concentration of European mills in the five districts is illustrated in Table IV.10. In 1898 and 1936, 97.8 and 87.5 per cent respectively of the total number of European mills and 98.3 and 87.7 per cent respectively of the total

number of workers employed in European mills were found in these districts. Among all the races, Burmans had the lowest percentage of mills and mill employees in these districts to the total in Burma. Indian mill-owners had a slightly greater proportion of mills and employees in this area than the Burmans, but the Chinese had the biggest percentage among Asian mill-owners.

Among the European rice firms, the four firms of the Bullinger Pool -- Steel Brothers, Anglo-Burma Rice Company, Ellerman's Arracan Company and Bulloch Brothers<sup>1</sup> -- were predominant in both the number of mills owned and the number of employees working in their mills, as may be noted in Tables IV.8 and IV.9. All the mills belonging to these firms were located in the five districts in both years. (See Table IV.10.) In fact these firms were even more influential than the figures suggest, as many small mills owned and managed by Burmans in the interior were financed by them. It was quite common for small mills to make contracts with the big rice firms by which, in return for financial assistance, deliveries of milled rice at agreed rates were to be made to the firms.<sup>2</sup>

It may be observed from Table IV.11 that the mills owned by Europeans were generally very large mills, the average number of employees per mill being 105 in 1898 and 496 in 1936.

1. Some time between 1933 and 1936 Bulloch Brothers wound up.
2. Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.61; and Grant, op. cit., p.31.

Table IV.11 : Distribution of Mills by Race of Owners and Number of Employees, 1898 and 1936.

Number of Employees in Each Mill	Burman		Indian		Chinese		European		Total	
	1898	1936	1898	1936	1898	1936	1898	1936	1898	1936
10- 49	10	255	5	118	6	55	14	4	35	442
50- 99	0	67	1	49	2	24	13	1	16	142
100-199	0	6	1	12	2	10	13	6	16	35
200-299	0	5	0	3	0	2	3	1	3	11
300-399	0	1	0	3	0	0	1	4	1	9
400-499	0	0	0	1	0	0	1	3	1	4
500-999	0	0	0	0	0	0	0	8	0	8
1,000 & Over	0	0	0	0	0	0	0	5	0	5
Total	10	334	7	186	10	91	45	32	72	655
Average number of employees per mill	23	38	53	55	54	57	105	496	82	68

Sources: Divisional Reports on the Working of the Indian Factories Act in Burma for the year 1898; and List of Industrial Establishments, 1936.

In contrast, the corresponding figures for the Chinese, Indians and Burmans were 54, 53 and 23 respectively in 1898 and 57, 55 and 38 respectively in 1936. While most of the big mills were owned by Europeans, most of the small mills were owned by Burmans. Of the mills employing from 10 to 49 persons, the smallest group enumerated, Burman mills, accounted for 57.8 per cent in 1936; or, to put it in another way, of the total number of Burman mills in the country in 1936, 76.3 per cent were mills employing from 10 to 49 persons.

A comparison of the data for 1898 and 1936 shows that the average number of employees per mill for every race

recorded an increase, with the European mills experiencing the greatest increase. These increases were due to the larger number of big-sized mills for every race.

However, the average number of employees per mill for the whole country decreased from 82 to 68. This decrease in the average size of mills for Burma, compared with the increase for every race, was due to the different rates of increase in the number of the mills for each race so that the percentage distribution of mills by race of owners was radically altered during the period 1898 to 1936. In 1898, Burman mills (which were mostly small mills) accounted for 13.9 per cent of the total number of mills; but in 1936, Burman mills accounted for 51.0 per cent. On the other hand, in 1898, European mills (which were mostly big mills) accounted for 62.5 per cent of the total number of mills; but in 1936, the percentage was only 4.9. This greatly increased percentage of Burman mills on the one hand and the significant drop in the percentage of European mills on the other, brought about the decrease in the average size of mills for the whole country.

### 3. The Small Up-Country Mills.

The cause of the astonishing growth in the number of small mills (See Table IV.12) from about the turn of the century lay in certain advantages enjoyed by the small

Table IV.12 : Growth in the Number of Small  
Mills outside the Ports, 1900-30.

Year	Small Mills	All Mills
1900	27	83
1914	151	264
1920	260	353
1930	528	613

Source: Grant, op. cit., p. 31.

mills over the big mills at the ports. Firstly, as the small mills were nearer the source of supply the millers could dispense with the services of some of the brokers and agents employed by the big millers. Secondly, they could see to it that less mixing of different varieties of paddy took place. With less mixing the quality of rice produced from the paddy was better and the breakage and wastage during the milling process was much reduced. As the quantity required to make up a milling lot was much smaller, the small mills could often afford to pay higher prices than the big mills for consignments of particularly good and uniform grain.

Another advantage lay in the plentiful supply of cheap labour in the paddy-growing countryside since the rush season for milling (February to April) coincided with the slack season of the agricultural year. The Report on the Administration of Burma, 1927-28, noted that the introduction of cheap and efficient small milling units of

German make greatly facilitated the tendency to set up small mills. The number of these mills was much greater than as indicated by Table IV.12 because many escaped enumeration and inspection by having less than ten employees each.<sup>1</sup>

Small mills also enjoyed the advantage of considerable savings in transport costs as the rice freed from the husk and other waste was sent to the ports instead of paddy. This saving applied equally to water and rail transport as up to 1922 the railways charged the same rates for paddy and milled rice. But in that year the railways increased the rates on rice. The reason given was that "as the crop carried by them from within 150 miles of the ports was mainly destined for export and would have to make the journey anyway, the carrying of it by them in the less bulky form of rice, when they might be carrying it as paddy, was involving them in loss."<sup>2</sup>

The rates on rice were raised by approximately 33 per cent above the rates on paddy. There was much agitation among the small up-country millers against this

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1. Annual Administration Report, 1927-28, p.64.  
In one instance a mill-owner erected 2 mills, each employing less than 10 workers, in one enclosure and was much disappointed to find that they could be grouped together and classed as a factory under the Indian Factories Act.
  2. Report on the Marketing of Rice in India and Burma (1941) p.376.

discrimination.<sup>1</sup> It was widely alleged that the change was intended to help the British firms situated in the ports at the expense of the predominantly Burman up-country mills. Tharrawaddy U Pu in a Dissenting Note attached to the Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931) stated that: "It was rather a strange coincidence to find that the Bullinger Pool came into existence in 1921 and the freight rates of rice were increased in the year 1922 by the then British Railways Company, Limited."<sup>2</sup>

By 1929 it was evident that there was over-building in certain centres, with the result that the milling season was cut from ten to six months because the mills could not obtain enough paddy at profitable rates to keep operating longer.<sup>3</sup> The hiring of mills, especially to speculators and dealers, became common, and many mills worked on a contract basis for the big mills, while others became mere branches of the big mills at the ports.

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1. The Committee appointed to enquire into the rice and paddy trade in 1931 agreed with the up-country millers that rice rates were raised to an unduly high level compared with the paddy rates and that the rice rates should be raised by 15 per cent, and not by 33 per cent, above the paddy rates "if the up-country miller who carries rice to a port to compete with rice milled there is not to be penalized by reason of the fact that the miller at the port pays a disproportionately low rate of freight on the paddy which he buys to mill." Interim Report... (1931), p.35.
  2. Tharrawaddy U Pu, "Minute of Dissent", op. cit., p.42.
  3. D.F. Chalmers, "Marketing", Agriculture in Burma (1927), p.101.

Most of the small mills borrowed money at high rates of interest from the Chettyars and other local moneylenders to establish and even to operate the business. Often the mills were mortgaged.<sup>1</sup> During the period of high prices in the 1910's and 1920's most of the small mills made good profits, but the depression of 1929 brought ruin to many. It was noted by D.F. Chalmers that mills owned by Burmans were the first to go to the wall. Indians and Chinese seemed to face the difficulties better.<sup>2</sup> Perhaps the other occupations frequently indulged in by the Indian and Chinese mill-owners, namely, moneylending, land-owning and shop-keeping, helped them to tide over reverses.

#### 4. Improvements Made in the Milling Industry.

The first few rice mills set up by the newly-established, European-owned firms were no more than sheds underneath which the grain was husked and polished in the same way as it had been done for centuries past. The implements used were the cylindrical grinder, operated by hand, and the mortar and pestle, operated by hand or foot.

The early 1860's saw the introduction into the mills at the main ports of power-driven machinery, run on coal.<sup>3</sup> Fuel costs were high, as the coal had to be imported. The

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1. Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.61.
  2. D.F. Chalmers, "Marketing," Agriculture in Burma (1927), p.101.
  3. Grant, op. cit., p.30.



next important development came in 1880 when C.R. Cowie of the firm of C.R. Cowie and Company, invented a furnace which could be fired by rice husk instead of coal.<sup>1</sup> The great saving in fuel costs effected by using the otherwise valueless husks led to the immediate installation of the husk furnace in every mill within the next few years. Another advantage gained from the new furnace was that the streams alongside which the mills were situated suffered less from the pollution resulting from the practice of throwing the husks into the river channels, though the problem was not solved altogether as the use of husk as fuel took up only about half the available quantity of husk.

Up to about 1880 the main form in which rice was exported to the Western markets was cargo rice which was roughly four parts husked rice and one part paddy. Cargo rice represented a compromise between milled rice and paddy. Milled rice tended to deteriorate very quickly during the long sea voyage to Europe due mainly to the poor ventilation systems of ships. On the other hand, paddy was very bulky though less perishable. It was found that a mixture of both kept quite well and was much less bulky than just paddy.

In the early days mills in Burma left the final stages of milling, viz., polishing, coating and grading, to the mills in the importing countries. As the milling industry

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<sup>1</sup>. Wright, Cartwright and Breakspear (editors), op. cit., p.206.

in Burma expanded and developed the mills in Europe became increasingly confined to these final milling functions only. Markets other than those in the West were less concerned over appearance and more often than not these final stages were left out altogether.

By 1880, the improvements made in steamers, especially with reference to the ventilation system and the greater use of the Suez Canal route meant that white milled rice could be shipped quite safely. The percentage of milled rice exported in the form of cargo rice declined as can be seen in Table IV.13. By the 1920's almost all milled rice was white rice.<sup>1</sup> Milling machinery in Burma improved steadily and the final processes of polishing and coating were undertaken increasingly in Burma. But final processing in the

Table IV.13 : Annual Average Amount and Percentage of Cargo Rice and White Rice Exported from Burma, 1881-82 to 1901-02.

Period	Cargo Rice Tons	Per Cent	White Rice Tons	Per Cent	Total Tons
1881-82 to 1883-84	748,316	79.0	199,516	21.0	947,832
1884-85 to 1886-87	626,300	74.1	218,439	25.9	844,739
1887-88 to 1889-90	498,965	59.7	337,251	40.3	836,216
1890-91 to 1892-93	566,241	52.0	523,291	48.0	1,089,532
1893-94 to 1895-96	521,552	50.8	504,541	49.2	1,026,093
1896-97 to 1898-99	508,912	48.8	534,032	51.2	1,042,944
1899-00 to 1901-02	508,285	45.9	599,337	54.1	1,107,622

Sources: Annual Administration Reports; and Annual Reports on Trade and Navigation.

1. Hendry, "Rice in Burma..." op. cit., p.35.

consumer centres was not altogether done away with because of different consumer preferences in different markets.<sup>1</sup>

About 1915 milling techniques developed a stage further with the growing demand for parboiled rice in certain markets. Paddy was first soaked, steamed and dried before the ordinary milling processes. Much parboiling was undertaken by the small mills in the interior and by the 1920's most of the big mills at the ports had installed parboiling machinery as well. By the late 1930's about 42 per cent of the milled rice exported from Burma was in the form of parboiled rice.<sup>2</sup>

##### 5. Milling Processes.

Hand-Milling. Before the establishment of power-driven milling machinery, paddy was milled by manual labour. Up to the turn of the century most of the paddy meant for home consumption was milled by hand by the females of the family as it was wanted, the grain being kept in the form of paddy in home-made storage receptacles. With the rapid development of small-scale milling in the countryside soon after the turn of the century, the practice of sending small lots of paddy to the local mills for conversion into rice for home consumption grew in popularity.<sup>3</sup> But in remote areas

1. Burma Rice ("Burma Pamphlets No. 4"; London: Longmans & Co., 1944), pp.13-14; and Rangoon Gazette, July 10, 1891.
2. Report on the Marketing of Rice in India and Burma (1941), p.95.
3. Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.60.

or where the farmer could not afford machine-milling, milling by manual labour continued in use.

The implement for home milling most common in Burma consists of a solid cylinder of wood about two feet in diameter, the upper surface grooved by radiating lines a quarter of an inch deep; on this is placed another cylinder the lower surface similarly grooved, with an opening in the shape of an inverted truncated cone. This upper piece is made to revolve while the paddy passes through it and comes out between the two portions of the mill. The friction causes the husks to be freed from the kernels and leads to the removal of a bit of the germ and outer layers of the grain.<sup>1</sup>

Another type of huller is the mortar and pestle. The mortar usually consists of a large wooden block, generally of a tree trunk, in which a cavity several inches deep and wide has been hollowed out while the pestle, usually made of hard heavy wood, is a long, thick pole of about six feet, held in the middle, for pounding the paddy placed in the mortar. The mortar and pestle can also be worked by foot. In this case either a mortar is let into the ground, or more

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1. The innermost part of the rice grain is the starchy endosperm. Located near the base of the endosperm is the embryo (or germ) which is rich in vitamins and minerals. Enclosing both are five very thin coats, viz., the aleurone layer (innermost layer), testa, cross-layer, mesocarp and epicarp. The last three layers constitute the pericarp. All the above together is known as the kernel and is enclosed in glumes known as the husk or hull.  
Grist, op. cit., pp.60, 313.

simply a hollow made in the ground. The pestle, about a foot in length, is attached to the underside of a long beam of wood supported on a low upright which acts as a fulcrum. The operator steps on and off the end farthest from the mortar and thus lifts and drops the pestle into the mortar at the other end.<sup>1</sup>

The resulting mixture of grain and husk is then hand-winnowed by throwing it from a height to allow the wind to carry the husks away. The rice milled by these primitive methods retains much of the germ and outer layers of the grain and has thus greater nutritional value than machine-milled and polished rice.

Virtually no hand-milled rice was exported from Burma from about 1890 onwards. Previous to that date hand-milled rice was bought by rice firms whenever demand for husked rice exceeded the supply from the mills. For example, on several occasions in the 1870's and 1880's Chinese firms bought considerable quantities of hand-milled rice from the cultivators in the interior when they could not meet their requirements from the European-owned mills.<sup>2</sup>

Machine-Milling. On page 146 is a diagram of the various processes taking place in the power-driven rice mills and the products after each stage. These processes

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1. Burma Rice (1944), p.19.

2. Annual Administration Report, 1878-79, p.38.

are similar for small and big mills, the difference lies in the number of machines for each process.

The first function is sifting and winnowing, as the impurities contained in the paddy that reaches the mills have to be removed before hulling can begin. It has been estimated that on average, boat paddy coming into Rangoon mills contain 3.7 per cent various types of extraneous matter. Of this, about 1.7 per cent comprise unfilled, immature and damaged grains and 2 per cent sand, small stones, straw, husks, etc.<sup>1</sup> In paying for the paddy it was the custom for the mills to deduct the weight of this 2 per cent for all consignments though the amount of impurities varied according to the quality of the grain obtained and the handling it had undergone in transit. However, a consignment containing much more than the average amount of impurities would be paid for at a lower price.<sup>2</sup>

To remove extraneous matter, the paddy is passed over a series of screens, subjected to a strong current of air and carried over a metal separator.

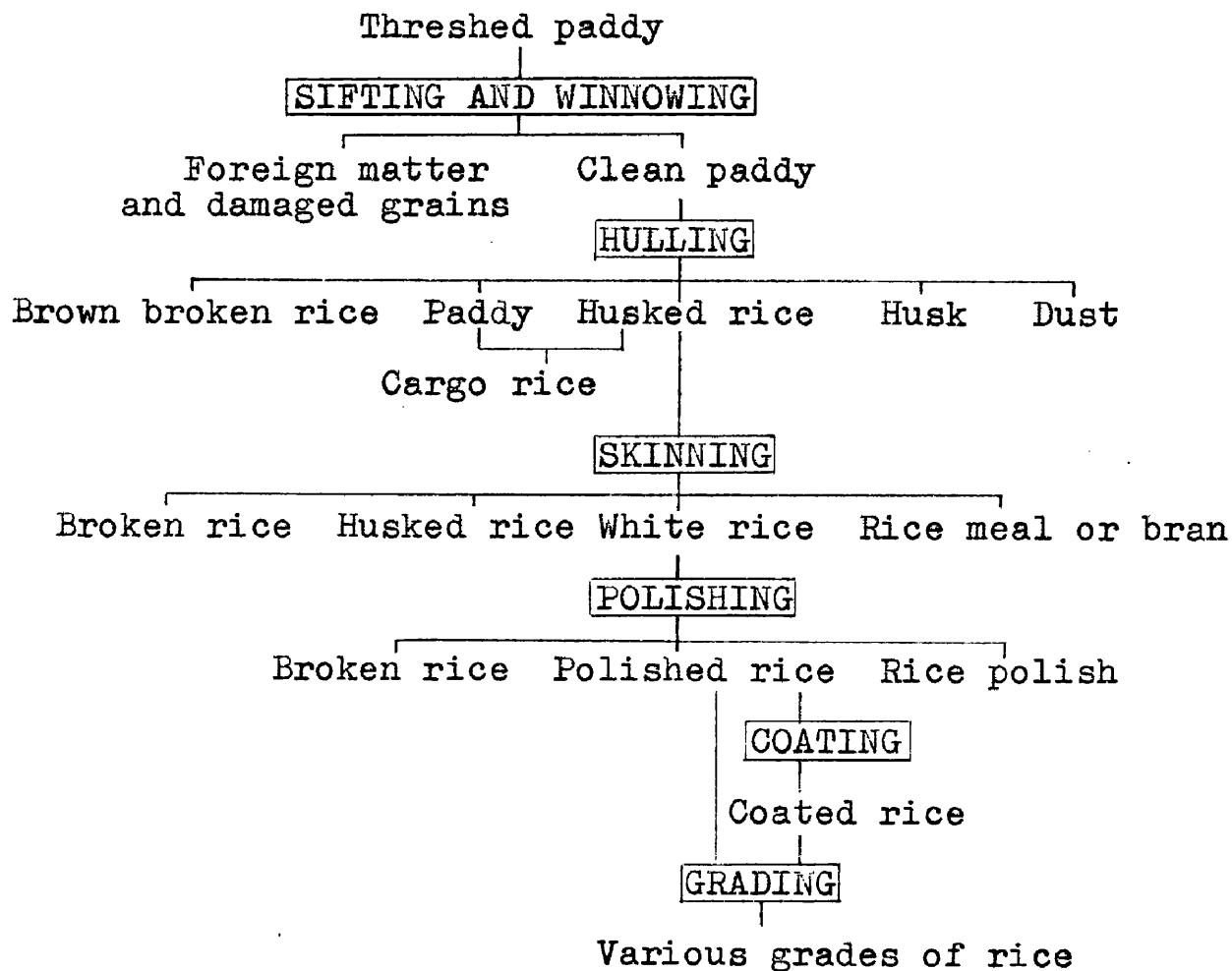
The second phase is hulling or husking. Cleaned paddy is fed through hoppers which regulate its flow into hulling machines. The most common type of these consists

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1. Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.63.

2. Grant, op. cit., p.32.

# Rice Milling Processes and the Products after Each Process.<sup>1</sup>



of two discs of stone or cast iron, coated on the opposed surfaces with emery and cement. A regulated flow of paddy passes between the discs -- one remaining stationary while the other revolves. The pressure on the grain causes the hull to split and the kernel to emerge.

The setting of the discs requires considerable skill as the grain in a milling lot usually differs in size and

1. "The Production and Uses of Rice," Reports on Rice ("Imperial Institute: Special Committee on Food Grains"; London: John Murray, 1920), p.143.

shape. If the set is too narrow, much breakage of the kernels results while a too wide set leads to many grains retaining their hulls. But however skilful the miller is in setting the discs, some paddy below the average in size may emerge unhulled, while others above the average are broken. The materials that come from the hullers are (1) loonzein, or hulled rice, (2) paddy, or unhulled grains, (3) hulls, and (4) broken grains, some bran and dust.

The hulls, dust and other lighter materials are removed by winnowing machines or aspirators and used for fuel, dumped into a neighbouring stream or burned. Broken grains and bran are separated and sold locally for cattle food. The loonzein and paddy are conveyed to a shaker where the paddy is separated and fed to shelling discs with a closer set and after hulling is returned to the main stream of loonzein. This rice is known in commercial circles in Burma as brown rice, as the germ and outer layers are usually light brownish in colour and the broken grains are known as broken brown rice.<sup>1</sup>

The hulled rice is next skinned or pearled to remove the waxy outer bran layers of the grain. The most common type of pearling cone consists of an emery and cement covered inverted truncated cone, made of cast iron, which revolves

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1. "Utilisation of Burmese Rice and Its By-Products," Reports on Rice ("Imperial Institute: Special Committee on Food Grains"; London: John Murray, 1920), p.140.



at high speed within a steel wire mesh encased in an iron casing. The space between the cone and the wire mesh is adjusted so that the bran can be rubbed off with as little breakage of the kernels as possible. This scouring is usually done several times, the space being narrowed each time, to lessen the incidence of breakage.

The resulting products are white rice with a varying proportion of broken white rice and rice bran or meal, consisting of the embryo, the outer layers of the kernel and parts of the endosperm, which has escaped through the steel wire mesh in pearling and which is used mainly as a very nourishing food for cattle, pigs and poultry.

The next process is polishing, which is similar in principle to skinning but is less drastic. The rice is passed through several revolving rollers or drums, covered with sheepskin or buffalo hide and encased in fine wire mesh. The remainder of the innermost (aleurone) layer and any floury particles adhering to the endosperm are removed leaving the grain smooth. The by-product, rice polish, is commonly mixed with rice bran and the mixture sold as animal fodder.

Most rice is not processed beyond the polishing stage in Burma but a small amount is coated to improve its appearance by slight oiling and glazing with powdered talc, glucose, glycerine and other materials. When a very fine

appearance is desired a small quantity of dry colouring matter, usually a blue pigment, is added after milling and before polishing to impart an appearance of increased whiteness to the rice. When rice is transported a considerable distance a certain amount of deterioration in appearance usually occurs and final processing is commonly postponed until just prior to sale in the ultimate consuming centres. Rice is coated also to improve its keeping quality when in storage, as coating offers some protection against attacks by insects.

Before rice is ready for sale in bags and packages it has to be graded. One important determinant of any grade of rice is the percentage of broken rice and the minimum size allowed in the grade. In the grading process, broken rice is separated from whole rice as well as into different sizes by passing the mixture of rice and broken rice taken from the polishers through a series of sieves or perforated cylinders. The broken rice of the required sizes is then added to the whole rice according to the recognised proportions demanded by each grade.

Parboiled Rice. From about the turn of the century considerable quantities of parboiled rice were exported from Burma to South India, Ceylon, Malaya, parts of Africa, the West Indies and parts of South America. By the late 1930's about a million tons of parboiled rice was exported annually

from Burma.<sup>1</sup>

Parboiling is a process of steeping paddy in heated water for one to three days, and then subjecting it to low-pressure steam for 10 to 20 minutes. By this time the grain has become completely gelatinized. The paddy is then either sun-dried or placed in artificial dryers of which there are many types. The most common of these uses steam-heated floors to dry the paddy. After drying, the paddy is milled in the ordinary way.

Sun-dried grain is considered superior to artificially dried grain in Asia and almost all sun-dried parboiled rice exported from Burma is processed by up-country mills which have plenty of facilities for sun-drying. In the 1930's the large mills at the ports began to produce parboiled rice as well and they used artificial forms of drying which, though they were more dependable and could be used the whole year round, tended to give the grain a stronger sour smell and a more pronounced yellow colour.<sup>2</sup>

Parboiled rice has many advantages over ordinary white rice. The process of parboiling makes it easier to remove the husk and therefore less milling is required. Less milling together with the toughening of the grain mean less

1. Report on the Marketing of Rice in India and Burma (1941), p.93.
2. C.E. Douglas, Rice: Its Cultivation and Preparation (London: Sir Isaac Pitman & Sons, Ltd., n.d.), pp.100-101.

broken rice as a result. Parboiled rice retains many nutrients including not a few vitamins and minerals because the process of parboiling drives these into the endosperm so that less is lost during milling, washing and cooking. It stores better than ordinary rice having greater resistance to insect and fungus infestation and after cooking it keeps better as it takes much longer to turn sour. This last fact is of great importance to plantation coolies who cannot afford the time or trouble required to cook more than one meal per day. Moreover, a large saving of rice is made. "The additional recovery of rice is considerable; from normal-grade paddy 70 per cent as against 66 per cent by milling white rice; from low-grade paddy 70 per cent as against 50 per cent by ordinary milling."<sup>1</sup>

The one great disadvantage is that the process of parboiling gives the grain a yellowish colour and a distinctive flavour which makes it unacceptable in many markets in the main rice consuming centres of Asia and the West.

## PART II - MILL PRODUCTS

### 6. Rice Grades.

Paddy can be milled into an infinite number of grades or qualities of milled rice, but for trade purposes a few main grades only need be considered. With the development of the rice export industry these grades became established

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1. Grist, op. cit., pp.316-7.

and recognised in the markets abroad. The grades were determined by the variety of paddy from which the rice was milled, by the percentage and size of brokens allowed in the grade, and on its general appearance. A government publication, Development of Standards - Quality, gives this account:

Present day grades appear to owe their origin to private individuals or firms who, for purposes of their own business, have drawn up and adhered to certain specifications. Competition for available markets has encouraged others to copy these until, in the case of the more important types, a quality or grade has achieved more or less general recognition.<sup>1</sup>

Subsequently, however, modifications were introduced. The Europe qualities started by European millers for the European market might be taken as an example. For these qualities definite specifications regarding the percentage of brokens and the degree of red tinge admissable were laid down by the European millers in Burma. As the required degrees of milling and polish were not easy to define precisely, approved samples were used for the purposes of matching. The Europe qualities sent to Europe by European-owned rice milling and exporting firms were usually up to the prescribed standards because it was to the interest of the firms to maintain these standards.

Europe qualities, however, were also exported to China,

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1. Development of Standards - Quality ("Department of Agriculture, Burma: Markets Section Bulletin No. 7"; Rangoon, Supdt., G.P.S., Burma, 1940), p.5.

Malaya and other places. Not all were obtained from the big European-owned mills. There were complaints that while the broken grain content was usually up to the specifications laid down, the degrees of milling and polishing were generally not up to the standard.<sup>1</sup>

Table IV.14 shows the more important characteristics of the main rice grades exported from Burma. The milling of the Europe qualities was done mainly by European-owned and managed firms. No. 1 was the highest grade of rice milled and finished entirely in Burma. The even better qualities of Europe Super and Europe No. 0 were often remilled in Europe. In the Super quality brokens must not exceed 5 per cent and these must all be of large size. All these Europe grades were milled from specially selected paddy of uniform size, shape and hardness. Ngasein, Midon and Emata paddies were all used, but the first-named was the most important. Super Sugandhi and Special Sugandhi were mostly exported to Europe and were milled mainly from the long and slender Emata group of paddies. All grades meant for the European market were milled to remove every trace of red grain and to give the rice a fine polish.

For the Eastern markets, Big Mills Specials and Small Mills Specials were the main grades exported, but certain

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1. Development of Standards - Quality ("Department of Agriculture, Burma: Markets Section Bulletin No. 7"; Rangoon, Supdt., G.P.S., Burma, 1940), p.2.

Table IV.14 : Main Rice Grades Exported from Burma.

Main Variety of Paddy Used.	Trade Description of Rice.	Maximum Percentage of Broken.	Approximate Baskets of Rice (75 lbs) Per 100 Baskets of Paddy (46 lbs).	Main Markets.
Ngasein	Europe Super	5	23-24	Europe only
	Europe No. 0	10	25-26	Europe only
	Europe No. 1	15	27-29	Europe only
	Europe No. 2	20	30-32	Europe
	Europe No. 3	27	33-34	Europe
Small Ngasein and Letywezin	Small Mills Specials	42	40-41	All eastern markets
	Big Mills Specials	45	41-42	All eastern markets
Midon	Straits Quality	35	37-39	Malaya and Cuba
	Bazaar Quality	38	42-43	Local consumption
Emata	Super Sugandhi	5	27	Europe
	Special Sugandhi	15	30	Europe and India
	Ordinary Sugandhi	30	35	India

Sources: Adapted from J.W. Grant, op. cit., p.35; and Report on the  
Marketing of Rice in India and Burma (1941), pp.311-2.

grades like Straits Quality and Ordinary Sugandhi were required by special markets in Malaya and India.

Big Mills Specials was the lowest grade exported and was milled from the smaller and inferior types of Ngasein, Letywezin and other paddies which were not suitable for any other grade. It might contain up to 45 per cent<sup>1</sup> brokens of various sizes and might include a fair proportion of red grains. Milling of this grade was done mainly by the big European-owned mills at the ports.

Small Mills Specials, as its name implies, was milled by the small mills which were scattered all over the country. This was the grade mainly used in futures and speculative trading. It was milled from poor to medium qualities of paddy. Up to 42 per cent brokens were allowed but none might be smaller than quarter-grain in size and only small amounts of red grain might be included.

Straits Quality was of better quality than Small Mills Specials. Red grain was commonly excluded. Letywezin, Ngasein and Midon paddies were used but the chalky and bold Midon paddies were preferred. It was, as its name suggests, exported mainly to Malaya but some were also exported to

1. The percentage of broken grains allowed in a grade often revealed wide variations. For example, an analysis of four commercial samples of Small Mills Specials, taken from random lots, made at the Rice Research Station at Hmawbi (near Rangoon), revealed the broken grain contents to be 36.7 %, 33.9 %, 42.9 % and 23.6 % respectively; one sample of Big Mills Specials showed a broken grain content of 25.8 %. It is clear, therefore, that the commercially acceptable proportions of broken grains in a grade was not fixed rigidly but was subject to wide variations within the maximum tolerances recognised by the trade. Report on the Marketing of Rice in India and Burma (1941), p. 312.



Cuba.

Ordinary Sugandhi was exported mainly to a special market in Bombay. It was milled almost exclusively from the long and slender Emata paddies.

Bazaar Quality was mostly for local consumption. It was slightly better than Small Mills Specials in quality and milling was almost all done from Midon paddies.

For the parboiled rice trade, almost all the paddy used was Emata and Letywezin, though some Ngasein might be mixed with the Letywezin paddies. From the Letywezin-Ngasein group of paddy varieties the grades produced were: Milchar No. 1 which was usually sun-dried by the small mills and light in colour; Milchar No. 2 usually steam-dried by the big mills and darker in colour; and Full Boiled, the lowest grade, which was frequently discoloured and generally contained a high proportion of broken. From the Emata paddy group two main grades of parboiled were produced, namely, Long Boiled which was produced from the long-grained Emata of the Henzada district and was highly esteemed; and Boiled Sugandhi made from ordinary Emata.<sup>1</sup>

Besides raw and parboiled rice grades there were also grades of broken rice, most of which were quite clearly defined. These grades were produced as a by-product of milling raw rice only and not parboiled rice, which, being

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1. Report on the Marketing of Rice in India and Burma (1941), p.312.

tougher, had comparatively less broken. The various qualities were classified under the heading of "A", "B", "C", and "No." and were graded 1, 2, 3 and so on, according to size. Thus, "A" quality, the highest, was produced in milling Europe Super, No. 0, 1 and 2 and were called "A1", "A2", "A3", etc.; "B" quality from the milling of Europe No. 3 and Straits Quality rices; "C" quality from the Big Mills Specials; and Nos. 1, 2 and 3 were obtained from milling Small Mills Specials and Bazaar Quality. Another type of broken rice was known as rough or brown broken rice and was obtained during the preliminary hulling of paddy and therefore still retained the bran layers. But this type of broken rice was much less important commercially than white broken rice.

## 7. The Uses of Rice and Its By-Products.

Rice as a Foodstuff. Of all cereals used as human food, rice is the most important as it is the staple food of more than half the population of the world. It forms the staple diet of most Asians and is also largely eaten in Europe, the Americas and parts of Africa. Its nutritive value depends on the degree of milling and polishing to which it is subjected and the form in which it is eaten.

Generally speaking, highly polished rice is less wholesome as a food than unskinned and unpolished rice, and the

degree of milling tends to vary inversely with the nutritive value of the grain. This is because milling removes the embryo or germ and outer layers where proteins, fats, vitamins and minerals are present in much greater quantities than in the starchy inner endosperm.<sup>1</sup> The removal of the protecting outer layers, the pericarp, also facilitates the loss of soluble substances from the aleurone layer during washing immediately before cooking the grain. A high degree of milling and polishing also results in losses of generally more than half the thiamin, ribloflavin and niacin present in the grain. In countries where highly polished rice constitutes an important part of the diet, the people frequently suffer from beri-beri, a disease caused by malnutrition.<sup>2</sup>

Yet, invariably, highly polished rice is preferred to the more wholesome unpolished rice as is clearly indicated by the willingness of consumers to pay much higher prices for the former. In a survey carried out by government officials it was found that even the very poorest Burmans considered unpolished rice unfit for consumption and that according to Burman consumers the more perfect the polish the better in taste, flavour and appearance was the cooked rice.<sup>3</sup>

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1. For the terms applied to various parts of the grain see footnote 1 on p. 143.
  2. Grist, *op. cit.*, p. 333.
  3. F.J. Warth and D.B. Darabsett, The Chemical Composition of Paddy Mill Products ("Department of Agriculture, Burma: Bulletin No. 70"; Rangoon: G.P.S., Burma, 1913), pp. 9-10.

Parboiled rice on the whole is more nutritious than ordinary raw rice. In parboiling, some of the vitamins are driven into the endosperm during steaming, and the aleurone layer and the scutellum covering the embryo are sealed so that they are not easily removed in milling. Milled parboiled rice contains 2 to 4 times as much thiamin, niacin and ribloflavin as milled raw rice.<sup>1</sup> Also, washing leads to less loss of the water-soluble vitamin content of parboiled rice than of raw rice.

Rice can be prepared in many ways. It has been found that rice cooked by steaming is superior in nutritious qualities to rice cooked by boiling. One method of cooking, practised extensively in India, is especially wasteful. The method involves boiling the rice in large amounts of water and draining away the excess cooking water, resulting in much loss of nutrients and calories.

Uses of Rice. In addition to its chief and direct use as food, a certain amount of rice is employed in brewing, distilling, vinegar manufacture and starch-making.

Considerable quantities were used for brewing, especially in Germany and Austria. For this purpose, either whole rice or broken rice could be used but broken rice was preferred as it was much cheaper than whole rice. The grain was often made into the form of grits, flakes or

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1. Grist, op. cit., p.336.

starch before use, but was sometimes merely crushed. As a rule, rice was not used alone in brewing but was mixed with malt. The result was often a light beer but if a large proportion of rice was used, the beer was said not to keep well.<sup>1</sup>

Vinegar and starch were also made from rice. Rice starch was chiefly used for laundry purposes and fine-ground rice was largely used for sizing and finishing textiles in many European countries. For the manufacture of starch, Burma rice was preferred to rice from other countries because it was softer and easier to treat.<sup>2</sup>

Rice was used very widely in the East to make fermented beverages. The favourite Japanese "sake", as well as the even more potent Chinese "samsu" is obtained by distillation from broken rice.<sup>3</sup>

Broken rice was sometimes ground into rice flour. A mixture of one-third rice flour and two-thirds wheat flour was said to make a remarkably white and fine-textured bread. This practice was especially popular in Italy. Rice flour was also used for cakes and waffles and was used widely as a face-powder in Asia. "As is to be expected, the use of rice in various forms as a medicine is general throughout Asia; likewise its employment in magic and religious

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1. "Utilisation of Burmese Rice and Its By-Products," Reports on Rice ("Imperial Institute: Special Committee on Food Grains"; London: John Murray, 1920), p.147.

2. Ibid., p.148.

3. Douglas, op. cit., p.132.

ceremonies is but natural when one remembers how closely this cereal has entered into the everyday life of Asians through countless centuries."<sup>1</sup>

By-Products. Rice bran or meal which comprises the outer layers and germ removed in the process of milling the husked rice, contains most of the proteins, fats, vitamins and minerals of the grain. Therefore it has a high food value and is readily saleable as feeding stuff for pigs, cattle and poultry. Often it is mixed with rice polish obtained during the polishing process. With regard to its nutritious contents it compares favourably with other feeding stuffs, such as barley meal, dried brewers' grains and maize meal.<sup>2</sup>

Large quantities of rice bran, roughly between 80 to 90 per cent of the total amount of bran produced in Burma, were exported.<sup>3</sup> Table IV.15 depicts clearly that U.K. and Malaya were the principal buyers. Other less important importers were Germany, Hongkong and India. In the early 1880's Malaya accounted for about 74 per cent of the total exports from Burma while Britain took about 21 per cent. Quite rapidly Britain increased her intake until by the late 1930's she took nearly 90 per cent of the total amount of rice bran exported from Burma.

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1. Grist, op. cit., p.324.

2. Ibid., p.322.

3. Report on the Marketing of Rice in India and Burma (1941), p.430.

Table IV.15 : Annual Average Exports of Rice Bran from Burma to the United Kingdom, Malaya and Other Countries, 1882-83 to 1939-40.

Period	United Kingdom	Malaya	Other Countries	Total
<u>In thousands of tons</u>				
1882-83 to 1884-85	6	23	1	30
1891-92 to 1900-01	45	38	16	99
1901-02 to 1910-11	95	36	36	167
1911-12 to 1920-21	99	41	24	164
1921-22 to 1930-31	145	34	53	232
1931-32 to 1939-40	230	16	19	265

Sources: Annual Reports on Trade and Navigation, Annual Statements on Trade and Navigation and Annual Reports on the Maritime Trade of Burma.

In the process of milling, a lot of husks or hulls are obtained since the weight of husks is about 21 per cent of the weight of the paddy.<sup>1</sup> Rice husks were used in the mills in Burma from 1880 onwards as fuel. But as less than half the quantity of husks was burned up for fuel purposes, many attempts were made to find some profitable use for the remainder. One was to convert them into briquettes in conjunction with petroleum by-products, but the experiment was unsuccessful. However, several uses have been found, such as employing them as packing material for bottles and other articles (quite popular in Germany and Holland), making insulating bricks and boards (since the treated husks could resist very high temperatures), using them as a fertilizer and as a supporting medium for growing vegetables

1. Grist, op. cit., p.320.

hydroponically. The husks are valueless as animal food, not only because of their low nutritive value but because their high silica content makes them harmful to the digestive and respiratory organs of animals. But because of this same high silica content, the ash<sup>1</sup> from the burning of husks can be used in the glass industry and for the purposes of cleaning, burnishing and polishing. However, some rice husks are ground and dressed into a fine meal called "ground shude" and are exported to Europe from Burma to be used for adulterating linseed cake, rice meal, maize meal and other feeding stuffs.<sup>2</sup>

Rice straw is mainly used in Burma as a fertilizer for the paddy fields. The long standing stubble is customarily burnt down at the end of the dry season and the ash and the remaining stubble ploughed under at the commencement of the rains. This practice is said to improve the land appreciably for rice as well as for other crops. Straw can also be used for making mats, sandals, cardboard and as a packing material.<sup>3</sup>

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1. This contains about 89 per cent of silica which gives the ash the hardness and bite necessary for polishing. H.B. Proctor, Rice: Its History, Culture, Manufacture, and Food Value (London, 1882), p.44.

2. Ibid., p.43.

3. Douglas, op. cit., pp.328-29; and Rangoon Gazette, July 24, 1911.



## CHAPTER V

## BURMAN AND INDIAN LABOUR

Before the arrival of the British, the prevailing form of agriculture in Burma was subsistence agriculture. Almost all the labour required could be supplied by the cultivator and his family<sup>1</sup> with the customary mutual assistance of neighbours, known by the Burmese as let-sa alok (to lend a hand), at certain peak periods, so that there was very little demand for hired labour. Nor was it easy to obtain hired labour for anyone could become an owner-cultivator quite easily as fertile cultivable and easily cleared land was abundant and ownership could be established by the mere occupation of the land.

As mentioned in an earlier chapter, the arrival of the British ended the prohibition on the export of rice and other articles imposed by the Burmese Government. At the same time the establishment of law and order by the British encouraged a flow of capital into the country brought by enterprising men who had the foresight to anticipate the swiftly dawning prosperity ahead. Very rapidly an economy based on subsistence agriculture gave way to one based on

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1. Hence the Burmese saying: "taung-thu-gyi, tha-thami", which means that a cultivator should have a large family of children. J.S. Furnivall, An Introduction to the Political Economy of Burma (Rangoon: Burma Book Club, Ltd., 2nd revised edition, 1938), p.83.

commercial agriculture, that is, the growing of crops to be sold. Cultivators took up more land and cultivation expanded at a tremendous pace, for paddy could be sold at increasingly higher prices to the recently set up but rapidly expanding rice milling firms which were exporting ever growing quantities of rice to markets in Europe and Asia.

This rapid conversion of jungles and swamps into paddy fields was undertaken almost entirely by the Burmans themselves. Indigenous enterprise was responsible for "the most spectacular development of her economic history"<sup>1</sup> -- the clearing and bringing under cultivation of the waste lands of the great delta plains of Pegu and Irrawaddy and the coastal regions of Arakan and Tenasserim. But this development could not have been so rapid without the emergence of a class of hired labourers, Burman and Indian, who were willing to work in the paddy-growing tracts during the busy periods of the agricultural season.

#### 1. Internal Migration.

The aim of the British Government was, first and foremost, to reclaim the waste of swamp and jungle and increase the acreage under cultivation as quickly as possible in order that cultivators could pay revenue out of the produce

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1. D.G.E. Hall, A History of South-East Asia (London: Macmillan & Co. Ltd., 1958), p.650.

of the land and contribute towards the cost of administration. As Lower Burma was sparsely populated,<sup>1</sup> the Government realised that development would be slow unless immigrants could be attracted. Upper Burma, then known as the Kingdom of Ava, was naturally looked upon as a potential source for the much needed manpower. With a view to facilitating the movement of Upper Burmans to Lower Burma, two articles in the commercial treaty signed in 1862 with King Mindon stipulated that there should be freedom of passage between the two territories and mutual protection be given to each other's subjects.<sup>2</sup> There were no restrictions on the taking up of land by immigrants and exemptions from land tax were given up to twelve years, according to the nature of the land. In addition, for the first five years after arrival, immigrants need not pay capitation or poll tax.<sup>3</sup>

1. The density of population in Lower Burma compared with that in other provinces of India and in the U.K. at about the same time is shown in the following table taken from the Report on the Census of British Burma, 1872 (Rangoon, 1875), p.7.

<u>Census Year</u>	<u>Country or Province</u>	<u>Population per square mile</u>
1872	Lower Burma	31
1872	Bombay	159
1872	Madras	221
1871	U.K.	261
1872	Bengal	269
1872	N-W. Provinces	378

2. B.R. Pearn, "The Commercial Treaty of 1862," Journal of the Burma Research Society, Vol. XXVII, Part I (Rangoon, 1937), p.33.
3. This exemption was withdrawn when Upper Burma was taken over by the British in 1886. Annual Report on the Administration of Burma, 1886-87, p.57.

It was soon found, however, that restrictions were placed by the Burmese Government on the movement of families so that workers could migrate to Lower Burma but could not bring their wives and children with them. Every effort was made by local headmen (thugyi) to prevent permanent emigration, mainly because every household that emigrated meant a diminished amount in the payment of thathameda, which was a tax assessed on the number of households in every village and which was contributed to by every household according to its means.<sup>1</sup>

Many immigrants, however, were successful in evading these restrictions. Some would come down the river with their families, some would get their friends to smuggle their families, while others would escape across the extensive land frontier. But most of the Upper Burmans came and worked as hired labourers, leaving their families behind and returning after staying for only a season.<sup>2</sup>

Annual statistics of migration between Upper and Lower Burma are not obtainable as they were not collected by the government or any other agency. But according to the Report on the Census of Burma, 1881, the number of persons born in Upper Burma and enumerated in Lower Burma was 316,018, or 8.5 per cent of the total population and over

1. Annual Report on the Administration of Burma, 1870-71, p.32; and Burma Census Report, 1891, Part I, p.89.
2. Administration Report, 1871-72, p.39.

58 per cent of the total foreign population of Lower Burma. The sex ratio was 610 females to every 1,000 males, which shows a greater tendency to settle in Lower Burma than the immigrant Indians whose ratio was 241.<sup>1</sup>

In 1871, the government signed an agreement with the two companies which had large inland fleets of steamers -- the Irrawaddy Flotilla Company and the Burmese Steam Navigation Company -- by which up to twenty-five free passages might be given to immigrants who boarded any of their steamers at Bhamo for Rangoon. The object was to encourage the immigration of Shan cultivators who were well-known for their thrift and industry. An official was assigned the duty of receiving all such Shans on their arrival in Rangoon, land was marked out for them and arrangements made to give the necessary monetary advances to them through their headmen. The Chief Commissioner even contemplated the construction of a house for their temporary reception at Rangoon but found that the new arrivals generally proceeded at once to the villages where Shan immigrants had already settled, whilst those who were unable to leave immediately were put up at the house of the Burman Town Surveyor, who was on good terms with the Shans.<sup>2</sup>

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1. These ratios are worked out from figures for the numbers, male and female, born in India and Upper Burma and enumerated in Lower Burma. Burma Census Report, 1881, p.72.
  2. Administration Report, 1877-78, p.13; and Administration Report, 1871-72, p.29.

Despite all these efforts made by the authorities, the immigration of Upper Burmans and Shans did not come up to expectations. Not only was the number of colonists too few to satisfy the government's desire for an even more rapid expansion of the cultivated area but the demand by cultivators for hired labour was far from satisfied. There was competition among cultivators to get labourers. Pioneer cultivators required assistance in clearing the jungle and draining the swamp and the settled farmers found that with the development of commercial agriculture they earned more by cultivating a larger area with the help of hired labour than by restricting themselves to farms small enough for them to manage on their own.

But by the 1890's even fewer Upper Burmans came down to work or settle in Lower Burma, for since the British took over Upper Burma in 1886 conditions there were improved by the construction, improvement and extension of canals, roads, railways and other public works and the establishment of a more stable government. The introduction in Upper Burma of new crops, particularly the groundnut (about 1906), in many areas made cultivation more secure and profitable and in addition provided local outlets for labour.<sup>1</sup> Upper Burmans therefore found enough economic opportunities at home.

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1. Burma Census Report, 1911, Part I, pp.72-73.

At the same time in Lower Burma the expansion of cultivation and the growth of population meant that there were less easily cultivable wastelands still available in the rich delta districts. More capital was required to clear the land than formerly, but in 1907 there was a general contraction of credit due partly to the collapse of the money market in the United States and partly to the government's determination to enforce more stringently the laws regarding the alienation of newly occupied land to non-agriculturists.<sup>1</sup> This shrinkage of capital at the very time when more was required to colonise the remaining but less suitable types of land prevented many Upper Burmans from settling in Lower Burma. Moreover, the five-year exemption from capitation tax was withdrawn in 1886.<sup>2</sup>

As noted earlier, reliable annual statistics for migration between Upper and Lower Burma are not available. However, an idea of the flow of population from central and northern Burma to the delta and coastal areas can be obtained from a study of the various census returns by place of birth.

The figures in Table V.1 do not show the actual volume of inflow or outflow but they do indicate the increasing movement of population from Upper to Lower Burma till the

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1. Burma Census Report, 1911, Part I, p.73.

2. Administration Report, 1886-87, p.57.

Table V.1 : Number of Persons Born in Upper  
Burma and Enumerated in Lower  
Burma in the Successive Census  
Years.

Census Year	Number of Persons
1881	316,000
1891	350,000
1901	394,000
1911	317,000
1921	244,000
1931	159,000

Source: Burma Census Reports.

turn of the century. From 1901 onwards, the number of persons in Upper and enumerated in Lower Burma declined continuously and quite rapidly from 394,000 in 1901 to 159,000 in 1931. The volume of population movement from Upper Burma southwards therefore contracted very quickly after the turn of the century. The main reasons for this contraction have been discussed above.

As for Shan immigration, it was relatively unimportant. In 1881, 16,490 persons (10,257 males and 6,233 females) from the Shan States were enumerated in Lower Burma.<sup>1</sup> The number of persons born in the Shan States and enumerated in Lower Burma in 1891 was 22,000; in 1901, 27,000; 1911, 17,000; 1921, 13,000; and 1931, 9,000.<sup>2</sup> The pattern of

1. Burma Census Report, 1881, p.lxxvi.

2. Burma Census Reports.



increase and decrease was somewhat similar to that of the population movement from Upper Burma. The decline in number after 1901 was due mainly to the decreasing opportunities for profitable cultivation in the delta and coastal districts of Lower Burma.

## 2. Government-Assisted Indian Immigration.

If other parts of Burma could not furnish enough immigrants, across the Bay of Bengal lay a country which could. India was populated by millions of people who were unemployed or under-employed. The British Government turned its attention to this vast reservoir of manpower and decided to intervene actively to promote the migration of people, preferably cultivators, from India to Burma. It was thought to be a mutual advantage to relieve the congestion of the more densely populated and poverty-stricken districts of India, especially in times of famine, and to introduce new crops, new methods of cultivation and the much needed population into Burma.<sup>1</sup>

The first immigration scheme, namely the Bengal Immigration Scheme, lasted from 1874 to 1876, during which a total of 7,392 immigrants landed in Rangoon. On arrival,

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1. Report of the Commission of Inquiry Appointed to Examine the Question of Indian Immigration into Burma by James Baxter, with the help of an Indian assessor and a Burman assessor. (Rangoon: G.P.S., Burma, 1941), p.44; and Burma Census Report, 1911, Part I, p.75.

the vast majority was employed by the Public Works Department and some worked in the towns as rice mill coolies, domestic servants and casual labourers. Only a mere 28 attempted to settle in Burma by acquiring land for cultivation. The scheme therefore failed to fulfil the local government's primary object of setting up Indian agricultural colonies in Lower Burma.<sup>1</sup>

The failure of the Bengal Scheme led to the decision to switch the field of recruitment to Madras, from whence most of the unassisted immigrants came. In January 1876 a Labour Law, the first of its kind in Burma, was passed to regulate the methods of recruitment, transport and employment, and to safeguard the welfare, of the immigrants.<sup>2</sup>

Emigration under the Madras Scheme began in December 1877 and continued till March the next year when it was abandoned due to its lack of success. Only 758 immigrants were recruited under the scheme.<sup>3</sup> Not only was the number small but not one of the immigrants attempted to settle permanently on the land.<sup>4</sup> The main reason most probably was that emigration was considered by the Indians as a temporary, emergency measure to help keep body and soul

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1. Emigration Proceedings of the Government of India, Feb. 1874, Vol. 693, p.36; Annual Administration Report, 1874-75, p.144, 1875-76, p.120, and 1876-77, p.163.
  2. Emigration Proceedings, March 1877, Vol. 932, p.27; and Administration Report, 1876-77, p.164.
  3. Administration Report, 1877-78, p.77; and Emigration Proceedings, July 1878, Vol. 1171, p.77.
  4. Emigration Proceedings, July 1878, Vol. 1171, p.79.

together, and as soon as conditions improved in India and enough money had been saved immigrants would return home. Besides, even if they had wished to take up farming they lacked the necessary capital to become owner-cultivators. What they usually did was to rent a piece of land to work for a few years before returning to India. On the whole, however, the less risky wage-earning occupations were preferred and most immigrants looked for work in the rice and saw mills, dockyards, on public works, as domestic servants, etc.

The government-imported coolies, however, found great difficulty in getting jobs because of the special provisions<sup>1</sup> in the Labour Act meant to safeguard the welfare of the coolies. For example, many managers of rice mills, one of the most important groups of employers of Indian coolie labour, preferred to make arrangements with private contractors to import coolies who would be much easier to manage.<sup>2</sup> The government, therefore, found it difficult to get work for the coolies. The project of importing Indian coolies under a special Labour Act was therefore abandoned after only four months.

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1. The men, under the contracts which the government insisted upon employers signing, were only to work a limited number of hours, to be supplied with provisions at certain fixed prices, to be given free medical aid, and other amenities. Rangoon Gazette, August 21, 1888.
  2. J.S. Furnivall, Political Economy of Burma (Rangoon, 2nd rev. edn., 1938), p.85.

Subsequent attempts in 1882 and 1883 to attract cultivators from North Behar to settle in the uncultivated tracts of Pegu and Shwaygyin districts were equally unsuccessful.<sup>1</sup> Not much is known about this attempt and evidently the officials concerned were completely disheartened by the series of failures for from then on immigration was mostly a non-governmental affair.

### 3. Unassisted Indian Immigration.

Altogether the government brought over about 8,500 Indians but in the 1870's the average number of Indian immigrants who came over unassisted by government was about 15,000 per year.<sup>2</sup> Ever since the establishment of British rule, there was a steady and constant flow of Indian immigrants. The Administration Report of 1867-68 mentioned the appointment of a Port Health Officer at Rangoon to guard against "the importation of disease from abroad, by the agencies of the coolies who flock here from the Madras coast during the working season."<sup>3</sup>

Most of the immigrants came from the poverty-stricken parts of Madras and Bengal. The three main routes used were, (1) the land route from Chittagong into the Akyab district of Arakan and other parts of Burma; (2) the sea

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1. Administration Report, 1881-82, p.20.

2. The figure is the yearly average of the number of immigrants by sea for the years 1871 to 1879 taken from various Administration Reports.

3. Administration Report, 1867-68, p.xxviii.

route from Calcutta; and (3) the sea route from the Coromandel coast. The land route was usually covered on foot while for the sea routes steamers were used as well as small native craft which were often in the worst possible conditions.<sup>1</sup>

In 1880 the monopoly enjoyed by the only steamship company plying regularly between India and Burma -- the British Indian Steam Navigation Company -- to convey Indians to and from Burma was broken by the establishment of a rival, the Asiatic Steam Navigation Company, and the resulting competition led to a reduction of fares by about 50 per cent. In the cold weather of 1880-81 the then record number of 40,000 coolies, double that of the year before, came over by steamer and landed in Pegu.<sup>2</sup>

The authorities took note of the effectiveness of reduced fares in attracting immigrants and decided to promote immigration by bearing part of the cost of every immigrant's passage. In 1882, the government offered to contribute Rs. 1-8-0 for every deck-passenger from Calcutta and Rs. 2-8-0 for those from the Madras coast on the condition that the two steamship companies in their turn should make some reductions in fares. The number of immigrants rose from 39,500 in 1881-82 to 72,300 in 1882-83 and to

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1. Emigration Proceedings, Feb. 1882, Vol. 1862, p.176; and Rangoon Gazette, August, 21, 1888.
  2. Administration Report, 1880-81, p.52.

83,000 in 1883-84.<sup>1</sup> In view of this large and rapid increase in number the government decided that enough labourers could be obtained without a subsidy and in 1884 the subsidy was withdrawn. Although there was a temporary decline to about 50,000, by 1888 the number rose again to 87,000 and steadily increased to well over 400,000 annually for a few years before 1930 when the deepening depression and the race riots of that year caused a decline till by 1938 about 213,000 came.<sup>2</sup>

As can be seen from table V.2, the number of emigrants kept pace with the increase in the number of immigrants. A few Indians, however, settled permanently in Burma, as shown by the difference between the two sets of numbers, but because of overstrain and debility resulting from the long hours of work combined with underfeeding and the appalling living conditions, many who came did not survive to return.<sup>3</sup> On the other hand, there were numerous immigrants from Chittagong and Bengal who reached Akyab district on foot but at the end of the season, having earned some money, returned by steamer to their homes.<sup>4</sup> The net

1. Administration Report, 1880-81, p.53; Administration Report, 1883-84, p.86; and Emigration Proceedings, Feb. 1882, vol. 1862, p.177.
2. See Appendix V.B on pp. 361-63 for the annual figures, and for an account of the methods of collection and the reliability of the statistics.
3. See E.J.L. Andrew, Indian Labour in Rangoon (Calcutta: O.U.P., 1933).
4. Burma Census Report 1891, Part I, p.176.

Table V.2 : Annual Average Number of Immigrants and Emigrants by Sea to and from the Ports of Burma.<sup>1</sup>

Period	Immigrants	Emigrants	Net Migrants
1871-75	14,200	10,300	3,900
1876-80	16,700	12,100	4,600
1881-85	74,200	54,400	19,800
1886-90	112,000	89,200	22,800
1891-95	130,800	104,400	26,400
1896-00	147,500	102,300	45,200
1901-05	179,800	138,000	41,800
1906-10	316,800	297,800	19,000
1911-15	336,600	278,700	57,900
1916-20	273,500	238,100	35,400
1921-25	367,100	315,200	51,900
1926-30	405,800	361,500	44,500
1931-35	276,600	273,700	2,900
1936-38	234,400	235,800	-1,400

Sources: Yearly figures from 1900 to 1938 are taken from Baxter, Report (1941), Appendix 6 (a), p.121. Earlier figures are culled from various Administration Reports.

migration figures, therefore, as well as the figures for immigration and emigration, are useful for indicating broad trends only. Another factor contributing to the inaccuracy of the detailed statistics was the unsystematic and varied methods used in collecting the data for incoming and outgoing passengers at the various ports in Burma.<sup>2</sup> Furthermore, the figures include immigrants and emigrants of all races,

1. & 2. For an account of the methods of collection and the accuracy of the immigration and emigration statistics, see Appendix V.B on pp. 361-63.

but in view of the relatively insignificant volume of immigration from countries other than India, the figures may be taken to represent the movement of Indians. As Furnivall pointed out, "One has but to watch the arrival of a few boats to realise that Indians... constitute the great majority of passengers."<sup>1</sup>

Immigrant labourers who came unassisted by government were of two kinds -- free and contract. Free labourers entered the country at their own expense and were free to enter whatever employment they could get. As the vast majority of the labourers were extremely poor, there were not many free immigrants. The few that came were usually the relatives of men already in Burma who could send them the passage money, or labourers who had been in Burma before and had returned to India for a visit.<sup>2</sup>

Most of the labourers could not afford to pay their passage fares. They were usually recruited in India by a contractor of labour called a maistry who would pay the fares for them and lend them about Rs. 25 to as much as Rs. 100 for the liquidation of debts and for the maintenance of their families for a couple of months till the workers could send remittances. Prior to embarkation the maistry would make sure that the labourers executed a contract or

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1. Furnivall, Political Economy of Burma (1938), p.88.
  2. Report of the Royal Commission on Labour in India (London: H.M.S.O., 1931), p.427.



agreement. As almost all the labourers were illiterate, thumb impressions were obtained on either printed forms or blank sheets of paper, in which the labourer acknowledged his debt and promised to serve the maistry for a specified period. Usually the actual amount of the debt and the terms of service were left blank to be filled in later by the maistry who thus had a strong hold over the labourers.<sup>1</sup> One of the reasons for enacting the Labour Law of 1876 was to have a state-controlled and regulated system of immigration so that exploitation of coolies by maistries could be minimised.

#### 4. Characteristics of Indian Immigration.

The government immigration schemes previously outlined show that the government did not realise the real nature of Indian immigrant labour and the role it could play in Burma. One important feature of this labour is its transient character. The vast majority of Indian immigrants came without their families, partly because of the caste system which frowned upon the emigration of women and partly because of the expense of the passage and the uncertainty of getting a job immediately on arrival to support the family.<sup>2</sup> The typical Indian immigrant therefore came alone,

1. J.J. Bennison, Report of an Enquiry into the Standard and Cost of Living of the Working Classes in Rangoon (Rangoon: G.P.S., Burma, 1928), p.75.
2. The sex ratio of the immigrants was about 28 males to 1 female; ranging from 12 to 1 among the Tamils and rising to as high as 185 to 1 among the Uriyas. E.J.L. Andrew, Indian Labour in Rangoon, (Calcutta: O.U.P., 1933), pp. 15-19.

either on his own or on borrowed money, and stayed for about 2 to 4 years, sending remittances home to help support his family and finally, having saved some money, would return to India either for a short visit of about six months before coming back to Burma for another spell of work, or for good.<sup>1</sup>

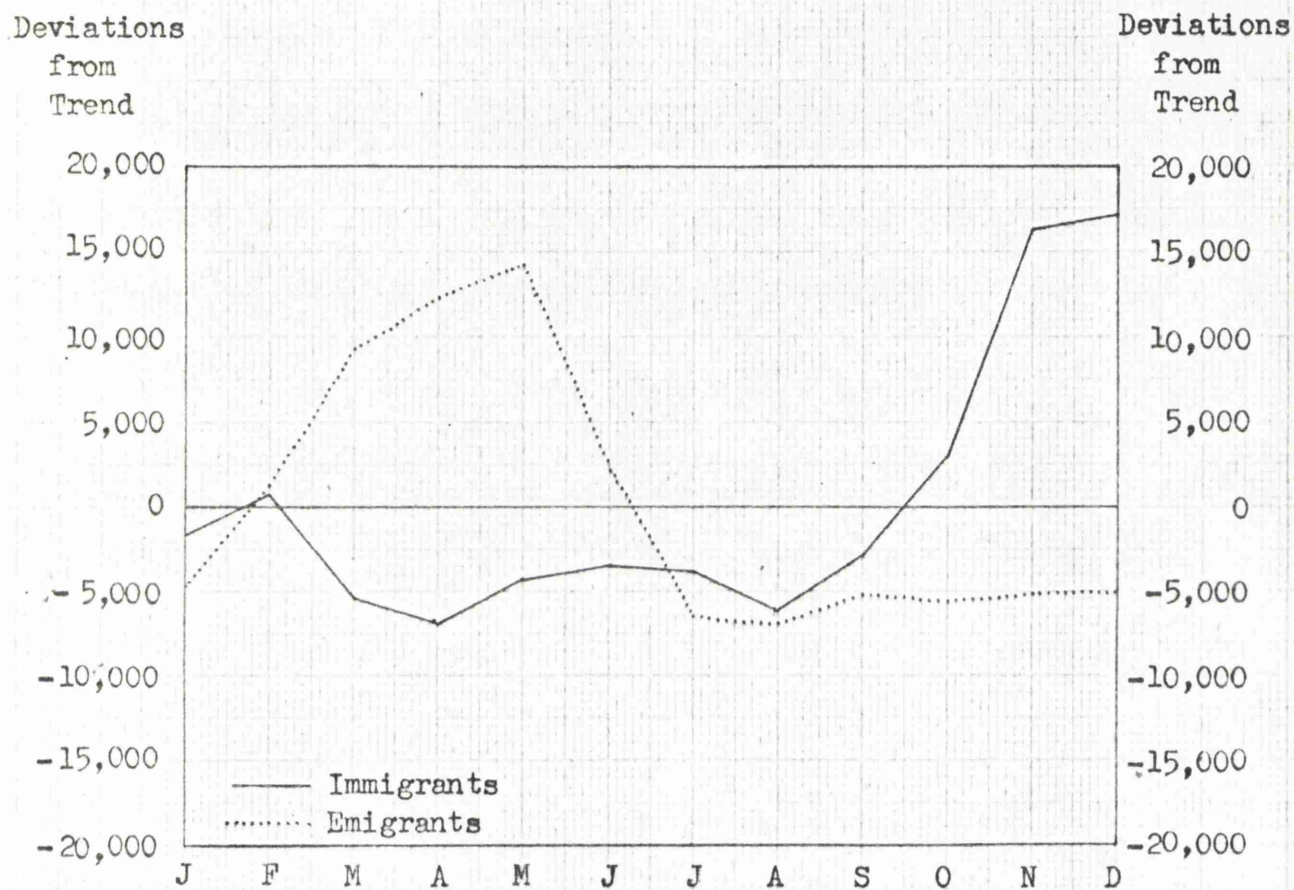
The government's aim to establish Indian agricultural colonies to hasten the process of bringing under the plough Burma's large cultivable waste lands could not be fulfilled because of this lack of desire among the Indian immigrants to make Burma their home. The authorities did not seem to realise then that the best place for Indian labour was not in expanding the area under cultivation, a task which was being undertaken by the indigenous Burman people on a large scale and which was absorbing all their energies, but in the rice mills, on public works, transport, communications, etc., where the indigenous labour was not forthcoming. But, as shown by the various schemes, the government believed that the immigrants would seek such jobs on arrival only as a temporary expedient and as soon as land was distributed among them on easy terms the land-hungry Indians would willingly drain and clear the swamp and jungle and settle down permanently in Burma. However,

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1. Baxter, Report... (1941), p.13.

Graph IV: Seasonal Variation in Immigrants and  
Emigrants, 1921-1925.

(Based on the Moving Average Method.)



source: Appendix V.A, pages 359-60.

as events turned out there was very little evidence of any inclination among the Indians to make Burma their home.

Another marked characteristic of Indian immigrant labour was its seasonal nature. As shown by Graph IV, the peak months for immigration were November and December. This sudden swelling of the flow of immigration was partly due to the monsoon conditions in the Bay of Bengal and partly to the rising demand for labour at this time of the year in Burma. Work could be obtained quite easily in helping to harvest the paddy and later in the rice mills. As these two fields of employment provided jobs for most of the Indian labourers, it is clear that the demand for labour in Burma was highly seasonal. Other important avenues of employment for labourers were the dockyards, railways and inland water communications, which were also influenced though to a much lesser extent by the seasonal nature of the rice industry as the most important cargo in terms of value and quantity was rice.

Graph IV shows also that emigration reached its peak between March and May, when the demand for labour in Burma was at its lowest. Ploughing would not begin till the end of May or the early part of June and before then there was little work to be done in the paddy fields even for the cultivators themselves. As for the rice mills, most

maintained only a skeleton staff at this time of the year while some of the smaller ones would shut down completely.

##### 5. Labour in Paddy Production.

From the 1860's to the turn of the century, the great demand for hired labour in the paddy fields of Lower Burma was met largely by immigrant labour from Upper Burma. There were not many Lower Burman labourers since anyone who could save or borrow enough to be able to clear a patch of jungle and live on for a year before the crop was harvested could become a cultivating owner. As landlords were eager to get tenants, rented land could be obtained on reasonable terms quite easily.

Another feature of the early days of development was the hiring of labour for the whole agricultural year of ten months. But the demand for labour in agriculture varies greatly at different periods and the practice of annual hiring soon gave way to one of hiring labourers for each agricultural operation. This specialisation of function was said to have been developed in Burma as far as was possible in agriculture. Ploughing, pulling the seedlings from the nursery, transplanting, reaping, carting to the threshing floor, threshing, repairing the kazins and tending the cattle were all considered separate functions and were paid for separately. Often they were performed by different

sets of labourers on one farm, and the same labourer might work as a ploughman in one farm and as a reaper in another. This marked division of labour was one of the main reasons for describing rice culture in Lower Burma as "industrialised agriculture."<sup>1</sup>

Wage rates for any of the above functions were almost invariably agreed upon in terms of so many baskets of paddy at harvest, but usually the labourer could not wait for the paddy wages. He himself needed little money as he was fed, supplied with working clothes and housed while he was employed but he generally lacked the means to support his family. It was a common practice for a labourer to find out at what rate the employer would buy his wages from him so that he could obtain small sums of a few rupees each as he felt the need for money. As the employer himself usually borrowed the money at a high interest rate, the sums in cash received by the labourer for the advanced sales together accounted for much less than the threshing-floor price of the paddy at harvest.<sup>2</sup> The labourer often

1. Banking Enquiry Report, 1929-30, Vol. I, p.14; Furnivall, Political Economy of Burma (1938), pp.94-96; and C.W. Dunn, "General Characteristics of Agricultural Economy in Burma," Agriculture in Burma (1927), p.16.
2. For example, the average wage for ploughing in the delta in the early 1920's was 50 baskets, which was worth about Rs. 80 to Rs. 100 on the threshing floor. But if the ploughman wanted money in the rains the employer would not pay more than Rs. 40 to Rs. 50 for the 50 baskets of paddy. As harvest drew nearer the labourer could obtain more money for his advance sales of paddy to the employer. T. Couper, Report of Inquiry into the Condition of Agricultural Tenants and Labourers (Rangoon: Supdt., G.P.S., Burma, 1924), pp.45-46.

exhausted his wages in this way and very little was left for payment at harvest.<sup>1</sup>

As the practice of engaging labourers separately for each agricultural operation spread, a labourer would find that he could obtain work for only about six months instead of ten months. In order to eke out an existence during the slack periods of the agricultural year the labourer would work on roads and other public projects, or take employment in the towns, particularly in the rice mills, or just return to his village and live on his relatives.<sup>2</sup>

At the same time paddy wages steadily declined due to the increasing competition among labourers to obtain work. This was made worse by the drastic fall in paddy prices in the late 1920's and early 1930's. Furnivall wrote in 1931 that it was "not improbable that during the last 60 years agricultural wages have fallen by about 20 per cent.... It was more difficult for the labourer to save money than it used to be."<sup>3</sup>

Thus the lot of the labourer gradually deteriorated. This was due to several reasons. The rate of expansion of the cultivated area gradually slowed down as reclamation of the remaining waste land became more difficult and

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1. T. Couper, Report of Inquiry into the Condition of Agricultural Tenants and Labourers (Rangoon: Supdt., G.P.S., Burma, 1924), pp.45-46.
  2. J.R. Andrus, Burmese Economic Life (Stanford, California: Stanford University Press, 1947), pp.73, 264.
  3. Furnivall, Political Economy of Burma (1938), p.93.

expensive. This tended to increase the supply of labour as young men could no longer get out and start a farm as easily as before. Competition was intensified by the growing number of Indian labourers who travelled round the countryside in search of work. At the same time the growing problem of indebtedness forced many dispossessed owner-cultivators to become tenants or labourers and evicted tenants to become agricultural labourers.<sup>1</sup>

By the 1920's and 1930's there were more Lower Burman than Upper Burman labourers. Landless labourers increased rapidly and many villages were known to be inhabited solely by labourers. Not all, however, were poverty-stricken; some owned cattle which they hired out because they preferred a labourer's wages and the supplementary income so obtained to taking the risks of farming. Some labourers

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1. The following figures show the number and percentage of the different classes of male workers in agriculture in 1881, 1921 and 1931. The increase in the number and percentage of agricultural labourers is particularly striking. On the other hand, the percentage of agriculturists who were owner-cultivators shrank from about three-quarters of all agriculturists in 1881 to slightly more than a third in 1931.

<u>Class of</u> <u>agriculturist</u>	<u>1881</u>	<u>1921</u>	<u>1931</u>	<u>1881</u>	<u>1921</u>	<u>1931</u>
	(In thousands)			(Per cent)		
Labourer	93	622	1,007	18.7	27.1	40.1
Tenant	41	512	578	8.2	22.3	23.0
Owner-cultivator	363	1,166	927	73.0	50.7	36.9
Total	497	2,300	2,512	100.0	100.0	100.0

Sources: Burma Census Reports, 1881, p.83; and 1931, Part I, p.130.



in fact were better off than rack-rented and heavily-indebted tenants. But as labourers grew older they tended to become tenants because work was harder to get and they were liable to suffer loss of wages through interruption of work for reasons of health. Also tenants had a higher social standing and could live with their families who could help them, whereas labourers were separated from their families when they were employed.<sup>1</sup>

Not only were there more Burman labourers but there was a noticeable increase in the number of Indian agricultural labourers. As the volume of Indian immigration grew, coolies found difficulty in getting jobs in the ports. Also the demand for labour for reaping was very great just before the beginning of the rice milling season so that Indian coolies usually arrived in **November or December**<sup>2</sup> to work as reapers in the countryside and returned to the ports in time for the mills.

In 1911 it was remarked that there was a tendency, which was then not very widespread but which was gradually growing, for cultivators in Lower Burma to engage bands of Indian coolies to transplant or reap the paddy crop. This was especially the case in the districts close to Rangoon such as Pegu, Insein, Myaungmya, Pyapon and Hanthawaddy where the holdings were large and where Indian labourers were within

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1. Banking Enquiry Report, 1929-30, Vol. I, p.14; and  
Dunn, op. cit., p.16.

2. See Graph IV.1 on p.182.

easy reach. These Indians travelled in organised gangs, varying in size from under 10 to 50 or 60 men, reaping each farmer's crop in turn and generally they were paid in money at so much per acre or kwet (1.32 acres).<sup>1</sup> A gang of fifteen men could reap a holding of about 15 acres in three days. By the late 1920's some Burman labourers were also organised into transplanting and reaping gangs, working on exactly the same terms as the Indian gangs. Most of the transplanting gangs consisted of women.<sup>2</sup>

This practice of engaging gangs of labourers for specific farming operations, however, was not universal in the paddy-growing tracts. It extended a short way beyond the districts mentioned and was found near Bassein and Moulmein, but generally the reaping problem was solved in a different way. The conditions of water-supply and flooding, the level of the ground and the different types of soil often led to the use of different varieties of paddy sown at different times for different parts of each holding. Various parts would then ripen successively and permit a small number of workers to complete the harvest in a long period. In some extreme cases in Myaungmya

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1. For example, in parts of Hanthawaddy district, Rs. 2 per acre plus subsistence rations were the usual remuneration rates. Sometimes payment was by way of a proportion, commonly one-tenth, of the crop reaped, or by daily wage as was common in Pegu where money wages of 6 annas per day were sometimes paid. Baxter, Report (1941), p.47.

2. Dunn, op. cit., p.22.

district reaping went on for three months in holdings of a size which would be disposed of in three or four days in the Hanthawaddy district with its large Indian reaping gangs.<sup>1</sup>

In comparing the efficiency of Indian and Burman labour, Baxter testified in his report that employers of labour were agreed that though Burman labourers tended to take longer rests so that a piece of work was finished within a longer period, the work they performed was of a higher standard. For example, Burman reapers were not so fast as Indian reapers but they lost much less grain.<sup>2</sup> As for ploughing and threshing, Burmans were preferred. On the whole, Indian coolies were less efficient since many came from urban areas with no previous farming experience.<sup>3</sup>

Compared with Burman labour, Indian labour in agriculture, of which the cultivation of paddy was by far the most important, was insignificant. This is amply demonstrated in the Census Report for 1931 which shows that of the total number of workers returned as agricultural labourers as the main occupation, indigenous races accounted for no less than 93.9 per cent of the whole as compared with 5.2 per cent contributed by Indians; while of the total returned as cultivating tenants, indigenous races

1. Burma Census Report, Part I, 1921, p.94; Banking Enquiry Report, 1929-30, Vol. I, p.19.
2. Baxter, Report (1941), p.48.
3. Burma Census Report, Part I, 1911, p.70; and Rangoon Gazette, August 26, 1912.

Table V.3 : Distribution of Agriculturists by Race and by Main Occupation on February 24, 1931.

Main Occupation	Burman	Indian	All Races
<u>Number of Persons.</u>			
Agricultural Labourer	1,398,120	77,870	1,488,330
Tenant Cultivator	702,718	41,099	749,716
Cultivating Owner	1,216,595	20,253	1,247,836
Total	3,317,433	139,222	3,485,882
<u>Per Cent.</u>			
Agricultural Labourer	93.9	5.2	100.0
Tenant Cultivator	93.7	5.5	100.0
Cultivating Owner	97.5	1.6	100.0
Total	95.2	4.0	100.0

Source: Burma Census Report, 1931, Part II, p.300.

accounted for 93.7 per cent compared with 5.5 per cent contributed by Indians. Indians played an even less significant role as cultivating owners.

The above table refers to the cultivation of all crops in the whole province but if the Lower Burma paddy tracts only were considered, the proportions for Indian participation in agriculture in all three categories would be much higher. Again, the number of Indian agricultural labourers was much greater during the harvest months of November and

December than on 24th February, the census date for 1931, when most of the harvesting operations were over and many of the Indians who had worked as reapers had returned to the towns to work as ordinary coolies, mainly in the rice mills. But there is no doubt whatever that in agriculture Burman labour far out-shadowed Indian labour.

#### 6. Labour in Rice Mills.

In the early days of the rice milling industry almost all the paddy was milled in the big European-owned mills at the ports. Indian labour was found to suit conditions of employment in the rice mills admirably. Coming from the poorest districts of India, the Indian coolies were willing to work long hours at arduous monotonous work for very little pay. They were docile, submissive and could be controlled quite easily. The bigger mills housed them in insanitary overcrowded barracks while other Indians lived in cheap lodging-houses with 25 to 30 fellow coolies in a room.<sup>1</sup> Under such conditions of work and with such low remuneration rates, no Burman labour was forthcoming.

Gradually mills sprang up in the interior, along the river banks and near the railway stations. After the turn of the century there was a rapid increase in the number of small, up-country mills owned mostly by Burmans. Burman

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1. B.R. Pearn, The Indian in Burma (Ledbury, England: Play House, 1946), p.16.

Table V.4 : Distribution of Skilled and Unskilled Labourers in Rice Mills on February 2, 1939, by Race.

	Burman	Indian	All Races
	<u>Number of Labourers</u>		
Skilled	3,284	6,164	9,844
Unskilled	11,191	39,538	50,778
Total	14,475	45,702	60,622
	<u>Per Cent</u>		
Skilled	33.4	62.6	100.0
Unskilled	22.0	77.9	100.0
Total	23.9	75.4	100.0

Source: Baxter, Report (1941), pp.66-67.

labour then became more important in the rice milling industry for the labour used in these mills was predominantly Burman; but up to 1941, the vast majority of the labourers, skilled and unskilled, in the rice milling industry as a whole, was Indian. The above table shows the number and percentage of skilled and unskilled Burman and Indian labourers working in the rice mills on February 2 (the peak period), 1939. It can be seen that Burmans accounted for less than a quarter of all labourers employed in rice mills. Of the skilled workers, Burmans accounted for a slightly higher proportion, being about a third of the total. Indians were predominant in both the skilled and unskilled categories, especially the latter.

Table V.5 : Percentage Distribution of Skilled and Unskilled Workers in Rice Mills in Selected Districts on February 2, 1939, by Race.

Race	Rangoon	Hanthawaddy	Bassein	Henzada	Prome	Toungoo
	<u>Per Cent.</u>					
<u>Skilled</u>						
Burman	14	20.2	62.7	82.1	39.6	53.5
Indian	86	79.8	37.3	17.9	60.4	46.5
<u>Unskilled</u>						
Burman	4	7.5	31.8	64.6	32.0	69.6
Indian	96	92.5	68.2	35.4	68.0	30.4

Source: Baxter, Report (1941), p.67.

As is strikingly illustrated by the table above, which shows the proportions of Burmans and Indians employed in rice mills in selected districts extending from south to north, from Rangoon to Toungoo on February 2, 1939, Indian labour, both skilled and unskilled, was predominant in the large mills in Rangoon and Hanthawaddy while Burman labour was more important in the more distant mills such as those in Henzada and Toungoo.

Table V.6 shows the extent to which Burman workers were employed in the rice mills of various sizes. It may be noted that the smaller mills employed a greater proportion of Burmans, especially in the case of skilled labourers, than the bigger mills. This confirms the conclusion arrived at previously that Burman participation increased with the distance from Rangoon as the largest mills were situated in Rangoon and the other seaports while up-country mills tended to be small.

Table V.6 : Distribution of Rice Mill Employees, Skilled and Unskilled, by Race and by Size of Mill on February 2, 1939.

Number of Employees	Skilled			Unskilled		
	Burman	Indian	Total	Burman	Indian	Total
<u>Number of Workers</u>						
0 - 49	1,395	1,267	2,662	2,589	3,889	6,478
50 - 99	711	1,281	1,992	3,591	4,862	8,453
100 - 199	204	699	903	2,098	4,056	6,154
200 - 299	208	584	792	743	3,133	3,876
300 - 399	175	298	473	367	2,820	3,187
400 - 499	53	451	504	160	3,424	3,584
Over 500	538	1,584	2,122	1,643	17,354	18,997
<u>Per Cent</u>						
0 - 49	52.4	47.6	100.0	40.0	60.0	100.0
50 - 99	35.7	64.3	100.0	42.5	57.5	100.0
100 - 199	22.6	77.4	100.0	34.1	65.9	100.0
200 - 299	26.3	73.7	100.0	19.2	80.8	100.0
300 - 399	37.0	63.0	100.0	11.5	88.5	100.0
400 - 499	10.5	89.5	100.0	4.5	95.5	100.0
Over 500	25.4	74.6	100.0	9.5	90.5	100.0

Source: Baxter, Report (1941), pp.67-68.

One reason for the small number of Burman labourers employed by the big rice mills at the seaports was "the comparative lack of mobility of Burmese labour."<sup>1</sup> Burman labourers were reluctant to leave their families behind but reasonable accomodation for their families in the large towns was difficult to find. The barracks owned by the mills were for men only while suitable lodgings were beyond the labourers' means. This problem was not met with if the labourer worked in an up-country mill for he could live with

1. Baxter, Report (1941), p.66.



his family in the nearby villages. Another reason was that the big mills at and near the seaports were usually owned by non-Burmans who were inclined "to recruit from the relatively fluid supply of Indian labour in such Indianized areas as Rangoon and Hanthawaddy, as well as in certain parts of the Delta such as Bassein, and would ... tend to favour a policy of further employment of Indians to simplify the problems of management which arise from a comparatively homogeneous labour force."<sup>1</sup>

The maistry (labour contractor) system of employment operating in the port mills also tended to exclude Burman labour. The employer in a big mill had very little direct contact with the coolies. He employed the maistry, who would either sub-let the contract to a sub-maistry or use his own labourers. These coolies worked in gangs and were organised on a basis of family or caste or of origin from the same village, so that vacancies in the gang were filled as they arose from among their own people. It was impossible to introduce Burmans into an Indian gang and the only way open for Burmans to secure employment was to form their own gangs. But here the Burmans were handicapped for they lacked head maistries with capital who could finance them for long periods. Indian head maistries could

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1. Baxter, Report (1941), pp.66-67.

do so and were preferred by employers, who were thus saved the problem of day to day advances.<sup>1</sup>

#### 7. Competition between Indian and Burman Labour.

From the early days of the rice industry till the First World War, Indian and Burman labour could be described as complementary rather than competitive. "The Indian immigrants fitted tidily into the country's economy, arriving in time to harvest the crop and then to supply the labour demand for the equally seasonal milling industry...."<sup>2</sup>

"While the indigenous population was confining itself largely to agricultural extension, the deficiency of labour in the commercial and industrial occupations was filled by immigrant races, mainly Indians."<sup>3</sup> Thus "each had his separate sphere in the economic life of the country."<sup>4</sup>

Gradually competition between the two races developed. Indians began to appear in increasing numbers on the agricultural scene as labourers and as tenant-cultivators. At the same time Burmans began to look for work in the big rice mills as well as in other spheres such as the Public Works Department, transport, communications, the dockyards, the lower ranks of the public services, etc., where Indians had practically monopolised the labour supply up to the 1920's.

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1. W.S. Desai, India and Burma (Bombay: Orient Longmans, 1954), p.34.
  2. V.M. Thompson, Labour Problems in Southeast Asia (New Haven: Yale University Press, 1947), p.17.
  3. Burma Census Report, Part I, 1931, p.34.
  4. Baxter, Report (1941), p.1.

In this competition Burmans found themselves faced with many handicaps. One was the much lower standard of living of immigrant Indians. For agricultural jobs Indian labourers were at times preferred even though they were less efficient because they could live on wages that were too low to be acceptable to Burmans. Indian tenants were usually preferred by the growing class of Indian landlords and also by some Burman landlords because they were more docile and were willing to pay higher rents.<sup>1</sup>

Burmans found that they had not only to face competition in their traditional stronghold, agriculture, but they could not compete effectively in any industry where Indian labour was already well entrenched. This was because of the fundamental differences in the mode of living of Burmans and immigrant Indians. The vast majority of Indians left their families in India and lived very cheaply crowded together with 25 to 30 of their fellow-workers, with food and lodging provided by the gang maistry at a low contractual rate. On the other hand, Burman labourers would refuse to live under such conditions and, even when free quarters were provided as part of the contract, would in most cases prefer to live with their families at some distance from their place of work, thus adding very considerably to their actual costs of living.<sup>2</sup>

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1. Furnivall, Political Economy of Burma (1938), p.80.

2. Baxter, Report (1941), p.54.

Another handicap faced by the Burmans was the maistry system of employment adopted by most of the big European firms. This system, which was mentioned earlier in connection with employment in rice mills, meant that Burmans had to organise themselves into gangs to get certain types of work, but Burmans lacked head maistries with sufficient capital at their command to finance a gang for long periods.<sup>1</sup>

Indians were also preferred by the big rice firms and other foreign enterprises because they were more docile and were cheaper to engage, and because many of the European managers had worked in India before coming to Burma and were therefore better acquainted with Indian ways and methods of working than with those of the Burman.

In the late 1920's and early 1930's, when the general economic depression led to even keener competition for employment, it was inevitable that a situation should develop where animosity between the two racial groups, which were so different in language, culture, religion and philosophy of life should become intense.

In May 1930, and again in 1938, violent race riots broke out. The immediate cause of the 1938 riot lay in religion while the 1930 riot<sup>2</sup> was due mainly to the feeling of frustration prevalent among the burmans. As a result of

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1. Baxter, Report (1941), p.54.

2. An interesting personal account is given in Maurice Collis, Trials in Burma (London: Faber & Faber, 1938).

the riots and racial disturbances, the number of Indian immigrants declined while the number of emigrants rose.<sup>1</sup> The Indian population in Burma further decreased with the separation of Burma from India on 1st April, 1937, the signing of the 1941 Indo-Burman Immigration Agreement, which placed restrictions on Indian immigration,<sup>2</sup> and the Japanese advance on Burma. By the time the Japanese took over Burma the Indian population in Burma had more than halved.<sup>3</sup>

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1. See Appendix V.B on pp. 561-63.
  2. The Agreement made it necessary for an Indian entering Burma to secure either a passport with a visa or an immigration permit issued by the Government of Burma. A literacy test, not necessarily in an indigenous language, might be imposed on those immigrants who wished to stay in Burma for an indefinite period, while other immigrants would stay for a specific period, which could be extended by the Burman Government. Pearn, The Indian in Burma (1946), p.29; and Usha Mahajani, The Role of Indian Minorities in Burma and Malaya (Bombay, Vora & Co., 1960), p.79.
  3. Pearn, The Indian in Burma (1946), p.32. Over 400,000, between 40 and 50 per cent of the Indians in Burma, left the country in the early months of 1942.

## CHAPTER VI

## LAND TENURE

Under the Burmese kings there were four main classes of land -- royal land, official land, waste land and private land.

Royal land was the private property of the king and paid rent to him. It included land confiscated for rebellion and land which lapsed to the crown because the owners left no heirs. Islands and alluvial formations on rivers, that is, land liable to periodic change due to the action of the river, were also royal land.

Official land was land held by persons who "actually or nominally rendered or were liable to render service to the king, and to whom the land had been assigned as remuneration for such actual or nominal service."<sup>1</sup> It included grants given by the king to officials, soldiers and members of the royal family.

Due to the sparse population there was a great deal of waste but cultivable land.

Private land was land held under allodial title. Customary rights to land were acquired by simply clearing and cultivating any land which was not claimed by a previous occupant. Such land obtained under the tenure known as

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1. Annual Report on the Administration of Burma, 1901-02,  
p. 14.

dama-u-gya, became the private property of the cultivator who could mortgage, sell or pass it on to his descendants. This land remained his even if he left it uncultivated for ten or twelve years and any newcomer who occupied the land without his permission could be ejected. Land was so abundant, however, that it was a common practice for the person who had cleared the land to abandon it after a couple of years or so and strike out for the more fertile virgin land. Any newcomer was usually allowed to occupy the abandoned land which would then become the private property of the new settler.<sup>1</sup>

#### 1. Land Tenure Systems under British Rule.

With the establishment of British rule, various land tenure systems were introduced. The general aims of the British Government were to develop the land as quickly as possible so that revenue could be obtained to help defray the costs of administration and, at the same time, to establish a body of peasant proprietors.<sup>2</sup> It was thought that the system most conducive to the stability and prosperity of the country was one of a great number of persons owning land, working it themselves and paying revenue

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1. J. Nisbet, Burma Under British Rule and Before (London: Archibald Constable & Co. Ltd., 1901), Vol. I, p.167; J.S. Furnivall, Political Economy of Burma (1938), pp.59, 101-102.

2. The peasant proprietorship form of land tenure was not new to Burma for under dama-u-gya tenure there was no holding from an overlord and the agriculturists were, in fact, peasant proprietors paying land revenue to the king.

direct to the State. To these ends, the following land tenure systems, which operated at about the same time, were formulated.

First, the squatter system of land tenure which resembled the tenure of dama-u-gya of Burmese times described above. Any person could clear and settle on any vacant land. But under British rule, a cultivator was liable to eviction by government but was generally allowed to remain in occupation so long as the annual land revenue was paid regularly. Under the Lower Burma Land and Revenue Act of 1876 a squatter who continuously occupied the same land and who paid land revenue for twelve successive years acquired a landholder's rights over it. He then ceased to be a squatter, could no longer be evicted and obtained a permanent, heritable and transferable right of use and occupancy in the land provided he continued to pay the land revenue regularly. This mode of acquisition was most popular in the more settled parts of the country, where permanent villages and hamlets had long been established and where cultivation increased by gradual extension of existing holdings, whereas the patta system (described below) was more commonly resorted to by newcomers in the more remote tracts. Under this system much land was brought under cultivation.<sup>1</sup>

1. Annual Reports on the Administration of Burma, 1892-93, p.13, and 1901-02, p.13.



Abuses crept in, however. When land became valuable speculators paid land revenue on large areas of land which they had no intention of cultivating. Substantial profits were realised by selling these areas after their value had greatly increased due to the cultivation and development of the neighbouring region and the construction of roads and villages. On the other hand, genuine squatters were often ousted from their land. This was because they were obliged to borrow to meet the expenses of reclamation and cultivation, often using their land as security. Should misfortune prevent the cultivators from remaining solvent, the land might be foreclosed. Much land passed into the hands of non-agriculturist moneylenders and traders in this way.<sup>1</sup>

The second system was the patta<sup>2</sup> system which was tried by the government, side by side with the squatter system, with the intention of regulating the disposal of land and of encouraging cultivators to settle on the same piece of land. A patta meant the grant of a small piece of land, about 15 to 50 acres, by the government to an approved cultivator with exemption from land revenue for a period of years varying according to the difficulty of

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1. Report of the Land and Agriculture Committee, Chairman: Maung Pu (Rangoon: Supdt., G.P.S., Burma, 1938), Part II, pp.39-40.
  2. An Indian term meaning a grant of land.

bringing that piece of land under profitable cultivation. During this period the grantholder was not allowed to mortgage his land. Applicants must prove that they were bona fide cultivators with sufficient means at their disposal to clear and cultivate the land without having to resort to moneylenders.<sup>1</sup>

In practice, the government found it impossible either to select suitable applicants or to prevent those who obtained land from mortgaging or selling it. Cultivators, due to misfortune or lack of foresight found they had to borrow or risk losing their land for failure to bring it under cultivation. At the same time moneylenders found it reasonably safe to lend money on the security of patta land; the extra risk that the land might be resumed for breach of the conditions under which the grants were made was covered by a higher interest rate.<sup>2</sup>

Another difficulty was that applicants for patta tended to concentrate on certain areas, particularly those bordering land already under cultivation. As a result, there were many overlapping applications and long delays occurred in surveying and demarcating the land. Many genuine cultivators in fact found it easier to squat on the land than to obtain a patta.<sup>3</sup>

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1. Administration Report, 1892-93, p.13; British Burma Gazetteer (1880), Vol. I, p.440.
  2. Report of the Land and Agriculture Committee (1938) Part II, p.41.
  3. J.S. Furnivall, Political Economy of Burma (1938), pp.65-66.

It was soon recognised that a patta-holder had a less valuable property for the purpose of borrowing money than a squatter because of the strict conditions attached to a patta and the liability to forfeiture for a breach of these conditions. In theory, a squatter was liable to eviction<sup>1</sup> until twelve years' continuous occupation had accrued but in practice evictions of agriculturists were so rare that the liability came to be ignored. Every Settlement Officer in the delta districts became familiar with the anomalous situation wherein "persons holding a valuable grant from government burned the document, and indignantly disclaimed having such a title."<sup>2</sup> Squatter-occupied land was readily accepted as security for loans but when patta land was used as security higher rates of interest were charged.<sup>3</sup> By 1900, the government realised that the patta system not only brought with it numerous administrative problems but it had failed to build up a body of peasant proprietors and it had not prevented land from being transferred to moneylenders,

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1. This power was usually reserved for use against non-agriculturists who had jumped land. T. Couper, "Area Farmed, Crops Grown, Tenure of Land, Assessment of Revenue in Burma", Agriculture in Burma (1927), p.9.
  2. Report on the Census of Burma, 1911, Part I, p.313.
  3. This difference in the rates of interest was eliminated in 1906 when the conditions of non-transferability applicable to grants were extended to land occupied without title. Census Report, 1911, Part I, p.313.

traders and landlords. By about 1900, the system was abandoned.<sup>1</sup>

The third system, the lease system, was introduced to simplify the assessment of land revenue, to encourage people to remain in occupation of land they had cleared and cultivated, and to extend the area of cultivation. Under this system revenue on land was settled for either five or ten years during which period cultivators could take up any amount of vacant adjoining land without having to pay additional revenue. It was thought that this system might solve the problem of the "capricious abandonment of land" allowed by the squatter system but frowned upon by the government and, at the same time, might find greater favour with the cultivator than the patta system which tied them down to definite areas of land. But by the 1870's cultivation proved so profitable that inducements to remain on cultivated land and to extend it were no longer necessary. This system was found to have cost the government much lost revenue and was abandoned and no new leases were executed after 1876.<sup>2</sup>

When the government found that cultivation did not expand as quickly as it desired, it decided to encourage capitalists to develop the land by offering them large

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1. Furnivall, Political Economy of Burma (1938), p.66; Census Report, 1911, Part I, p.312.
  2. Furnivall, Political Economy of Burma (1938), pp.60-61.

areas on easy terms under the grant system. It was hoped that the capitalists would import labourers to work their estates. Many applicants came forward but few were really interested in agriculture. It was discovered that many of the applicants who were successful were "mere speculators, government officials, law advocates, clerks, members of the police, etc."<sup>1</sup> Some of the grantees parcelled their estates into small holdings which were let to tenants, while others earned money from neighbouring cultivators by making them pay for firewood and pasturage. Many of these estates remained uncleared blotches in an otherwise cultivated countryside. Most were eventually resumed by the government either by voluntary surrender by the grantee or through non-compliance with the conditions under which they were held, such as failure to bring a certain proportion under cultivation within a certain period, or failure to pay the revenue demand when the land in due course became assessable.<sup>2</sup>

Though the defects of the various systems described above were recognised by the government nothing else was attempted until the 1920's when the colonisation<sup>3</sup> system

1. Quoted in Furnivall, Political Economy of Burma (1938), pp.62-63.
2. Annual Report on the Land Revenue Administration of British Burma, 1881-82, p.28.
3. The term "colonisation" was defined by the Land and Agriculture Committee as "the placing and keeping of peasant cultivators on waste land brought under profitable cultivation by means of systematic reclamation." Land and Agriculture Committee (1938), Part III, p.135.

was introduced. By this selected colonists were settled in government estates. Funds for reclamation and cultivation were provided by government through co-operative credit societies consisting of groups of colonists. The first estate settled in this way was in the Kadonbaw Forest Reserve in the Hanthawaddy District in 1914-15. Subsequently, other estates were colonised. This system did create groups of peasant proprietors but it was limited by the availability of large stretches of suitable waste land<sup>1</sup> and by the need for government funds and close official supervision.<sup>2</sup>

## 2. Loss of Land by Agriculturists.

Table VI.1 shows the steadily diminishing proportion of land held by agriculturists and the increasing proportion of land held by non-agriculturists, in particular, the non-resident non-agriculturists or absentee landlords, since statistics were first published in 1901-02. From column (5) it may be observed that the cultivated area extended steadily. The bulk of the work of converting jungles and swamps into paddy fields, as noted in an earlier Chapter, was undertaken by small cultivators but

1. For example, the Sittang Colonies, the most successful of the colonies, extended over an area of about 120,000 acres. Report of the Land and Agriculture Committee (1938), Part III, p.137.
2. C.W. Dunn, "Agricultural Economy in Burma", Agriculture in Burma (1927), p.18.

Table VI.1 : Distribution of Annual Average Acreage of Agricultural Land by Type of Owners in Burma from 1901 to 1939.

Period	Area owned by agriculturists	Area owned by non-agriculturists			Total agricultural land.
	(1)	Resident (2)	Non-Resident (3)	Total (4)	(5)
In thousands of acres					
1901-05	10,073	620	1,006	1,626	11,699
1905-10	12,150	816	1,391	2,208	14,358
1910-15	14,346	942	1,555	2,497	16,843
1915-20	14,654	857	1,917	2,776	17,430
1920-25	14,611	964	2,300	3,265	17,875
1925-30	14,786	1,082	2,626	3,708	18,494
1930-35	13,494	1,270	4,091	5,361	18,855
1935-39	12,875	1,452	5,012	6,464	19,399
Per Cent					
1901-05	86.1	5.3	8.6	13.9	100.0
1905-10	84.6	5.7	9.7	15.4	100.0
1910-15	85.2	5.6	9.2	14.8	100.0
1915-20	84.1	4.9	11.0	15.9	100.0
1920-25	81.7	5.4	12.9	18.3	100.0
1925-30	80.0	5.8	14.2	20.0	100.0
1930-35	71.6	6.7	21.7	28.4	100.0
1935-39	66.6	7.5	25.9	33.4	100.0

Note: The years are from 1st July to 30th June.

Source: Annual Reports on the Land Revenue Administration of Burma.

this was the class that was owning a shrinking percentage of the total cultivated area. By the late 1930's non-agriculturists owned more than a third while non-resident non-agriculturists owned more than a quarter of the total cultivated area in the whole of Burma.

Tables VI.2 and VI.3 reveal that these changes were even more pronounced in Lower Burma and in the thirteen principal rice-surplus districts of Lower Burma -- namely, Pegu, Tharrawaddy, Hanthawaddy, Insein, Prome, Bassein,

Table VI.2 : Distribution of Annual Average Acreage of Agricultural Land by Type of Owners in Lower Burma from 1901 to 1939.

Period	Area owned by agriculturists	Area owned by non-agriculturists			Total agricul- tural land.
		Resident	Non-Resident	Total	
<u>In thousands of acres</u>					
1901-03	5,864	463	832	1,295	7,159
1905-10	6,482	572	1,194	1,766	8,248
1910-15	7,187	675	1,298	1,974	9,160
1915-20	7,275	586	1,616	2,202	9,477
1920-25	7,335	661	1,958	2,619	9,954
1925-30	7,577	757	2,227	2,984	10,560
1930-35	6,424	853	3,539	4,392	10,816
1935-39	5,887	976	4,349	5,326	11,213
<u>Per Cent</u>					
1901-03	81.9	6.5	11.6	18.1	100.0
1905-10	78.6	6.9	14.5	21.4	100.0
1910-15	78.4	7.4	14.2	21.5	100.0
1915-20	76.8	6.2	17.0	23.2	100.0
1920-25	73.7	6.6	19.7	26.3	100.0
1925-30	71.8	7.2	21.1	28.2	100.0
1930-35	59.4	7.9	32.7	40.6	100.0
1935-39	52.5	8.7	38.8	47.5	100.0

Note: The years are from 1st July to 30th June.

Source: Annual Reports on the Land Revenue Administration of Burma.

Henzada, Myaungmya, Maubin, Pyapon, Thaton, Amherst and Toungoo. By the late 1930's agriculturists owned about 53 per cent and 49 per cent of the total agricultural land in Lower Burma and in the thirteen combined districts respectively.

Table VI.4 illustrates the trend of landownership in the thirteen principal rice-producing districts. In 1930 the Chettyars owned about 6 per cent of the total occupied area but by 1937 their share rose to 25 per cent. This



Table VI.3 : Distribution of Annual Average Acreage of Agricultural Land by Type of Owners in the Thirteen Principal Rice-Growing Districts of Lower Burma, 1901 to 1939.

Period	Area owned by agriculturists	Area owned by non-agriculturists			Total agricultural land.
		Resident	Non-Resident	Total	
In thousands of acres.					
1901-02	4,790	374	618	993	5,782
1905-10	5,509	494	1,018	1,512	7,021
1910-15	6,030	598	1,239	1,838	7,868
1915-20	6,068	528	1,475	2,003	8,072
1920-25	6,142	595	1,778	2,373	8,515
1925-30	6,325	680	2,027	2,708	9,032
1930-35	5,278	777	3,274	4,052	9,330
1938-39	4,729	885	4,108	4,993	9,722
Per Cent					
1901-02	82.8	6.5	10.7	17.2	100.0
1905-10	78.5	7.0	14.5	21.5	100.0
1910-15	76.6	7.6	15.8	23.4	100.0
1915-20	75.2	6.5	18.3	24.8	100.0
1920-25	72.1	7.0	20.9	27.9	100.0
1925-30	70.0	7.5	22.4	30.0	100.0
1930-35	56.6	8.3	35.1	43.4	100.0
1938-39	48.6	9.1	42.2	51.4	100.0

Notes: The thirteen principal rice-growing districts were Pegu, Tharrawaddy, Hanthawaddy, Insein, Prome, Bassein, Henzada, Myaungmya, Maubin, Pyapon, Thaton, Amherst and Toungoo. The years are from 1st July to 30th June.

Source: Annual Reports of the Land Revenue Administration of Burma.

was caused largely by the fall in the value of land following the collapse of world cereal prices during the depression of the early 1930's.<sup>1</sup> Much land was foreclosed since the mortgaged land was worth less than the outstanding indebtedness. By 1937 more than half of the agricultural land was owned by non-agriculturists. Chettyars

1. The selling price of paddy land in Lower Burma usually corresponded roughly to the value of 100 baskets of paddy per acre. Before the depression, paddy land was worth more than 100 rupees per acre but during most of the 1930's it was worth around 50 rupees only. J.R. Andrus, Burmese Economic Life (1948), p.67.

Table VI.4 : Distribution of Agricultural Land by Type of Owners in the Thirteen Principal Rice-Growing Districts of Lower Burma, 1930 to 1937.

YEAR	Total agri- cultural land.	Area owned by non- agricul- turists.	Area owned by Chettyars.	Percentage of non-agricul- turists to total agri- cultural land.	area owned by Chettyars to total agricul- tural land.
	<u>In thousands of acres.</u>			<u>Per Cent.</u>	
1930	9,249	2,943	570	32	6
1931	9,305	3,212	806	34	9
1932	9,246	3,770	1,367	41	15
1933	9,266	4,139	1,782	45	19
1934	9,335	4,460	2,100	48	22
1935	9,408	4,687	2,293	50	24
1936	9,499	4,873	2,393	51	25
1937	9,650	4,929	2,446	51	25

Source: Report of the Land and Agriculture Committee (1938), Part II, p.39. For the names of the 13 districts see note for Table VI.3 on page 212.

were not the only non-Burman landowners, however. Others were non-Chettyar Indians and Chinese. Thus land was not only lost to non-agriculturists but considerably more than half the land owned by non-agriculturists was owned by aliens.

Though practically all the land was cleared and put under the plough by small cultivators, the ownership of the cultivated land passed rapidly into the hands of other classes.<sup>1</sup> This tendency, which would mean the end of the peasant proprietorship form of tenure thought by British

1. Much more ground was lost by small cultivators than was indicated by the above tables, since not all agriculturists were small cultivators. Compare the above tables with Tables VI.5 and VI.6 on pp. 231 and 233, which show the areas let to tenants, and see page 234 below.

officials to be the best for a predominantly agricultural country like Burma, was noticed as early as 1880 in connection with the work of settling the land revenue assessment in the Bassein and Henzada Districts.<sup>1</sup> What made the problem even more serious was that the absentee landlord, of Lower Burma land especially, was frequently an alien, in most cases an Indian. The Government felt from time to time that something ought to be done to stop the process if the country was to be saved from the violent political troubles which usually occurred when large areas of fertile land of a country were owned by persons who permanently resided outside that country. Before reviewing the various attempts at land alienation legislation, we will deal with the main factors leading to the loss of land by agriculturists.

The most important cause by far for the loss of land was that cultivators incurred debts which were beyond their capacity to repay. Indebtedness, in turn, could be traced to a number of causes which will be dealt with in the next chapter.<sup>2</sup>

A less important cause of land alienation by agriculturists lay in the Buddhist inheritance customs. This operated less evidently in Lower Burma than in Upper Burma

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1. Report of the Land and Agriculture Committee (1938)  
Part II, p.37.

2. See below pp. 263-274.

where holdings tended to be smaller and where property was often divided among the children. Lower Burma farms were not only bigger but it was the common practice for the children on reaching maturity to go off to clear and settle on new farms.

According to Burmese Buddhist law, land should be divided amongst all the members of the family of a deceased person. This led to frequent divisions and sub-divisions. When the holding became too small to be shared out the several heirs might agree to take turns cultivating it or to take shares in the rent obtained by letting it, or one of the family might take over the whole holding, pay the others their shares and mortgage it to raise the money. Thus the deceased parent free of debt might be replaced by an indebted son. If the holding was already mortgaged, it would most probably be sold and the proceeds shared out among the members of the family.<sup>1</sup>

Not only was land frequently on sale, for this as well as other reasons, there were always people ready to buy land. Land, moneylending, and jewellery were the chief forms of investment for people with money due to the scarcity of other investment facilities. Traders who wanted to raise capital for their business found land a readily-accepted form of security and rice millers wished to own

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1. Banking Enquiry Report, 1929-30, Vol. I, pp.59-60.

land so that they could be certain of enough paddy to keep their mills going. Land also had the added attraction of raising the prestige and social standing of the owner, in addition to its being able to earn considerable returns either by having it rented out or by cultivating it with the help of hired labourers.<sup>1</sup>

### 3. Land Alienation Legislation.

The steady loss of land by agriculturists to non-agriculturists was noted with concern by Government officials as early as the 1880's. The growth of a landlord class which was largely alien was felt to be most unsatisfactory on both political and economic grounds. As stated in the Report of the Land and Agriculture Committee (1938), "The country should be owned by the permanent residents who have a direct interest in the maintenance of law and order and in the stability of national institutions."<sup>2</sup> It was considered uneconomic to have between the cultivator and the State too large a number of persons with whom the surplus of the land must be shared. It was even more undesirable that a substantial share of the profits of the land should be remitted year by year to another country. As a rule, the absentee landlord did very little to improve

1. Ibid., p.25; and Furnivall, Political Economy of Burma (1938), p.68.

2. Report of the Land and Agriculture Committee (1938), Part II, p.35.

his land or to encourage tenants in improved methods of cultivation. This was especially the case with the alien landowner who did not intend to keep the land for a long period and had "no interest in his land except to screw as much rent out of it as possible while it remains in his possession."<sup>1</sup>

Numerous attempts at legislation to restrict the alienation of land by agriculturists were made during a period of about half a century but though many influential people, mainly government officials, desired such legislation, strong and vehement opposition came from quarters which were too important to be lightly treated. One was the influential group of European merchants dealing in the rice milling and exporting trade and in the importation of piece-goods. These merchants, through the Burma Chamber of Commerce, through the Legislative Council to which a representative was elected,<sup>2</sup> and through personal contacts with officials,<sup>3</sup> made their attitude towards legislation to control land alienation known. Their argument was that such legislation would weaken the borrowing power of the

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1. Furnivall, Political Economy of Burma (1938), p.73.

2. A. Wright, editor, Twentieth Century Impressions of Burma (London, 1910), p.289.

3. Maurice Collis in Chapter 3, "Rangoon Society", Trials in Burma (London: Faber & Faber Ltd., 1938), pp.68-73, describes the three great Rangoon clubs -- the Pegu, the Boat and the Gymkhana -- where only Europeans might enter and where English officials, merchants and soldiers spent most of their leisure hours.

cultivator since he could no longer use his land as security for loans. Weaker credit would lead to a lower rate of extension of the cultivated area and might force the farmer to leave much of his holding uncultivated due to his inability to hire labour, buy cattle, implements, seed, etc. If less paddy was grown the government would lose much revenue in the form of the assessment on cultivated land and the export duty on rice. As the merchants were noted for their lack of concern for the welfare of the cultivator or the interests of the government, the real reason was that if such legislation was passed the rice firms would definitely suffer a set-back and the piece-goods trade would also be severely affected since the purchasing power of the cultivator would be greatly diminished.<sup>1</sup>

Opposition came also from officials who argued that legislation would place a very heavy burden on the administrative machinery. Other arguments were that such legislation would constitute an interference with property rights and the freedom of contract, and that no satisfactory and practicable definition of the term "agriculturist" could be devised for the purpose of legislation.<sup>2</sup> Some believed that since indebtedness was the main cause of the loss of land by

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1. Rangoon Gazette, July 6, 1908.

2. The following is a definition of "agriculturist" found in the Draft Bill of 1906. It is remarkable for its vagueness. "The expression 'agriculturist' includes, but does not necessarily mean, any person engaged in or dependent for his livelihood on pastoral pursuits and may include a person who is engaged or interested in other occupations besides agriculture." Report of the Land and Agriculture Committee (1938), Part II, p.47.

agriculturists the solution lay rather in the establishment of a sound, adequate and cheap credit system.<sup>1</sup>

Opposition from the landowning classes, Burman as well as foreign, was to be expected since legislation would lead to a depreciation of the value of land as it would no longer be a freely marketable commodity. Most were moneylenders as well and, in fact, many became landowners through their moneylending activities. Should a law prohibiting land alienation to non-agriculturists be passed, land could no longer be used as security for loans and moneylending would have to be conducted on a much smaller scale with even greater risks. Within this group could be included traders, millers, officials, lawyers, clerks, etc. -- people who had made some money. They did not wish to see the disappearance of opportunities for a form of investment which had proved so convenient, safe and lucrative.<sup>2</sup>

The opinion of owner-cultivators towards land alienation legislation was not known except as reported by Settlement Officers, other officials, landlords, traders and moneylenders.

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1. Ibid., pp.36, 49-50.

2. The Annual Report on the Administration of Burma, 1901-02, p.13, gave the average rent per acre of paddy land as Rs. 8 and the average purchase price as Rs. 24. Thus the average annual rental was one-third of the price of the land. But Rs. 24 is too low a figure. The Banking Enquiry Report, 1929-30, Vol. I, p.29, gave the selling value of delta land as varying from 6 to 10 times the net rent, but in other parts this ratio might reach 15 or 16.



On the whole it seemed they were against legislation because it would weaken their borrowing power since loans would be harder to get and would cost more because less valuable forms of security such as jewellery, crops and cattle, or no security at all, would be used. A few far-seeing cultivators, however, expressed their support of what the government was attempting to do.<sup>1</sup>

The people who tried to bring about legislation to prohibit and control alienation of land were officials of the Central Government of India, local officials, and Burman politicians.

The Central Government of India was anxious that the evils which resulted from the alienation of large areas of land in various provinces of India should be avoided in Burma. In the early 1880's the Government of India advised the Government of Burma to take measures to hinder the growth of a tenant class. Subsequently, warnings were sounded repeatedly. In 1912, in reply to the recommendation of Sir Harvey Adamson, the Lieutenant-Governor, to drop the Land Alienation Bill of 1906, it made this statement:

The Government of India are not indeed convinced that the evil of the transfer of land is not a serious one in Burma, nor that it is likely to diminish, and they cannot but recognise that much of the opposition to the Bill, to which the Lieutenant-Governor attributes considerable importance, is not based on the

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1. Report of the Land and Agriculture Committee (1938), Part II, p.48.
  2. Ibid., Part I, p.3.

interest of the peasant proprietor but of those from whom it is desired to protect him. It does not, moreover, appear to them to be altogether certain that the effect of the proposal for restriction of alienation on the credit of the landlord would be as serious as the Lieutenant-Governor anticipates, or that the work under the Land Alienation Act would be too great for Revenue Officers to carry out."<sup>1</sup>

Many local officials were anxious to bring about some form of legislation. Settlement Officers in particular, especially those in the delta districts, early foresaw the problems that would arise if land continued to be transferred at such a rapid rate to non-agriculturists. They were concerned and alarmed by the "wholesale expropriation" of cultivators who were then forced to become tenants, or worse still, hired labourers. One of the most active of the local officials was D.M. Smeaton, who was described by the Land and Agriculture Committee as an officer of great experience and foresight. He made the first attempt at legislation in the form of the draft Burma Agriculturist Bill in 1891, when he was Financial Commissioner. In that year he wrote:

A gradual process of absorption of land by the money-lending and trading classes is going on; they do not cultivate the land themselves, but let it out at rents which are yearly rising. Moneylenders find that the rents derived from lands acquired by them are remunerative. They are therefore becoming more and more ready to advance money to agriculturists on the security of their holdings.... It appears very likely that with the steady rise in the value of land and the consequent steady improvement of his

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1. Quoted in ibid., p.50.

credit, the Burman agriculturist will borrow more and more freely and will therefore lose his land more rapidly and more completely than now. If it is advisable to arrest this process, to protect the Burman agriculturist against his own imprudence, and to maintain the land in Burma for the Burmans, we must prevent the permanent transfer of land to any but agriculturists and in order to do so we must destroy, or at least seriously impair, the credit of the Burman cultivator with the non-agricultural trader and moneylender.<sup>1</sup>

With the growth of Burman nationalist feelings after World War I many political leaders emerged. Without exception all were loud in their condemnation of the existing agrarian conditions and agricultural reforms, among which was legislation against land alienation, occupied a prominent place in almost all policy statements. It was under the Ba Maw Government (1937-39) that the Land and Agriculture Committee, consisting of ranking political leaders and senior civil servants, both Burman and British, was set up in 1938. Four able reports were made dealing with (1) tenancy; (2) land alienation; (3) agricultural finance, colonisation, and land purchase; and (4) the regulation of moneylending. These reports eventually led to the passing, at long last, of the various Acts designed to improve the economic and social conditions of rural life.

Before proceeding with the various attempts at legislation it should be pointed out that the problem of land alienation was much more acute in Lower than in Upper

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1. Quoted in ibid., p.44.

Burma.<sup>1</sup> One reason was that a great deal of the land in Upper Burma except in the irrigated tracts was of no great commercial value and therefore could not be used as security for loans. Also, it was provided in the Upper Burma Land and Revenue Regulation of 1889 that occupiers of State land<sup>2</sup> had no heritable or transferable right of use and occupancy in the land and therefore could not mortgage the land.<sup>3</sup> Foreclosures therefore were on a much smaller scale. Another reason was Upper Burma cultivators took greater care against the loss of land as they had a greater degree of sentimental attachment to the land since it had often been handed down through many generations. Again, easily cleared waste land was very difficult to get. As most of the landlords were Burmans and agriculturists themselves and resided near their land there were less problems arising out of absentee landlordism and foreign ownership of land.

The question of enacting suitable legislation to prohibit or control the alienation of land was therefore prompted mainly by conditions in Lower Burma. But it was

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1. In Upper Burma, the area owned by agriculturists amounted to 93 per cent of the total agricultural land in the 1910's, 91 per cent in the 1920's and 87 per cent in the 1930's. (Percentages calculated from figures given in the Annual Reports of the Land Revenue Administration of Burma.)
  2. State land comprised all land which was previously held as royal and official land during Burmese times and all waste land cleared and cultivated from July 1889 onwards.
  3. Report of the Land and Agriculture Committee (1938), Part II, p.36.

stated by all those anxious for legislation that Upper Burma should not be left out in any legislative measure enacted to regulate land alienation because there were signs that conditions in Upper Burma were tending towards those in Lower Burma.

As mentioned earlier, the first attempt at legislation was a draft Burma Agricultural Relief Bill of 1891, framed by Smeaton. It tried to regulate the transfer of land by a Burman agriculturist by making it compulsory to have a written instrument which must be approved and endorsed by a Revenue Officer. The Bill also provided for the prohibition of the attachment or sale of a Burman agriculturist's land in execution of a decree of a civil court.<sup>1</sup>

But the Government of Burma remarked in 1893 in another connection that transfers of land at that time were not significant enough to warrant immediate legislation for protection against moneylenders. The Government of India disagreed but the matter was not proceeded with.<sup>2</sup>

Subsequently other proposals were put forward by Smeaton and other Government officials but nothing came of them until 1906 when a Land Alienation Bill was submitted to the Government of India. This Bill stipulated

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1. Ibid., p.43.

2. Ibid., p.44.

that the land could not be permanently alienated and that a creditor could at best hope to take it for fifteen years after which it must be returned to the original owner without further payment. Both the Lieutenant-Governor, Sir Herbert Thirkell White, and the Central Government of India agreed that it was far better to take moderate preventive actions while there was yet time than to wait till the mischief was done and "heroic remedies" were required.

But when the Bill was circulated among officials and members of the public in Burma it encountered such strong opposition that it could not be enacted. The great majority of European officials, many Burman non-officials and some Burman officials objected to the Bill while a minority of European and Burman officials and some Burman cultivators expressed approval of the Bill. Among the large volume of objections, the main ones were that the Bill would diminish the credit of the cultivator who would then find it difficult to borrow, thus leading to a contraction of the area cultivated, and that the Bill was an interference with property rights.<sup>1</sup>

In 1911 Sir Harvey Adamson, who had succeeded Sir Herbert White, recommended that the bill should be withdrawn for the following reasons: that no satisfactory

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1. Ibid., pp.46-49.

definition of an agriculturist was practicable; that Revenue Officers would be given too much say and responsibility; that the Chettyar, the mainstay of agricultural finance, would be ousted and the credit system might be disrupted; and that the bill would impose a very heavy additional burden on the revenue administration.<sup>1</sup> The reply of the Government of India in 1912 is quoted on pp. 220-221 above.

No further Land Alienation Bills were drafted till 1937. In the meantime several enquiries were conducted by various government officials, the most noteworthy of which were Harold Clayton's enquiry into the condition of the agricultural population with special reference to indebtedness, in 1908-09, in parts of the Delta area; and Thomas Couper's enquiry into the conditions of tenants and labourers in 1924 in thirteen selected districts<sup>2</sup> in Lower Burma.

The enquiries established that small cultivators were steadily losing land to moneylenders, traders and large non-agriculturist landlords. The reason for the loss of land in the vast majority of cases was indebtedness. In addition, T. Couper found that in the thirteen districts he investigated, it was almost impossible for a landless

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1. Ibid., pp.49-50.

2. These were the same as the 13 districts named in the note for Table VI.3 on p.212.

cultivator, no matter how hard he worked, to own a mortgage-free holding again, mainly due to the high selling price of cleared land, the large amount of capital required to clear the remaining waste land and the very high interest rates on loans.<sup>1</sup>

In 1931, 1932-33 and 1934 various Committees were set up to investigate the problem. No action was taken, however. The recommendation given in the reports submitted by the 1931 and 1934 Committees were found impracticable by the Government while the 1932-33 Committee found that it could make no useful report.<sup>2</sup>

In 1937 U Ba On introduced his Burma Alienation of Land Prevention Bill. A Committee on Land and Agriculture was set up under the chairmanship of Maung Pu.<sup>3</sup> In its report it reviewed past attempts at land alienation legislation and the objections which had been raised against them. Against the main arguments that no serviceable definition of an agriculturist could be found, that it would interfere with the freedom of contract, that the establishment of a sound credit system was more important, and that cultivators might find it difficult to borrow,

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1. T. Couper, Report of an Inquiry into the Condition of Agricultural Tenants and Labourers (Rangoon: Supdt., G.P.S., Burma, 1924), p.10.
  2. Report of the Land and Agriculture Committee (1938), Part II, pp.53-55.
  3. Not James Baxter as stated by Andrus, Burmese Economic Life (1948), pp.80-82. Baxter was the Financial Adviser of the Committee.



the Committee argued that the definition of an agriculturist as put forward by T. Couper in the Agrarian Bill of 1927 was reasonably precise and practicable,<sup>1</sup> and that interference with the freedom of contract was also argued against the Indian Child Marriage Act and labour legislation in many countries. The Committee agreed that a sound system of agricultural credit was undoubtedly important but it would take many years to establish it in all parts of the country and in the meantime legislation should be enacted to prevent further loss of land. Anyway, even a sound credit system might not enable the owner-cultivator to hold his own during periods of world-wide trade depression. While land had been passing gradually from agriculturists to non-agriculturists over many decades, there was a marked quickening of the pace during the slump years of 1907 and 1930-34 and immediately afterwards when there was a great contraction of agricultural credit.<sup>2</sup> As for the weakening

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1. The definition adopted by the 1938 Bill is given below:  
 "'Agriculturist' means a person -  
 (a) who is engaged or has habitually been engaged in the cultivation of land with his own hands as his principal means of subsistence; or  
 (b) who satisfies both the following conditions, namely-  
     (i) that he superintends personally and throughout the working periods of the year the actual cultivation of land including all the processes thereof and the treatment of the cattle and other equipment used therein, and  
     (ii) that he derives the major part of his income either from such superintendence or from the cultivation of land with his own hands or jointly from such superintendence and such cultivation." Report of the Land and Agriculture Committee (1938), Part II, pp.63-64.

2. Ibid., pp.35-36.

of the borrowing power of the cultivator, the Committee made this observation:

Credit obtained at the ultimate cost frequently of the cultivator's land is too dear at the price and in many cases it is better that the peasant proprietor should be satisfied with what he can obtain on his personal credit and on the security of his crops than that he should risk the loss of the land from which he obtains his livelihood.<sup>1</sup>

Also, as it was well known that much of the money borrowed on the security of land was squandered in unproductive expenditure the contraction of credit could not be considered a bad thing.<sup>2</sup>

The Committee embodied its proposals in the form of a draft Alienation Bill. After further debate and consideration a Land Alienation Act was at last passed in 1941. But it had no chance to work because shortly afterwards, in December 1941, the Japanese invaded Burma.

Since so much land had already been lost by agriculturists by the late 1930's the Land and Agriculture Committee realised that legislation to prohibit the alienation of the remaining land in the hands of agriculturists was like attempting to lock the stable door after the horse had bolted. It advocated a scheme by which "a sustained and systematic attempt should be made gradually to reduce the present preponderance of the non-resident landlord and to establish the small cultivator in greater numbers on the

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1. Ibid., p.57.

2. Ibid., p.57.

land either as landholder or as a State tenant."<sup>1</sup> This scheme involved the purchase by Government from non-agriculturist landowners at market prices of compact blocks of land to be divided into family-sized units and settled under the Government Estates Department. These estates were to meet the credit, marketing, milling and consumer needs through co-operative organisations. The Land Purchase Act was passed in late 1941 but it too was never implemented because of the Japanese invasion.

#### 4. Tenancy Conditions.

In the early days of British rule when easily cleared waste land suitable for paddy cultivation was abundant, tenants were very few in number since any person could become a landowner by clearing and occupying the land under one of the tenure systems. With the extension of cultivation, the remaining waste land was less suited to paddy-growing and often required heavy initial expenditure to bring it under cultivation. Newcomers from Upper Burma, young men striking out on their own and cultivators who had lost their land found it easier to get a piece of land to work as tenants than to take up new land as pioneer settlers.

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1. Ibid., Part III, p.147.

Table VI.5 : Annual Average Acreage of Areas Let at Full Fixed Rents in All Burma, Lower Burma and the Thirteen Districts, 1901 to 1939.

(In thousands of acres.)

Period	All Burma		Lower Burma		The 13 Districts	
	Area let at full fixed rents.	Per cent to total occupied area.	Area let at full fixed rents.	Per cent to total occupied area.	Area let at full fixed rents.	Per cent to total occupied area.
1901-05	2,109	19.9	1,913	27.6	1,779	29.1
1905-10	2,630	18.3	2,494	30.2	2,272	32.4
1910-15	3,071	18.2	2,936	32.0	2,655	33.7
1915-20	3,399	19.5	3,300	35.0	2,955	36.6
1920-25	3,895	21.8	3,736	37.5	3,531	41.5
1925-30	4,704	25.4	4,393	41.6	4,057	44.9
1930-35	5,926	31.4	5,489	50.8	4,985	53.4
1935-39	7,044	36.4	6,409	57.2	5,986*	61.6*

\* 1939 only.

Source: Annual Reports on the Land Revenue Administration of Burma.

Notes: The years are from 1st July to 30th June.  
For the names of the districts see note for Table VI.3 on p.212.

The above table shows a consistent increase in the area let on full fixed rents both absolutely and as a proportion of the total occupied area. The tendency was more marked in Lower than in Upper Burma and in Lower Burma itself the thirteen principal rice-growing districts experienced the most pronounced increase in the rented area and in the proportion of rented to total cultivated area. By 1939, more than 60 per cent (about six million acres) of the total agricultural land in the thirteen districts were let to tenants on full fixed rents.

The total rented area was even larger than was indicated by the figures in Table VI.5, which covers only areas let at full fixed rents and does not include areas let on share or partnership basis and areas let on privileged rents or rent-free. Share rents were rents in the form of a certain percentage of the gross produce measured after harvest. Land let on a partnership basis involved the provision of one or more of the following -- seed, cattle, implements, etc. by the landlord and the rent was also a share rent. Areas let on privileged rents or rent-free were usually let to relatives and friends of the owners.<sup>1</sup>

Table VI.6 presents figures for the areas let on the three classifications of rents. It may be noted that the full fixed rent was by far the most important form of rent in Lower Burma. The proportion of the area let on fixed rents to the total area let consistently increased till by the late 1930's it was about 98 per cent. This increase was due mainly to the growing competition among tenants for land and, to a lesser extent, to the increasing proportion of the area owned by absentee landlords who had no time for the supervision which was necessary in the case of share rents.

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1. Report of the Land and Agriculture Committee (1938),  
Part I, p.8.

Table VI.6 : Distribution of Annual Average Acreage of Rented Area by Type of Rent, 1923-39.

Period	Area let			Total
	at full	on share or	at privileged	
	fixed	partnership	or nominal	
	rents.	basis.	rent.	
<u>In thousands of acres.</u>				
ALL BURMA				
1923-25	4,058	1,393	673	6,123
1925-30	4,704	1,386	566	6,656
1930-35	5,926	1,622	518	8,065
1935-39	7,044	1,738	449	9,227
LOWER BURMA				
1923-25	3,854	44	355	4,255
1925-30	4,393	41	232	4,665
1930-35	5,489	54	163	5,707
1935-39	6,409	42	106	6,557
UPPER BURMA				
1923-25	203	1,347	318	1,869
1925-30	311	1,345	334	1,990
1930-35	436	1,567	354	2,358
1935-39	635	1,692	342	2,669
<u>Per Cent.</u>				
ALL BURMA				
1923-25	66.3	22.7	11.0	100.0
1925-30	70.7	20.8	8.5	100.0
1930-35	73.5	20.1	6.4	100.0
1935-39	76.3	18.8	4.9	100.0
LOWER BURMA				
1923-25	90.6	1.1	8.3	100.0
1925-30	94.2	0.9	4.9	100.0
1930-35	96.2	1.0	2.8	100.0
1935-39	97.7	0.6	1.6	100.0
UPPER BURMA				
1923-25	10.9	72.1	17.0	100.0
1925-30	15.6	67.6	16.8	100.0
1930-35	18.5	66.5	15.0	100.0
1935-39	23.8	63.4	12.8	100.0

Source: Annual Reports on the Land Revenue Administration of Burma.

Note: The years are from 1st July to 30th June.

The share type of rent was more common in Upper Burma where most of the landlords were resident landlords and some were agriculturists as well. They had less objection to this form of rent as they could supervise its collection. Since crop failures were fairly frequent in Upper Burma, tenants were reluctant to take up land on fixed rents. The share rent meant that losses in a bad year were distributed between the landlord and the tenant. But, with the increasing competition among tenants, there was a noticeable increase in the area let on fixed rents.<sup>1</sup> From 1924 to 1939 the area let on fixed rents more than trebled while the proportion to the total area let in Upper Burma increased from about 11 per cent to about 24 per cent.

A comparison of Tables VI.5 and VI.6 with Tables VI.1, VI.2 and VI.3 brings out the fact that the areas rented were much larger than the areas held by non-agriculturists. This was because some agriculturists cultivated part of the land and let the rest. Again, many wealthy men who resided away from the estates were classified as agriculturists because they employed a bailiff to manage part of their estates instead of letting the whole area to tenants. Since officials were prone to

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1. Administration Report, 1923-24, p.17.

treat non-agriculturist landowners harshly in such matters as remission rates for fallow land and the resumption by government of uncultivated land, non-agriculturists were eager to try all means at their disposal to classify themselves as agriculturists.<sup>1</sup>

The loss of land by small owner-cultivators is, therefore, brought out more clearly in the two tables above. But the actual situation was even more serious. Many cultivators paid very heavy interest rates to the moneylender on loans secured on mortgages of land. They were so heavily indebted that the high interest rates were comparable to rents paid by tenants and since there was no hope of getting out of debt they were at the mercy of the moneylender, who could foreclose the land whenever he wished by taking the necessary court action.<sup>2</sup> J.R. Andrus estimated that less than 15 per cent of the land under crops in Lower Burma in 1941 was owned by genuine agriculturists free of mortgage.<sup>3</sup>

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1. Nisbet, op. cit., Vol. I, p.280.  
According to the Land Records Manual, "an agriculturist is (a) a person who cultivates land for a livelihood or did so until incapacitated by age or otherwise, or (b) the wife, widow or child of such a person." This definition was sometimes stretched to fit doubtful cases. J.R. Andrus gave an instance of a Burman who was really an absentee landlord but who had heard that there might be legislation penalising the non-agriculturist landowner and so he took pains to make sure that he was always returned as an agriculturist. J.R. Andrus, "Three Economic Systems Clash in Burma," The Review of Economic Studies, Vol. III, No. 2, February 1936 (London), p.144.
  2. Banking Enquiry Report, 1929-30, Vol. I, p.30; and Furnivall, Political Economy of Burma (1938), p.72.
  3. Andrus, Burmese Economic Life (1948), p.81.



Fixed rents were agreed upon in terms of so many baskets of paddy after harvest either for the entire holding or per acre of the holding. Cash rents, which were generally paid before cultivation began, were rare but after the First World War they became more common due to the growing competition among tenants and the increasing absenteeism among landlords. Tenants paying cash rents were reported to suffer more in years of low paddy prices than they gained in years of high paddy prices. The terms of rental were usually recorded in a document, though among relatives and friends a verbal agreement might do. In areas where tenants occupied a very weak bargaining position, the tenant might have to sign a coolie-sagyok stating that he was the labourer of the landlord and that the landlord had the first claims on the produce for the amounts of rent and loans owing to him. The landlord usually paid the land revenue.<sup>1</sup>

U Tin Gyi gave the following description of how rents were determined on newly cleared land in the Labutta Township of Myaungmya District:

Rents are fixed according to the stage of development the land has reached since the initial clearing took place. Land well cleared of roots and stumps and provided with kazins fetched the most rent. Land partially cleared is rented at a slightly lower figure while land just cleared of its

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1. Banking Enquiry Report, 1929-30, Vol. I, pp. 29, 31; and Furnivall, Political Economy of Burma (1938), p. 77.

original tree jungle is rented at a mere nominal rent. The present tendency is to increase gradually the rent from a mere nominal figure of 3 or 4 baskets an acre to 12 - 14 baskets in its fifth and sixth year of occupation when the land is fully cleared of its roots and stumps and provided with the necessary kazins.<sup>1</sup>

Table VI.7 gives the average rent per acre in Lower Burma from 1889 to 1923.<sup>2</sup> These figures, as given in the sources, were worked out from figures of areas let at full fixed rents, and the amount of money (obtained by converting the paddy rents at current market rates) for which the areas were rented.

A study of the table shows that rents rose fairly steadily. By comparing columns (1) with (2) it can be seen that the rate of increase in rents was much faster than that in paddy prices. By the early 1920's rents were about three to four times as much as they were around 1900 while paddy prices were only about twice as much. The main reason for the increase in rents was the growing competition among tenants for land due to expansion of population and the large amount of capital required to bring the remaining waste land under cultivation.

The period of the lease was commonly for a year after which it had to be renewed. Officials in the course of settlement operations to determine the land revenue rates

1. U Tin Gyi, Report on the Original Settlement Operations in the Labutta Township of the Myaungmya District, Season 1924-25 (Rangoon: Supdt., G.P.S., Burma, 1926), p. 17.

2. Figures after 1923 are not obtainable.

Table VI.7 : Rents and Paddy Prices in Lower Burma,  
1899 to 1923.

Year	Rent per acre	Price per 100 baskets of paddy
	<u>Rs.</u>	<u>Rs.</u>
1890	5.39	95
1895	6.67	95
1900	8.15	95
1901	7.74	95
1902	7.74	100
1903	9.19	110
1904	8.75	95
1905	10.00	105
1906	10.05	120
1907	11.99	130
1908	13.29	135
1909	10.87	110
1910	10.48	110
1911	11.78	130
1912	14.58	160
1913	13.65	130
1914	14.82	120
1915	10.72	125
1916	12.33	110
1917	12.91	105
1918	9.84	100
1919	14.27	140
1920	20.61	180
1921	19.73	190
1922	12.37	195
1923	23.02	180

Sources: Annual Reports on the Land Revenue Administration of Burma; J.P. Hardiman, Compilation on Tenancy Matters (Rangoon, 1913), p.17; and Grant, op. cit., p.140.

Table VI.8 : Percentage Distribution of Rented Area Held by Tenants of Various Years' Standings.

District	Period	1 yr.	2 yrs.	3 yrs.	4 yrs. or more	Total
Pyinmana-Irrigated	1930-32	34	18	14	34	100
Unirrigated	1930-32	41	21	12	26	100
Amherst	1930-33	40	19	12	29	100
Pegu	1932-34	48	17	8	27	100
Insein	1933-35	47	21	10	22	100
Myaungmya	1933-35	43	19	13	25	100

Source: Report of the Land and Agriculture Committee (1938), Part I, p.13.

found that there was a large floating population of tenants who moved constantly from holding to holding. An unknown portion changed their village as well.<sup>1</sup> The above table gives figures for the percentage of the rented area held by tenants who had cultivated their current holdings for one year, two years, three years and four years or more. These percentages are based on data collected during settlement operations in the respective districts.<sup>2</sup>

1. Andrus, Burmese Economic Life (1948), pp.71-72.  
This constant shifting contributed considerably to the feeling of rootlessness, which, in turn, was an important cause of crime. Just before World War II there were 800 to 1,000 reported murders per year and a large number of other crimes for a population of 12-13 millions living in the areas covered by crime statistics. According to Harvey, Burma under British rule had an unenviable reputation for crime.  
G.E. Harvey, British Rule in Burma, 1824-1942 (London: Faber and Faber, 1946), pp.38-40.
2. Report of the Land and Agriculture Committee (1938) Part I, p.13.

Table VI.8 reveals that almost half the tenants changed holdings each year. As these settlements were held during the slump years, most probably the reason for the frequent migration was that tenants hoped to do better in the next holding. In Table VI.9 are figures collected by the Land Records Department for selected assessment tracts in selected districts during the official year 1936-37.

These tables confirm the observation that there was a large floating population constantly on the move particularly in Lower Burma. This movement was attributed to the unsatisfactory conditions of tenure. The Land and Agriculture Committee argued that if the tenant moved of

Table VI.9 : Percentage Distribution of Rented Area in Selected Assessment Tracts in Selected Districts Held by Tenants of Various Years' Standings, during 1936-37.

District	One year.	Two years.	Three years.	Four years or more.	Total
	<u>Per Cent.</u>				
Myaungmya	22	16	12	50	100
Pegu	38	17	10	35	100
Tharrawaddy	25	12	13	50	100
Hanthawaddy	24	16	11	49	100
Henzada	15	11	11	63	100
Pyapon	18	17	13	52	100
Thaton	35	24	14	27	100
Toungoo	25	16	11	47	100

Source: Report of the Land and Agriculture Committee (1938), Part I, p.13.

his own will, it meant he failed to make a decent living from his holding, and if the landlord evicted the tenant it must be due either to the landlord's desire for a higher rent or because the tenant failed to fulfil his obligations with regard to rent and loans because these were more than the output of the holding could bear.<sup>1</sup>

Whatever the cause, short-term tenancies meant that the land was not cultivated to the best advantage since tenants seldom stayed long enough on the same piece of land to learn the best way of cultivating it. There was no incentive to improve the land. For example, the full benefit of using fertilizers would not accrue to the cultivator if he remained on the land for only one season. Naturally he was reluctant to use fertilizers since he might not get a renewal of the lease and the landlord might even evict him in order to charge higher rents for the improved holding. Landlords on the whole were not interested in the improvement of the land either, as most of them were absentee landlords and land ownership was practically forced upon them in the course of their moneylending activities.

In the 1920's and 1930's several official reports published findings on the economic condition of tenants.

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1. Report of the Land and Agriculture Committee (1938), Part I, p.14.

One of the most comprehensive was the enquiry conducted by Thomas Couper into the condition of agricultural tenants and labourers in the thirteen principal rice-growing districts of Lower Burma in 1924. Briefly, he found that:

There has been a rise in the produce-rent paid by the tenant; that the size of the basket in which the produce-rent of the tenant is measured has been varied unfavourably to the tenant; that there has been increasing displacement of tenants; that the price of paddy has not risen in proportion to the cost of production... and that the productiveness of the land is decreasing, partly owing to insecurity of tenure for the tenants.<sup>1</sup>

In 1929-30 the Report of the Provincial Banking Enquiry Committee was published. The Committee found that only one out of four tenants who cultivated paddy was able in an average year to pay his rent and all his loans and could still put aside from his harvest sufficient paddy to feed himself and his family during the next cultivating season. In some districts such tenants were rare. As for the proportion of tenants who had little or no capital, it varied greatly from district to district. In some districts they accounted for about a third of all tenants. These were commonly known as "one pot one mat" men, the term suggesting the paucity of their possessions. Such men borrowed for everything

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1. Resolution on Report by T. Couper, op. cit., p.2.

they required throughout the year and used all their harvest to repay their loans. Even when they had a good harvest they had nothing left in hand because there were arrears of previous years to make good.<sup>1</sup>

The Banking Enquiry Committee also reported that few tenants succeeded in becoming owners. This was because it was hardly possible to pay off the debt incurred in buying land from the profit of cultivating that land because of the high price of land and the high interest rates on loans.<sup>2</sup>

On February 1938, the Land and Agriculture Committee completed Part I of their Report entitled "Tenancy" which confirmed the findings of the earlier enquiries. The Committee wrote:

We think that rents throughout Lower Burma and in some parts of Upper Burma are too high.... It was clear from the evidence of the landlords themselves that tenants, however careful and thrifty they may be, are, except very rarely, unable to provide the cultivation expenses from any season's crop from their own resources. They must borrow.... There is abundant evidence to show that many tenants even in years when crops and prices are good, are unable to feed themselves and their families between one harvest and the next after having paid their dues in respect of rent and loans. They are therefore obliged to borrow for mere subsistence.<sup>3</sup>

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1. Banking Enquiry Report, 1929-30, Vol. I, pp.30, 55.
  2. Ibid., p.30.
  3. Report of the Land and Agriculture Committee (1938), Part I, p.9.



And

Rents especially in the congested areas of Lower Burma are on a level which keeps the tenant's standard of living down to a bare subsistence level and maintains him in a state of permanent indebtedness from which there is no hope of escape.<sup>1</sup>

## 5. Tenancy Legislation.

The first official reference to a landlord-and-tenant question was made as early as 1869 when the system of giving long leases of arable land was objected to on the ground that it encouraged non-cultivating speculators to take up leases with the intention of earning rents from tenants. A scheme was drawn up by which every village-tract would be divided into lots and the Government would reserve the power to fix the number of lots a person might possess so that the "Government would be able at any time to check the development of an unsound Zamindari system."<sup>2</sup> But the scheme was adversely criticized and was not brought into use. In 1871, an amended scheme was submitted with the same object but it was also condemned.<sup>3</sup>

In the early 1880's the Government of India advised the Government of Burma to be on its guard against the growth of a tenant class and to put forward legislation designed to impede this growth. As a result the 1892 Bill was drafted providing for, among other things, the purchase

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1. Ibid., p.10.

2. J.P. Hardiman, Compilation on Tenancy Matters (Rangoon: Supdt., G.P.S., Burma, 1913), p.135.

3. Ibid., p.135.

by tenants of the land they cultivated from landlords at two to three years' rents. This measure was considered too extreme and was dropped.<sup>1</sup>

In 1896 the Chief Commissioner, Sir Frederic Fryer (who personally thought there was no necessity for tenancy legislation but who considered that the Government had committed itself<sup>2</sup>), drafted a Bill designed to deal with the problems of security of tenure and fair rent. It conferred occupancy rights on tenants who had cultivated the same piece of land continuously for twelve years and on tenants who, having been landowners, had continued to occupy the same land as tenants. Occupancy rights were made heritable but non-transferable. The rents of occupancy tenants as well as ordinary tenants were to be fixed during settlement operations, and could only be raised by the Revenue Officer when applied to by the landlord. Tenants could not be ejected except in execution of a decree of a civil court for failure to pay rent or for using the land for non-agricultural purposes. On the other hand, landlords were given the first claim on the produce of the land for the amount of rent due. The Bill also provided for the payment of compensation to both classes of tenants in respect of improvements made.<sup>3</sup>

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1. Report of the Land Agriculture Committee (1938), Part I, p.3.

2. Hardiman, op. cit., p.137.

3. Report of the Land and Agriculture Committee (1938) Part I, pp.3-4.

The Bill, however, met with strong opposition from district officers who argued that legislation was premature as the tenant needed no protection from the landlord since in fact he could dictate his own terms owing to the shortage of tenants and that in any case he could always move to another holding if the landlord was difficult to deal with. This was a favourite argument of those who opposed tenancy legislation. The argument was certainly applicable in the early days of British rule when easily cleared waste land suited to paddy-growing was abundant. But with the growth of population, the increasing difficulty of clearing the remaining waste land, and the growing number of dispossessed cultivators, tenants increased in number and soon competed to get land. As to when competition among landlords to get tenants gave way to competition among tenants to get land, it is difficult to say. But as the Land and Agriculture Committee commented more than forty years later, "whatever semblance views of this kind that landlords competed for tenants may have had in the circumstances of the time, they were singularly lacking in imagination and foresight."<sup>1</sup>

As a result of the opposition Sir Frederic advised the Government of India in 1897 to leave matters as they were for a time. The Central Government agreed but not

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1. Report of the Land and Agriculture Committee (1938),  
Part I, p.4.

before airing some misgivings about the attitude adopted by the government officials in Burma. It made the following reply:

Having regard to past experience in other provinces, the Government of India feel some hesitation in accepting the argument that legislation is premature. They cannot but remember that thirty years ago proposals for the protection of tenants in Oudh were met by the Chief Commissioner of that province with almost identical arguments to those now put forward by Sir Frederic Fryer. Yet His honour is doubtless well aware how the Chief Commissioner's anticipations were falsified, how the evils which it was contended did not exist and could never arise assumed in twenty-six years such proportions that remedial measures could no longer be delayed, and how rent legislation was then carried through in the face of many difficulties. The history of agrarian questions in all parts of India points to the conclusion that the mistake on the part of the Government has as a rule been undue delay rather than premature or precipitate action; and the Government of India are strongly of the opinion that in Burma at any rate, where difficulties arising from the pressure of population on the land are as yet perhaps scarcely felt, every reasonable effort should be made to anticipate evils rather than to leave future generations to find an incomplete remedy after the mischief has been done.<sup>1</sup>

Four years later, Sir Frederic Fryer produced the Burma Tenancy Bill of 1900 which was less radical than the previous bill. The attempt to create a class of tenants with occupancy rights was abandoned. The Bill provided only for the security of tenure for tenants on regular payment of a fair rent as fixed by the Revenue or Settlement

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1. Quoted in ibid., pp.4-5.

Officer, and only capable of enhancement after a certain period. The Government of India considered that certain interests were neglected and the question was reviewed somewhat leisurely by the Government of Burma.<sup>1</sup>

The result was the draft Burma Tenancy Bill of 1906 which provided for the creation of a privileged class of tenants known as "protected tenants". This status was to be conferred by Revenue or Settlement Officers on tenants who held land which was habitually let by the landlord to get rent. Fair rents were to be fixed by the Officers for periods of five years. Protected tenancies were heritable but non-transferable. With a few modifications the Bill was laid before the Legislature in 1908. It met opposition in the Legislative Council and from outside groups -- officials, landlords, the Chettyar Community, and the European merchants dealing in rice and piece-goods. Amendments were introduced and discussions went on "intermittently and half-heartedly" until 1914, when Sir Harvey Adamson ordered that "the papers should be filed on the ground that no harm would be done if the question were buried for ten years."<sup>2</sup>

The next Bill was in 1927 when the Burma Agrarian Bill, based on the findings of the enquiry held by T. Couper in

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1. Ibid., p.5.

2. Ibid., p.6.

1924, was put forward. The principal provisions of the Bill were that tenants in notified areas, cultivating a holding of 30 acres or under were to have the right to a renewal of the lease up to a period of seven years if they were willing to pay a fair rent and had treated their landlord fairly in the past; the payment of compensation for improvements made by an ejected tenant; and the granting of a first claim on the output of the land with regard to the unpaid wages of labourers, the unpaid hire of cattle and the unpaid rent of the land for the current year. But the publication of the Bill in the Burma Gazette raised such a storm of protest from many quarters, especially from the landlords, that it went no further.<sup>1</sup>

The next attempt was the Burma Tenancy Bill of 1937 following a number of enquiries. The Bill was restricted in scope and proposed to set up machinery whereby a tenant to whom a renewal of lease was refused could obtain a renewal by order of the Revenue Officer provided he was ready to pay a fair rent and had treated his landlord fairly in the past. Tenants were to be compensated at the end of the lease for improvements made. The Bill was laid before the Legislative Council but was superseded by the more comprehensive Bill of 1938.<sup>2</sup>

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1. Ibid., p.6.

2. Ibid., pp.6-7.

In 1937 also, U Saw put forward his Burma Paddy Rents Control Bill, which proposed that no rent on paddy land should be more than 25 per cent of the gross produce obtained by the tenant from the land. The Bill was considered too drastic and arbitrary. It ignored other important factors in the determination of a fair rent such as the cost of cultivation, liability to floods and the cost of transport. In February 1938, the Bill was rejected.<sup>1</sup>

The 1938 Bill drawn up by the Land and Agriculture Committee provided for: (1) the right to a fresh lease by satisfactory tenants, (2) machinery for the determination of fair rents, (3) the fixation of fair rents in special areas, (4) the making of a first charge on the crop, the rent and the hire of labourers; and a second charge, the loans given by the landlord and the hire of cattle, (5) compensation for improvements, and (6) the reduction of rent where the landlord obtained a remission of land revenue.<sup>2</sup>

In May 1939, the Tenancy Act was passed but it proved unworkable due to the inability of officers designated as rent fixers to examine the tens of thousands of applications presented by tenants. The concept of fair rent proved to be full of practical difficulties. Many rents were fixed so low that the reduction in rent was "as unexpected to the

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1. Ibid., p.7.

2. Ibid., pp.14-19.

tenants as it was unacceptable to the landlords. In some cases rents were fixed at rates lower than the land revenue rates which the landlord had to pay and in one case I believe that an officer decided that no rent at all would be fair!"<sup>1</sup> The courts often refused to uphold the reduction of rents made by officers. In 1941, a new Draft Bill was drawn to correct several obvious deficiencies in the old Act but it had not proceeded beyond the "Select Committee" stage when the War intervened.

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1. B.O. Binns, Agricultural Economy in Burma (Rangoon: Supdt., G.P.S., Burma, 1948), p.18.



## CHAPTER VII

### AGRICULTURAL CREDIT

Credit played an undoubtedly important role in the growing, assembling and milling of the paddy crop. The sources of credit for millers, brokers, mill agents and other middlemen were mentioned earlier in connection with the assembling and milling aspects of the rice industry. This chapter will be confined to the role of credit in the field of paddy cultivation.

#### 1. The Need for Credit.

It is generally recognised that cultivators by the nature of their calling have to borrow money at some periods of the year, due to the time lag between the planting and the harvesting of the crop. Borrowing is not only necessary but it leads to greater output if the loan is given under proper conditions and used in such a way that it can be repaid out of the advantages gained in applying the loan.

The demand for agricultural credit in Burma came from all classes of agriculturists -- the hired labourer, the tenant-cultivator, the owner-cultivator and the landlord. The hired labourer seldom had anything at the beginning of the cultivating season except "his strength and willingness to serve."<sup>1</sup> In return for his work the employer had to

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1. Report on the Marketing of Rice in India and Burma (1941), p.280.

feed and house him, either in his own house or in the field hut nearer the paddy fields, and agree to give him a certain number of baskets of paddy at the time of harvest. A careful and thrifty bachelor could usually wait for his paddy wages but an extravagant bachelor or a married man, who had to support his family separately as they did not live with the employer, had to borrow from the employer small sums of money every now and then to be set against the paddy wages due to him at harvest. If the employer could not supply the loans, the hired labourer would go to the shopkeeper or the trader and buy the things he needed on credit, to be repaid by an agreed number of baskets of paddy at harvest time.<sup>1</sup>

The tenant-cultivator often began the season as empty-handed as the labourer. But he had more things to look after, for, in addition to providing for his family, he had to feed and house his hired labourers and he had to obtain cattle, carts, implements and seed. As a rule, rents were paid at harvest except cash rents which were paid at the beginning of the cultivating season. Tenants paying cash rents, therefore, usually had to borrow to pay the rent as well as for the other requirements, but cash rents were not common. The tenant mainly looked to his landlord for loans.<sup>2</sup>

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1. Banking Enquiry Report, 1929-30, Vol. I, p.142.

2. The Marketing of Rice in India and Burma (1941), p.281.

The owner-cultivator had similar items to provide for as the tenant-cultivator except that he did not have to worry about rent and that he had to pay the capitation tax due on January 1st and the land revenue due about the middle of February. His lenders were the professional moneylender, the pawnbroker, the shopkeeper, the trader, and others. If he was a fairly well-off cultivator he could get loans direct from the Chettyars at a cheaper interest rate than the tenant from his landlord. But if he was already heavily indebted he was not much better off than the tenant.<sup>1</sup>

It was the common practice in Burma for landlords to lend to their tenants and it was doubtful whether landlords could get tenants at all if they were not ready to finance them. Besides, landlords were eager to lend since most were moneylenders as well. Indeed, it was reported that landlords viewed with disapproval any attempt by their tenants to obtain loans from other people. Thus moneylending, especially in the delta areas, became a corollary to land-owning. But not all the money lent by the landlords was their own. Much was borrowed from Chettyars on the security of land, houses or jewellery. These loans were usually obtained at the interest rates of 1.25 to 1.75 per cent per

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1. Rice ("Department of Agriculture, Burma: Markets Section Survey, No. 9"; Rangoon: Superintendent, Government Printing and Stationary, Burma, 1940), p.32.

month,<sup>1</sup> and lent, augmented by the landlord's own money, to the tenant at interest rates of 1.75 to 2.5 per cent per month.<sup>2</sup>

The landlord usually demanded repayment in paddy; so did traders and village shopkeepers. But other lenders, including Chettyars, made no attempt to restrict or control the borrower in the disposal of his crop so long as interest payments were regular and the security remained sufficient.

## 2. Types of Loans.

Loans may be classified according to (a) the form of the loan and the mode of repayment; and (b) the period of the loan. The five main types of loan classified in the former manner were as follows:

(1) Ngwedo, which was a loan made in cash, and the principal and interest were repayable in cash.<sup>3</sup>

(2) Sabado, which was a loan made in produce and repayable, both principal and interest, in produce.

(3) Sabade, which was also a loan made in produce and the principal repayable in produce, but the interest must

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1. Interest rates were usually stated in terms of a month since loans were usually held for less than a year. In fact, the average period of a loan was about 7 to 8 months. It is incorrect, however, to multiply these rates by 12 and call them annual rates because 12 Burmese months were short of a solar year by about 11 days. Banking Enquiry Report, 1929-30, Vol. I, p.79.
  2. Report on the Marketing of Rice in India and Burma (1941) p.281; and A.E. English, A Handbook of Co-operative Credit for Burma (Rangoon: Supdt., G.P.S., Burma, 1911), p.7.
  3. Rangoon Gazette, December 14, 1908.

be paid in cash.

(4) Sabanyun, a loan made in cash. The principal was repayable in cash but the interest must be paid in produce. The interest (i.e., the number of baskets of paddy) usually came to 7 to 10 per cent per mensem on the loan, when calculated on the previous season's price.<sup>1</sup>

(5) Sabape. This was more of an advance sale than a loan. The rate was expressed in terms of the number of rupees advanced in the expectation of a repayment of 100 local baskets of paddy. Goods obtained on credit from village shopkeepers were sometimes paid for in paddy at harvest. These assumed a sabape character because the goods were valued at cash prices and the payment was made on sabape terms. The interest rates worked out to about 8 to 15 per cent per month.<sup>2</sup>

Ngwedo loans were by far the most common. Chettyars dealt only with this type of loan and all large loans were ngwedo loans. The interest rate was determined, subject to the effects of competition among lenders and agreements as to minimum rates, by the size of the loan, the time of year, the kind of security offered, the reliability, reputation and general position of the borrower, the urgency of the borrower's need, the cost of the money to the lender

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1. Report on the Marketing of Rice in India and Burma (1941), p.281.

2. Ibid., p.282; and Rangoon Gazette, December 14, 1908.

and the skill of the borrower and lender in haggling. Small loans were charged higher rates of interest than large loans and rates were higher in the busy season than in the slack season. The Banking Enquiry Report gave the usual rates of interest for loans from Chettyars of Rs. 100 to Rs. 500 as 1.25 to 2.0 per cent per month. Smaller loans might be charged 2 to 2.5 per cent per month. Non-Chettyar moneylenders charged about 0.25 to 0.5 per cent higher than the corresponding Chettyar rates. Rates were even higher in Upper Burma where there were less Chettyars than in Lower Burma.<sup>1</sup> Variations from these, however, were very wide.<sup>2</sup>

The reason for the lower rates of interest charged by Chettyars compared with other private moneylenders was that Chettyars, working on a large scale and over a wide area, accepted only the best type of security such as land, houses and gold. By charging relatively low rates Chettyars could choose their clients and pick the most reliable borrowers. Burman moneylenders tended to charge higher rates because they often lent to borrowers who could not get loans from the Chettyars. Since they conducted business on a much smaller scale and over a smaller area, they could

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1. It was noted by the Banking Enquiry Report, 1929-30, Vol. I, p.343, that the rate of interest had always fallen in areas where Chettyars had established themselves.
  2. Ibid., pp.78, 79, 234 and 344; and Rangoon Gazette, December 14, 1908.

give close attention to each loan and could therefore lend with greater safety to the less reliable borrowers. Also, higher rates were charged because part of the capital was borrowed from Chettyars and these lenders naturally expected some profits as middlemen.<sup>1</sup>

Sabado, sabade and sabanyun loans were not common in Lower Burma. They were found only in certain areas. The first two loans were usually very small loans obtained to get seed for planting.<sup>2</sup>

Sabape loans, however, were used everywhere. Because of their exorbitant interest rates they were taken by people whose credit was so poor that they could not get loans on other terms. These loans were mostly used for small requirements of food and seed and to provide money to lend to labourers. The hired labourer obtained these loans frequently from the employer and the village shopkeeper. The loans were especially popular from about October onwards when harvest was approaching and when borrowers had already used up whatever forms of security they possessed in earlier loans. This type of loan became very important after 1930 when professional moneylenders, especially the Chettyars, greatly restricted their money-lending activities due to the trade depression and to their

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1. Banking Enquiry Report, 1929-30, Vol. I, pp.78, 79.

2. Report on the Marketing of Rice in India and Burma (1941), p.282.

reluctance to make any fresh loans secured by land because of the government attempts to bring about tenancy legislation and the cry among Burman politicians for the return of the land to the sons of the soil.<sup>1</sup>

The above loans except ngwedo loans were all crop loans, i.e., loans repayable at the borrower's next harvest. This leads us to the classification of loans according to the period of time before repayment.

Broadly, loans could be divided into long-term, intermediate and short-term loans. Long-term loans were required for the purchase of land, the financing of the more costly improvements, the acquisition of expensive equipment and the extinction of large debts. Repayment of loans for these objects ~~was~~ necessarily spread over a number of years, the actual period being determined by the purpose of the loan and the repaying capacity of the borrowers.

Intermediate loans were used for the purchase of cattle or carts, house-building and the liquidation of smaller debts. The loans were repayable from about two to five years.<sup>2</sup>

Short-term loans, or crop loans as they were commonly called, were to be repaid out of the proceeds of the next

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1. Banking Enquiry Report, 1929-30, Vol. I, p.79; and J.L. Christian, Modern Burma: A Survey of Political and Economic Development (Berkeley, Los Angeles: University of California Press, 1942), p.118.
  2. Note by F.H. Steavenson quoted by E.G. Pattle, "Some Factors Affecting the Economic Position of Agriculturists", Agriculture in Burma (1927), p.122.



harvest. Crop loans were for current cultivation expenses including not only the expenses connected with agricultural operations but also the living expenses of the cultivator and his family till harvest. It was estimated by the Banking Enquiry Committee in 1929-30 that the total amount of crop loans required annually in Burma was about 200 million rupees. Of this about 160 million rupees were used in Lower Burma and about 40 million rupees in Upper Burma. Two-thirds (about 100 to 120 million rupees) of all crop loans in Lower Burma and about one-sixth in Upper Burma were provided directly or indirectly by Chettyars.<sup>1</sup>

Crop loans were taken in instalments rather than in lump sums. The Banking Enquiry Report gave this rough distribution in time of the 200 million rupees required yearly as follows: about 60 millions taken in April to June, 100 millions July to September and 40 millions more before harvest. The average loan ran for about seven to eight months.<sup>2</sup>

Generally speaking, a cultivator who had borrowed crop loans was not regarded as being indebted. But if he failed to repay the loans at the coming harvest he was then regarded as being indebted to the amount outstanding. Indebtedness, therefore, consisted of long-term loans, intermediate loans and stale crop loans.<sup>3</sup>

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1. Banking Enquiry Report, 1929-30, Vol. I, pp.67, 74 and 211.

2. Ibid., p.75.

3. Ibid., p.52.

Among private moneylenders in Burma there was no clear distinction between loans according to the period of repayment. Only the government, some co-operative credit societies and Dawson's Bank attempted a time classification of loans. With private lenders the amount of a loan was generally taken to indicate whether it was a crop loan or not, but there was no arrangement for the repayment of loans by annual instalments and large loans were in fact for an indefinite period. Loans were usually allowed to run on so long as interest payments were not too irregular and the security remained adequate.<sup>1</sup>

The usual forms of security were land, houses, gold, cattle, carts or the standing crops. For large loans, whether large at time of lending or large through the compounding of interest, the usual form of security was a mortgage. Land was also used when the borrower had no other security or when the character of the borrower was doubtful or unknown to the lender. For crop loans the most usual form of security, if security was given at all, was a pledge of gold. Cattle, carts and crops were used as security on a small scale but these were not accepted as a rule by Chettyars though other lenders accepted them quite readily.<sup>2</sup>

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1. Ibid., p.88.

2. Ibid., p.82.

Borrowers of loans which were not secured by a mortgage had to execute an "on demand" document, that is, a promissory note payable on demand. For crop loans there was an understanding that the demand would not be made till harvest. But if at harvest the borrower failed to pay at least the interest on the loan, either another harvest might be awaited or the borrower might be forced to make a fresh "on demand" or a mortgage made for the principal and interest together, or measures might be taken to recover the loan. It was said that Chettyars took to litigation, or threats of it, sooner than other lenders who usually had other business dealings with the borrowers and therefore could bring greater pressure to bear.<sup>1</sup>

### 3. Causes of Indebtedness.

A distinction should be drawn between causes of indebtedness and the occasions of borrowing. An example will make this clearer. Suppose a cultivator had Rs. 120 and lost a bullock by rinderpest in the middle of ploughing. To replace it he had to pay, say, Rs. 80. Before long he would have used up all his money and might have to borrow for domestic expenditure, which would thus become the occasion of his borrowing. But the immediate cause was rinderpest. This, in turn, could be ascribed to the cultivator's ignorance of the way to protect his cattle against

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1. Ibid., pp.68, 81.

disease. Similarly, on tracing back to their origins, a great number of borrowings for occasions of various kinds might be ascribed to general social and economic disorganisation.

The more important specific causes are described below. They are grouped as under:

A. Factors Over Which the Cultivator Had No Control.

- (1) Change to a money economy.
- (2) Development of the land.
- (3) Vicissitudes.
- (4) Rise in paddy prices.
- (5) Difficulty of saving.

B. Loans Used for Unproductive Purposes.

- (6) Religious and social customs.
- (7) The Burman character.

C. Mis-management of Loans.

- (8) Abuse of credit.
- (9) Speculative ventures.

D. Conditions Under Which Loans were Made.

- (10) Attitude of lenders.
- (11) High rates of interest.

(1) Change to a money economy. The extension of paddy cultivation and the development of the rice export trade changed the living conditions of the cultivator in the rice-producing regions. A subsistence economy gave way to one based on money. Previously only sufficient paddy was grown to satisfy the requirements of food, seed and to barter for other necessities. Most of the household needs were obtained direct from nature by the family. The jungle,

which was then within easy reach of every field and house, supplied materials for buildings, household goods and food. As cultivation extended the jungle was cleared and many products became more difficult to obtain. Restrictions on fishing were imposed by the government for purposes of revenue and fishing developed into a specialised business on a commercialised scale. In order to obtain his requirements the cultivator had to concentrate on paddy cultivation on commercial lines and to adopt a money economy.<sup>1</sup>

The Burman's whole way of life was changed. Paddy was sold and the money used to buy the things the cultivator could no longer supply himself or which were more convenient than home-made articles or which appealed to the Burman's strong love for novelty which "easily coaxed his money out of the pocket in the new belt he has bought himself."<sup>2</sup>

This rapid change to a money economy for a nation without previous contact with the outside world has been described as a "shattering national experience that no people anywhere could have passed through unscathed."<sup>3</sup> The people scarcely had time to learn to put to the best advantage either earned or borrowed money.

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1. E.G. Pattle, "Some Factors Affecting the Economic Position of Agriculturists," Agriculture in Burma (1927), pp.111, 117; T. Couper, Report of an Inquiry into the Condition of Agricultural Tenants and Labourers (Rangoon: Supdt., G.P.S., Burma, 1924), p.3; and Report of the Land and Agriculture Committee (1938), part II, p.51.
  2. Banking Enquiry Report, 1929-30, Vol. I, p.57.
  3. Ibid., p.57.

(2) Development of the land. The rapid conversion of jungles and swamps into paddy fields could not have taken place without the investment of a large amount of capital. The actual clearing and cultivation of the land were undertaken by small cultivators who usually lacked capital. The pioneer settler found they had to resort to moneylenders in order to buy seed, implements, carts and cattle, to pay for general living expenses for the family, to feed and advance loans to hired labourers and to pay taxes. Some pioneers succeeded in paying off the interest and capital of loans and emerged victoriously as owners of wide stretches of fertile land, most managed to obtain a holding subject to a mortgage, while some were in reality no more than mere agents of capitalists and had little prospect of winning through as owners of the land they cleared.<sup>1</sup>

(3) Vicissitudes. The cultivator led a precarious existence. There were the risks of drought, flood, pests, illness, low prices, cattle disease, and many other misfortunes, which could ruin him. The risks were great indeed. It was remarked that the wonder did not lie in the number of cultivators who lost their land but in the number who managed to overcome such great obstacles or who were so fortunate as to remain as owners of land.

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1. Ibid., p.58.

(4) Rise in paddy prices. Table III.2 on page 112 shows that there was a fairly constant rise in paddy prices throughout the whole period except during the First World War and the early 1930's. Land values rose correspondingly. Since the prices of most commodities were geared to the price of paddy, this meant that the rise in paddy prices did not lead to a rise in real income. The situation could be compared with that of a gradual inflation. Cultivators came to expect a steady increase in paddy prices all the time and this attitude tended to discourage thrift and to encourage extravagant expenditure. It also caused failure to provide in bountiful years for lean ones, strengthened unwillingness to lower the standard of living temporarily in unfavourable seasons and encouraged speculative activities both in trade and in land.<sup>1</sup>

(5) Difficulty of saving. Cultivators rarely put aside some money to meet emergencies. The difficulties in the way of saving were many. Saving banks were few and these were found only in the big towns. There was the risk of loss through theft, fire, flood, etc. There was the temptation to use it uneconomically. Relatives, neighbours and friends would press for loans. Bigger contributions would be expected for religious ceremonies, village festivals and other public activities. All these militated against saving.

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1. Ibid., p.62; and Report of the Committee on Land and Agriculture (1938), Part II, p.51.

(6) Religious and social customs. Marriages, funerals, ceremonies attending the entry of boys into the monastic noviciate and ear-borings for girls all led to the spending of considerable sums of money.<sup>1</sup> Substantial contributions were made towards the upkeep of priests, monasteries, pagodas, shrines, etc., and for the very popular pwe or open-air theatrical performances. Expenditure of this sort was a matter of prestige. Often it led to borrowing soon after even if there was no borrowing for the occasion itself.<sup>2</sup>

(7) Character of the cultivator. The following description was given by E.G. Pattle in 1926 in a note for the Royal Commission on Agriculture:-

The bourgeois ideal of economy as a rule of life pursued with a view to financial security makes little appeal to the Burman agriculturist. Habitual indebtedness causes him no twinges of conscience and involves no social stigma. On the contrary the existence of a debt involves the existence of a creditor to whose interest it is to support and protect the debtor. His essential requirements are simple but he is not hampered by social conditions and is always ready at any moment to expand the range of his expenditure to the limits of his credit. The possession of money is

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1. T. Couper, op. cit., p.9, gave this example: "A woman owning land in one of the survey blocks investigated in the Pyapon District spent in eight years Rs. 1,740 as follows:- Rs. 300 on the death of her father, Rs. 700 on the death of her husband, Rs. 140 on the death of a grandson, Rs. 100 on a niece's death and Rs. 500 when her grandsons became novices. Though so many deaths in so short a period may be unusual the amounts spent are not unusually high."
  2. Pattle, op. cit., p.118; Nisbet, op. cit., Vol. I, p.295; and Report of the Committee on Land and Agriculture (1938), Part II, p.52.



to him an opportunity to be used in a manner dictated more by the chances or exigencies of the moment than by conscious choice. His philosophy teaches him that all is impermanent, and even in the secure areas of Lower Burma this dogma is reinforced by experience. The economic history of Burma in the last half century is one of unceasing and revolutionary change.<sup>1</sup>

The Banking Enquiry Report explained the typical attitude of Burman agriculturists towards indebtedness as "a temporary effect due to recent conditions of easy credit from Indian lenders and without adequate control in the application of loans,"<sup>2</sup> and towards the repayment of loans thus: "Let the extreme contempt which Burmans had for Indians until recent years (and still have in rural areas) be remembered, and the effect it would have upon the sense of a duty of repayment of loans to Indians."<sup>3</sup>

(8) Abuse of credit. The result of the rapid increase in the amount of money handled by and within the reach of paddy cultivators was extravagant spending and abuse of credit. It happened that the increase in money income coincided with the increasing facility in borrowing money, as the number of moneylenders and the amount of their capital quickly multiplied. It was noted that indebtedness was high where the land was good security and loans were readily obtained and that indebtedness, in fact, increased with borrowing power. The temptation to spend beyond one's means

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1. Pattle, op. cit., p.111.

2. Banking Enquiry Report, 1929-30, Vol. I, p.61.

3. Ibid., p.60.

and improve one's standard of living was great. This was especially so after a year with a good harvest and good paddy prices. Very little reserve was kept as a precaution for bad years.<sup>1</sup>

(9) Speculative ventures. Not only was there excessive expenditure but there was excessive investment. With the steady increase in paddy prices especially during the period 1900 to 1908 when the average price paid for paddy at Rangoon rose from Rs. 93 in February 1900 to Rs. 137 in February 1908, many owners of paddy holdings borrowed money to buy a second holding, mortgaging both the old and the new holdings, in order to produce more paddy. But should any financial crisis occur, as in 1907 when there was a world-wide money stringency originating in the U.S.A., moneylenders would call in their loans. Many borrowers then lost all their land or sold off the new holding and still had a mortgage on the old holding. Thus many old-established cultivators who had managed to survive the difficulties of the early days found themselves without land or with a mortgaged holding.<sup>2</sup>

From about 1910 many agriculturists indulged in the

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1. Ibid., p.61.

2. Ibid., pp.61-62; Couper, op. cit., p.2; and Report of the Land and Agriculture Committee (1938), Part II, p.51. This pattern was repeated in the 1920's and early 1930's. From 1921 to 1928 paddy prices rose steadily but from 1928 to about 1932 the trade depression led to a drastic fall in paddy and land prices. Moneylenders then decided to call in their loans and this led to a large volume of foreclosures.

practice of storing paddy through the rains in the expectation of a rise in prices. Money was borrowed on mortgages of their land to build storage facilities and to buy additional paddy for storing. If prices did not run the expected course, the consequences were often disastrous. This happened, for example, in 1913, 1914 and 1916 when prices rose very slowly if at all and in 1917, when the imposition of war control led to a fall in the price from Rs. 115 in February to Rs. 85 in October. Many who were holding paddy for a rise suffered heavy losses and had to part with their land to pay for their debts.<sup>1</sup>

Other forms of business which sometimes resulted in the loss of land by an agriculturist were trading ventures in cattle, piece-goods, tobacco, etc. The trading capital was often obtained by mortgaging the land which would then be lost when the venture failed.

(10) Attitude of lenders. Moneylenders in most cases were not interested in whether the cultivator could repay or not so long as the security was good. No attempt was made to encourage improved methods of farming by borrowers and to see to it that loans were used for productive purposes. The system of taking repayments of loans by instalments at each harvest was practically unknown so that

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1. Couper, op. cit., pp.8-9; Report of the Committee on Land and Agriculture (1938), Part II, p.52; and E.H. Solomon, "Note of Dissent", Interim Report... (1931), p.61.

borrowers were not given any help in building up an improved position. No distinction was made between cultivation expenses, long-term loans, fixed capital and emergency needs. Some Chettyars were known to postpone the foreclosure of land belonging to a client who had got into difficulties in the hope that he would recover as they were more interested in the business of moneylending than in land-owning. But some Burman moneylenders were accused of deliberately entangling a debtor so as to get his land. Undoubtedly, Burman moneylenders were more keen to become land-owners than were the Chettyars and were more inclined to keep whatever land fell into their hands because they were better at managing the land and making it pay.<sup>1</sup>

In the early days of development of the paddy lands of Burma, moneylenders, mainly Chettyars, were known to persuade cultivators to borrow and used to "peddle" around the countryside inviting and encouraging people to borrow. This often led to unnecessary borrowing. In fact, indebtedness was due to a great extent not to the cultivators' inability to obtain credit but to the "fatal ease with which they could secure credit far in excess of the amount which they could profitably employ."<sup>2</sup>

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1. Banking Enquiry Report, 1929-30, Vol. I, pp.69, 349;  
and E.H. Jacoby, Agrarian Unrest in Southeast Asia  
(London: Asia Publishing House, second revised edition,  
1961), pp.90-91.
  2. Report of the Land and Agriculture Committee (1938),  
Part III, p.78.

(11) High rates of interest. The rates of interest charged in Burma were considered in several official reports as being much higher than comparable rates in most parts of India. The Indian Cotton Committee of 1928 reported that in all India 52 per cent of the loans were at 1 per cent or less per month. In Burma such rates were rare and the most usual rates were 1.25 to 1.75 per cent per month for loans on the best type of security, that is, land or gold, with higher rates in other cases. Rates on unsecured or sabape loans were 5 to 10 per cent or more per month.<sup>1</sup>

In the early stages of development of Lower Burma the risks and the shortage of capital led to high rates of interest. As most of the money was in the hands of the Chettyars, a small group of people with close racial, social, religious and other ties, arrangements could be made easily about minimum rates. Anyway, borrowers did not raise much objection as they were dazed by the rapid change to a money economy and by the steady rise in paddy prices. Also, the rates seemed not too bad when compared with the still higher rates which had prevailed under the Burmese kings and which continued in many of the Upper Burma villages from which many of the cultivators had emigrated.

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1. Banking Enquiry Report, 1929-30, Vol. I, pp.63, 343;  
and Administration Report, 1880-81, p.3.

As time went on the force of custom maintained the rates, supported by a sustained demand and by the fact that most of the capital was in the hands of a small homogenous class.<sup>1</sup>

The Banking Enquiry Report made this comment on the high rates of interest in Burma:

It is obvious that with these rates of interest it is difficult for a cultivator to avoid getting deeply into debt whenever any misfortune occurs to him. If he is not able to repay promptly, the compounding of large amounts of interest, also bearing interest at a high rate, makes a default happen easily; and after that the difficulties accumulate rapidly. Comparatively small loans begun on a promissory-note for a perfectly legitimate purpose may thus swell up into mortgage-loans too heavy for the borrower to bear. It is unfortunately true that many cultivators have by a single misfortune, such as ill-health or death of cattle or theft of cattle or a short harvest, been set inevitably upon a road leading straight to the loss of their land. For many of them this has resulted partly from the large amount of indebtedness due to extravagance and other errors in the past; but even those who have not borrowed so much can fall easily into the same plight as those who have; they need only have such misfortunes as those mentioned above in two successive years. Everybody, however, industrious, skilful and thrifty, is liable to suffer this. It has indeed been said that agriculture in Burma cannot pay its way with interest-rates at the present level.<sup>2</sup>

Unfortunately, a vicious circle arose, as the high interest rates to which the risks of lenders gave rise were themselves the cause of enhancement of some of those risks. The borrower of a loan bearing a high rate of interest more

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1. Banking Enquiry Report, 1929-30, Vol. I, p.344.

2. Ibid., p.63.

readily found that he was unable to pay the full amount of interest and was therefore easily discouraged from paying any at all. The compounding of large amounts of interest, also bearing interest at a high rate, made a second default still more likely, and so on. Borrowers were also less ready to make regular payments because they accused the lenders of greed. In this they had the sympathy of the general public which always sided with the borrowers in any dispute with a lender. This was more so in the case of lenders who were aliens.

Other vicious circles were the difficulty faced by the indigenous people in accumulating their own capital, and the inability of the cultivator to make advances in education, health and technology because of lack of capital and lack of loans at a low rate of interest. But without making these advances the cultivator could not get out of the rut as he could not acquire the money required for making them.

#### 4. Private Moneylenders.

Private lenders were the most important source of loans for cultivators. In the early years of British rule they were the only source. Later, some of the loans were provided by the government under the Land Improvement Loans Act of 1883 and the Agriculturists' Loans Act of 1884, by co-operative credit societies in certain localities, and by

Dawson's Bank in the delta area. These together accounted for only a small fraction of total loans. The great bulk of the loans were provided by private lenders. In Lower Burma about two-thirds of the loans were provided by Chettyars, while much of the rest were lent by Burmans, Chinese and non-Chettyar Indians. Chettyars were less important in Upper Burma, however, and most loans there were made by Burmans. Of the private lenders the Burmans were by far the most numerous<sup>1</sup> while the Chettyars, though comparatively few in number, clearly provided the largest amount of loan-money.<sup>2</sup>

The only European-owned joint-stock bank which dealt with direct loans to agriculturists was Dawson's Bank. It was established in 1905 and had its head-quarters in Pyapon and branches in other parts of the delta.<sup>3</sup> It advanced about 2.5 million rupees annually in loans on mortgage security to the more substantial class of landowners. But in the depression of the early 1930's, the Bank encountered

1. According to the Banking Enquiry Report, 1929-30, Vol. I, p.67, there were about 1,500 Chettyar firms lending to agriculturists while in nearly every one of the 15,000 village-tracts there was at least one Burman lender, and most of these had several Burman lenders.
2. Ibid., pp.53, 67.  
In 1927-28, for income tax purposes, 1,587 Chettyars were assessed on an estimated total assessable income of over 30 million rupees while 1,315 other moneylenders in the country were assessed on an estimated total income of 6½ million rupees. Report of the Committee on Co-operation in Burma, 1928-29, chairman: H. Calvert (Rangoon: Supdt., G.P.S., Burma, 1929), p.10.
3. Rangoon, Bassein, Bogale, Dedaye, Kyaiklat, Maubin, Myingagon and Moulmeingyan (in Myaungmya district). U Tun Wai, Burma's Currency and Credit (Bombay: Orient Longmans Ltd., 1953), pp. 78, 131.



serious difficulties due mainly to the drastic fall in land values and the resulting wholesale foreclosures. It succeeded, however, in making its very heavy landholdings pay by careful estate management and by the time of the outbreak of war in the Pacific, Dawson's Bank had completely recovered.<sup>1</sup>

Burman lenders. All over Burma there were numerous Burman moneylenders, most of whom were Burmese (including Arakanese). In some areas there were Karen lenders who lent almost solely to other Karens. Throughout Upper Burma the indigenous lenders supplied much more agricultural finance than in most parts of Lower Burma. Burmans who lent on a small scale were usually cultivators while lenders on a considerable scale were as a rule landowners as well. Everywhere loans were given by landlords to their tenants and were regarded as part of the land-letting business. There were also professional Burman moneylenders who used their own or borrowed money to lend and regarded this as an important if not a principal means of earning a living. But few operated on a scale comparable to that of the Chettyars.<sup>2</sup>

Burman lenders were sometimes accused of deliberately causing a borrower to over-reach himself in order to get

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1. Ibid., pp.78-82; and Banking Enquiry Report, 1929-30, Vol. I, pp.70-71.
  2. Banking Enquiry Report, 1929-30, Vol. I, pp.68-69.

possession of his land. Since they found it easier to manage the land and make it pay than the Chettyars, they showed less objection to landowning and they tended more often to keep the land when it fell into their hands. Also, as they were permanent residents of the country they had no reason for wishing to sell off the land at the earliest opportune moment.

Non-Chettyar Indian and Chinese moneylenders. Indian moneylenders (who were not Chettyars) were of all kinds coming from various parts of India and including amongst others Mappilas, Chulias, Gujeratis, Marwaris, Gurhas, Sikhs, Bengalies and Uriyas.<sup>1</sup>

In the Irrawaddy and Pegu Divisions, and a few Upper Burma districts, Chinese provided a great deal of credit, partly by straight loans but chiefly by selling on credit. Many of the village shopkeepers were Chinese as were nearly all pawnshop owners in the country.<sup>2</sup>

Most of these Indian and Chinese moneylenders owned land but very few were agriculturists. None of these foreign lenders, nor the Burman lenders, had any organisation comparable to that of the Chettyars.

The Chettyars.<sup>3</sup> The Chettyars were a caste of

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1. Banking Enquiry Report, 1929-30, Vol. I, p.70.

2. Ibid., p.81.

3. Sometimes spelt "Chettiars" or "Chetties". Almost all Chettyars in Burma were Nattukkottai Chettyars. Ibid., p.189.

hereditary moneylenders who were the indigenous population of Chettinad, a barren and waterless region near Madras. Though they came from a small region, they had wide business connections, doing business not only in Burma but also in parts of India (especially Madras), Ceylon, Malaya, Indo-China, Siam, Indonesia and Mauritius. But their main business field was in Burma which was more important to them than all the other countries put together.<sup>1</sup>

The opening of Chettyar businesses in Burma followed the establishment of British rule in the various parts of the country. The development of the rice export trade and the rise in land values together with the settled conditions brought about by British rule encouraged an inflow of Chettyar capital. The spread of Chettyars was very rapid as they fulfilled an essential role in the opening up of the country. By the twentieth century, throughout every well-populated part of Lower Burma there was a Chettyar within a day's journey of every cultivator.<sup>2</sup>

It was estimated by the Banking Enquiry Committee in 1929-30 that the total amount of capital lent by Chettyars amounted to about 750 million rupees. About two-thirds of this went to agriculture. From 500 to 550 million rupees were supplied by the proprietors of the various firms from

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1. Ibid., pp.67, 190-1; Pattle, op. cit., p.119; and Lakshmi-Chandra Jain, Indigenous Banking in India (London: Macmillan & Co., 1929), p.31.
  2. Banking Enquiry Report, 1929-30, Vol. I, p.203.

their own savings, which were mainly profits derived from business in Burma. The remainder was partly obtained as deposits from other Chettyars and partly from non-Chettyar sources such as banks worked on western lines.<sup>1</sup>

Most of the money lent directly to agriculturists in Burma was provided by Chettyars who also financed to a great extent others who did such lending. In certain Lower Burma districts, such as Hanthawaddy and Tharrawaddy, Chettyars provided more than 99 per cent of all direct crop loans. In districts where less was lent directly, the Chettyars financed to a great extent the Burman and other lenders. It was estimated by the Banking Enquiry Committee that Chettyars provided directly and indirectly more than two-thirds of all crop loans in all Lower Burma districts except Tavoy, Mergui, Kyaukpyu and Sandoway which were quite cut off from the general body of the country; while the share in Upper Burma was about one-sixth.<sup>2</sup>

The proprietors of Chettyar firms normally resided in Chettinad and paid visits every now and then to their firms in Burma. These businesses were run by agents who were engaged on a three years' contract. Usually, two agents took turns in running the business. Before the end of the period of three years the predecessor would usually return

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1. Ibid., pp.211, 213; and Pattle, op. cit., p.119.

2. Banking Enquiry Report, 1929-30, Vol. I, p.67.

and spend about six months acquainting himself with the business generally and getting to know the clients. The new agent might call in bad or doubtful loans as he did not wish to bear any losses. Because of this system Chettyars normally lent only to people who could offer good security. Long-term loans were not provided for because of this lack of continuity.<sup>1</sup>

The Banking Enquiry Report listed the outstanding qualities of the Chettyars as:

(a) Their organisation as a financial system, (b) their sodality, (c) their mutual confidence, (d) the confidence they command in the minds of most of the ordinary people of the country as to the honesty of their dealings, (e) the simplicity and rapidity of their procedure for granting loans, (f) the magnitude of the total business done by them, (g) their spread over all Lower Burma so that (in spite of their origin) the availability of Chettyar loans is accepted as though it were as natural as rain in the monsoon; and (h) their dominating position as rural financiers in Lower Burma.<sup>2</sup>

From about 1930, the Chettyars greatly restricted their moneylending activities. The amount of money lent shrank drastically from about 500 million rupees to about 100 million rupees. This decline began during the depression when waves of foreclosures by Chettyars occurred due to the fall in land values. Much indebtedness was thus liquidated. The Chettyars then restricted their lending to their own tenants, since they could not get tenants otherwise, because

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1. Ibid., pp.209-10.

2. Ibid., p.194.

they became increasingly reluctant to lend on the security of land due partly to the many attempts at tenancy legislation, to the separation of Burma from India in 1937 and to the anti-Indian and anti-Chinese riots of the 1930's. All aliens therefore were eager to dispose of their land in Burma "particularly in view of ... the nationalist demand for legislation aimed at returning the rice fields to the sons of the soil."<sup>1</sup>

The Chettyars, like moneylenders all over the world, had been both praised and condemned. Some claimed that without Chettyar capital Burma's rice-producing capacity could not have developed at the rapid pace it did. Others that the price paid by Burma was too high. The two sides were exemplified by the following quotations. The first was taken from a public speech made by Sir Harcourt Butler, the Governor of Burma, in December, 1927:

Without the assistance of the Chettyar banking system Burma would never have achieved the wonderful advance of the last 25 to 30 years.... The Burman today is a much wealthier man than he was twenty-five years ago; and for this state of affairs the Chettyar deserves his share of thanks.<sup>2</sup>

The other quotation was taken from the evidence given to the Banking Enquiry Commission in 1928 by a Karen witness:

Tersely and pointedly speaking, Chettyar banks are fiery dragons that parch every land that has the misfortune of coming under their wicked creeping.

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1. Christian, op. cit., p.118; Furnivall, Political Economy of Burma (1938), p.125.
  2. Banking Enquiry Report, 1929-30, Vol. I, p.189.

They are a hard-hearted lot that will wring out every drop of blood from the victims without compunction for the sake of their own interest. One proof of this: thirty or forty years ago, out of ten villagers in the country nine had lands; now it is just the reverse, and the one that has got anything, has the same tied up in the hand of the Chettyar tightly.... Again, suffice it to say that the swindling, cheating, deception and oppression of the Chettyars in the country, particularly among the ignorant folks, are well known and these are to a large extent responsible for the present impoverishment of the land.<sup>1</sup>

The Banking Enquiry Committee arrived at the conclusion that "the Chettyars have been well remunerated for the service they have rendered Burma; but that does not alter the fact that the service has been rendered."<sup>2</sup>

#### 5. Government Loans.

The Government of Burma supplied loans direct to agriculturists under the Land Improvement Loans Act of 1883 and the Agriculturists' Loans Act of 1884. Loans could be obtained under the former act for works which improved the land, defined as adding to the letting value of the land, such as the construction of wells, irrigation or drainage channels, etc. The loans were repayable by instalments. But these credit facilities were little used. (See Table VII.1.) Part of the reason was the delay caused by enquiries into the security offered and whether the improvement would be both feasible and remunerative. But in actual

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1. Ibid., p.189.

2. Ibid., p.190.

Table VII.1 : Amount of Loans Advanced Under the Land Improvement Loans Act, from 1905-06 to 1935-36.

Year	Amount of Loans
	<u>Rs.</u>
1905-06	4,000
1910-11	11,000
1915-16	5,000
1920-21	38,000
1925-26	20,000
1930-31	6,000
1935-36	5,000

Sources: Pattle, op. cit., p.126;  
and Report of the Committee on Land and Agriculture (1938), Part III, p.79.

practice there was little borrowing from any source for such purposes. Also, since such works usually benefited many individuals it was extremely difficult to organise the repayment of loans by a large number of joint borrowers.<sup>1</sup>

The Agriculturists' Loans Act enabled Government to lend to "owners and occupiers of arable land, for the relief of distress, for the purchase of seed or cattle or any other purpose not specified in the Land Improvement Loans Act but connected with agricultural objects."<sup>2</sup> Though the loans under this act were much more significant than loans under the first act (see Table VII.2), it was found that they proved popular only in tracts where the market value of land was low and where loans from ordinary money-

1. Report of the Committee on Land and Agriculture (1938), Part III, p.79.

2. Ibid., p.80.



lenders were difficult to obtain. The great advantage of government loans over other types of loan was that the rate of interest was comparatively very low, being 10 per cent per annum for long-term loans and slightly higher for other loans.

But against this were numerous disadvantages. One was that there was much red tape and delay, requiring frequent attendances at the township office. Then there was the need to persuade the village headman, the thugyi, to recommend the loan and to bribe various persons to see that the papers were dealt with. The supply of money was never enough for all applicants. This meant that there was uncertainty about getting the loan and about how much would be given. Also, the loan could not be taken by instalments

Table VII.2 : Amount of Loan Advanced Under the Agriculturists' Loans Act, from 1900-01 to 1935-36.

Year	Amount of Loans
	<u>Rs.</u>
1900-01	111,000
1905-06	676,000
1910-11	918,000
1915-16	1,299,000
1920-21	3,161,000
1924-25	2,422,000
1930-31	955,000
1935-36	360,000

Sources: Pattle, op. cit., p.125;  
and Report of the Committee  
on Land and Agriculture (1938),  
Part III, p.81.

as he required them so that there was not much saving in interest as the difference in the rates would suggest. Another disadvantage was that there was a definite date for repayment and finally, moneylenders lent larger amounts in proportion to the value of the security given.<sup>1</sup>

The Banking Enquiry Commission recommended that where loans could be obtained from banks, co-operative societies, Chettyars and other moneylenders, Government loans should be gradually stopped and loans restricted to assistance in cases of widespread distress.<sup>2</sup> This recommendation was evidently followed for the amounts lent in the 1930's were much reduced.

#### 6. Co-operative Credit.

The co-operative movement in Burma was started to free the small cultivator from his dependence on the moneylender. It was not a spontaneous growth from among the people but was government-inspired and government-led. In this case "government" meant the "Government of India" and the movement was started to ameliorate the economic conditions of the farmers of India. It was caused largely by the discovery of the extreme financial weakness of the Indian rural population as brought out startlingly in periods of acute

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1. Report of the Bribery and Corruption Enquiry Committee, 1940 (Rangoon: Supdt., G.P.S., Burma, 1941), p.19.
  2. Banking Enquiry Report, 1929-30, Vol. I, p.72.

distress and famine.<sup>1</sup>

The co-operative movement owed its inception to the report of the Indian Famine Commission of 1901, which recommended the introduction of mutual credit societies. In 1904, the Co-operative Societies Act was passed for the whole of India. Since famines as calamitous as those which occurred in India were unknown in Burma, it was doubtful whether the economic condition of the people of Burma or any defect in the credit system entered the thoughts of those framing the Act. However, the Government of Burma felt that "Burma should enjoy whatever benefits the new legislation could confer."<sup>2</sup> Also, the Government was aware of the unpopularity of the loans issued under the two Loans Acts and sought in the co-operative credit societies a more suitable channel for helping agriculturists financially.

Having decided to introduce co-operative credit societies, the Government of Burma appointed a Registrar to supervise and direct the movement generally and set up a Department of Co-operative Societies to help him. The establishment of agricultural credit societies once started, quickly grew in number, as can be seen in Table VII.3. The decline in number from about 1925 onwards will be explained later.

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1. Report of the Committee on Land and Agriculture (1938), Part III, pp.84-5.
  2. Ibid., p.85.

Table VII.3 : Number of Agricultural Co-operative Credit Societies and Their Members in Burma, 1906 to 1940.

Year	<u>Agricultural Co-operative Credit Societies</u>	
	<u>Number of Societies</u>	<u>Total Number of Members</u>
	(1)	(2)
1906	21	1,386
1910	252	6,128
1915	1,252	30,130
1920	3,319	72,816
1925	4,057	94,900
1930	2,191	50,074
1935	1,371	29,712
1940	1,573	28,985

Source: Annual Reports on the Working of the Co-operative Credit Societies Act in Burma.

It was at first intended that the capital of the societies should consist of the share capital and deposits from members and from government loans (the amount of which would equal the share capital and deposits). But the amounts collected, doubled by government contributions, were not sufficient to meet the needs of the societies and deposits were sought from private individuals, mostly government servants. The collection of deposits was undertaken by a firm of solicitors which made disbursements on the advice of the Registrar. These "somewhat unorthodox" functions were taken over in 1910 by the newly established Upper Burma Central Union Co-operative Bank in Mandalay, renamed the Burma Provincial Co-operative Bank Limited, in

1920. The Bank, with other less important central banks, collected funds to finance the primary credit societies.<sup>1</sup>

As the movement grew the central banks had to deal with numerous and widely scattered rural credit societies with which they had no close contact and of whose affairs little was known. It was thought to be safer if societies were grouped into unions whose function was to assess the credit and guarantee the borrowings of the affiliated societies. Great hopes were placed on the unions, which were to act as "controlling, inspecting and propagandist bodies" as well.<sup>2</sup>

In 1928 an enquiry was ordered into the affairs of the Burma Provincial Co-operative Bank, which was in difficulties. In 1929 the Report of the Committee on Co-operation in Burma, under the chairmanship of H. Calvert, was published and it was found that the whole movement was in a state of collapse. The Provincial Bank was found insolvent and the Committee recommended its liquidation. This was carried out in 1932 when the Government assumed responsibility for its liabilities and took over its assets.<sup>3</sup>

The reasons for the failure of the movement were many. Firstly, the Registrar and the Co-operative Societies Department lost control of the movement due to its rapid

1. Report of the Committee on Land and Agriculture (1938)  
Part III, p.86.
2. Report of the Committee on Co-operation in Burma, 1928-29.  
Chairman: H. Calvert, pp.7, 43; and Report of the  
Committee on Land and Agriculture (1938), Part III, p.86.
3. Report on the Committee on Land and Agriculture (1938),  
Part III, pp.87, 95; The Government lost 3½ million  
rupees.

expansion and the lack of adequately trained personnel. Secondly, too much was expected of the unions while too little was done to see to it that the unions were properly organised and that the staff was sufficiently trained in the principles and methods of co-operation. As for the primary credit societies, it was evident that the spirit and ideals of co-operation and mutual help were lacking. Among the many faults of the societies were the practice of adjusting accounts so that unpaid loans were shown as having been paid and the amount of principal and interest entered as a fresh loan, and the recklessness and excessive leniency shown in the granting of loans and the treatment of defaulting members. It was stated that office-holders in unions as well as in primary societies showed "undue delicacy and lack of moral courage in dealing with the faults and misdemeanours of their neighbours" and they preferred "to put up with maladjustment and malpractices in the hope that one of the Government staff would one day come and put things right."<sup>1</sup>

The Calvert Committee went into great detail in describing the various causes of the movement's failure. However, it did not think that co-operation should be abandoned, but instead it recommended that, in view of the

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1. The Calvert Report (1929), p.43.

increasing burden of indebtedness in the country, the Government should proceed to reconstruct a sound well-controlled system of rural credit.

In the 1930's, following the recommendations of the Calvert Committee, many weak societies were liquidated. In the process of liquidation many co-operators suffered serious losses because of the principle of unlimited liability. Land, cattle, houses, carts and every form of property were seized by the liquidators. There was wholesale expropriation of cultivators and their reduction to the status of tenants and labourers. But from December 1935 onwards reconstruction of old societies began. Debts were reduced to within reasonable proportions so that members and societies would be able to repay their debts to the societies and unions respectively. Irrecoverable debts were written off. Much of the land taken over by the Government in the process of liquidation was given back to the original owners or their next-of-kin on the rent-purchase plan by which the market value of the land was made repayable in small annual instalments spread over a period not exceeding fifteen years.<sup>1</sup>

This second phase of the movement was definitely more promising. In the first place, everybody involved in

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1. Annual Report on the Working of the Co-operative Societies Act in Burma, 1935-36, pp.4, 7; Report of the Committee on Land and Agriculture (1938), Part III, pp.102-3.

co-operation, from the Registrar downwards, had learnt a few practical lessons. All realised that the co-operative plant had to be nurtured with care. It was seen that co-operation should not be "preached as a faith, a religion of celestial origin but as a humdrum matter of business for the satisfaction of purely terrestrial needs."<sup>1</sup>

Secondly, co-operation was no longer confined to the provision of credit. Steps were taken towards organised co-operative marketing of agricultural produce. Members' dues were collected in kind, thus facilitating repayment, and members' crops sold in bulk so that cultivators obtained better prices for their produce. There were schemes for compulsory savings and subscriptions towards cattle replacement funds. As stated in the Annual Report on the Working of the Co-operative Societies Act in Burma for 1938-39, "our aim should be to make the economic life of our cultivator wholly co-operative.... We should look forward to a day when he shall be qualified to feed and clothe his family co-operatively, make his living as a member of a co-operative agricultural society, and go for his borrowings or savings to a co-operative credit society."<sup>2</sup>

In the few years before the Pacific War it was reported that the second phase was working successfully. Crop loans

1. Report of the Committee on Land and Agriculture (1938) Part III, p.100.
2. Annual Report on the Working of the Co-operative Societies in Burma, 1937-38, pp.5-6.



given by the Co-operative Department were fully recovered every year as were also the rent purchase annuities. Unfortunately the War cut short the movement before it had time to establish itself firmly.<sup>1</sup>

As for an assessment of the importance of the movement in Burma, it can be seen from Table VII.3 column (2), that the total number of members never exceeded 100,000. In fact, in the Pegu district, the most successful co-operative banks in Burma supplied through the primary co-operative societies about 2 per cent only of all the crop loans in the district; and in other districts, perhaps with the exception of Mandalay, the percentage was much smaller. In 1925 F.H. Steavenson, the Registrar, estimated that the total number of members (95,405) of unlimited agricultural credit societies was less than five per cent of the total number of persons eligible for membership.<sup>2</sup> But there is no doubt that if the movement had been better organised right from the start the role that could have been played by co-operative credit in solving the more pressing problems of agricultural finance would certainly have been much greater.

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1. Annual Report on the working of the Co-operative Societies Act in Burma, 1937-38, p.4; Report of the Committee on Land and Agriculture (1938), Part III, p.101.
  2. Note by Steavenson quoted by Pattle, op. cit., p.120; and Banking Enquiry Report, 1929-30, Vol. I, p.70.

## CHAPTER VIII

### MARKETS FOR BURMA RICE

The volume of rice Burma exported to her various foreign markets every year depended on many factors, such as, the size of total output, the level of internal consumption, the amount of stocks held internally and the foreign demand for Burma rice.

The paddy acreage, as shown in Table II.5,<sup>1</sup> expanded at a tremendous pace in the latter half of the nineteenth century and this expansion continued, though at a slower rate, into the twentieth century and was only checked by the Second World War when considerable damage was inflicted on the rice industry as a whole. The rapid expansion of paddy acreage was accompanied by a parallel increase in the production of paddy though at a slightly lower rate as the average yield per acre for the whole country was around 1,600 lbs. of paddy per acre in the 1880's and slowly declined to around 1,500 lbs. per acre in the 1930's.<sup>2</sup>

An extensive paddy acreage, however, does not necessarily lead to an exportable surplus. Burma owes her ability to export rice to her sparse population. The Report on the Marketing of Rice in India and Burma (1941)

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1. See above p. 39.

2. See above pp. 43-45.

estimated that about 17 per cent of the total production of rice in Burma was retained on the farm and in the villages for food, seed, fodder, etc., leaving a balance of about 83 per cent to form the marketable surplus. The exportable surplus constituted roughly 78 per cent of the marketable surplus or 63 per cent of the total output.<sup>1</sup>

From the short-term point of view the supply of rice for the export trade may be influenced by the amount of paddy and rice held as stocks in the country. This depends on the time of the year, the demand from abroad as expressed in the price, and the trend of the speculative market. Under normal circumstances, the amount held as stocks stands at its peak level at the time of harvest around November and December, and diminishes month by month till the next harvest, the rate of decrease in stocks at any one moment depending on the prevailing market conditions.

Finally, foreign demand for Burma rice in the various importing countries depends on, to mention only the more important factors, the state of the home-grown food crops in those countries, the relative prices of rice and other food crops, the relative prices of Burma rice and rice from other countries, consumer preferences for certain

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1. Report on the Marketing of Rice in India and Burma (1941), pp. 88, 93.

2. See Table II.

types of rice and for rice from certain countries, and the rate of food production compared with the rate of population growth in the importing countries. These factors are dealt with in greater detail when each importing country as well as the broader market groups are considered.

#### 1. Internal Trade.

The whole exportable surplus came from Lower Burma where about 80 per cent of the total paddy acreage was situated. The Upper Burma rice crop was not important in external trade as it was barely sufficient for internal consumption. In fact Upper Burma had to import varying quantities of rice from Lower Burma quite regularly. Rice was grown wherever possible and accounted for about one-third of the total cultivated area in Upper Burma, but the uncertain rainfall and frequent droughts, especially in the dry zone, meant that the amount of rice harvested was extremely variable. There were innumerable irrigation works, embankments, and canals built from ancient times and repaired, improved and extended continuously but in a drought these were often useless. In a normal year about 68,000 tons were usually bought by Upper Burma, but in times of scarcity the Upper Burma demand could raise prices to such an extent that exports abroad, especially to countries in Asia, were much curtailed, as in 1888 when

151,000 tons were taken by Upper Burma.<sup>1</sup>

Up to 1885, when the Kingdom of Ava was conquered by the British, the King of Burma regularly sent agents down to Lower Burma to buy rice to feed his army and to be stored in the royal warehouses in case of scarcity. The method used by the agents was to lend large sums of money to the cultivators long before the rice was harvested so that they could secure a lien on the crop.<sup>2</sup> After 1885, the trade with Upper Burma was mainly in the hands of Burman and Chinese traders. Figures for the flow of rice to Upper Burma from 1897 onwards were not recorded but as the subsistence economy was gradually modified by an increasing dependence on cash crops like groundnut and cotton, the flow of rice northwards most probably increased.

Both Lower and Upper Burma consumed mainly the quality of rice with the trade descriptions of Small Mills Specials and Bazaar Quality.<sup>3</sup> Parboiled rice was not in demand by Burman consumers but small quantities of the superior parboiled qualities such as Long Boiled and Boiled Sughandi<sup>4</sup> were consumed by Indian residents in Burma. On the whole rice milled from the soft-grained varieties of paddy belonging to the Midon and Byat groups were preferred by the Burmans.

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1. See Appendix VIII.4: Table showing annual exports from Lower to Upper Burma, from 1865 to 1896, on pp.364.
  2. Trade and Customs Report, 1875-76, p.50.
  3. For an account of the various rice grades produced in Burma mills, see above pp. 151-57.
  4. See above p. 156.

Table VIII.1 : Distribution of Annual Average Exports of Rice and Paddy from Burma by Market Group, 1865-66 to 1939-40.

Period	Europe	India and Ceylon	Southeast Asia	China and Japan	Others	Total
<u>In thousands of tons</u>						
1865-66 to 1870-71	249	52	-	-	-	399
1871-72 to 1880-81	527	114	70	1	98	810
1881-82 to 1890-91	708	90	164	1	18	981
1891-92 to 1900-01	749	432	222	40	20	1,463
1901-92 to 1910-11	792	607	367	182	221	2,169
1911-12 to 1920-21	689	914	379	90	104	2,176
1921-22 to 1930-31	520	1,172	390	246	348	2,676
1931-32 to 1939-40	420	1,855	310	182	374	3,141
<u>Per Cent</u>						
1865-66 to 1870-71	62.4	13.0	-	-	-	100.0
1871-72 to 1880-81	65.1	14.1	8.6	0.1	12.1	100.0
1881-82 to 1890-91	72.2	9.2	16.7	0.1	1.8	100.0
1891-92 to 1900-01	51.2	29.5	15.2	2.7	1.4	100.0
1901-02 to 1910-11	36.5	28.0	16.9	8.4	10.2	100.0
1911-12 to 1920-21	31.7	42.0	17.4	4.1	4.8	100.0
1921-22 to 1930-31	19.4	43.8	14.6	9.2	13.0	100.0
1931-32 to 1939-40	13.4	59.0	9.9	5.8	11.9	100.0

Sources: Annual Reports on the Administration of Burma, Annual Trade and Customs Reports, and Annual Statements of the Sea-borne Trade and Navigation of Burma.

Rice which was not for internal consumption or stock-holding was exported to the following markets which are grouped under five heads: -- (1) Countries in Europe, (2) India and Ceylon, (3) countries in Southeast Asia, (4) China and Japan, and (5) other countries.

## 2. The European Market.

As is shown by the above table, Europe was the principal market for Burma rice in the nineteenth century, taking

roughly more than half the total exports from Burma, but from about 1900 onwards the Asian market became relatively more important. Up to the First World War, Europe took less than 40 per cent of the exportable surplus and by the end of the War exports of rice to Europe dropped still further and accounted for less than 20 per cent of Burma rice exports, the remainder going mostly to Asian countries, the most important of which was the India-Ceylon market.

But in the early days of the rice industry, the European market was the most important. The first big rice-milling and exporting firms in Burma were European firms (mainly British and German) which saw the opportunity for making profits out of the growing demand for rice and rice products in Europe and the steadily increasing supply of rice in Burma. European merchants and millers were not only among the first to realise the great potentialities for profit-making in the rice trade but were also able to obtain adequate financial resources and bring with them advanced technical know-how and business management methods necessary for the efficient running of large-scale milling and exporting firms. From the very beginning they gained the lead over their less well-equipped Indian and Chinese rivals.

The dominating position occupied by European firms in the early days meant that the European market which was

practically monopolised by them had the first claims on the rice produced in the big port mills. It was only in times of great scarcity or famine in a big rice-eating country in Asia that considerable quantities were exported to the Asian market. At such times prices for paddy and rice were driven so high that European merchants were often forced to cancel contracts to deliver rice in Europe in order to cut losses. On the other hand, the big mills made large profits by selling milled rice to the famine-stricken country directly or to merchants trading with that country.<sup>1</sup>

The development of the European rice milling and exporting firms in Burma was so rapid that by 1890 it was remarked that where rice milling was concerned "decay and extinction has already to a great extent overtaken London and Liverpool"<sup>2</sup> and the increasing shipments of white rice, instead of cargo rice, from Burma were fast forcing many millers to become mere dealers whose business was more and more confined to the final polishing and the distribution of rice to buyers and retailers.<sup>3</sup>

The millers in Burma were not only getting a bigger share of the milling business, but were also exporting white rice to various countries in the West Indies and Africa which previously bought white rice from Europe. In

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1. Annual Report on Trade and Customs, 1878-79, p.22.
  2. Annual Report on Trade and Navigation, 1890-91, p.20.
  3. Annual Report on Trade and Navigation, 1891-92, p.23.



Table VIII.2 : Distribution of Annual Average Exports  
of Rice and Paddy from Burma to European  
Countries, 1871-72 to 1939-40.

Period	U.K.	Germany	Holland	Italy	Total to Europe
	<u>In thousands of tons</u>				
1871-72 to 1880-81	511	5	1	11	527
1881-82 to 1890-91	324	194	75	29	708
1891-92 to 1900-01	196	249	127	-	749
1901-02 to 1910-11	154	334	170	5	792
1911-12 to 1920-21	322	115	86	29	689
1921-22 to 1930-31	82	296	74	15	520
1931-32 to 1939-40	61	190	73	14	420

Sources: Annual Reports on the Administration of Burma,  
Annual Trade and Customs Reports, and Annual  
Statements of the Sea-borne Trade and Navigation  
of Burma.

their annual review of the rice trade, a London firm of rice merchants, Messrs. Fraser and Company, wrote in 1881: "The competition already started at the Burma ports is causing some apprehension as large quantities of cleaned rice are being shipped direct to the great consuming centres, which are some of the most important markets for the European millers".<sup>1</sup>

One reason, therefore, for the declining importance of Europe as a market for Burma rice was the development of direct exports to consuming centres which previously bought rice from Europe. Other reasons which will be dealt with in greater detail below were the raising of tariff walls against rice imports into certain European countries and

1. Annual Report on Trade and Navigation, 1880-81, p.19.

the increasing competition of other rice-exporting countries in the European market for rice.

Burma rice was imported into every country in Europe but the most important countries in the trade were Britain, Germany, Holland and Italy. Britain was the leading importer of Burma rice till the 1890's when Germany became more important. (See Table VIII.2). In Britain, most of the rice mills were concentrated in Liverpool and London and re-exports were made to the Continent, the West Indies, Cuba and West Africa.

The decrease in British imports of Burma rice was due mainly to the competition of Germany and Holland in the rice milling and re-exporting business. As noted earlier, the increasing shipments of milled white rice from Burma -- made possible by the shorter and quicker journey through the Suez Canal, improvements made in ship ventilation systems and the installation of more elaborate mill machinery in Burma -- resulted in the loss of much milling business in Europe. The loss was not evenly distributed among the different countries, however. It was noticed that while mills in Britain were seriously affected, mills in Germany and Holland suffered much less. One reason for the better position of the Continental millers was that rice was more popular with the Continental Europeans who took to it quite easily in times of shortage in other food

crops. Continental millers therefore had a bigger home market and were nearer to the countries whose people consumed more rice.

Another reason lay in the location of mills. Liverpool was the chief rice milling centre in Britain and its mills were built near the point where rice-carrying steamers loaded and unloaded, but with the development of the port and the increase in the size of steamers, conditions changed and the loading and unloading of rice took place away from the mills so that transport and handling charges were increased. On the other hand, most of the mills in Germany (Hamburg and Bremen) and Holland (Amsterdam, Rotterdam and Zaandam) were situated on the waterside so that in many cases rice could be taken straight from the steamers into the mills and vice versa, and in others it merely had to be carried by lighters to the mills.<sup>1</sup> An additional advantage enjoyed by Continental millers was cheaper labour charges. Finally, it was admitted that the British mills were older and smaller than most of the German mills and the machines were also less efficient.<sup>2</sup>

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1. "All the evidence taken showed that the cost of landing and exporting rice was higher in Liverpool than in Continental, and especially German, ports." Reports on Rice ("Imperial Institute: Special Committee on Food Grains, Chairman: M.F. Reid"; London: John Murray, 1920), p.17.

2. Reports on Rice (1920), pp.15-16.  
But C.E. Douglas wrote that: "It is not a question of greater skill or experience, either in the design or manufacture of suitable machinery, or in its operation when installed. We are simply faced with the fact that handling and general labour charges are lower in certain European ports than with us: and on this ground, and on it alone, British millers seem unable to compete with their Continental brethren." Douglas, Rice (London, 1925 ), pp.133-34.

Germany became the main buyer of Burma rice in Europe from the 1890's onwards, except for a break during the First World War when German mills and other property in Burma were confiscated and trade with Germany entirely ceased. After the War, the Germans returned and by the early 1920's had completely recovered their pre-war position.

Much of the rice imported into Germany was re-milled and re-exported to Cuba, the West Indies, West Africa, South America and neighbouring European countries. Net imports of rice into Germany were slightly less than half total imports and the rice was used for food, fodder, brewing, starch manufacture and other industrial uses.

About 1925, the German rice milling industry suffered a setback. The reason was the prohibitive differential duties between polished and cargo rice which had been imposed by neighbouring countries to encourage their own rice milling industries. German intake of Burma rice therefore decreased considerably. This was also due to the increasing competition of Italian rice in southern Germany.<sup>1</sup>

Exports to Germany further decreased during the 1930's due to raised customs duties and surcharges placed on rice and rice bran imported into Germany. The use of rice for food or fodder was discouraged officially as it competed with home-grown crops. A surcharge of Rm. 1<sup>2</sup> per ton was

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1. Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.12.

2. A Reichmark was of about the same value as a rupee.

placed by the Monopoly Office, established in 1932, on rice intended for human consumption, whilst this was raised to the prohibitive figures of Rm. 85 per ton on fodder rice and Rm. 110 per ton on rice bran.<sup>1</sup> At the same time, exports of rice from Italy, Siam and Indo-China to Germany did not diminish owing to "compensation" trade agreements,<sup>2</sup> Italy and Siam even increasing their rice exports to Germany.

Italy was a large importer of Burma rice which was mainly for re-export to Czechoslovakia, Austria and other European countries. Before 1890, Burma rice was partly re-exported and partly consumed by the poorer classes in Italy. In 1890, the Italian Government increased the import duty on rice for home consumption, as distinguished from rice in transit, to a prohibitive level<sup>3</sup> to protect the home-grown crop against competition in the home market. From that date onwards, therefore, practically all Burma rice imported into Italy was re-exported.

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1. Report of the Rice Export-Trade Enquiry Committee, Chairman: U Ba Pe (Rangoon: Supdt., G.P.S., Burma, 1937), p.10.
  2. "Compensatory trade control" was practised by most countries in Europe after World War I, but the most rigid exponent was Germany. Under this, pressure was brought to bear on buyers to limit their purchases to countries which were prepared to take goods to an equivalent value in exchange. This operated detrimentally to Burma whose normal balance of trade with Germany was favourable. Ibid., p.9.
  3. The duty on foreign rice imported into Italy was 6.50 gold lire per 100 kilos - equivalent to over Rs. 45 per ton. Interim Report... (1931), p.13.

Holland took annually large quantities of Burma rice, mainly good quality loonzein or husked rice, which were re-milled and re-exported mostly to neighbouring countries. In this market Burma rice had to face the competition of the higher grades of Java rice, which fetched good prices partly because of its good quality and partly because it usually arrived at a time when shipments from other rice-producing countries were at a minimum, since the rice harvest south of the equator occurs about midway between the harvests north of it. Besides rice from Java, rice from Spain and Italy became increasingly important from about 1920 onwards.

Italy, Siam, Java and Spain have been mentioned above as competing in certain European countries. Burma had to compete not only with these but also with Indo-China, the United States and Japan. The earliest two competitors Burma had to face were Siam and Indo-China.

Siam, Indo-China and Burma developed their rice-exporting industries at about the same time, that is, in the middle years of the nineteenth century. By the 1930's the three together were providing about 70 per cent of the world's exportable surplus of rice.<sup>1</sup>

Competition among them tended to be very keen. One

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1. Out of a total world export of about 80 million quintals per year during 1928-29 to 1933-34, 30 millions came from Burma, 13 millions from Siam and 12 millions from Indo-China. Report of the Rice Export-Trade Enquiry Committee (1937), p.4.

reason was that because of geographical proximity, years of plenty as well as lean years tended to coincide due to rather similar general climatic conditions. Further, in all three countries rice was the most important export, accounting for more than half of the value of ~~the~~ total exports of each country.<sup>1</sup> This high degree of dependence of the whole economy on the rice trade in the three countries accentuated competition in marketing their surpluses.

Competition was less keen in the European market than in the other markets, and this was due to several factors. One was that Burma rice was preferred to rice from the other two countries, since Burma rice destined for Europe was of the hard-grained varieties suitable for the extensive milling and polishing required by this market, whereas rice from Siam and Indo-China was mostly of the soft-grained varieties which broke easily when much milling was involved. In addition, the soft-grained varieties deteriorated much more during transit to Europe and were often over-heated and discoloured on arrival. Quality was still further impaired by the large content of broken and stained grains.

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1. The value of the rice exports accounted for 51 % of the value of the total exports of private merchandise from Burma, (average of 1929-34); 70 % of that from Siam (average of 1927-32); and 63 % of Indo-China (average of 1927-31). C.J. Robertson, "The Rice Export from Burma, Siam and French Indo-China," Pacific Affairs, Vol. IX, No. 2, (Honolulu, 1936), p.244.

Thus rice from these two countries usually fetched much lower prices than Burma rice in the European market.<sup>1</sup>

But in the 1920's Siam began to export a high grade rice called "garden" rice which was found to be equal if not superior to the best Burma could produce. Siam was able, therefore, to obtain a bigger share of the trade with Europe. An inferior quality rice was also exported known as Siam "field" rice which was in demand among distillers and starch-makers, who found it excellent for their purposes.

Indo-China lagged behind in the quality of rice she exported, and poor quality was made worse by marketing practices which hindered the establishment of recognised grades. The uncertain quality of Indo-Chinese rice did much to put off buyers. Almost all Indo-Chinese rice taken by Europe was absorbed by France.<sup>2</sup>

Although the three countries are adjacent to one another, the port of Rangoon is much nearer to ports in Europe than Saigon or Bangkok. Ocean freight rates, however, are not determined by distance alone. Both Saigon and Bangkok were served by numerous tramp steamers of

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1. Rice from Bangkok and Saigon fetched about 1s.6d. per cwt. less than rice from Burma in 1883.

Trade and Navigation Report, 1883-84, p.17.

2. The annual average exports to Europe from Indo-China for the three years 1932 to 1934 was 596,000 metric tons, while the exports to France was 538,000 metric tons, or 90 % of the total exports to Europe. Report of the Rice Export-Trade Enquiry Committee (1937), p.7.



various nationalities -- British, Norwegian, French, Siamese, Japanese, Dutch and Chinese -- as they lay near the main sea-routes, and freight rates were determined largely by competition.

On the other hand, tramp steamers were few at Rangoon because of its position off the main trade-routes. Freight rates from Rangoon were usually arranged by the principal shipping companies<sup>1</sup> which periodically met and fixed rates on various types of cargo from Rangoon to ports within their respective spheres of operation. Outsiders were prevented from cutting in by means of a system of deferred rebates. These, usually 10 per cent of the freight rates, were returned to shippers about six months after the first shipment. As these rebates were given on the condition that shippers remain loyal to the conference line for the whole six months, regular shippers found it difficult to break off relations for fear of losing their accumulated rebates. Also it was not wise to antagonise conference lines in the absence of regular alternative means of transport. The conference lines, therefore, dominated Rangoon and despite the shorter journey to European ports, freight rates were not very much lower than rates from the other two ports.<sup>2</sup>

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1. The most important of the lines connecting Rangoon to Europe were the Bibby and Henderson Steamship Companies. E.H. Solomon, "Minute of Dissent", in Interim Report... (1931), p.70.

2. Ibid., p.72.

Shippers exporting rice had to incur shipping charges besides ocean freight rates. On the whole, shipping charges from Rangoon compared very favourably with similar expenses from Bangkok and Saigon. One important advantage enjoyed by Rangoon merchants was the freedom from export duty on gunny bags exported from India, since Burma was a part of India, and the lower freights on gunnies against both Saigon and Bangkok, as practically all exported rice was shipped in bags rather than in bulk.<sup>1</sup> Bangkok merchants had to incur additional expenses because of the necessity for transshipment. Only relatively small vessels could cross the bar at the mouth of the river, the larger vessels had to anchor at Koh Sichang Island nineteen miles away and receive their cargoes from lighters loaded at Bangkok. On the other hand, Saigon merchants had to incur higher charges on account of boat and coolie hire, compared with Rangoon.

The first year in which Burma felt the competition of Siam and Indo-China in the European market was 1869, when significant amounts of rice were exported to Europe from Bangkok (53,000 tons) and Saigon (31,000 tons)<sup>2</sup>. Great fears were entertained by the European merchants in Burma that these two countries might become dangerous rivals in

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1. Solomon, op. cit., p.69. Bags were used to facilitate handling and to lessen the danger of over-heating in the holds of ships.
  2. Report on the Administration of Burma, 1871-72, p.143; and Report on Trade and Customs, 1871-72, p.8.

this market. It was soon evident to the merchants, however, that the reason for the large amounts of exports to Europe was because China had so abundant a harvest that she did not have to import from them. Normally, even in quite good years, China imported much rice from Siam and Indo-China. It was only when rice could not be profitably sold there and other countries nearer home that Bangkok and Saigon looked to Europe as a place to dispose of their surplus stocks. On the other hand, should a famine or shortage occur in the East, very little rice was exported westwards since markets could be found within a short distance. For example, in 1865, a great scarcity occurred in the eastern provinces of China and short crops in Siam. No rice was exported from Bangkok and Saigon to Europe but instead 77,000 tons of rice from Burma were exported eastwards.<sup>1</sup> The European market, therefore, was resorted to only when the surplus of rice from these two countries could not be sold profitably to their more regular customers. Europe became a more regular place for exports from Bangkok and Saigon in the twentieth century when production had expanded more rapidly than could be absorbed by the Eastern markets. Below is a table showing the annual average quantities of rice exported from Siam, Indo-China and Burma to Europe.

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1. Report on the Administration of Burma, 1871-72, p.141

Table VIII.3 : Annual Average Exports of Rice from  
Siam, Indo-China and Burma to Europe.

Period	Siam	Indo-China	Burma
1871 - 1875	3,500	7,700	486,400
1876 - 1880	21,200	23,100	556,600
1881 - 1885	9,100	26,800	707,000
1886 - 1890	57,900	27,000	657,400
1921 - 1925	58,000	37,500	407,000
1926 - 1930	40,300	85,000	437,400
1931 - 1936	90,700	359,000	687,200

Sources: Annual Trade and Navigation Reports,  
Report of the Rice Export-Trade  
Enquiry Committee (1937), and Interim  
Report... (1931).

Even fiercer competition came from the Western rice-growers -- the United States, Spain and Italy. After the First World War, rice cultivation and production greatly expanded in these countries, which soon established themselves in the European market by producing grains of good milling quality and of attractive appearance when highly milled and polished. Yield and quality were constantly improved by applying modern farming techniques and the results of experiment and research. Because of geographical proximity, close commercial links, the ability to supply small quantities at short notice, and by paying careful attention to the appearance of the milled product, Western rice-growers were soon able to supply much of the top-quality rice requirements of the European countries.<sup>1</sup>

1. Report of the Rice Export-Trade Enquiry Committee  
(1937), p.8.

Other competitors in the European market were Japan, Java and India (Bengal and Madras). These exported their best qualities of rice and imported low and medium quality rice from the countries of the Indo-Chinese Peninsula for their own requirements. Madras exported low quality rice as well to Europe for the starch, brewing and distilling industries.

### 3. India and Ceylon.

While Europe as a whole was decreasing its rice imports from Burma, India and Ceylon became increasingly more important buyers of Burma rice. By the 1910's more was exported to this market than to the whole of Europe and by the 1930's more than half of Burma's total exports were taken by this market. (See Table VIII.1 on p. 297 .)

Table VIII.4 : Distribution of Annual Average Exports of Rice and Paddy from Burma to India and Ceylon, 1865-66 to 1939-40.

Period	India	Ceylon	Total
	<u>In thousands of tons</u>		
1865-66 to 1870-71	52	-	52
1871-72 to 1880-81	98	16	114
1881-82 to 1890-91	64	26	90
1891-92 to 1900-01	407	25	432
1901-02 to 1910-11	571	36	607
1911-12 to 1920-21	797	117	914
1921-22 to 1930-31	848	324	1,172
1931-32 to 1939-40	1,515	340	1,855

Sources: Annual Trade and Customs Reports,  
Annual Trade and Navigation Reports,  
and Annual Statements of the Sea-  
borne Trade and Navigation of Burma.

Price, rather than quality, was the most important consideration in this market. The population of India has often been divided into rice-eating and wheat-eating, but besides these are large numbers of people who are compelled to live on whatever form of food is cheapest. Millions of people prefer rice to other staple foods but they cannot have as much as they want. They have to mix it with maize or millet or other cheaper grains, or even substitute them for rice entirely if the price is prohibitive. When rice prices are low, rice is brought within the reach of large numbers of these people. Therefore, when the price of Burma rice was high compared with the prices of other food-grains, less rice was imported and vice versa.

An even more important factor in determining the amount of rice imported by India was the state of the harvests in the various provinces. In years of famine and scarcity, considerable quantities of Burma rice were imported. Burma was regarded as:

A granary for which any large and unexpected demand from the continent of India can be at once supplied; because a considerable increase in price, consequent on scarcity in this great staple food of the people of the East, will stop shipments to Europe and direct the grain to the local [i.e., Indian] markets.<sup>1</sup>

At such times of scarcity, Indian merchants, who dominated this market, were willing to pay such high prices

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1. Report on the Administration of Burma, 1876-77, p.88.

in order to obtain as much paddy and rice as possible that European and Chinese merchants were forced to withdraw from the market temporarily and even cancel previously arranged contracts in an attempt to cut losses.

Burma's transactions in the India-Ceylon market were almost entirely in the hands of Indian merchants. These were either independent traders or were agents of firms in India and Ceylon. They owned very few rice mills in the early days and even as late as 1898 they owned only about seven out of a total of 72 mills in Burma.<sup>1</sup> Most of the milled rice had to be obtained from European firms. But this dependence on European mills for supplies diminished in the twentieth century with the increase in the number of Indian and Burman mills.

Rice was shipped mainly by conference lines -- the British India Steam Navigation Company, the Scindia Steam Navigation Company, the Asiatic Steam Navigation Company and (to Ceylon) the Bibby and City lines. But rates were kept reasonably low by the competition of tramp steamers which were sometimes chartered by big shippers.<sup>2</sup>

The milled rice exported to this market was mostly the lower grades of rice produced in Burma -- about 80 per cent Big and Small Mills Specials and 20 per cent Bazaar

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1. See Table IV.4 on p. 122 above.

2. Report of the Rice Export-Trade Enquiry Committee (1937), p.8.

Quality. A great deal of paddy was exported to be milled in the consuming centres to suit local tastes, the difference in freight rates on paddy and rice being less important in a market so near to Burma. The better qualities of broken rice were exported to this market for human consumption as well as the greater part of the parboiled rice milled in Burma.

Parboiled rice became important in the rice trade of Burma only after the turn of the century. This trade expanded with the mushroom growth of small mills in the interior of the country. By the mid-1930's parboiled rice accounted for about 45 per cent of total exports of rice and rice products to India and 96 per cent of exports to Ceylon.<sup>1</sup> The bulk of the parboiled rice produced in Burma was exported to the India-Ceylon market.<sup>2</sup>

Though Ceylon imported much less rice than India, she shared several similar features. She had a large Indian coolie population, mainly working in her plantation industries, who tended to demand the same type of milled rice as that required by India. Some paddy was also

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1. The annual average amount of parboiled rice imported by India in the two years 1934-35 and 1935-36 was 892,000 tons and the amount of all forms of rice and rice products imported was 1,977,000 tons; for Ceylon, the figures were 334,000 tons and 347,000 tons respectively. Report of the Rice Export-Trade Enquiry Committee (1937), pp.107-108.
  2. The annual average exports of parboiled rice from Burma in the two years 1934-35 and 1935-36 amounted to 1,354,000 tons, of which 1,226,000 tons, or 91 %, were exported to India and Ceylon. Ibid., pp.107-108; and Report on the Marketing of Rice in India and Burma (1941), p.95.



imported to be milled into parboiled rice, while Ceylon was the second biggest market for this type of rice. All parboiled grades were imported but mostly low quality Milchar No. 2. The people who could afford better grades preferred rice imports from India to Burma rice.

In the nineteenth century, most of Ceylon's requirements were obtained from Madras and Bengal, but in years of famine and scarcity in India, Ceylon had to turn to Burma. In 1897, two Commissioners were sent to Burma to "induce local millers to steam rice for Ceylon as coolies objected to eating raw rice."<sup>1</sup> At that time only the small mills in the interior were producing parboiled rice. The Commissioners drew the attention of the big millers in the ports to this branch of the trade and several began to install parboiling machinery.

Siam and Indo-China faced serious obstacles in competing with Burma in this market, for Burma had many advantages over her rivals. Geographical proximity meant very much lower freight rates, which was of great importance in a market where the most important consideration was price. Other advantages were political and administrative ties, monetary uniformity, accordance with local tastes and preferential tariffs.

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1. Rangoon Gazette, June 13, 1898.

Burma, therefore, dominated this market almost to the complete exclusion of her rivals. Only in exceptional circumstances, such as at the end of 1927 and the beginning of 1928, did Saigon become an important competitor. At that time the political situation in China was such as to prohibit export there, and Indo-China, which had harvested an unusually large crop, found itself left with a huge surplus for which a market had to be found. Saigon sold the rice to India at Rs. 15 to 20 a ton lower than the prices at which comparable grades of Burma rice were offered. At that time also, many small tramp steamers usually employed in carrying rice to China had no employment and were forced to accept much lower freight rates. But with the reopening of the China market export from Saigon ceased. Siam rice hardly ever competed with Burma rice in this market.<sup>1</sup>

#### 4. Countries in Southeast Asia.

This market expanded with the growth of plantation industries from about the middle of the nineteenth century onwards. An increasing demand for rice arose to feed the plantation labourers in Malaya and Indonesia which were the main importers of Burma rice in this group. Imports were also required to feed the growing populations.

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1. Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade (1931), p.7.

Table VIII.5 : Distribution of Annual Average Exports of Rice and Paddy from Burma to Countries in Southeast Asia, 1874-75 to 1939-40.

Period	Malaya <sup>+</sup>	Java and Sumatra	Philippines	Total to Southeast Asia
<u>In thousands of tons</u>				
1874-75 to 1880-81	67	-	-	70
1881-82 to 1890-91	160	-	-	164
1891-92 to 1900-01	216	3	-	222
1901-02 to 1910-11	274	75	7	367
1911-12 to 1920-21	265	105	5	379
1921-22 to 1930-31	198	175	-	390
1931-32 to 1939-40	210	88	2	310

<sup>+</sup> Straits Settlements and Federated Malay States.

Sources: Annual Trade and Customs Reports, Annual Trade and Navigation Reports, and Annual Statements of the Sea-borne Trade and Navigation of Burma.

Milled white rice constituted the bulk of the imports from Burma. Very little paddy was imported while small quantities of parboiled rice were taken by Malaya to feed her Indian coolie population.

There was a general shrinkage of this market during the world-wide trade depression of the early 1930's. The fall in the value of plantation products led to attempts to lessen the dependence on export crops and to a policy of self-sufficiency in food supplies.

An important market for Burma rice in this group was Malaya. Though paddy cultivation could be undertaken in many parts of Malaya, many of the people found employment

in more lucrative occupations such as tin-mining and rubber-planting. Besides, large quantities of rice could be obtained easily and cheaply from Malaya's neighbours on the Indo-Chinese Peninsula. Imports decreased in the early 1930's due to the slump in rubber and tin prices, the reduction in the number of Indian and Chinese labourers in the rubber estates and tin mines due to international agreements on production quotas and the increased cultivation of paddy as part of the policy of self-sufficiency in staple foodstuffs.

Burma's transactions in this market were about 75 per cent in the hands of Chinese merchants, 20 per cent in the hands of Indians and the remaining 5 per cent European merchants.<sup>1</sup>

The grades of Burma rice most popular in this market were good quality Small Mills Specials, Medon Bazaar, and Straits Quality, while the parboiled rice imported was of the best grade Sun-dried Milchar No. 1 and Long Boiled from Henzada and the Upper Prome line. Some broken and rice bran were imported for poultry, pig and cattle feeding. It must not be forgotten, however, that much of the rice imported by Singapore was re-exported to the surrounding islands.

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1. Report of the Rice-Export Trade Enquiry Committee (1937), p.15.

Table VIII.6 : Rates of Freight Per Ton Ruling from  
January to March 1930 on Rice Shipped.

TO	FROM		
	Rangoon	Bangkok	Saigon
Singapore	Rs. 8-2	Rs. 6-11	Rs. 3-14
Penang	Rs. 6-14	Rs. 12-8 including transhipment at Singapore.	No business
Java	Rs. 10-13	Rs. 9-2 Nett	Rs. 7-3
Hongkong	Rs. 10-0	Rs. 6-4 to 7-2	Rs. 5-10
Shanghai	Rs. 12-0	Rs. 14-11 including Hongkong transhipment.	Rs. 7-8
Japan	Rs. 12-0	Rs. 10-8	Rs. 7-8

Source: E.H. Solomon, "Minute of Dissent," Interim Report... (1931), p.71.

In Malaya, Burma rice had to compete with rice from Siam and Indo-China. As can be seen from Table VIII.6 Rangoon (the chief Burma port for this market) suffered freight disadvantages where Singapore (the main port for Malaya) was concerned. Though Bangkok was at a disadvantage in this respect compared with Saigon, she was able to offset it by the superior qualities of rice she exported. But the principal reason for the domination of Siam in the Malayan market was due to the large Chinese population, who preferred Siam qualities, especially the "garden" Siam type, to rice from the other two countries. It was noted that "in the import market of Singapore, what is known as 'Siam No. 2' rice is consistently more expensive than those

termed 'Rangoon No. 1' or 'Saigon No. 1'."<sup>1</sup> Despite the cost the consumer was willing and able to pay for Siam rice.<sup>2</sup>

Indonesia imported rice from Burma either directly or through Singapore. Burma's transactions with Indonesia were about one-third in the hands of European merchants and two-thirds in the hands of Indian merchants. In the 1930's mainly because of the expansion of sugar-cultivation in India, the demand for Java sugar greatly decreased. Much land devoted to sugar planting was turned into paddy fields instead. Rice imports declined till by 1939 Java and Madura, but not the Outer Islands, had closely approached a net export status.<sup>3</sup>

Java exported her best qualities of rice to Europe and imported cheap rice for home consumption. To this market Burma exported mainly loonzein. Before 1930, the exports consisted of about two-thirds Small and Big Mills Specials and about one-third Medon Bazaar which was a better grade of rice. But with the decline of the sugar industry, the demand for rice from coolie labour greatly decreased and imports from Burma comprised 70 per cent Medon Bazaar. In this market both Siam and Indo-China competed. Because

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1. Wickizer and Bennett, op. cit., p.139.
  2. The annual average exports of rice and rice products to the Straits Settlements and Federated Malay States during the period 1931-32 to 1935-36 from Burma was 236,000 tons and from Siam 474,000 tons. Report of the Rice Export-Trade Enquiry Committee (1937), p.98.
  3. Wickizer and Bennett, op. cit., p.93.

price was an important consideration, Saigon was usually the favourite source of importation,<sup>1</sup> but the lower qualities from the other two also had a share in the trade.

The Philippines imported rice mostly from Indo-China and to a lesser extent Siam. In the 1930's when the policy of self-sufficiency in food supplies became popular in many countries, paddy cultivation in the Philippines was greatly extended. Imports decreased and this indirectly affected Burma in that Indo-China and Siam were deprived of a market and had to find other outlets, where they competed with Burma.

#### 5. China and Japan.

The quantities of rice imported into China and Japan depended mainly on the state of the home-grown crops. Because of the large rice-eating populations and because calamities like droughts and floods tended to be on a very big scale, the demand from these two countries varied greatly from year to year. When harvests were very good, these countries could supply their own needs; but even with a normal harvest imports were required. Should there be scarcities or famines the quantities of rice imported were very large.

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1. Rice from Bangkok and Rangoon in this market was almost invariably more expensive than Saigon rice. Widkizer and Bennett, op. cit., p.139.

Table VIII.7 : Distribution of Annual Average Exports of Rice and Paddy from Burma to China and Japan, 1874-75 to 1939-40.

Period	China	Japan	Total
	<u>In thousands of tons.</u>		
1874-75 to 1880-81	1	-	1
1881-82 to 1890-91	1	-	1
1891-92 to 1900-01	1	39	40
1901-02 to 1910-11	12	170	182
1911-12 to 1920-21	9	81	90
1921-22 to 1930-31	134	112	246
1931-32 to 1939-40	122	60	182

Sources: Annual Trade and Customs Reports and Annual Statements of the Sea-borne Trade and Navigation of Burma.

In this market the position of geographical advantage which Burma enjoyed with regard to the India-Ceylon market was reversed in favour of Siam and Indo-China. In addition, Bangkok and Saigon were served by a large number of steamship companies as well as tramps since they were nearer the main lines of ocean trade than was Rangoon. Therefore they enjoyed freight advantages besides the shorter journey.<sup>1</sup> Moreover, the varieties of paddy grown in these two countries were preferred to paddy grown in Burma. It was only in years when Siam and Indo-China could not satisfy the needs of the market that Burma rice was imported in considerable quantities. Of the two, Siam proved to be the more formidable competitor.

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1. See Table VIII.6 on p. 320.



Burma's interests in this market were mainly in the hands of Chinese merchants. Much of the rice imported into China came first to Hongkong where it was regraded, frequently mixed and sometimes remilled before re-exportation. The types of Burma rice shipped to China were mainly Medon Bazaar and Ngasein Big and Small Mills Specials. No parboiled rice was taken. The comparatively soft-grained paddies Midon and Byat were much preferred but these were also very popular in Upper Burma so that the amount available for export to China depended also on the trade with Upper Burma. If sales to Upper Burma were very large there was little of the soft-grained varieties for export; if, on the other hand, the Upper Burma market was well-stocked there was a considerable balance available at rates which would permit shipment to the Far East.<sup>1</sup>

In Japan, the aim of the Government was to maintain the price of rice at a level which would be fair to the farmers as well as to the factory workers. To do this, wide fluctuations in the amount of rice available in the country had to be avoided. The Japanese Government therefore used the import duty on rice, among other measures, to regulate the amount of rice in the country. If stocks in the country in the hands of private traders and in the government warehouses were too low, the tariff on imports

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1. Report on the Administration of Burma, 1871-72,  
pp.144-5.

was lifted altogether; if a moderate quantity of imports was required to keep sufficient stocks in the country, a customs duty was levied. If stocks were ample, then imports were prohibited altogether. Prior to about 1928 the surpluses of Korea and Formosa, then part of the Japanese Empire, were insufficient to meet Japanese requirements and substantial amounts from non-Empire sources were imported, principally from Siam, Indo-China, Burma and California. From about 1928 the exports from Korea and Formosa fully or nearly sufficed to meet Japanese import requirements and usually very little rice was imported from abroad. Only when exceptionally short crops occurred in the colonies or in Japan itself were foreign imports resorted to.<sup>1</sup>

#### 6. Other Countries.

Other markets for Burma rice were the West Indies, Cuba, East Africa, Mauritius,<sup>2</sup> Egypt and South Africa. These at first took milled rice from the millers and merchants in Europe. But with the development of white rice milling in Burma more rice was exported direct. In Burma, practically all the trade was in the hands of European and Indian merchants, the Europeans having a

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1. Report of the Rice Export-Trade Enquiry Committee (1937), p.17; and Interim Report... (1931), p.8.

2. This market was peculiar in that it preferred the discoloured grain which often results from prolonged storage. Ibid., p.14.

bigger share in the trade with the West Indies, Cuba, Egypt and South Africa. The demand was mainly for milled white rice but parboiled rice was also imported by the West Indies, Mauritius, South Africa and Egypt. On the whole, the competition of Siam and Indo-China in this market group was not very important except in Cuba, South Africa and Egypt.

## CHAPTER IX

## CONCLUSION

The rice industry of Burma occupied a predominant position in the economic life of the country. Below are two tables. The first shows that about two-thirds of the total population of Burma, from 1881 to 1931, were dependent on agriculture as their main means of livelihood; and the second table that out of the total cultivated acreage, no less than 70 per cent was devoted to paddy production.<sup>1</sup> In addition, the rice industry gave employment to a considerable number of people in other occupations in connection with water and rail transport, dockyards and rice mills.

Table IX.1 : Number of Persons Dependent Mainly on Agriculture, 1881 to 1931.

Year	Number	Per Cent of Total Population
1881	2,562,070	68.6
1891	4,826,737	59.6
1901	6,460,934	61.6
1911	8,083,712	66.7
1921	8,158,932	69.3
1931	9,753,652	66.5

Source: Burma Census Reports.

1. The high percentage of paddy acreage to total cultivated acreage was attributable to the fact that the soil and water supply conditions on large stretches of fertile land favoured paddy production to the almost complete exclusion of any other crop. Jute was tried at the close of the last century as a possible alternative in the delta areas but the attempt failed due mainly to the heaviness of the soil and the prolonged flooding. Crop rotation was not possible because the soil baked to a cement-like hardness during the dry season.

Table IX.2 : Annual Average Acreage under Paddy  
and under All Crops, 1891 to 1940.

Period	Paddy	All Crops	Per Cent of
	(1)	(2)	(1) to (2)
	<u>In thousands of acres.</u>		
1891-00	6,821	9,126	74.7
1901-10	9,262	12,632	73.3
1911-20	10,366	14,226	72.9
1921-30	11,571	16,159	71.6
1931-40	12,193	17,206	70.9

Source: Annual Season and Crop Reports.

In external trade, rice exports were Burma's chief source of foreign exchange. As shown in Table IX.3, they accounted for from half to three-quarters or more of the value of total exports from the country up to the 1930's and for more than a third in 1936-37.

Table IX.3 : Value of Rice and Total Exports from  
Burma, 1866-67 to 1936-37.

Year	Rice Exports	Total Exports*	Per Cent of
	(1)	(2)	(1) to (2)
	<u>In thousands of rupees.</u>		
1866-67	12,620	23,141	54.5
1876-77	29,706	38,350	77.5
1886-87	55,588	65,648	84.7
1896-97	74,683	93,533	79.8
1906-07	191,924	275,265	69.7
1916-17	222,228	381,961	58.2
1926-27	382,696	669,740	57.1
1936-37	209,612	567,685	36.9

\* Excluding Re-exports.

Sources: Annual Reports on the Administration of Burma and Annual Statements on the Seaborne Trade and Navigation of Burma.

It is clear from the brief account of the geography and climate of Burma<sup>1</sup> that vast stretches of fertile land, mostly in the lower and coastal parts of the country, are eminently suited to paddy production. But the emergence of Burma as the chief rice exporting country of the world occurred only about a century ago. Before then, rice was grown principally for home consumption and many of the best paddy tracts of the country were undeveloped.

Several factors accounted for this failure to develop what later became the most important rice granary of the world. One was the prohibition on the export of rice, as well as of rubies, gold and other precious metals, due to the mercantilist-type of economic theory adopted by the Burmese kings. Another was the neglect of Lower Burma in Burmese times consequent on the concentration of political and social life in Upper Burma where the several successive capitals were situated. Lower Burma was populated mainly by non-Burmese races, like the Talaings and the Arakanese, who were often subjected to massacres and destruction of property during the interminable wars and raids among the Burmese, the Talaings and the Siamese, and to heavy taxation and drastic requisitions for men, labour and goods at other times. By the time the British took over Pegu in 1852,

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1. See above pp.31-37.

much of the once cultivated land had reverted to jungle and swamp and the region was almost depopulated.

Once the restrictive policy of the Burmese rulers with regard to trade in general, and rice exports in particular, was removed and replaced by the British policy of encouraging all forms of trade, rice exports at once became important. Indigenous enterprise was free to develop and soon found expression in paddy production -- a task thoroughly understood by the Burmans and well-suited to their temperament and inclinations.

If one has to pick on one event above all others which sparked off the development of Burma's rice industry, it is the freeing of indigenous enterprise by the lifting of the prohibition on rice exports. This is on the supply side. On the demand side there was around the middle of the nineteenth century an increased and more regular foreign demand for rice. In the old days foreign demand was erratic and Arakan, which exported rice before the Burmese conquest in 1785, exported considerable quantities only when bumper crops coincided with famines in neighbouring countries. But as Van der Heide pointed out in connection with Siam's rice trade, it was modern transportation which "created a regular and increased demand for bulk commodities like rice and teak. In consequence of the regular demand

for rice, the production became stimulated and increased."<sup>1</sup> But before the arrival of the British in Burma, there was no evidence to suggest that production had increased. It took the lifting of the ban on rice exports to bring about the expansion in paddy production in response to the increased and more constant foreign demand.

The foreign demand was made effective by the setting up of rice firms, owned exclusively by foreigners in the early days, as soon as all restrictions on trade were removed. These firms were ready to pay cash for rice and paddy brought from the interior and served as the connecting link between demand from abroad on the one hand and the rapidly expanding production on the other.

Many writers believe that the opening of the Suez Canal provided the principal stimulus, but, as explained in the first chapter, the importance of the Canal has been over-estimated. Before the first steamer loaded with rice went through the Canal in 1872, rice exports were already important in the seaborne trade of Burma and for a decade or more after 1872, many merchants still preferred to send rice to Europe via the Cape, in sailing ships.<sup>2</sup> But the Canal undoubtedly accelerated the rate of expansion of the rice industry by making the journey shorter and quicker thus

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1. Quoted by J.C. Ingram, Economic Change in Thailand Since 1850 (Stanford, California: Stanford University Press, 1955), p.41.

2. See above pp.21-22.



enabling milled white rice instead of cargo rice to be exported to Europe. With the development of steam transportation, particularly with reference to improvement in ship's ventilation systems and the cheapening of rates due mainly to lower costs in running and maintaining steamers, almost all rice from Burma to Europe was carried by steamers through the Canal. It is conceivable that if not for the Canal, Europe's share of Burma's total rice exports -- more than half up to about 1900 -- might be less and, conversely, the share of Asian markets, more. But the most likely explanation for Europe's large share of Burma's rice exports was her greater ability to back demand with purchasing power.

The growth of Burma's exports to Asian markets was due largely to the development of economies in Asia which were dependent on large regular imports of rice, e.g. Malaya, and to the failure of food production to keep pace with population growth, e.g. India. By the 1930's Asian markets took more than 70 per cent, with the India-Ceylon market accounting for more than 50 per cent, of Burma's total rice exports.

With the development of the rice industry, subsistence agriculture soon gave way to commercial agriculture. At the same time, the newly-established European firms brought into the country many articles, such as textiles, tinned food, and cheap manufactured goods. The farmer was spurred

on to take up more land and grow more rice so that he could obtain the money to satisfy his increased wants. Also he was free to spend on new clothes, fine houses and elaborate ceremonies -- practices which were jealously proscribed, except among high-ranking personages, in the days of the Burmese kings.

The expansion of paddy cultivation in the delta and coastal plains of Lower Burma was undertaken mainly by immigrants from Upper Burma. J.R. Andrus in Burmese Economic Life (1948) stated that:

The introduction of British law and order was the primary factor in inducing Burmans to migrate to British-held Lower Burma between 1853 and 1885.<sup>1</sup>

This implies that migrants from Upper to Lower Burma were escaping to a relatively stable and orderly region. On the contrary, the "rice rush" was accompanied by the usual disorder, lawlessness and violence normally prevalent in frontier districts which for the moment were beyond the forces of law and order. A far more likely reason was the rising paddy prices coupled with the availability of vast stretches of land eminently suited to paddy production.

From one of the most sparsely populated regions of Burma, the delta soon became the most densely populated. This helped to change the relative importance of Lower and

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1. J.R. Andrus, Burmese Economic Life (Stanford, California: Stanford University Press, 1948), pp.65-66.

Upper Burma. In Burmese times the dry zone of Upper Burma was the centre of the political, social and economic life of the country. With the growth of the rice industry, Lower Burma became more important economically. The shift to Lower Burma was further accentuated by the rapid development of Rangoon into a great commercial, industrial, administrative and political centre. Lower Burma thus became relatively more important than Upper Burma.

In terms of population, it was estimated that in 1856 Lower Burma had a population of 1,381,000,<sup>1</sup> while in 1855 Upper Burma had 3,600,000.<sup>2</sup> In 1891, when Upper Burma was included in the census for the first time, Lower Burma's population was 4,408,466 against Upper Burma's 3,313,587. In 1931, the population was 7,765,614 in Lower Burma and 6,841,532 in Upper Burma.<sup>3</sup> The main reason for the change in the distribution of population was the large volume of migration from Upper Burma and, to a lesser extent and of a more temporary nature, from India to Lower Burma.

The changing distribution of population and the growing density of population in the delta area compared

1. Burma Handbook (Simla: Government of India Press, 1944), p.10.
2. Estimate by Sir Henry Yule in A Narrative of the Mission sent by the Governor-General of India to the Court of Ava in 1855 with Notices of the Country, Government and People (London, 1858), p.290.
3. Source of figures: Burma Handbook (1944), p.10. The swing to Lower Burma was even greater than indicated by these figures for extensions in census areas (to sparsely populated regions) came under the heading of Upper Burma.

with other areas are shown in Table IX.4.<sup>1</sup>

In the ports, European firms and Indian and Chinese merchants took over the milling and exporting aspects of the rice industry. The most important in both fields throughout the period under consideration were the European-owned and managed firms. They were not only among the first to realise that substantial profits could be

Table IX.4 : Number of Persons Per Square Mile, 1881 to 1931.

Area	1881	1891	1901	1911	1921	1931
BURMA	44 <del>0</del>	61	47 <del>7</del>	53	57	63
Delta	65	82	105	122	135	152
Coast	24	29	33	38	42	49
Centre	-	76	83	93	100	109
North	-	-	15	17	18	19
Chin Hills	-	-	12	15	15	16
Salween	-	-	-	15	16	16
Shan States	-	-	21	24	25	26

~~0~~ The census of 1881 related only to Lower Burma.

~~7~~ In 1901 the census was extended to the Shan States, Karenni, Chin Hills and other sparsely populated areas.

Source: Burma Census Report, 1931, Part I, p.37.

1. The districts comprising the following areas were:  
Delta -- Rangoon, Insein, Hanthawaddy, Tharrawaddy, Pegu, Bassein, Henzada, Myaungmya, Maubin, Pyapon, Toungoo and Thaton;  
Coast -- Akyab, Kyaukpyu, Sandoway, Amherst, Tavoy and Mergui.  
Centre -- Prome, Thayetmyo, Pakkoku, Minbu, Magwe, Mandalay, Kyaukse, Meiktila, Yamethin, Myingyan, Shwebo, Sagaing and Lower Chindwin;  
North -- Bhamo, Myitkyina, Katha, and Upper Chindwin;  
Chin Hills -- Arakan Hill Tracts and Chin Hills;  
Salween -- Salween and Karenni;  
Shan States -- Northern Shan States and Southern Shan States.

derived from rice milling and exporting, but also possessed outstanding advantages over their rivals in their greater financial resources, more advanced technical knowledge, better organisational and business methods and closer links with Europe -- the market where demand was most firmly backed by purchasing power. Most of the milling and exporting business was in the hands of a few British firms. These dominated other industries besides rice. For example, "a typical British firm, Steel Brothers and Company, is extensively interested in oil, rice, cement, timber, importing, cotton and general trade."<sup>1</sup>

In the early days cultivators used to bring their paddy to the rice mills at the ports. This practice disappeared with the growth of a host of middlemen -- Burman, Indian and Chinese -- who undertook the task of moving the paddy from the threshing floors to the ports. The middlemen were sometimes accused of being mere parasites who took an unduly large share of the profits of the rice trade. Attempts to do without them were unsuccessful, however. But the real reasons for the weak bargaining position of the cultivators with regard to the disposal of their crop lay in their lack of cash reserves and their financial commitments, and the middlemen's hold was derived from their other activities

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1. J.L. Christian, Modern Burma (Berkeley: University of California Press, 1942), p.136.

besides assembling, such as moneylending, land-letting and shopkeeping.

In the twentieth century, rice milling was no longer confined to the ports. Many small mills, owned by Burmans, Indians and Chinese, in that order of importance, sprang up in the more important paddy centres. Their rapid increase could be taken as an indication of their success. But by the early 1920's there were signs that milling capacity had expanded too quickly. The Interim Report of the Committee Appointed to Enquire into the Rice and Paddy Trade, 1931, stated that "the existing milling capacity could deal with a crop one-third as much again as is now milled."<sup>1</sup> The reason for this over-development was that rice milling was one of the few openings for investing indigenous capital. When many small electrical plants were set up around 1930, it was remarked that they probably attracted some capital which would otherwise have been wasted on unnecessary rice mills. "It is certainly true that there has been over-concentration on this one most obvious form of industrial enterprise."<sup>2</sup>

Rice mills on the whole employed about one-third of the total industrial labour force.<sup>3</sup> Burmans accounted for

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1. Interim Report... (1931), p.20.
  2. O.H. Spate, "Beginnings of Industrialization in Burma," Economic Geography, Vol. XVII (Worcester, Mass: Clark University, 1941), p.84.
  3. Out of a total industrial labour force of 187,012 on February 2, 1939, 60,622 or 33.5 per cent were employed in rice mills. Baxter, op. cit., p.65.

only 33.4 per cent of the skilled labour and 22 per cent of the unskilled labour in rice mills on February 2, 1939, when a survey was held.<sup>1</sup> These percentages for Burman labour were much smaller in the nineteenth century due to the almost complete dominance of foreign-owned mills and the availability of large stretches of easily cleared fertile land suitable for paddy cultivation.

Indians played the dominant role not only in the rice mills but also in the dockyards, transport, communications and other spheres, which required labour and which were essential to the development of the rice industry as well as to commerce and industry in the country generally. The main reasons for this dominance were, as given in an earlier chapter,<sup>2</sup> the very low standard of living of immigrant Indians and the maistry system of employment commonly adopted by European firms and the Government Departments. In addition, employers found it not only cheaper but <sup>also</sup> much less trouble<sup>some</sup> to employ Indians since Indians had more experience with modern industry and were better acquainted with European ways and methods of industrial organisation. Once Indians were firmly entrenched in the major industries and public services, it was very difficult for a Burman to get a place, due to the system of employment and to the desire

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1. See Table V.4 on p.193.

2. See above pp. 192, 195-99.

of employers for a homogenous labour force which could be managed more easily.

The lower standard of living of Indians also gave them an advantage over Burmans when competing in agricultural occupations, but only about 20.7 per cent of the total number of Indians were engaged in agriculture in 1931.<sup>1</sup> Of these, about 56 per cent were agricultural labourers. The main reason for the small number of Indian owner-cultivators and tenants was that Indian immigration was transient in character and agriculture involved a certain degree of permanence. Also, most immigrants were single males, whereas cultivation could best be carried out with the help of the family. It may be noted that many of the Indian owner-cultivators and tenants were Indians born in Burma rather than immigrants.<sup>2</sup>

Indian agricultural labourers worked as a rule in the paddy fields only in periods of peak demand for labour. At other times they would move to the towns to look for work. One reason for the low percentage of labourers in agriculture compared with the number in urban and industrial occupations (since the argument that agriculture involved some degree of permanence does not apply here) was that as most of the

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1. Only 4 per cent of the total number of persons engaged in cultivation were Indians. See Table V.3 on p.191.
  2. 43.5 per cent of the Indians born in Burma engaged in agriculture compared with 18.2 per cent of Indians born outside Burma. Burma Census Report, 1931, Part I, p.134.



Indians came from urban areas,<sup>1</sup> they found towns more congenial places to work in. More important still was the fact that there was usually a much greater demand for labour in industries and the public services than in agriculture.

Agriculture, therefore, remained a predominantly Burman sphere of activity, and in agriculture, paddy production was by far the most important. Rice cultivation is an ancient and honourable occupation in many parts of Asia and Burma is by no means an exception. Burmans preferred rice farming with its alternating periods of hard intensive work, moderate activity and almost complete leisure to working for a daily wage which involved regular hours, obeying orders, and often dull and monotonous work. Also, the communal life of the village was preferred to the more individualistic and competitive life in the towns. These preferences, coupled with the vast extent of easily cleared waste land suitable for paddy cultivation and the rising prices for paddy in the early days, brought about the major economic achievement of the Burmans -- the remarkably rapid extension of paddy acreage.

But in the twentieth century, Burmans found that though there was still a great deal of arable waste land it was usually less fertile, or less secure, or of the type which

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1. Burma Census Report, 1911, Part I, p.70, and Rangoon Gazette, August 26, 1912.

required a heavier capital outlay to clear and convert into farms. Agriculture became even less attractive due to the growing problems of land alienation and indebtedness and the deteriorating conditions for tenants and labourers. The depression of the early 1930's aggravated matters and there arose a "steady and persistent demand by Burmans for employment as unskilled labourers under conditions and at rates of pay which they would not have been obliged to accept in the previous generation."<sup>1</sup> Thus, as reported by James Baxter, "the Burman, from necessity perhaps more than from choice, is increasingly seeking a footing in occupations other than agriculture and is entering into competition with other races more especially the Indian."<sup>2</sup> Animosity between the two racial groups intensified with the growing competition and this, as pointed out in chapter five, was the underlying cause of the race riots of the 1930's.

The expressed policy of the Government of Burma was the establishment of a peasant proprietorship form of land tenure. But as early as the 1880's, government officials noticed that there was a growing tendency for owner-cultivators to lose their land to non-agriculturist moneylenders and others. The collapse of cereal prices during the depression of the early 1930's accelerated the movement and resulted in the wholesale foreclosures of hundreds of thousands of acres of

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1. Baxter, Report (1941), p.84.

2. Ibid., p.1.

paddy land. In the late 1930's, 58 per cent of the land in Lower Burma against 33 per cent in Upper Burma, or 48 per cent for the whole country, were let to tenants.<sup>1</sup>

Instead of a country of peasant proprietors, Burma emerged as a country of large landowners (mostly absentee aliens, and in the principal paddy-producing districts, mainly Chettyars), owner-cultivators (many of whom were heavily indebted), tenants (who were sometimes rack-rented and who had no security of tenure) and a growing class of landless labourers (the largest class of agriculturists in 1931, according to census returns.<sup>2</sup>)

Many prominent government officials realised that legislative measures were urgently required to restrict the free alienation of land and to improve tenancy conditions. Numerous attempts were made during a period of about half a century but the bills were opposed vigorously by vested interests, the most powerful of which were the British firms. The bills were eventually passed in the late 1930's but they had no time to work before Burma was invaded.

There is no doubt that among the various participants in the rice industry, non-Burmans benefited much more than

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1. Calculated from figures for the period 1935-36 to 1938-39 given in the Annual Reports on the Land Revenue Administration of Burma. The area let included area let at full fixed rents, on share or partnership basis and at privileged or nominal rents.
  2. See Table V.3 on p.191.

did Burmans. Europeans, Indians and Chinese controlled entirely the rice-exporting trade to the various markets abroad, owned the greater part of the rice milling industry in the country and, excepting Europeans, took an important part in the assembling process.

The biggest share of the profits derived from the rice industry, as in the other major industries of Burma -- timber, oil, mining, banking and trade -- went to British firms.<sup>1</sup> For example, Steel Brothers and Company was able to return dividends at the following rates:<sup>2</sup>

<u>Year</u>	<u>Per Cent</u>	<u>Year</u>	<u>Per Cent</u>
1923	40	1930	35
1924	40	1931	10
1926	20	1932	7½
1927	17½	1934	16
1928	15	1935	8
1929	50		

Estimates given by J.L. Christian were lower, though they were still quite considerable. According to Christian, Steel Brothers averaged a net profit of £400,000 per year on a capital of £4,000,000; and the usual dividend rate was 8 per cent.<sup>3</sup> These profits came from all its activities but profits from the rice milling and exporting

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1. "There is little doubt that 90 per cent or more of total foreign investments in Burma are British or British-controlled." Helmut G. Callis, Foreign Capital in Southeast Asia (New York: Institute of Pacific Relations, 1942), p.94.

2. A.M.M. Vellayan Chettyar, quoted by Andrus, Burmese Economic Life, p.186.

3. Christian, op. cit., p.136.

business were certainly not unimportant. T.L. Hughes wrote:

The part played by British business in the economic development of Burma was a worthy one; and those concerned need no defence from me if some of them -- not by any means all -- found it also profitable.<sup>1</sup>

Another racial group which benefited greatly from its participation in Burma's economic development, especially in the rice industry, were the Indians. W.S. Desai made this observation:

The lion's share in the profitable exploitation of Burma was indeed reaped by British capitalists; but Indian businessmen certainly came next.<sup>2</sup>

Besides Indian businessmen in the fields of rice exporting, milling, assembling, land-letting and moneylending, Indians of the coolie class, who worked mainly in the rice mills and paddy fields, also benefited.

The roles of the Chinese businessmen were similar to that of the Indian businessmen, but the former were relatively insignificant in number.<sup>3</sup>

The party which benefited least was the indigenous people of the country. They were predominant only in paddy production but here capital was supplied largely by Indians. Because of the increasing burden of indebtedness and whole-sale foreclosures much of the surplus obtained in this

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1. T.L. Hughes, "The British Contribution to the Industrial Development of Burma", The Asiatic Review, April 1950, Vol. XLVI, No. 166 (London), p.923.
  2. W.S. Desai, India and Burma (Bombay: Orient Longmans, 1954), p.25.
  3. In 1931, the Chinese constituted 1.3 per cent of Burma's total population.

branch of the rice industry went to landlords, moneylenders, dealers and shopkeepers. Most of these, in fact, were Burmans but though numerically important their operations considered as a whole were on a much smaller scale than that of the better equipped and more experienced Indians and Chinese.

As to the relative position of the Lower Burma paddy farmer growing one single crop for the market compared with that of the farmer in Upper Burma where mixed farming was practised and where agriculture was more of a subsistence nature, it may be said that in the early days of the rice industry the Lower Burma farmer was better off because he cultivated a larger and more fertile stretch of land, crop failures were almost unknown compared with the frequent failures in Upper Burma, and paddy was the crop which earned the greatest cash rewards. But near the close of the period under consideration due mainly to land tenure and agricultural credit problems, Lower Burma agriculturists were comparatively worse off since the majority became landless labourers and more than half the land was lost to absentee landlords, while in Upper Burma the vast majority of agriculturists remained as owner-cultivators or tenants of State land.

## APPENDIX I.A

Exports of Rice from Major Ports of Burma  
to All Countries

Year	Rangoon	Akyab	Bassein	Moulmein	Other Ports	Total
			<u>Tons.</u>			
1862-63	108,913	115,175	38,639	21,501	-	284,228
1863-64	170,077	152,686	39,366	16,113	-	378,241
1864-65	259,270	121,077	64,225	25,046	-	469,618
1865-66	202,125	120,472	62,649	40,951	-	426,197
1866-67	107,858	81,391	26,690	32,162	-	248,101
1867-68	163,142	97,876	37,160	27,735	-	325,913
1868-69	244,510	111,192	60,549	29,858	-	446,109
1869-70	181,964	69,185	51,063	27,429	-	329,641
1870-71	220,101	133,571	44,291	42,038	-	440,001
1871-72	265,613	105,894	55,274	60,381	-	487,162
1872-73	415,028	173,252	74,927	57,143	-	720,350
1873-74	482,479	162,788	88,495	77,344	-	811,106
1874-75	389,897	141,416	89,743	49,169	-	670,225
1875-76	389,821	136,274	113,957	81,157	-	721,209
1876-77	403,136	143,185	104,516	59,946	-	710,783
1877-78	353,253	80,713	102,178	36,381	7,245	579,770
1878-79	398,489	68,233	120,186	55,280	6,406	648,594
1879-80	397,318	119,915	145,274	63,673	2,204	728,384
1880-81	452,309	172,805	154,336	60,648	916	841,014
1881-82	553,511	157,723	167,298	56,508	3,083	938,123
1882-83	677,122	154,623	164,040	66,898	3,846	1,066,529
1883-84	504,626	140,199	148,657	54,845	2,788	851,115
1884-85	433,996	102,251	107,080	32,724	3,464	679,515
1885-86	574,822	123,900	190,549	68,474	4,021	961,766
1886-87	557,991	141,988	151,177	61,795	4,508	917,379
1887-88	543,757	181,312	109,749	60,827	3,365	899,010
1888-89	493,613	87,728	86,102	44,485	597	712,575
1889-90	617,947	117,069	136,462	42,537	1,777	915,792
1890-91	840,203	144,895	150,595	93,482	3,079	1,232,254
1891-92	722,171	165,020	136,394	113,417	3,780	1,140,782
1892-93	667,979	94,893	83,621	77,167	3,683	927,343
1893-94	581,877	72,730	88,000	46,666	1,089	790,362
1894-95	765,110	118,285	150,752	108,090	2,756	1,144,993
1895-96	853,383	108,397	128,359	135,827	5,783	1,231,749

(continued next page)

## APPENDIX I.A (cont'd)

Year	Rangoon	Akyab	Bassein	Moulmein	Other Ports	Total
<u>Tons.</u>						
1896-97	659,055	74,223	133,536	96,954	5,162	968,930
1897-98	631,464	60,034	127,762	81,455	7,811	908,526
1898-99	906,082	115,171	150,720	118,901	7,571	1,298,445
1899-00	734,251	99,823	134,573	111,050	4,418	1,084,115
1900-01	710,788	80,142	154,426	123,876	2,113	1,071,354
1901-02	900,667	78,550	109,785	121,283	2,814	1,213,099

Sources: Annual Reports on the Administration of Burma;  
and Annual Reports on Trade and Navigation.

Note: The figures as given in the reports include exports of paddy. Since on the average 67 baskets of rice could be obtained from 100 baskets of paddy, the amount of paddy exported was expressed in terms of rice at the conversion rate of 67 per cent.



## APPENDIX I.B

Exports of Rice from Major Ports of Burma  
to Europe.

Year	Rangoon	Akyab	Bassein	Moulmein	Total
<u>Tons.</u>					
1865	46,803	69,991	32,079	580	149,453
1866	94,853	104,187	43,324	6,510	248,874
1867	123,806	96,947	35,988	938	257,679
1868	151,903	94,808	44,964	8,845	300,520
1869	168,300	66,614	47,476	4,932	287,322
1870	170,306	80,295	34,206	9,866	294,673
1871	181,061	112,716	49,613	14,760	358,150
1872	287,900	140,450	68,500	18,518	515,368
1873	294,000	121,250	66,350	11,957	493,557
1874	274,500	111,250	67,625	41,450	457,825
1875	334,385	118,674	100,616	41,450	595,125
1876	288,830	95,366	80,059	19,796	484,051
1877	288,500	73,300	97,300	33,000	492,100
1878	324,500	69,300	131,500	32,900	558,200
1879	340,000	73,700	130,600	50,200	594,500
1880	341,500	158,200	140,500	17,600	657,800
1881	412,500	118,200	162,400	45,100	738,200
1882	436,000	152,800	161,800	30,400	781,000
1883	370,200	165,600	154,200	42,300	732,300
1884	363,500	87,400	117,800	37,000	605,700
1885	351,380	103,490	177,890	45,060	677,820
1886	313,170	118,420	156,290	47,500	635,380
1887	346,300	164,000	118,400	48,400	677,100
1888	315,740	138,570	92,220	41,810	588,340
1889	404,240	75,100	137,800	45,820	662,960
1890	429,000	130,800	141,800	21,600	723,200

Sources: Annual Reports on the Administration of Burma; Annual Reports on Trade and Customs; and Annual Reports on Trade and Navigation.

Note: The figures as given in the reports include exports of paddy. Since on the average 67 baskets of rice could be obtained from 100 baskets of paddy, the amount of paddy exported was expressed in terms of rice at the conversion rate of 67 per cent.

## APPENDIX II.A

Paddy Acreage in Lower and Upper Burma,  
1830 to 1940.

Year	Lower Burma	Upper Burma	Total
<u>In thousands of acres.</u>			
1830	66	No records	
1835	235		
1845	354		
1855	993		
1860	1,333		
1863	1,434		
1864	1,470		
1865	1,437		
1866	1,637		
1867	1,682		
1868	1,667		
1869	1,712		
1870	1,734		
1871	1,836		
1872	1,893		
1873	2,062		
1874	2,302		
1875	2,379		
1876	2,455		
1877	2,728		
1878	2,868		
1879	3,089		
1880	3,102		
1881	3,237		
1882	3,381		
1883	3,662		
1884	3,630		
1885	3,700		
1886	3,756		
1887	4,190		
1888	4,069		
1889	4,339		
1890	4,398	1,357	5,755

(continued next page)

Year	Lower Burma	Upper Burma	Total
	<u>In thousands of acres</u>		
1891	4,649	1,013	5,662
1892	5,087	1,040	6,127
1893	5,183	1,216	6,399
1894	5,007	1,353	6,360
1895	5,249	1,500	6,749
1896	5,451	1,143	6,594
1897	5,913	1,350	7,262
1898	6,099	1,503	7,602
1899	6,112	1,819	7,931
1900	6,578	1,972	8,550
1901	6,705	1,552	8,257
1902	6,713	1,582	8,295
1903	6,982	2,324	9,306
1904	7,180	2,085	9,265
1905	7,222	2,057	9,281
1906	7,344	1,951	9,195
1907	7,505	1,825	9,330
1908	7,751	1,941	9,722
1909	7,836	2,165	10,001
1910	7,808	2,142	9,950
1911	7,838	1,986	9,824
1912	8,082	2,137	10,219
1913	8,103	2,228	10,331
1914	8,291	2,232	10,523
1915	8,285	2,119	10,404
1916	8,351	2,219	10,570
1917	8,464	2,223	10,707
1918	8,332	2,052	10,384
1919	8,377	2,103	10,480
1920	8,588	1,751	10,309
1921	8,732	1,970	10,702
1922	8,954	2,011	10,965
1923	9,046	2,193	11,239
1924	9,238	2,196	11,434
1925	9,318	2,240	11,558

(continued next page)

Year	Lower Burma	Upper Burma	Total
	<u>In thousands of acres</u>		
1926	9,553	2,244	11,797
1927	9,622	2,078	11,700
1928	9,598	2,458	12,056
1929	9,820	2,389	12,209
1930	9,911	2,459	12,370
1931	9,569	2,296	11,865
1932	9,711	2,239	12,050
1933	9,708	2,534	12,242
1934	9,703	2,307	12,010
1935	9,696	2,178	11,874
1936	9,855	2,319	12,174
1937	9,950	2,535	12,485
1938	9,934	2,447	12,381
1939	9,892	2,540	12,432
1940	9,932	2,586	12,518

Sources: Annual Reports on the Administration of Burma; Annual Season and Crop Reports; and Grant, op. cit., Appendix I, p. 40.

## APPENDIX II.B

Paddy Acreage in Each Division of Lower Burma,  
1867-68 to 1940-41.

Year	Arakan	Pegu	Irrawaddy	Tenasserim	Lower Burma
<u>In thousands of acres</u>					
1867-68	374		872	336	1,582
1868-69	348		985	334	1,667
1869-70	356		1,004	352	1,712
1870-71	357		1,055	321	1,733
1871-72	371		1,129	336	1,836
1872-73	377		1,149	367	1,893
1873-74	370		1,307	385	2,062
1874-75	382		1,506	414	2,302
1875-76	386		1,577	416	2,372
1876-77	402		1,646	391	2,439
1877-78	416		1,678	418	2,512
1878-79	427		1,835	446	2,708
1879-80	458		1,942	468	2,868
1880-81	480		2,107	515	3,102
1881-82	441	1,250	1,002	544	3,237
1882-83	453	1,371	994	531	3,381
1883-84	504	1,449	1,072	493	3,519
1884-85	510	1,513	1,057	551	3,630
1885-86	527	1,530	1,083	565	3,705
1886-87	546	1,504	1,127	579	3,756
1887-88	588	1,515	1,176	567	3,847
1888-89	607	1,624	1,252	585	4,068
1889-90	631	1,698	1,396	673	4,398
1890-91	654	1,676	1,369	700	4,398
1891-92	658	1,787	1,458	745	4,649
1892-93	678	1,882	1,205	823	5,087
1893-94	702	1,859	1,643	902	5,184
1894-95	706	1,742	1,588	903	5,007
1895-96	690	1,926	1,691	898	5,249
1896-97	661	2,013	1,748	920	5,451
1897-98	704	2,158	1,936	1,044	5,913
1898-99	740	2,220	1,985	1,081	6,099
1899-00	752	2,289	2,033	1,128	6,278
1900-01	771	2,394	2,132	1,202	6,578

(continued next page)

## APPENDIX II.B (cont'd)

Year	Arakan	Pegu	Irrawaddy	Tenasserim	Lower Burma
<u>In thousands of acres.</u>					
1901-02	759	2,454	2,233	1,238	6,684
1902-03	789	2,453	2,204	1,267	6,713
1903-04	810	2,534	2,305	1,333	6,982
1904-05	829	2,615	2,370	1,366	7,180
1905-06	821	2,643	2,356	1,402	7,222
1906-07	828	2,640	2,414	1,461	7,343
1907-08	865	2,658	2,465	1,516	7,504
1908-09	880	2,685	2,564	1,605	7,734
1909-10	891	2,710	2,601	1,634	7,836
1910-11	889	2,708	2,592	1,618	7,807
1911-12	800	2,728	2,610	1,601	7,739
1912-13	915	2,800	2,711	1,656	8,082
1913-14	940	2,835	2,776	1,652	8,203
1914-15	947	2,874	2,813	1,657	8,291
1915-16	924	2,875	2,811	1,674	8,284
1916-17	915	2,904	2,846	1,685	8,350
1917-18	932	2,958	2,919	1,675	8,484
1918-19	903	2,983	2,865	1,582	8,333
1919-20	905	2,998	2,880	1,594	8,377
1920-21	908	3,046	2,980	1,654	8,588
1921-22	919	3,115	3,030	1,669	8,733
1922-23	922	3,175	3,007	1,696	8,800
1923-24	916	3,197	3,129	1,700	8,942
1924-25	929	3,232	3,253	1,705	9,119
1925-26	949	3,281	3,380	1,758	9,368
1926-27	950	3,336	3,440	1,827	9,553
1927-28	931	3,370	3,476	1,846	9,623
1928-29	919	3,365	3,473	1,840	9,597
1929-30	981	3,409	3,533	1,897	9,820
1930-31	985	3,426	3,556	1,944	9,911
1931-32	976	3,700	3,460	1,933	9,569
1932-33	991	3,285	3,493	1,942	9,711
1933-34	977	3,315	3,503	1,913	9,708
1934-35	968	3,316	3,524	1,895	9,703
1935-36	980	3,305	3,557	1,854	9,696

(Continued next page)

## APPENDIX II.B (cont'd)

Year	Arakan	Pegu	Irrawaddy	Tenasserim	Lower Burma
1936-37	988	3,378	3,603	1,886	9,855
1937-38	989	3,400	3,665	1,896	9,950
1938-39	994	3,398	3,650	1,892	9,934
1939-40	1,000	3,385	3,626	1,881	9,892
1940-41	1,009	3,390	3,626	1,907	9,932

Sources: Annual Reports on the Administration of Burma for the earlier years and Annual Season and Crop Reports for 1901-02 onwards.

## APPENDIX II.C

## Average Yield of Paddy Per Acre in Each District

District	Lbs.	District	Lbs.
Akyab	1,550	Thayetmyo	1,150
Arakan Hill Tracts	1,300	Minbu	1,600
Kyaukpyu	1,350	Magwe	1,000
Sandoway	1,350	Pakokku	1,000
ARAKAN DIVISION		MAGWE DIVISION	
Rangoon	1,500	Mandalay	1,500
Pegu	1,650	Kyaukse	1,450
Tharrawaddy	1,700	Meiktila	1,100
Hanthawaddy	1,650	Myingyan	1,000
Insein	1,500	Yamethin	1,250
Prome	1,250	MANDALAY DIVISION	
PEGU DIVISION		Bhamo	1,300
Bassein	1,550	Myitkyina	1,450
Henzada	1,650	Shwebo	1,250
Myaungmya	1,700	Sagaing	1,000
Maubin	1,600	Katha	1,400
Pyapon	1,700	Lower Chindwin	1,300
IRRAWADDY DIVISION		Upper Chindwin	1,000
Salween	1,300	SAGAING DIVISION	
Thaton	1,300		
Amherst	1,300		
Tavoy	1,300		
Mergui	1,250		
Toungoo	1,400		
TENASSERIM DIVISION			

Source: Season and Crop Reports.

From 1922-23 to 1940-41 the average yield for each district remained the same in the Season and Crop Reports. This is evidently due to official inertia with regard to sampling work to determine the average yields than that the yields remained unchanged.



Table Showing the Monthly Prices for Ngasein Paddy  
in Rangoon from 1934 - 1939.

(Per standard maund of 82 2/7 lbs.)

Month	1934	1935	1936	1937	1938	1939
	Rs.A.P.	Rs.A.P.	Rs.A.P.	Rs.A.P.	Rs.A.P.	Rs.A.P.
Jan.	1 0 0	1 5 0	1 7 0	1 11 0	1 8 0	1 7 0
Feb.	15 0	1 8 0	1 8 0	1 10 0	1 7 0	1 8 0
March	15 0	1 9 0	1 10 0	1 10 0	1 7 0	1 10 0
April	15 0	1 11 0	1 10 0	1 11 0	1 8 0	1 11 0
May	1 1 0	1 13 0	1 10 0	1 11 0	1 13 0	1 13 6
June	1 3 0	1 13 0	1 10 0	1 11 0	1 11 0	1 12 0
July	1 7 0	1 13 0	1 10 0	1 11 0	1 12 0	1 12 0
Aug.	1 11 0	1 10 0	1 12 0	1 13 0	1 13 0	1 11 0
Sept.	1 11 0	1 11 0	1 12 0	1 14 0	1 14 0	1 15 0
Oct.	1 9 0	1 14 0	1 10 0	2 0 0	1 15 0	2 1 0
Nov.	1 6 0	1 13 0	1 10 0	1 12 0	1 10 0	1 12 0
Dec.	1 4 0	1 11 0	1 10 0	1 12 0	1 11 0	1 12 0

Source: Report on the Marketing of Rice in India and  
Burma (1941), pp.566-67.

## APPENDIX IV.A

Table Showing the Number of Rice  
Mills in Burma, 1861-1939.

Year	Lower Burma	Upper Burma	Total
1861	1		1
1867	3		3
1868	8		8
1869	13		13
1870	20		20
1871	21		21
1872	26		26
1873	38		38
1874	42		42
1875	43		43
1876	45		45
1877	47		47
1880	46		46
1881	49		49
1892	52	Not Recorded	52
1893	53		53
1894	54		54
1896	67		67
1897	70		70
1898	74		74
1899	81		81
1900	83		83
1901	97		97
1902	96		96
1903	108		108
1904	117		117
1905	128		128
1906	137		137
1907	153		153
1908	161		161
1909	164		164
1910	164		164
1911	165		165
1912	228	17	245
1913	224	16	240
1914	246	17	263
1915	262	19	281

(continued next page)

## APPENDIX IV.A (cont'd)

Year	Lower Burma	Upper Burma	Total
1916	288	23	311
1917	302	27	329
1918	304	28	332
1919	302	34	336
1920	317	36	353
1921	363	66	429
1922	398	71	469
1923	464	65	529
1924	453	68	521
1925	474	69	543
1926	494	73	567
1927	504	68	572
1928	532	70	602
1929	531	77	608
1930	538	75	613
1931	518	71	589
1932	523	76	599
1933	542	76	618
1934	565	73	638
1935	575	72	647
1936	582	75	657
1937	572	78	650
1938	603	80	683
1939	608	84	692
1940	599	84	683

Sources: Annual Reports on the Administration of Burma; Annual Reports on Trade and Navigation; and Annual Reports on the Working of the Indian Factories Act.

## APPENDIX V.A

Table Showing Distribution  
of Immigrants and Emigrants by MonthImmigrants

Month	1881 (1)	1882 (1)	Total(2) 1887-91	1921 (3)	1922 (3)
Jan.	3,539	3,670	38,071	23,909	21,966
Feb.	1,400	3,147	30,945	23,196	21,777
Mar.	2,044	2,051	24,935	16,957	14,930
Apr.	2,335	1,468	24,343	15,086	12,984
May	1,909	2,186	23,623	20,560	18,535
Jun.	1,489	2,351	30,125	18,513	19,308
Jul.	1,935	3,496	28,219	21,902	17,239
Aug.	3,621	3,349	26,820	15,600	17,201
Sep.	3,629	7,005	38,561	15,184	18,832
Oct.	5,078	9,524	49,462	18,719	23,304
Nov.	5,408	14,191	76,180	38,995	39,188
Dec.	5,817	14,274	66,839	32,260	36,554

Immigrants

Month	1923 (3)	1924 (3)	1925 (3)	Total All
Jan.	21,747	22,843	20,085	155,831
Feb.	23,248	25,351	25,509	154,573
Mar.	16,644	19,817	19,923	117,354
Apr.	17,232	19,043	17,040	109,531
May	17,163	21,861	19,147	124,984
Jun.	19,004	23,360	19,579	133,729
Jul.	17,356	21,033	16,248	127,428
Aug.	19,415	16,209	15,638	117,853
Sep.	28,118	19,276	19,291	149,896
Oct.	27,324	24,800	25,065	182,676
Nov.	37,416	42,920	56,658	310,956
Dec.	50,611	42,352	34,030	282,837

Sources: (1) Administration Report, 1882-83, p.140.

"Immigration from Indian Ports by sea".

(2) Burma Census Report, 1891, Part I, p.177.

"Return of immigrants and emigrants showing the arrivals and departures in each month of the year from 1887 to 1891."

(3) Bennison, Report (1928), pp.220-1, Appendix E

"Statement showing the number of deck-passengers between the port of Rangoon and ports of India for the five years 1921-25 inclusive."

(continued next page.)

## APPENDIX V.A (cont'd)

## Emigrants

Month	1882 (1)	Total(2) 1887-91	1921 (3)	1922 (3)
Jan.	2,278	17,170	12,311	13,215
Feb.	1,981	24,445	15,732	20,397
Mar.	4,693	36,130	22,435	29,194
Aprl.	5,493	47,453	27,974	33,410
May.	5,597	43,610	29,704	30,194
Jun.	4,915	28,483	19,618	22,275
Jul.	2,401	20,032	12,858	13,009
Aug.	1,257	21,031	12,920	11,153
Sep.	2,064	18,102	14,620	15,133
Oct.	1,393	18,664	14,247	13,275
Nov.	1,293	19,227	13,903	13,827
Dec.	1,575	17,864	14,289	14,414

## Emigrants

Month	1923 (3)	1924 (3)	1925 (3)	Total All
Jan.	14,184	14,525	14,992	88,674
Feb.	19,558	19,287	22,162	123,562
Mar.	26,850	29,625	27,870	176,797
Apr.	29,017	32,812	30,626	206,785
May	27,831	35,741	39,555	214,932
Jun.	20,451	20,234	22,175	138,151
Jul.	10,798	11,371	11,650	82,119
Aug.	11,677	11,841	13,123	83,002
Sep.	12,669	13,506	14,058	90,152
Oct.	13,486	13,399	16,026	90,490
Nov.	12,583	15,715	14,680	91,228
Dec.	14,460	13,206	13,837	89,645

Sources: (1) Administration Report, 1882-83, p.140.  
 "Emigration to Indian ports by sea."  
 (2) and (3), see previous page.

## APPENDIX V.B

Table Showing the Number of Passengers  
by Sea, Landed at and Embarked  
from, the Ports in Burma.

Year	Immigrants	Emigrants	Net Immigration
1885	56,100	50,600	5,500
1886	78,700	55,400	23,300
1887	66,200	59,500	6,700
1888	86,700	69,500	17,200
1889	194,900	163,000	31,900
1890	133,500	98,400	35,100
1891	151,200	112,900	38,300
1892	123,400	116,600	6,800
1893	129,100	58,300	70,800
1894	119,500	129,900	9,600
1895	-	-	-
1896	134,600	86,900	47,700
1897	123,400	91,600	31,800
1898	149,200	106,700	42,500
1899	167,000	105,700	61,300
1900	163,100	120,500	42,600
1901	154,600	114,200	40,400
1902	143,800	135,000	7,800
1903	180,200	139,700	40,500
1904	182,700	125,200	57,500
1905	238,500	175,700	62,800
1906	360,500	319,800	40,700
1907	271,100	267,600	3,500
1908	319,200	301,000	18,200
1909	302,200	301,900	300
1910	331,100	298,600	32,500
1911	368,300	311,500	56,800
1912	327,500	331,500	- 4,000
1913	380,200	355,300	24,900
1914	268,400	146,200	122,200
1915	338,800	249,000	89,800
1916	258,800	252,300	6,500
1917	223,100	237,100	-14,000
1918	259,900	234,200	25,700
1919	284,700	219,000	65,700
1920	341,100	247,900	93,200

(continued next page)

## APPENDIX V.B (cont'd)

Year	Immigrants	Emigrants	Net Immigration
1921	331,900	303,800	28,100
1922	360,000	310,300	49,700
1923	382,700	295,300	87,400
1924	388,200	315,800	72,400
1925	372,700	350,900	21,800
1926	408,400	342,500	65,900
1927	428,300	361,200	67,100
1928	418,600	333,000	85,600
1929	405,300	371,800	33,500
1930	368,500	399,200	-30,700
1931	309,400	367,100	-57,700
1932	300,300	288,400	11,900
1933	243,300	252,200	- 8,900
1934	256,000	226,600	29,400
1935	273,800	234,200	39,600
1936	245,500	221,600	23,900
1937	244,600	232,300	12,300
1938	213,100	253,400	-40,300

Sources: Various Administration Reports; and  
Baxter, Report, Appendix 6 (a) p.121,  
for 1900 and onwards.

Methods of Collection and Reliability  
of the Above Statistics

The immigration and emigration figures were derived from the records kept by the Port Health Department, which records were compiled under the provisions of Act X of 1887. These returns were based on information supplied by Port Health Officers at Rangoon, Akyab, Bassein, Moulmein, Tavoy and Mergui; and included all races and classes of people, but as Furnivall pointed out, "One has but to watch the arrival of a few boats to realise that Indians of the working class constitute the great majority of passengers."<sup>1</sup>

1. Furnivall, Political Economy of Burma (1938), p.88.

## APPENDIX V.B (cont'd)

For ports other than Rangoon the figures for immigrants and emigrants were supplied by the shipping companies and represented the number of tickets sold. For Rangoon the figures for immigrants were obtained by counting entrants and included infants and passengers travelling without tickets. The figures for emigrants from Rangoon to other than Indian ports were the result of an actual count while those for Indian ports were obtained from the shipping companies and represented the number of tickets sold.<sup>1</sup>

The Port Health Officer stated that although the figures for immigration were probably accurate, the figures for emigration were probably on the low side.<sup>2</sup> The returns furnished by the Port Health Department were compiled, not for the purpose of ascertaining the movement of population but as a check on the steamship companies. So long as the number of persons carried on each ship did not exceed the number permissible under the Act, the requirements of the Act were satisfied.

The figures for the years before 1887 were even less reliable as they were collected by the Custom House while the ship was at the wharf. As coolies were in the habit of crowding on board up to the very last minute, the accuracy of the returns of emigrants made in this way "may be more easily imagined than calculated."<sup>3</sup>

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1. Baxter, Report (1941), p.121.
  2. Furnivall, Op. cit., p.87.
  3. Burma Census Report, 1891, Part I, p.176.



## APPENDIX VIII

Annual Exports of Rice and Paddy From Lower to Upper Burma  
1865 to 1896

Year	Tons.	Year	Tons.
1865	33,800	1881	5,200
1866	17,000	1882	39,800
1867	93,400	1883	37,800
1868	78,000	1884	87,100
1869	66,000	1885	96,400
1870	100,300	1886	77,000
1871	64,800	1887	125,200
1872	28,700	1888	150,700
1873	26,400	1889	58,500
1874	13,000	1890	53,800
1875	67,400	1891	77,800
1876	72,800	1892	152,800
1877	66,800	1893	116,700
1878	53,300	1894	36,500
1879	41,800	1895	25,400
1880	5,700	1896	102,974
		1897	and subsequently, not recorded.

Sources: Annual Reports on the Administration of Burma, Annual Trade and Customs Reports, and Annual Trade and Navigation Reports.

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