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FAMINES AND PEASANT MOBILITY: CHANGING AGRARIAN STRUCTURE IN KURNOOL DISTRICT OF ANDHRA, 1870-1900.

D. R a j a s e k h a r

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ABSTRACT

This paper attempts to bring out the impact of famines on peasant mobility in Kurnool district of Andhra during the period 1870-1900. It emphasises that the interaction of demographic and socio-economic factors played a crucial role in bringing out long term structural changes in a backward and stratified agrarian economy. This has been shown to take place in a manner that calls into question the orthodox Marxist as well as Chayanovian approaches which emphasise, in a deterministic fashion, one or the other set of factors.

The paper argues that famines and their impact are not random. The famine of 1876/78 was very severe on vulnerable sections of the society. By bringing about changes in the age and sex composition especially in families of small peasants, it caused their downward economic mobility. The colonial policies of land revenue collections also contributed to this process. The ability of rich peasants to cope up with the problems posed by the famine was distinctly better than that of the small peasants. Hence, the former benefited from the economic deterioration of the latter both during and after the famine. Although the landlord class of Brahmins could overcome the hardships of the famine, it was affected by the reduced supply of tenants and labourers. Thus, a polarization of peasantry seems to be the predominant tendency during this period.

FAMINES AND PEASANT MOBILITY: CHANGING AGRARIAN STRUCTURE IN KURNOOL DISTRICT OF ANDHRA, 1870-1900

Introduction

Mortality crises such as famines and epidemics were a regular feature of the nineteenth century Kurnool. Periodically they ravished the population, leaving marks on its size and composition and also the agrarian structure. This district witnessed widespread famines in the years 1876/78, 1891/2, 1896/7 and 1900. The famine of 1876/78 devastated several parts of the Madras Presidency; the cultivated area declined by 22 per cent, 3.5 to 4 million people had perished and in as many as 1136 villages more than 40 per cent of the population was missing[1]. The impact of these famines on the peasantry in Kurnool district was not only severe but also varied in its intensity across various strata of the peasantry[2]. This paper, while analysing the changes in population and agrarian economy of the district during the period 1870-1900 brings out the impact of these famines on peasant mobility.

The paper is presented in five sections. The first section discusses the analytical relationship between famines and economic mobility of rural households. The second section provides a background to the agrarian economy of the district. The subsequent two sections analyse the impact of the 1876/78 famine on the population and agrarian economy of the district respectively. The final section brings out the impact of famines on peasant mobility during the period 1875/1900.

1. Linkages between Famines and Peasant Mobility

Shanin's model on peasant mobility views famines as random factors. But "the proximate cause of a famine might lie in some apparently unpredictable 'natural disaster' ... but these are no more than precipitating factors, intensifying or bringing to the fore a society's inner contradictions and inherent weaknesses, exposing an already extant vulnerability to food shortage and famine" (Arnold, 1988: 7). Some societies can pass through a prolonged drought without undergoing much suffering or loss of life, while others, subjected to a similar catastrophe, might experience mass starvation and high mortality. Thus, although a famine has meaning and context as an 'event' in itself (to the extent that it can be distinguished from what precedes and what follows it), it is seldom an entirely isolated episode or a purely chance misfortune and, hence, it is both an event and structure (Arnold, 1988: 6-11). The famines are, therefore, not completely random and unpredictable occurrences and cannot be meaningfully studied in isolation from the socio-economic structure of a specific society.

Although Shanin hypothesizes that random factors (which include state policies, fluctuations in weather and market) would lead to multi-directional mobility (Shanin, 1972: 115), he does not provide us with any analytical relationship between random factors and peasant mobility (Cox, 1979: 76). We will examine the influence of famines on peasant mobility.

An understanding of the impact of famines on economic mobility requires an understanding of what causes a famine. Malthus (1965) treated famine as the last resort of the nature in ensuring balance between population and resources[3]. Following

the Malthusian logic, many scholars attributed famines to the decline in food availability. It is somewhat difficult to accept this approach in the light of most recent theoretical and empirical works. Firstly, Boserup (1965) argues that population pressure, rather than being a cause of demographic catastrophe, has been the driving force behind agricultural innovation and the greatest incentive for increased agrarian production. Also, Malthus failed to foresee the potential growth of modern agriculture and industry. Secondly, food availability decline approach fails to take note of the distributional aspects[4].

The latter point is better articulated by Sen (1984), who challenged the food availability decline approach. For him, the central issue is not the total quantum of food, but the way in which it is distributed. He argues that although there was no serious decline of food availability during the Bengal famine of 1943/44, a considerable number of people died simply because of the "failure in peoples' entitlement to the food". Notwithstanding the skeptical remarks on the novelty and wider application of Sen's argument (Mitra, 1985; Srinivasan, 1983) and also the examples of famine in which food availability did decline (Ashton et al, 1984), his approach is extremely useful in understanding why some people would starve and perish in a region during a famine period, while others, in the same region, would live in comfort.

Let us see how a failure of employment entitlement would result in starvation of some families in an economy, where market relations are just penetrating. Here, some families produce mainly food, while others acquire food mainly in exchange of either labour (agricultural labourers), or products of labour (artisans), or services (barbers, washermen, etc.). In the case

of food producers, the access to food is a function of their production capabilities, which, in turn, are determined by their command over productive assets. Depending on the nature of productive assets, their food surplus would vary across the good and bad years; hence, their susceptibility to a famine. For the non-food producers, access to food is related to "employment entitlements"; it is the level of demand by the food producers for their labour or products of labour, or services which determine their vulnerability to starvation in any particular situation. Thus, a crop failure, by reducing employment opportunities for the non food producers, might result in their starvation[5].

But whether or not a failure in employment entitlement would result in starvation deaths depends on the survival techniques, viz., migration, evolved in a society and the state's relief measures. However, unlike pastoralists and for that matter food gatherers, the geographical mobility of the peasants would be somewhat restricted as commitment to the land limits the latter's mobility as well as their adaptability to a crisis in an alien land. The famine policies often fail to provide relief to the victims. For instance, in colonial India, famine policy was mostly guided by the principles of classical political economy. As a short-term emergency measure the Smithian laissez-faire policy proved to be a negative approach. Again, as regards the long-term perspective on Indian famines the prevalent Malthusian argument was; "what is the use of saving lives when once again the people so saved would suffer in the same way?". Such a "callousness towards life", no doubt, had a devastating impact on the vulnerable sections of the society[6].

Thus, in a stratified society where insurance mechanisms are not readily available and state's help is meagre, a famine would result in a large number of deaths. Following Sen's argument, such an increase in death rates would obviously be overwhelming among the poor, which again need not be same across age groups and sexes. The younger and middle aged men are likely to do hard work either in relief camps or as agricultural labourers. Such hard work coupled with their physical deterioration during the famine period would make them much more vulnerable towards the epidemic diseases and lead to higher mortality rates among them. On the other hand, the survival chances of adult women, left behind in the villages to look after the children and old, would improve (Vaughan, 1987: 119-47) as the incidence of famine-induced diseases would be less here. The deserted women would also be helped by friends, relatives and others[7]. However, the women in the relief camps are not likely to suffer from exhaustion as the gratuitous relief is liberally provided to them[8]. Added to that, females have a better (hormonally determined) immune resistance (Waldron, 1983: 324-5). Given the fact that higher mortality rates are mainly due to the spread of famine-induced diseases, such resistance may help the women to fight the infectious diseases better than men. Hence, women are likely to experience lower mortality rates than their male counterparts.

Females, however, are said to be the victims of social discrimination. Greenough argues that under the influence of patriarchal values of the Indian Hindu society, priority is given to the feeding of the adult males and male children so as to ensure the continuance of the male line (Greenough, 1982: 215-7). Moreover, women in the reproductive age groups are likely to be more susceptible to famine despite the fact that they are

biologically stronger than men.

Let us have a look at the evidence on sex-wise mortality rates. In the famine of 1876-78, the women appeared to have died in less numbers as compared to the men in Madras (Lardinois, 1985: 460) and Bombay Presidencies (MacAlpin, 1983: 63-7). Even during the Bengal famine of 1943/4, Greenough admits that "females experienced smaller increases in mortality ... than males" in all the age groups (Greenough, 1982: 313). In modern societies, where females normally have the disadvantage of higher mortality rates than men, famine appeared to have reduced or even reversed such a disadvantage[9]. Hence, "women were not as generally abandoned as Greenough's cultural hypothesis suggests" (Arnold, 1988: 90). Thus, "females have greater biological capacity to resist the rigors of periods of famine - a capacity that is not offset by social factors" (MacAlpin, 1983: 64).

The death rates among the children would be the highest[10] because of their low body weights and greater vulnerability. Among them, the children at the weaning stage (1-3 years) are likely to suffer more from food shortage compared to infants (Vaughan, 1987: 36), who may not be affected by sudden change in food availability or by varying cultural practices as the latter take most of their nourishment from breast milk. With respect to sex, male children would experience higher mortality rates than the female children (Waldron, 1983: 324). The older people would have higher mortality rates[11] not only because of lower resistance towards nutritional stress but also due to the discrimination in the provision of food as they are less valued in the family[12].

Thus, in a stratified society where insurance mechanisms are not readily available and state's help is meagre, a famine would result in a large number of deaths. Following Sen's argument, such an increase in death rates would obviously be overwhelming among the poor, which again need not be same across age groups and sexes. The younger and middle aged men are likely to do hard work either in relief camps or as agricultural labourers. Such hard work coupled with their physical deterioration during the famine period would make them much more vulnerable towards the epidemic diseases and lead to higher mortality rates among them. On the other hand, the survival chances of adult women, left behind in the villages to look after the children and old, would improve (Vaughan, 1987: 119-47) as the incidence of famine-induced diseases would be less here. The deserted women would also be helped by friends, relatives and others[7]. However, the women in the relief camps are not likely to suffer from exhaustion as the gratuitous relief is liberally provided to them[8]. Added to that, females have a better (hormonally determined) immune resistance (Waldron, 1983: 324-5). Given the fact that higher mortality rates are mainly due to the spread of famine-induced diseases, such resistance may help the women to fight the infectious diseases better than men. Hence, women are likely to experience lower mortality rates than their male counterparts.

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Thus, the increase in mortality rates in poor families would be uneven across the age and sex groups. The mortality rates would be higher among male children and the older men as compared to the adult males and females of all age groups. This results in changes in age and sex composition in the population. Immediately after a famine, the dependency ratio (the number of females, children and aged as a proportion to adult males) would decline as the mortality rates of children and aged would be high during the famine period. However, after a decade or so, the dependency ratio would increase because a small proportion of children would reach adulthood, while a large proportion of adults become old. The attempts of a society to recover its population would also result in a large number of births, and, consequently, the dependency ratio would go up further. Such an increase in dependency ratio would be extremely marked among the poor families as they are the chief victims of famine.

The poor would also face a disruption in their family life. The abandonment of spouses is somewhat frequent during the period of famine. In the Bengal famine of 1943/4, an abnormal proportion of the female destitutes in Calcutta was found to be widows and those deserted by their husbands during the famine period (Greenough, 1982: 220). In Malawi, the famine year (1949) is "remembered as the year of 'many divorces'" (Vaughan, 1987: 34). Besides, a large number of men would out-migrate in search of work and food[13]. Very few of the out-migrants returned home[14]. Consequently, the poor families in the post-famine period would consist of widows, widowers and orphans. After the famine, the widows and widowers "would have a difficult time in coping in an economy in which family was the central productive unit; remarriages can recreate the family economy, but may not have reconstructed the bonds of affection and loyalty that

nourished it" (Watkins et al, 1985: 666). In the Indian society, where social sanctions do not easily permit the remarriages, the family life in the post-famine period may have been disrupted. Added to that, the impoverished survivors of the famine would be plagued by under-nourishment. The children born during and immediately after the famine would be 'weak and sickly' (Vaughan, 1987: 35-6) and would continue to be so even when they become adults. Thus, the quality of the labour services that poor families could provide to the society may have been low.

The changes in sex and age composition of poor families and the disruption of their family life coupled with a general decline in the quality of their labour would adversely affect their recovery from the famine. An enormous loss of cattle during the famine period would make their recovery even slower. The scarcity of able bodied men in their families would incapacitate them in occupying the cultivable wastes (if there are any) and also their participation in the labour market. The slow agrarian expansion that has been observed in many of the societies in the post-famine periods is to be attributed not to the decline in population per se but to changes in the age and sex composition of families of poor and small peasants, the disruption of their family life and general decline in the quality of their labour.

On the other hand, the rich peasants though suffer from the failure of monsoons, benefit from the widespread deterioration in the economic condition of poor and small peasants during and after the famine. Such deterioration, which precedes the stage of starvation and deaths, gets reflected in the sale of jewellery, ornaments and brass pots (Greenough, 1982: 196-7)[15]. This stage will be followed by the relinquishment and/or

alienation of land. Authentic evidence on distress sales of land comes from a large scale survey conducted by the Indian Statistical Institute (ISI), Calcutta. The ISI interviewed 15769 households in 386 villages and collected information on sales of paddy land and the results were projected for the Bengali population as a whole. During the period mid-April 1943 to mid-April 1944, 9.25 lakhs of families or about 14 per cent of land owning families of Bengal sold some paddy land, whereas nearly 29 per cent of these families sold all of their paddy land. Majority of these families (nearly 88 per cent) were small farmers owning below 5 acres of land. About 60 per cent of the land went into the hands of non-agriculturists (mostly non-residents), while most of the remaining land "passed into the hands of prosperous cultivators who took advantage of distress sales to enlarge their own holdings" (Mahalanobis et al, 1946: 34-9). On the other hand, a large number of the small farmers either decreased their landholdings or gave up cultivation ending up as agricultural labourers or were wiped out (Ghose and Gupta, 1946: 75-8). The general decline in the economic condition of the small peasants also got reflected in widespread selling of cattle and mortgages of land (Mahalanobis, et al, 1946: 32 and 42-3). In the post-famine period, the richer peasants may face problems of scarcity of labourers; but the recovery would be faster in their case.

With the elimination of small peasants and decline in both the number and quality of able bodied labourers, the demand for land in the lease market would be somewhat low. This might lead to a decline in rents and consequent decline in rental incomes of the landlord class. Hence, the recovery of landlord class would be slower than that of the rich peasants.

Thus, the small peasants would experience a downward economic mobility during the period of famine. A fast recovery from the famine would be difficult in their case because of changes in age and sex composition of their families, disruption of family life and a general decline in quality of their labour. On the other hand, the rich peasants might benefit from the famine. The recovery from the famine would be faster in the case of rich peasants, while it would be somewhat slow in the case of landlords whose dependence on tenants and agricultural labourers would be relatively more.

2. Agrarian Background of the District

Before we discuss the impact of 1876/78 famine on peasant mobility, it may be useful to explain the historical process which rendered some groups more vulnerable to the famine than the others (Rangasamy, 1985: 1743).

When Kurnool District[1] was formed in 1858/9, the society was already stratified. Prior to the British rule, village lease system existed in the district, under which the whole village jointly paid the land revenue. The headmen, who were in charge of the collections of land revenue from individual ryots, exercised authority in matters of land distribution (according to the means of the ryots) and fixing the land revenue. Thus, in reality they became the renters[2]. The Ryotwari Settlement (RS) replaced the village lease system. Under the RS, though peasant proprietorship involving direct relationship between cultivator and the government was sought to be legalised and institutionalised, in practice, it did neither prevent tenancy nor involve any redistribution of land. All it did was to legitimise the existing structure of land distribution and determine the land revenue according to the type of the soil, irrigation, market and

other factors (Mukherjee and Frykenberg, 1979: 238).

Moreover, the assessments were grossly unequal as they were fixed by influential men in villages (such as Karnams and Reddies) and the apportionment was mostly unfair[18]. Under the RS the government received land revenue in cash. Not being a pecuniary commutation for its share of the produce, the assessment varied according to each year's produce. The land revenue was generally high, around 40 to 60 per cent of the gross produce. Added to that, ryots were compelled to occupy and cultivate as much land as possible (Mukherjee, 1962: 181). Unable to relinquish the lands, the farmers in this region used to abandon the rich black soil fields and occupy inferior red soil fields, thus resulting in unprofitable agriculture and poverty of the people[19]. The high tax burden coupled with famines[20] and depression in prices[21] resulted in heavy balances of revenue (often irrecoverable), large remissions and a progressive decline in the land revenue[22]. In 1843 the District Commissioner wrote: "if bad farming, heavy balances year after year, land which has no saleable value and a universal struggle to reduce the size of the farms, are proofs of the poverty or symptoms of over taxation, then assuredly Kurnool can produce abundance of them"[23]. The revenue system also hampered the development of commodity[24] and land markets[25].

The inequality of land ownership was further worsened by the extent and nature of inam lands, for ryotwari settlement was not the only form of land control. RS "was only half of the settlement with leaders and elite groups of the villages in South India. Implicit if not explicit in the contents of records is ... a lurking suspicion that Munro reached separate, quiet agreement with village leaders" (Frykenberg, 1984; 47-8). The

high magnitude of inam lands in the district became known only after the appointment of Inam Commission in 1858. In Kurnool district, there were 47837 land titles, comprising an area of 878913 acres with a hypothetical average land revenue of Rs. 1.Ø5 and the average quit-rent payable on them was only Rs. Ø.43²⁶. Roughly half of the total lands, which represented the accumulated charities from the powerful of the country from the most remote times, was given to individual families or their descendants for their socio-religious (and political) merits. These lands were the richest, most cultivable and best watered in the district. Since these lands were mostly owned by non-cultivating castes such as Brahmins, the prevalence of tenancy was widespread and disputes between the tenants and the landlords were not uncommon. The other half of the lands was meant for village revenue officers, police and artisans.

Thus, an oppressive land revenue system and a large extent of inam lands perpetuated the iniquitous land ownership. The RS legitimized the existing inequality and resulted in the emergence of village elite groups who became much more powerful with the cultivation of partially or fully revenue free inam lands. These lands were controlled by the non-cultivating castes such as Brahmins and cultivating castes such as Reddies and Lingayats, whereas the other middle and lower middle castes (Yadavas and Boyas respectively) were either tenants on the inam lands or petty lanandolders. Besides, they had to hire themselves to eke out a subsistence. The untouchables (Malas and Madigas) were mainly agricultural labourers. Thus, when Kurnool district was formed in 1859/6Ø, the revenue burden was quite high, cash crop cultivation was inconsiderable, land market was partially developed and the society was xtremely stratified.

Between 1860-1875, the cultivated area (excluding inams)

increased at an annual growth rate (compound) of Ø.4 per cent, while occupied area increased at Ø.7 per cent. This marginal agrarian expansion was partly due to the increase in prices during the Civil War in U.S.A.[27] and partly due to the revision of settlement rates in some of the taluks[28]. However, the tax burden in some of the taluks (such as Cumbum and Markapur) was relatively high[29]. Consequently as much as 8Ø per cent of total arable area (excluding inam lands) was left uncultivated in Markapur taluk. The farmers in some villages used to abandon the rich fields in the vicinity of the village and occupy inferior and far away fields. The Collector wrote; "the ryots hold lands of the adjoining village in preference to and not from want of lands in their own villages, and they ascribe it to excessive assessment of their own lands". In Markapur, the extent of cultivation of inam lands was more or less equal to that of government lands and the Collector bemoaned that the ryots, instead of holding proprietary rights on government lands, prefer to be tenants-at-will on inam lands[30]. In other taluks also, the high tax burden resulted in relinquishment of land[31].

The above circumstances placed the Brahmins and Reddies in an advantageous position as they owned most of the inam lands. Moreover, their accumulation of surplus from the revenue-free inam lands was greater especially during the period of rising prices in the early 186Øs[32]. In Kurnool district, 25 per cent of the Brahmins derived their income from landed property. The Commissioner of 1872 Census remarked that;

> as a rule, Brahmin cultivators secured the best lands in the country. By the proceeds of land, tilled by serf labour, they have increased in substance and grown wealthy ... the Brahmins have gradually shifted their position from that of mere priests, purohits ... to the more substantial one of landed aristocracy[33].

The condition of small farmers and tenants was not very encouraging. Despite rising cotton prices the cultivation of cotton did not pick up mainly due to the low incomes of small farmers and tenants. In 1863, their estimated monthly income was only Rs. Ø.5Ø. Hence, it was not surprising that "a new demand, like that which has arisen for cotton, should meet with but a feeble response"[34]. Thus, the price boom of 186Øs seemed to have surpassed the small peasantry. Added to that, with a high burden of taxation, the farmers found it difficult to pay the land revenue and there was a gradual increase in the arrears for which coercive processes were issued and sales were resorted[35]. Moreover, the exorbitant land revenue rates (and payment in cash) compelled the small peasantry to get into the debt trap[36].

A rapid growth of population[37] and a consequent increase in family size would have induced the small farmers to bring those cultivable wastes under plough where assessments were tolerable. In fact, the labouring class was "struggling to rise to the position of landed proprietors"[38]. Since their monthly income was small, these petty landowners resorted to supplementary means of subsistence such as hiring out for agricultural work, stone quarrying, plying bullock carts and cotton spinning[39]. The construction of Kurnool-Cuddapah canal also enhanced the job opportunities. With the availability of cultivable wastes and employment opportunities, the small peasant was "endeavouring to better [illegible] condition"[40]. However, such an endeavour was, perhaps, affected by the high tax burden.

Thus, cumulation of economic advantages and disadvantages seems to be the predominant tendency during this period. Random factors such as state's land revenue policies also contributed to the polarizing trends. Although the availability of cultivable

wastes and employment opportunities had a countervailing effect, polarisation of peasantry seems to have been the predominant tendency. So when the famine struck in 1876, certain sections of the peasantry in the district were already vulnerable.

3. The 1876/78 Famine and Population of the District

The monsoon of 1876/7 was the "worst within the memory of the oldest inhabitant" in the district. The south-west monsoon was scanty, while the north-east monsoon was a total failure. There was a general failure of crops; prices increased sharply and the Great Famine had struck. Next year, the average rainfall was better; however, on the whole, was deficient and unseasonal. And the Great Famine continued to ravish the district for the second successive year. With fairly good rains in the following year, the condition improved; but the destruction was complete.

The famine had a devastating impact on the population of the district. The mortality rate (based on registered deaths[41]) increased by 400 per cent in 1877 and by over 200 per cent in 1878 (Figure 1). The death rate remained high in the post-famine period mainly due to the epidemic diseases[42]. The population of the district declined by 25.3 per cent during the period 1872-81; and if population growth till 1876 is also considered the loss would be even higher (Table 1). The loss was the highest in Pattikonda taluk; whereas it was relatively low in the irrigated taluks of Sirvel and Nandyal. A smaller loss of population in Cumbum and Markapur was due to out-migration to the irrigated district of Kistna (Benson, 1869: 7). Thus, the district lost more than one-fourth of its population. Did a decline in food availability cause this loss?

Table 1: Taluk-wise Changes (%) in Population in Kurnool District (1872-1901)

Taluks	1872-81	1881-91	1891-1901	1872-1901
Pattikonda	-39.21	31.55	3.1	-17.53
Ramallakot	-35.22	31.97	14.3	-2.28
Nandikotkur	-28.59	21.75	17.6	2.26
Nandyal	-27.06	23.00	14.5	2.77
Koilkuntla	-22.81	13.43	1.9	2.25
Sirvel	-19.52	13.94	12.6	3.27
Cumbum	-10.72	7.06	-5.7	-5.82
Markapur	-9.30	18.93	1.5	1.76
District	-25.80	20.52	6.6	-4.63

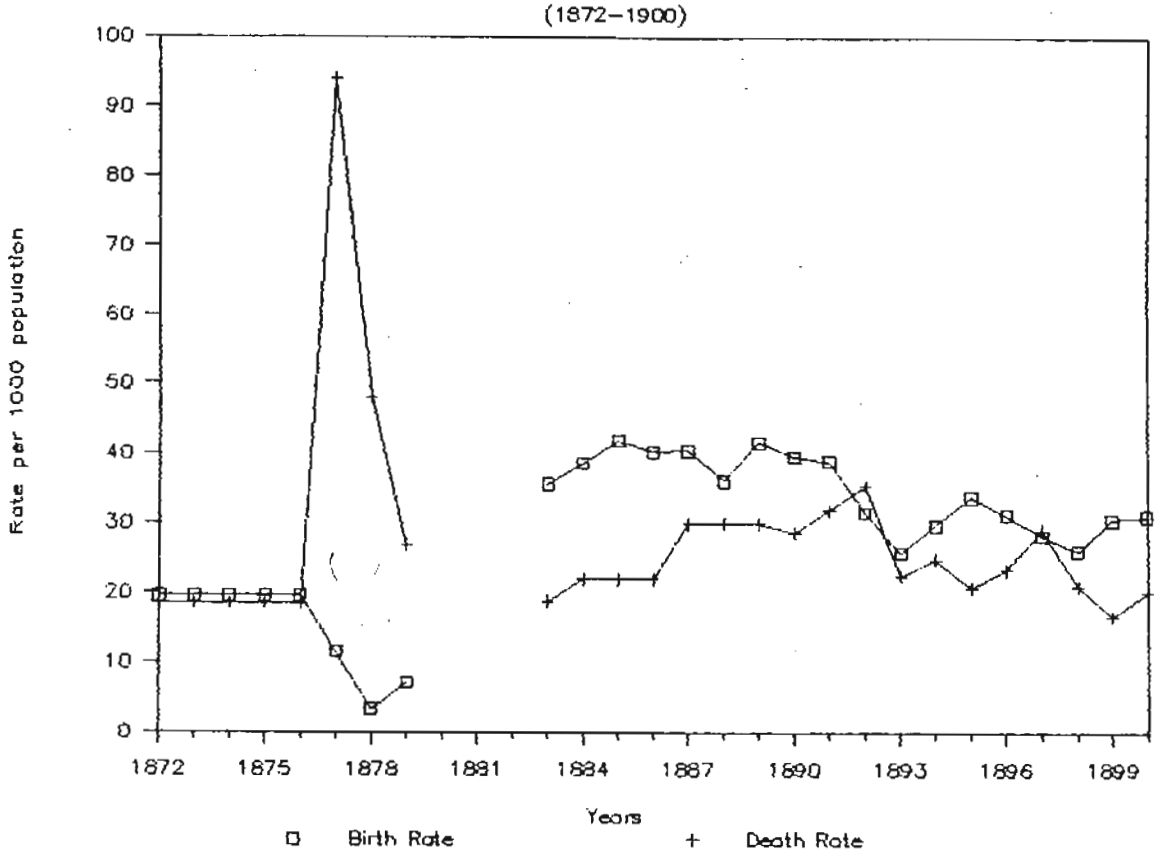
Source: Census of India, Madras, Various Volumes.

With a complete failure of rains in 1876 and 1877, the jowar prices started increasing from June 1877 onwards and were ruling high even till June 1879. As a result of favourable weather, they started declining, but reached the pre-famine levels only towards the end of 1879 (Figure 2).

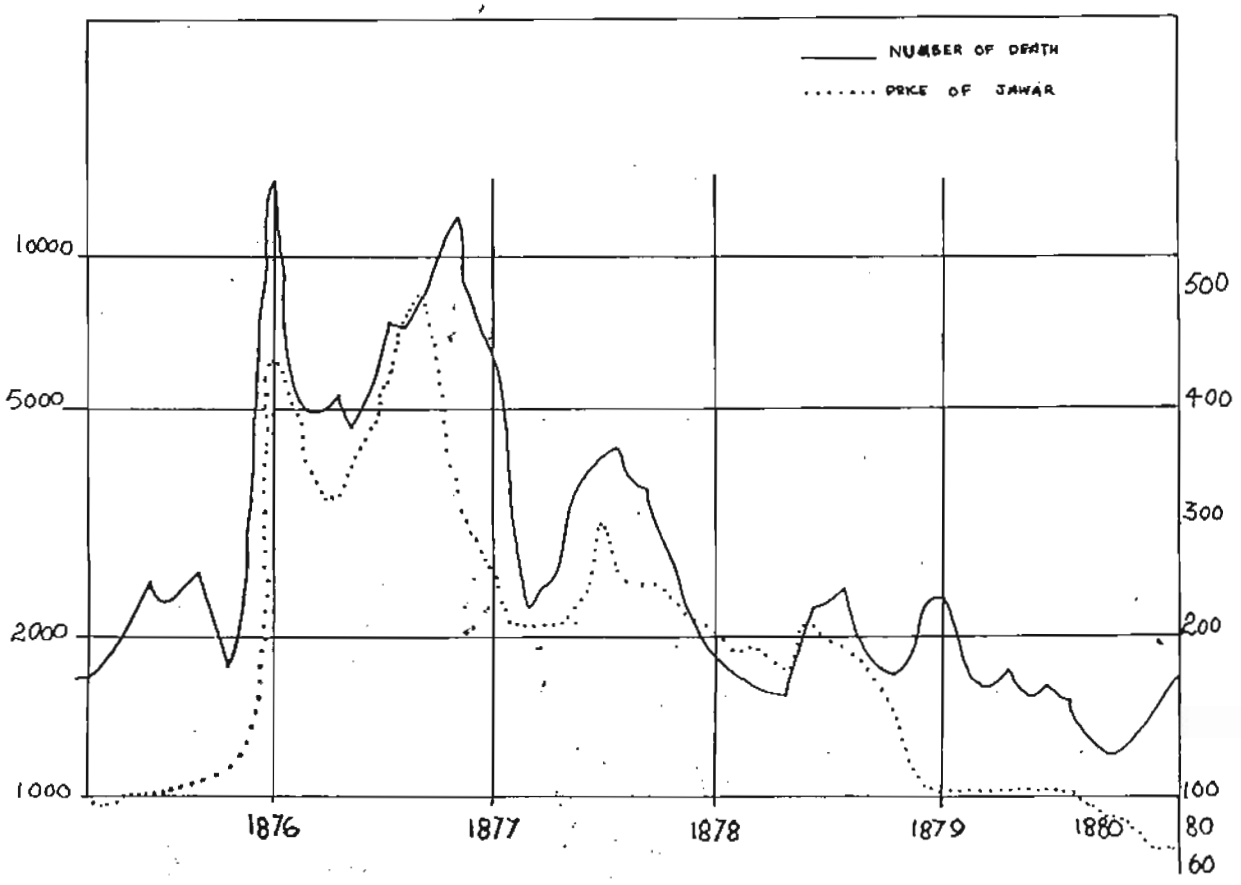
Such an increase in prices was not completely due to decline in food availability. To begin with, the district was self-sufficient in food. In 1875/6, the estimated total food production and consumption were 4.52 and 2.11 lakh tons respectively, thus leaving a surplus of 2.41 lakh tons. At the rate of annual consumption of 4 cwt of grains per person, this stock would feed the population for more than one year[43]. Besides, the imports into the region increased from 535 tons in 1875 to 1.18 lakh tons in 1877 of which more than 97 per cent were foodgrains[44]. Even then, the prices of foodgrains increased due to the following factors. Firstly, the bigger farmers stored large quantities of grain in the underground pits. The Sanitary Commissioner wrote in 1877:

Fig 1: Birth and Death Rates in Kurnool

(1872–1900)



GRAPH 2: MONTHLY NUMBERS OF DEATHS AND RRICE INDICES OF JAWAR IN KURNOOL DISTRICT (1876 - 1880)



> It is certain that the more substantial of the farmers, artizans did hold, through out the famine, considerable reserves of these dry grains, and that even the very extraordinary prices obtainable for them did not tempt the holders to get rid of their stores while the prospects of continuance of famine were imminent. I became acquainted with an instance of a substantial ryot in Bellary district, who, all through the famine brought imported food at high prices for his labourers and household, and who at the same time, had several pits stored with about 50000 seers of old grain, which he kept as an assurance against starvation, but which he would not open till the prospects of a new crop were assured. This one instance was probably multiplied by thousands and ... the collector of Cuddapah informed me that after a plentiful fall of rain, old grain came out of the hidden store[45].

Secondly, it was not uncommon to store the foodgrains when the prices were low. In most cases, the traders and wealthy farmers were reluctant to release the stocks as there were instances of attack from the starving people[46].

With the increase in prices, one finds a good association between the intensity of famine (measured in terms of jowar prices) and the number of deaths (Figure 2). Correlation, however, does not mean causation; it may be noted that the increase in death rate was mainly due to the failure in exchange entitlements. The failure of rains dwindled employment opportunities, thus resulting in a decline in purchasing power. Hence, notwithstanding the imports and availability of foodgrains "an enormous number of poorer classes of the people ... have perished miserably, <u>simply from their inability to procure sufficiency of wholesale food</u>"[47] (emphasis added). The colonial government attributed the phenomenal loss of population to the transport bottlenecks. However, the population loss in areas well served with transport (such as Pattikonda) was high compared to irrigated areas (such as Sirvel and Nandyal) where though

transport was ill-developed, better employment opportunities improved entitlement to the food[48].

Slow Recovery of Population

More importantly, the recovery of population was somewhat slow in the district. The growth of population was somewhat faster in the 1880s, while it had slowed down in 1890s due to the famines in that decade (Table 1). However, how fast a region could recover its population depends on changes in age-wise composition of population brought about by differential mortality rates and out-migration (Eversely, 1974: 52; Watkins et al, 1985: 655). Let us, therefore, examine changes in the age and sex composition of population, fertility rates and migration from the district during and after the famine.

The increase in death rate was uneven across the socio-economic groups, sexes and age-groups. For obvious reasons[49], the famine had a severe impact on the depressed castes. As caste-wise mortality rates are not available, a comparison of population loss across castes in the district between 1872 and 1881 is made in Table 2. It reveals that population of Madigas, Boyas, Chenchus and artisans declined at a faster rate compared to that of the Brahmins and cultivating castes such as Reddies. In some taluks, the loss of Madigas was as much as 50 per cent. The relief officers also noted that "the great out-caste or paria tribes, and the lower divisions of Hindu agricultural castes were the chief victims (of the famine). The Brahmins and trading castes of Hindus suffered but little or not at all"[50].

Table 2: Changes in Caste-wise (%) Population of Kurnool (1872-1881)

Castes	PK	RK	NK	NL	KK	SL	CM	MP	Total
UC	-14.8	-14.1	-25.3	-19.9	-33.9	-Ø.5	-11.5	-11.5	-17.2
NBUC	-23.Ø	-37.Ø	-21.8	-21.6	-54.7	35.5	-14.3	-11.2	-21.4
Yadavas	-28.9	-3Ø.8	-35.Ø	-27.Ø	-33.8	-4.Ø	-16.1	-1Ø.1	-25.1
Artisans	-45.1	-4Ø.3	-32.1	-26.1	-49.6	15.8	-8.6	-1.7	-28.3
Boyas	-45.5	-38.2	-35.6	-41.5	-47.9	17.9	-17.8	-3Ø.3	-37.9
Chenchus	-52.9	-39.6	-12.3	-38.5	-57.1	2Ø.4	9.Ø	-1.Ø	-27.5
Madigas	-5Ø.7	-42.3	-35.1	-36.4	-31.4	-25.7	-15.7	-36.8	-35.6
Muslims	-39.4	-3Ø.6	-31.5	-22.9	-11.4	-24.6	-6.3	-3.6	-24.2
Total	-39.3	-35.6	-29.2	-28.6	-43.2	5.7	-12.Ø	-14.4	-27.3

Sources: 1. Census of India, Madras, 1872.
2. Census of India, 1881, Taluk War Returns, Kurnool District.

Notes : PK = Pattikonda RK = Ramallakot NK = Nandikotkur
NL = Nandyal KK = Koilkuntla SL = Sirvel
CM = Cumbum MP = Markapur
UC = Upper castes NBUC = Non-Brahmin upper castes.

Among the sexes, the adult males and boys perished more as they "left their villages in large numbers, flocking to food markets and centres of relief works. They exhausted their energies sooner than the females"[51]. Since the colonial government did not fully realise the intensity of the famine in the initial months, there was some delay in setting up of relief works. Hence, some men and boys, in their reckless wandering, died in "jungles, road sides and ditches". Added to that, they came into contact with epidemic diseases, widely prevalent at the site of relief works. On the other hand, as the females and older people were left behind in the villages (which were relatively less affected from diseases), their survival chances were enhanced. Moreover, gratuitous relief was extended more easily to women and aged people, as compared to the 'able bodied men'. Consequently, as the statistics of famine hospitals and

relief camps showed, the adult men and boys "died in a ratio of about 20 per cent in excess of the females"[52]. A corroboration to this can be found in an improved sex-ratio (in favour of females) in this district and also in all the famine districts in 1881[53].

Moreover, the birth rate also declined (Figure 1). Such a decline, it was argued, was due to the reckless wandering of village servants and consequent under registration. However, as Cornish argued, "it cannot be said that registration as a whole has fallen off in 1877, for in the areas of country more severely affected by famine, the death registration has been four or five times in excess of the average registration of the past five years. Nor can it be supposed that the many thousands of village servants scattered over the country ... have entered into a combination amongst themselves to render fictitious entries of deaths, and to systematically omit the births"[54]. Thus, though birth rates were not able to capture the picture fully, they nevertheless show the broad t nds.

That birth rate had declined can be established by the children to women ratio. Though this is a summary measure of level of birth rate, it has the advantage of being calculable for each census year. Table 3 shows a faster decline in children (0-4) to women (15-45) ratio in Kurnool district as compared to the non-famine district of Godavari. This is further corroborated by the qualitative evidence. Cornish's enquiries brought out "overwhelming evidence to show that pregnancy in the famine stricken zone (after the earlier months of distress) was a very rare condition; that in young women the period of puberty had been retarded; and that the special functions relating to generation were, in the more marked cases of physical emaciation,

altogether in abeyance"[55]. A combination of demographic, medical and social factors[56] contributed to such a decline.

Table 3: Children (Ø-4) to Women (15-45) Ratios in the Population in Kurnool and Selected Non-famine District.

Districts	Ratios			Indices (1872 = 1ØØ)	
	1872	1881	1891	1881	1891
Kurnool	Ø.639	Ø.262	Ø.586	41.Ø	91.7
Godavari	Ø.71Ø	Ø.631	Ø.633	88.9	89.1

Source: Census of India, Madras, Various volumes.

The lower birth rate, higher male mortality rate and lower mortality rates for females and old people brought about striking changes in the age-wise distribution of population (Table 4). The loss of male population (15-4Ø years) was lower compared to that of females (15-4Ø years), males (4Ø-6Ø years) and children. However, the growth of both males and females in the age group of 15-4Ø years in the later decades was either slow or declining (Figure 3). A decline in the population in the reproductive age groups had reduced the fertility. Moreover, a substantial loss of population in the age group of 15-6Ø resulted in a large

Table 4: Age-wise Change (%) of Population in Kurnool (1872-19Ø1)

Age groups	1872-81			1881-91			1891-19Ø1		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Ø-15	-34.34	-31.2Ø	-32.83	16.95	17.18	17.Ø6	2Ø.Ø4	2Ø.59	2Ø.31
15-4Ø	-22.73	-25.87	-24.29	5.67	1Ø.Ø2	7.78	-1Ø.68	-7.44	-9.Ø7
4Ø-6Ø	-23.6Ø	-18.55	-21.16	32.96	18.68	25.84	16.34	15.52	15.95
6Ø +	-5.54	18.52	7.ØØ	39.43	36.5Ø	37.79	18.22	5.Ø3	1Ø.91
Total	-26.81	-25.26	-26.Ø5	15.21	15.31	15.26	6.44	6.93	6.69

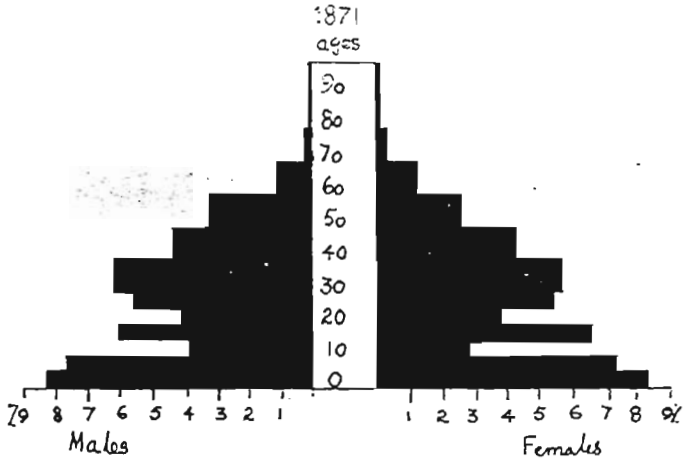
Source: Census of India, Madras, Age Tables, Various issues.

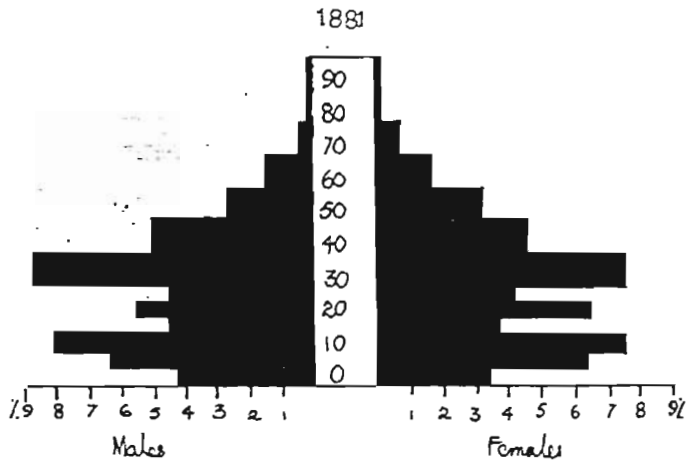
number of widowed; in 1881 nearly 30 per cent of total females in the district were widows and this figure was one of the highest in the Presidency. Most of the widows were found in the age group of 30-50 and their remarriages were not always easy because of social customs, while widowers could not simply afford them[97]. Consequently, as Table 3 shows, the fertility rate was low in the district. Thus, an enormous loss of children and the existence of a large number of widows and widowers coupled with recurring famines in the 1800s slowed down the recovery of population in the district.

Migration

One might argue that such a slow recovery of population (belonging especially to the age group of 15-40) was due to out-migration. It is difficult to estimate out-migration from a district, since people born in the district and enumerated in other Presidencies would be classified as born in the Madras Presidency. However, unlike those migrated (to Ceylon) from the Tamil Countryside, the people in the district were found to be not very mobile. They either migrated to the neighbouring delta district of Kistna or to the Nellore district to work for the construction of the Buckingham canal[98]. Table 5, which provides figures on the people born in Kurnool district and enumerated in other districts of the Madras Presidency, makes it clear that out-migration was not the principal reason for slow recovery. The proportion of out-migrants in total population was 5.27 in 1881 and it declined to 4.30 in 1891 mainly due to an increase in the total population. In 1901, the increase in the number of out-migrants is misleading as people born in Kurnool and enumerated at Banaganapalli (one jagir in the district itself) were included. Moreover, majority of the out-migrants was found

GRAPH: 3 AGE DISTRIBUTION OF THE POPULATION IN KURNOOL DISTRICT, 1871, 1881 AND 1891.





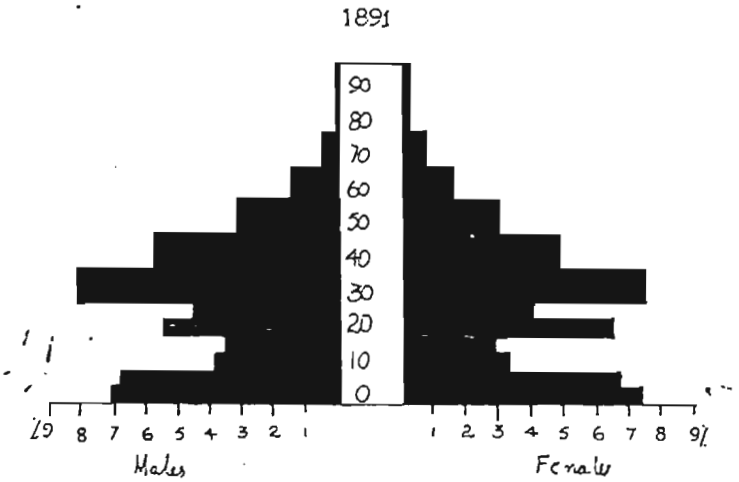


Table 5: Out-migrants from the Kurnool district (1881-1901)

Migrated to	1881	1891	1901
Kistna	8572	8474	10323
Nellore	3010	3914	3242
Cuddapah	9605	9195	10839
Bellary	13030	7080*	9482
Anantapur	n.a	5108	4455
Other districts within Presidency	1520	1382	32877**
Total	35737	35153	71218
As % in total population	5.27	4.30	8.17

Source: Census of India, Madras, Various years.
Notes : * The decline is due to bifurcation of Bellary district in to Bellary and Anantapur in early 1880s.
** This increase was due to the inclusion of persons born in Kurnool and enumerated at Banaganapalli jagir, which was in the district itself.

in the neighbouring districts, implying it to be marriage-induced migration. Thus, the proportion of out-migrants was too small to affect the recovery of population.

4. Agrarian Expansion

The famine affected the agrarian expansion very severely. The cultivated area declined from 21 lakh acres in the triennium ending with 1874/5 to 15 lakhs in that ending with 1879/80 (Table 6). Between 1872/3 and 1885/6, the decline in cultivated and occupied area was 16 and 11 per cent respectively; a faster decline in the former indicates that much of the area was kept as current fallows. More importantly, the district did not regain its cultivated/occupied area even by the turn of the century.

Table 6: Cultivated and Occupied Area in Kurnool (1871/2-1899/1900)

Triennium ending with	Cultivated Area (in '000 acres)	Occupied Area (in '000 acres)
1874/5	2078	2293
1879/80	1469	n.a
1882/3	1561	n.a
1885/6	1738	2044
1888/9	1847	2062
1891/2	1862	2106
1894/5	1896	2098
1897/8	1851	2121
1899/1900*	1875	2108

* Two-yearly average.

Sources: 1) For years 1872/3 to 1890/91, Statistical Returns of Madras Presidency, PBR, Various issues.
2) For the years 1891/2 to 1899/1900, Indian Agricultural Statistics, Various issues.

As prices were on the rise from mid-1880s, one would expect the agrarian expansion to take place at a faster rate. In fact, the slow agrarian expansion in Rayalaseema in general and Kurnool district in particular received constant attention of the revenue oriented government.

> Compared with the year which preceded the great famine of 1876-78, the increase in (cultivated) holdings was 12.36 per cent ... But a portion of this increase is due to the excess brought to account by the introduction of new survey areas into certain districts and to the inclusion of resumed village service inam lands under holdings. If these items, which amount to 1.16 million acres, ... are excluded, the net increase due to the extension of cultivation would amount to 1.78 million acres ... This improvement was shared by all the districts except Cuddapah, Anantapur and Kurnool[59].

The deficiency in the district was as large as 6409 acres in

1897/98. (However, the figures in Table 6 are not comparable with the above figures, for, whereas the former included the government as well as inam lands, the latter relate only to government lands). On enquiries from the government, the Collector, among other things, suggested that the loss of population was the major reason for this slow expansion[60]. As the cultivated holdings were held back till as late as early nineties, the government was left unconvinced by this explanation. Further, the Collector offered the following explanations.

Firstly, he argued that a significant proportion of total cultivable wastes was reserved as forests to provide fuel and fodder. And whenever the ryots wanted to cultivate these lands, the district administration was unable to grant pattas as they came under the purview of the Forest Department. Later on, the collector was granted permission to issue pattas on such lands. However, soon it was found that such reservation did not have "any material influence in starding the recovery of the district"[61]. The Collector also admitted that over reservation was "not the reason for the great decrease in cultivation"[62].

The second reason attributed to the slow agrarian expansion was the temporary fallowing of poor soils to recuperate their fertility. As leaving lands fallow was a part of the cultivation practices, relinquishments were frequent in the district, especially in Markapur, Nandikotkur and Pattikonda taluks where the soils were poor[63]. However, such an explanation does not hold true for the following reasons. Firstly, after the turn of the century, poor soils in the district were increasingly occupied. Secondly, a relatively higher average assessment on lands relinquished implies that they were of good quality.

Thirdly, the Collector's reports in the early nineties indicate that the black soil taluks also had significant extent of cultivable wastes[64]. Benson's analysis of the district also showed that the unoccupied lands in many tracts were of fair quality (Benson, 1889; 108). An important reason[65] attributed to the non-occupation of these lands was the sparseness of population[66]:

The sparseness of population per se was not the important reason; rather it was the changes in the age composition of population brought about by the famine. A substantial loss of children during the period of famine reduced the number of adult males and females in 1880s as well as in 1890s and resulted in an unfavourable composition of population. We have worked out the dependency ratio (DR) (the number of dependents per male in the age group of 15-60) for the period 1872-1911 (Table 7). The female population have been excluded from the productive age group as their role was not very significant in matters of decisions relating to extension of cultivation. The DR, which was 2.38 in 1872, marginally declined to 2.24 in 1881. It increased to 2.32 in 1891 and to 2.64 in 1901. This increase in DR would have been very marked in families belonging especially to the depressed castes as they were the chief victims of the famine.

Table 7: Dependency Ratios in Kurnool

Years	1872	1881	1891	1901	1911
Dependency ratios	2.38	2.24	2.32	2.64	2.54

Such an increase in the DR had adversely affected the agrarian expansion in the following ways. Firstly, in dry regions the cultivable wastes were not generally preferred by

richer peasants as these were less fertile and located far from the villages. Hence, these lands were usually brought under plough mainly by the hardworking small and poor peasants with family labour[67]. However, as there was a change in the composition of families in the post-famine period, the family labour was hard to come by[68]. Secondly, such peasants in the post-famine period were extremely impoverished. A Settlement Officer remarked (in 1905); "the survivors among the ryots were impoverished, many doubtless had deteriorated physically. A new generation has grown up, but the memory of the great famine still lives and has increased the dull fatalism of the ryots"[69]. Thirdly, the family life was severely affected in the post-famine period. After the famine, widows, widowers and orphans must have found it difficult to cope within an economy where the family was the central productive unit. Perhaps, these circumstances would have changed the labour participation rates or led to an intensification of labour effort. But it is doubtful whether such changes had any significant impact on the extension of cultivation. Thus, the poor and small peasants were at a disadvantage as far as extension of the cultivation and reoccupation of the lands relinquished were concerned.

Even if richer peasants wanted to occupy the cultivable wastes, the reduction in the number of labourers and tenants in the district had acted as a constraint. A substantial loss of population (belonging mainly to agricultural labourer castes) coupled with some out-migration had reduced the number of working hands available in the district.

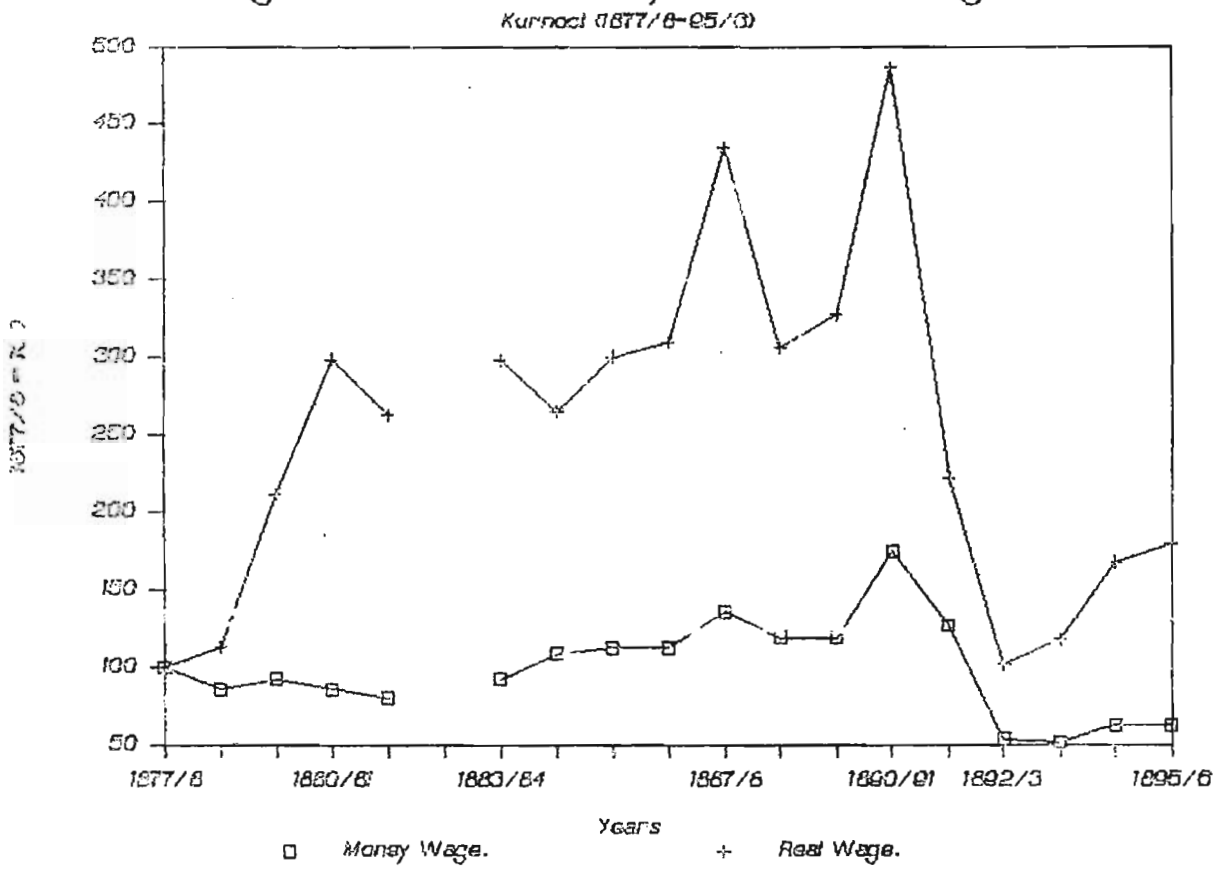
It is difficult to establish the actual decline in the number of labourers as data on occupational distribution of population in 1872 are not comparable with those in 1881. Hence,

the trends in population belonging to the agricultural labourer castes such as Malas, Madigas and Boyas are taken as a proxy for the trends in agricultural labourers in the district. This method is justified on the grounds that there was little occupational mobility during this period. However, it should be noted that the preponderance of children and old (especially in 1891) makes this method unsatisfactory. The number of Madigas, Malas and Boyas declined from 2.75 lakhs in 1872 to 1.74 lakhs in 1881 and increased to 2.08 lakhs in 1891; consequently, their proportion in the total population declined from 29 in 1872 to 25 and remained virtually the same in 1891. As a result, the money and real wages of casual labourers in the district were not only high but also were rapidly increasing during the period 1877-1891 (Figure 4). In contrast, a rapid population growth along with immigration into the deltaic districts resulted in larger labour availability and lower wages[70].

Loss of Livestock:

An enormous loss of cattle during and after the period of famine had affected the agrarian expansion in the district, at least till the late 1880s. The district was never self-sufficient in livestock. In the absence of local breeding, farmers were importing cattle from Nellore and Guntur through dealers on credit, at twice or thrice their average cost (Chetty, 1886; 113). Also, the recurring diseases also periodically ravished the cattle population[71]. The shortage of fodder was so acute that the farmers in parts of the district would buy cattle at the beginning of agricultural season and sell them off after the harvest[72]. The famine had greatly reduced the cattle population; the Collector's estimate of the loss was 40 per cent[73]. Consequently, the size of ploughing cattle continued to be small around six to eight bullocks per 100 acres of tilled

Fig 4. Index of Money and Real Wages



area in the district (Table 8). However, considering the fact that the data on ploughing animals related to both bulls and bullocks, the number of bullocks per 100 acres of sown area must have been even smaller. Thus, the ploughing animals were insufficient for good tillage as well as for the extension of cultivation in the district[74].

Table 8: Number of Bullocks and Ploughs (per 100 acres of tilled area) and Bullock/Plough Ratios in Kurnool District.

Triennium ending with	Bullocks per 100 acres of tilled area	Ploughs per 100 acres of tilled area	Bullock/ plough ratio
1877-80	6.77	3.51	1.93
1880-83	6.15	4.00	1.53
1887-90	7.97	3.59	2.22
1890-93	8.21	3.87	2.12
1893-96	8.36	3.98	2.10
1896-99	8.06	3.79	2.12
1899-1901*	8.05	3.88	2.09

Notes: * Two yearly average. Source: Same as in Table 6.
Note: Figures for the first triennium relate only to bullocks. As no separate information on bulls and bullocks was given for the period 1883/84 to 1886/87, the data for this period are omitted.

Colonial Policies of Land Revenue Collections

The colonial government's policies in the collection of land revenue had also severely affected the agrarian expansion. Though the failure of crops was complete during the famine period, the percentage of land that was given remission was 29 in 1876/7 and 12 in 1877/8. While dry remissions were not given to larger pattadars who were considered to be in a better position to pay the land revenue (Benson, 1889; 103), those given to the poor were insufficient. In the post-famine period, an enormous loss of population and livestock led to a large extent of current fallows; yet remissions were not given on these lands. Added to

that, the ryots were unwilling to cultivate the lands saddled with arrears for which the crops on the land were liable to be seized[75]. These factors resulted in an accumulation of land revenue arrears on a scale which was unprecedented in the district (Appendix 1). As the lands with outstanding arrears could not be relinquished till 1879/8Ø, the farmers fled and only a few turned up when the government tried to reinstate them in the late 188Øs and 189Øs[76].

In order to recover the arrears through coercive means, a separate department was set up. In the district, where ordinarily land revenue was paid with the slightest pressure, coercive policies had to be employed for the recovery of as much as 78 per cent of total collections in 1879/8Ø. In the succeeding years, this figure ranged between 5Ø to 6Ø per cent. Table 9 shows that the amount for which coercive processes were issued was as large as Rs. 9 lakhs in the triennium ending with 1881/2. The colonial governmen found it very difficult to apply pressure in the absence of movable property with the ryots. The Collector unashamedly regretted that "the heavy loss of cattle sustained by the ryots has deprived us a most ready means of recovering the government dues". All that could be collected by distraining the crops and any movable property was realised. It was soon realised that in many cases the arrears could not be recovered as the ryots had deserted the villages without relinquishing their lands[77].

Consequently, the government had to resort to auctioning of lands. The number of defaulters whose property was sold (and also the amount for which property was sold) was small compared to those against whom the coercive processes were issued. This does not, however, mean that majority of the defaulters was

subsequently able to pay the land revenue. The payments were made either by borrowing or by alienation of land in the private

Table 9: Coercive Processes Employed in Land Revenue Collections

Triennium	1	2	3	4	5	6
1878/79	35304	443596	1159	23609	14559	11004
1881/82	110709	863679	8104	183023	178534	79411
1884/85	98231	361988	1475	24392	24840	15380
1887/88	109776	314110	1004	4370	20798	3172
1890/91	105766	n.a	174	3321	n.a	1946
1893/94	179527	n.a	315	3935	n.a	3608
1896/97	150312	n.a	133	1684	n.a	2737
1899/1900	214553	n.a	474	5784	n.a	4776

Source: Reports on the Settlement of the Land Revenue of the Provinces Under the Madras Presidency, for the relevant years.

1 = Number of defaulters against whom coercive processes issued.
2 = Amount of arrears for which coercive processes issued.
3 = Number of defaulters whose property was actually sold.
4 = Amount of arrears for which the property was actually sold.
5 = Estimated value of the property.
6 = Amount realised from property sold.

transactions. A corroboration to the latter can be found in a sharp increase in the total land transacted in the post-famine period (Table 14). This was done partly to avoid the payment of process fees and partly due to the fact that the lands in the auctioning were sold at dirt-cheap rates[78]. Even after the revenue sales, the government could not completely recover the arrears mainly due to the difference between the amount for which the property was sold and actual amount realised at the auction sales (deduct 6 from 4 in Table 9). This difference arose as the government had to buy most of the lands for want of bidders at very low rates. The remaining amount had to be written off (Appendix 1).

Regarding tax burden as an impediment to the agrarian expansion, the evidence is mixed. The average assessment was around one rupee per acre of dry land in most of the taluks. The increase in prices reduced the percentage of assessment in the gross produce (Table 10), thereby, lessened the burden of

Table 10: The Share (%) of Per-acre Assessment in the Gross and Net Produce in Kurnool District (Dry land with jowar).

Year	G.P (Rs)	S.V (Rs)	C.E (Rs)	N.P (Rs)	A.P.A (Rs)	Share (%) of A.P.A in	
						G.P	N.P
1885/86	7.97	2.00	2.71	3.21	0.94	12.00	29.28
1890/91	8.97	2.24	3.05	3.68	0.94	10.48	25.54
1895/96	10.38	2.60	3.53	4.25	0.94	9.06	22.12
1898/99	10.27	2.66	3.62	4.37	0.94	8.83	21.51
1904/05	10.27	2.57	3.49	4.21	0.94	9.15	22.33
1909/10	15.57	3.90	5.30	6.39	0.94	6.03	14.71

Sources: 1) Data on yields, cultivation expenses and per acre assessment are obtained from PBR, December 17, 1878, pp. 11114, 11205 and 11222.
2) Data on prices are obtained from Statistical Atlas of Madras Presidency, 1910/11.

Notes: G.P = Gross produce N.P = Net produce.
S.V = Seasonal vicsittude C.E = Cultivation expenses
A.P.A = Assessment per acre

taxation. However, in taluks of Koilkuntla and Pattikonda, the assessments were heavy[79], a fact which was acknowledged even by the Board of Revenue[80]. Benson's analysis also shows that "good lands in these taluks (especially in Pattikonda) were left waste, because of extraordinarily high average assessment on them" (Benson, 1889:27). Perhaps, this was the reason why the average assessment on lands relinquished was somewhat higher compared to that on lands taken up (Table 11). During the famine periods of the late 1870s and 1890s, the assessment on lands taken up was naturally high as the richer farmers occupied the best lands relinquished by the poor. During the non-famine period of 1880s,

the assessments on lands taken up were generally low compared to that on lands relinquished. The same was noted in 1881/2; "while the lands brought to revenue sales were high class lands, those newly taken up on darkhast were second and third rate"[81].

Thus, the policies of land revenue collections not only affected the agrarian expansion, but also led to concentration of

Table 11: Average Assessment on Lands Relinquished and Taken Up.

5-year average ending with	Lands Relinquished			Lands Taken up		
	Extent	Assessment	Avg.	Extent	Assessment	Avg.
1879/80	94225	67273	0.71	37619	32274	0.86
1884/85	56294	46353	0.82	71928	57987	0.81
1889/90	31279	24553	0.79	53243	37679	0.71
1894/95*	42817	32830	0.77	40420	31345	0.78
1899/1900	38095	27641	0.73	37296	28603	0.77

* 4-year average. The figures for the year 1892/3 are excluded as they included the resumed service inams.
Source: Same as in Table 9.

land ownership in the district. While the richer farmers occupied or bought some of the best lands in the district, the poorer farmers occupied some of the inferior lands due to higher assessment on best lands.

Changes in Cropping Pattern

The slow agrarian expansion was, to some extent, due to the partial development of commodity market. Though the prices started increasing from the mid-1880s, the product market failed to gain a momentum due to the recurring famines. Soon after the famine struck, the peasantry showed preference for raising food crops[82]. Consequently, the area under non-food crops, especially

cotton, had declined (Table 12). Since the decade 1881-91 was free from famines, the farmers began to make efforts to grow cash crops and thus, took advantage of the rising prices. However, the famines of 1891/2, 1896/7 and 1899/1900 compelled them to switch back to the food crops. The share of area under food crops gradually increased, while that under non-food crops declined during 1890s (Table 12).

Table 12: Cropping Pattern in Kurnool District (1877/78 to 1899/1900)

3-Year average	Rice	Jowar	OFC	TFC	Indigo	Cotton	ONFC	TNFC	Total
1875	2.89	41.91	37.49	82.29	1.73	10.92	5.06	17.71	2078
1880	3.81	44.75	37.71	86.27	1.17	9.60	2.96	13.73	1469
1883	3.05	39.42	34.56	77.03	4.08	13.77	5.12	22.97	1561
1886	3.28	37.40	37.18	77.85	2.67	12.45	7.02	22.15	1738
1889	3.76	33.40	37.69	74.85	4.66	11.61	8.89	25.15	1847
1892	3.59	33.87	37.69	75.14	2.47	13.09	9.30	24.86	1862
1895	4.09	32.24	39.34	75.67	3.11	11.53	9.70	24.33	1895
1898	3.54	36.02	37.73	77.28	2.05	11.93	8.73	22.72	1851
1900	3.70	36.75	39.03	79.08	0.69	12.45	7.79	20.92	1875

Sources: 1. Statistical Returns for the Years 1877/78 to 1890/91
2. Agricultural Statistics of India, Various Issues.

Such a partial development of commodity market was aided by the development of transport and commerce. The road development was brisk as the famine relief works were almost entirely on the construction of roads. Besides, the railway line between Madras and Bombay passes very close to the district. By 1890s, the district was connected with the delta districts of coastal Andhra by a railway line, which placed all the parts of the district within 30 miles of the line. It stimulated trade (chiefly in cotton, indigo and tobacco) and helped the emergence of market towns such as Nandyal and Cumbum.

The district had trade links with the Hyderabad State as well as with the rest of the Presidency. On an average, goods worth more than 6 lakhs were transacted between Hyderabad and the district during the period 1881/2 and 1886/7 (Benson, 1889: 36). Regarding other parts in the Presidency, there are problems as separate information on district-wise trade is not available. What we have is the rail-borne trade data between the Ceded Districts and the rest of the Presidency. These districts were exporting both foodgrains and industrial produce such as cotton and oil seeds. The imports into the region were insignificant except in the famine year of 1891/92. Rice and foodgrains other than jowar and bajra constituted bulk of the imports. On the other hand, raw cotton was the major item of export. Interestingly, exports of jowar and bajra gradually picked up and in the early 1890s (including the famine years) these were the major articles exported from the region (Rao and Rajasekhar, 1989). Thus, barring the famine years in which larger quantities of rice were imported[83], the region exported jowar and bajra on a large scale to sub-regions both within and outside the Presidency.

Notwithstanding the development of trade and transport, the commodity market could not gain momentum mainly due to the recurring famines in 1890s. However, this was not the same across the various strata of the peasantry. For instance, the proportion of cotton area on inam lands was high compared to that on government lands during the period 1879/80-1891/2. Since rich peasants possessed most of the inam lands, they were in a better position as far as the cultivation of cash crops was concerned; and, in the process, took advantage of the rising prices.

5. Economic Mobility of Rural Households (1875-1900)

The foregoing discussion reveals that the recovery of the cultivated/occupied area was slow in the district during the post-famine period. Nonetheless, it varied across various strata of the peasantry.

An enormous loss of population and cattle coupled with widespread impoverishment compelled the small farmers to give up most of their lands. However, as the lands with outstanding arrears could not be relinquished till 1879/80, these lands were left fallow. As such lands were not given remissions, the land revenue arrears accumulated. Consequently, most of the small farmers either fled or alienated the lands to private individuals or to the government at the auction sales. We have data on the land transacted both in the registered and auction sales during the period 1875/6-1886/7 (Table 13). The total land transacted

Table 13: Lands Transacted in the Registered Sales and at the Auction Sales.

(Area in acres and assessment in Rs)

Year	Registered sales		Auction sales			
	Area	AA	Bought by individuals	AA	Bought by government	AA
1875/6	10891	1.19				
1876/7	12511	1.15				
1877/8	8179	1.02				
1878/9	9186	1.22				
1879/80	20657	1.31			49744	0.61
1880/81	31014	1.27			31395	0.70
1881/2	14743	1.40	3296	1.22	7253	0.78
1882/3	14157	1.32	821	1.34	1529	1.11
1883/4	10558	1.32	1176	1.31	1351	1.03
1884/5	11337	1.35	1203	1.27	1133	1.53
1886/7	9470	1.26	327	1.39	433	1.07

AA = Average assessment
Source: As in Table 9.

was significantly high during the period 1879/80-1884/5. Precisely during this period, the colonial government was ruthlessly collecting the revenue arrears. Hence, we suggest that these lands were transferred under compulsions to clear off the land revenue arrears. A second point that emerges from Table 13 is that lands alienated in the registered as well as in auction sales to private individuals were of high quality. The average assessment on these lands was consistently higher compared to that on the lands alienated to the government, except in the year 1884/5. This implies that the best lands had a ready market. We do not have data on class position of the buyers of these lands. Given the miserable conditions of the small farmers, it is reasonable to suppose that the rich farmers had acquired these lands. Again the rich peasants occupied the best lands relinquished by the poor during and after the famine. Consequently, the average assessment on lands relinquished was lower compared to that on lands taken up during the period 1875/6-1879/80 (Table 11).

In the post-famine period, the small peasantry could not extend the cultivation though large tracts of cultivable wastes were available and prices were on the rise from mid-1880s onwards. This was mainly due to the changes in age composition of their families, resulting in an increase in the dependency ratio in the last two decades of the nineteenth century. These impoverished families consisted mainly of children, old and widowed. Also they lacked able bodied men. These conditions of physical deterioration continued for some more time. This was partly due to the mal-nourished children that the district had inherited in the post-famine period; "a large number of infants in the famine districts at birth showed all the marks of being famine stricken. Frequently in such cases the mother had no

visible signs of starvation, but her previous poor living had the effect of starving the foetus in utero"[84]. Moreover, the existence of a large number of widowed in these families had hampered their chances of upward economic mobility. In an economy, where family as a central economic unit played an important role in occupying of arable wastes as well as in cultivation, such a disruption must have affected these families. Thus, the famine coupled with the severe revenue collection policies of the colonial government resulted in a downward mobility of small peasantry.

As noted earlier, the changes in the age composition of population reduced the number of labourers and tenants available in the district. Such a decline had adversely affected the landlord class of Brahmins for they were more dependent on agricultural labourers compared to rich peasants (Reddies). In a situation of shortage of labourers and tenants, the Brahmin cultivators had to keep their partially revenue-free lands out of cultivation. The occupied inam lands, which constituted a significant proportion of total occupied area, declined at a faster rate during the period 1872/3-1899/1900 (Table 14).
A break-up of cultivable wastes and current fallows held under the inam and ryotwari tenures is very suggestive (Table 15). The cultivable wastes declined from 11.8 to 7.25 lakh acres between 1879/80 and 1889/90. The component of inam lands, which was larger immediately after the famine, declined obviously as these were the best lands and were greatly in demand. A break up of cultivable wastes and current fallows shows that the proportion of inam lands in the total cultivable wastes was small in 1885/6, but significantly increased in the late 1880s. On the other

Table 14: Occupied Area and Current Fallows Under Inam and Ryotwari Tenures in Kurnool (1872/3-1899/1900).

Triennium ending with	Occupied land			Current fallows		
	Govt.	Inam	Total	Govt. (%)	Inam (%)	Total
1874/5	1219	1074	2293	n.a	n.a	n.a
1885/6	1031	1013	2044	17.32	82.68	253
1888/9	1129	933	2062	32.09	67.91	146
1891/2	1155	951	2106	30.74	69.26	169
1894/5	1163	935	2098	46.04	53.96	109
1897/8	1163	958	2121	36.67	63.33	171
1899/1900	1165	943	2108	41.20	58.80	137

Source: Statistical Returns of the Madras Presidency, PBR, Various issues.

hand, the proportion of inam lands in the total current fallows was ranging between 67 and 87 (Table 15). Thus, consequent upon a decline in the number of tenants and labourers available in the district, a significant proportion of inam lands was thrown out of cultivation despite the fact that these were the best lands in the district.

Table 15: Cultivable Wastes (CW) and Current Fallows (CF) in Kurnool District.

Yea	CW & CF			CF			CW		
	A	B	C	A	B	C	A	B	C
1879/80	59.44	40.56	1180						
1880/81	61.84	38.16	1095						
1881/2	62.38	37.62	1079						
1882/3	67.13	32.87	974						
1883/4	68.90	31.10	911						
1885/6	69.80	30.20	802	17.74	82.26	227	90.40	9.60	575
1886/7	68.61	31.39	788	28.06	71.94	230	85.32	14.68	558
1887/8	68.79	31.21	774	24.13	75.87	210	85.46	14.54	564
1888/9	64.39	35.01	786	33.41	66.59	221	76.52	23.48	565
1889/90	64.99	35.01	725	15.37	84.63	160	79.02	20.98	565

Source: Same as in Table 14.
A = Government lands B = Inam lands C = Total in '000 acres.

With an increase in the extent of current fallows on inam lands, the land revenue arrears had also increased (Appendix 1). Also, revenue remissions on these lands were not given. With a rapid accumulation of arrears, the partially revenue-free proprietors had to relinquish or sell much of their lands at auction sales[85], which led to a rapid decline in occupied inam land (Table 14). As a result, the quit-rent on minor inams declined from Rs. 89362 in 1877/8 to Rs. 82889 in 1880/1, while jodi on them had declined from Rs. 59565 to Rs. 52369 during the same period (Appendix 2).

A further decline in the number of tenants and labourers had worsened the position of Brahmin inamdars during the last two decades of the nineteenth century. Again the availability of cultivable wastes and reduction in the incidence of land revenue on government lands brought down the demand for inam lands; thus squeezing the rental incomes of the landlords. The same was observed in 1886; "one cause of their (Brahmin landlords) poverty is ... the reduction of the assessment on government lands, which affects the rental values of inams" (Chetty, 1886: 186). Consequently, they had to alienate most of their land through registered as well as auction sales. Table 16 shows that the share of land sold by Brahmin inamdars was considerably high, around 20 to 30 per cent during the period 1890/1-1912/3. In Markapur, nearly two-thirds of the inam lands were sold to either private individuals or to the government. By the turn of the century, the importance of Brahmins as the 'landed aristocracy' was on the wane. It was observed "land is passing more and more into the hands of the cultivating classes at the expense of the absentee land holdings and the lower castes"[86].

Table 16: Land Transfers by Status of the Alienator.
(Area in acres)

3-year Avg. ending with	By wholly or partly revenue free proprietor				By revenue paying proprietor				Total	
	Number		Area		Number		Area		Number	Area
	BOC	BPCG	BOC	BPCG	BOC	BPCG	BOC	BPCG		
1894	167	628	1161	4883	55	1999	344	14433	2848	19665
1897	22	645	197	4527	68	2307	690	15493	3041	20710
1900	43	496	428	4142	102	1777	694	13957	2418	18793
1903	54	645	423	5130	154	2318	1285	15132	3171	21606
1906	22	595	197	6022	90	2158	933	14865	2865	21820
1909	5	395	387	3199	52	1901	347	13460	2354	17007
1912	5	506	44	4471	49	1974	261	14925	2533	19657
1913*	2	461	32	3235	5	440	71	3094	2696	19057

* One year figure
BOC = By order of a court. BPCG = By private contract or gift.

Source: Indian Agricultural Statistics, Various Issues.

The lands alienated by the small peasantry and landlord class were acquired by the rich Reddy peasants. Since the loss of population among the Reddies was low, they were not severely affected by the changes in the age composition of population. Unlike Brahmins, they (including women) used to work on the lands and consequently, the decline in the number of agricultural labourers did not affect them. They also participated in trading activities even during the famine period[87]. So, when the lands were sold at dirt-cheap rates in the post-famine period, they were able to acquire them. Moreover, the fertile lands, which were relinquished in the post-famine period were also occupied by them as they were dominant both politically and economically. Hence, their chances of upward mobility had enhanced.

Thus, the famine of 1876/78 and the state land revenue policies have played an important role in the mobility of rural households during this period. The famine by bringing about changes in the age and sex composition especially in families of small farmers, resulted in their downward mobility. The ability of rich farmers to cope up with the problems posed by the famine proved to be much better than that of the small peasants. Even though, the landlord class could overcome the hardships of the famine, it was severely affected by the short supply of tenants and labourers.

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Appendix 1: Land Revenue Arrears (LRA) and Amount Written off (AWO) on Various Land Tenures.

Year	Ryotwari Lands		Shrotriem Jodi		Minor Inams	
	LRA	AWO	LRA	AWO	LRA	AWO
1875/6	61341	1214	166	nil	15335	nil
1876/7	21784	2403	553	nil	12091	1375
1877/8	672998	538	12226	nil	151974	253
1878/9	550698	1855	17089	nil	166853	665
1879/80	349278	713	16493	nil	116436	391
1880/81	230132	1975	10930	nil	92780	1407
1881/2	178606	57871	13842	496	180675	45924
1882/3	88631	66069	6309	nil	50306	32999
1883/4	19878	5465	5759	nil	15443	5857
1884/5	10140	4386	5049	nil	5578	557
1885/6	6323	2049	5049	4549	5592	775

Source: Same as in Table 9.

Appendix 2: Decline in Revenue on Minor Inams in the District.

Year	Minor Inams		Remarks
	Quit-rent (Rs)	Jodi (Rs)	
1877/8	89362	n.a	-- decline is due to the -relinquish- ment & sale of inam lands
1878/9	89044	59565	
1879/80	87339	56135	
1880/81	82889	52369	
1882/3	87892	52167	
1883/4	85652	53991	
1884/5	85271	52729	--

Source: As in Table 9.

Notes and References

1. Report of the Famine Commission, Vol.4, 1881, hereafter Report of the Famine Commission, p.359. However, the commission could not decide how much of this loss was due to desertion from the villages and how much to death as further information was not available.

2. At a macro level, Dharma Kumar argued that the agricultural labourers, tenants, small cultivators and weavers had suffered the most during the period of famine (Kumar, 1984: 231).

3. Though Malthus later on switched from pessimism to preventive checks such as delayed marriages and so on, his theory is popular in explaining both the slow growth of population in the past (Ladurie, 1974) and the rapid population growth in recent times after the subsistence crisis is overcome (Helleing, 1974: 79-86). Helleing argued that a secular downward trend of death rate in Europe during the 18th and 19th centuries was not so much due to improvement of medical facilities (both curative and preventive) and consequent reduction of mortality in 'normal' years. It was mainly due to an unmistakable abatement of the great crisis.

4. The available food might be unequally apportioned because of manipulation, hoarding and control of supplies by the more well-to-do. The geographical obstacles or transport difficulties also play an important role in preventing a more effective distribution. In fact, Appleby (1978) locates the cause of famine and consequent high mortality rates in Tudor-Stuart England primarily in transport bottlenecks.

5. This paragraph is based on the articles written on the extension of Sen's argument. They are Desai (1988) and Ghose (1982).

6. This paragraph is based on Ambirajan (1976) and (1978).

7. In Malawi the deserted women received much support and help from other members of their families in the initial stages of the famine of 1949 (Vaughan, 1987; 132).

8. The colonial government followed such a favourable policy towards women. For instance, in Bengal famine of 1943, nearly 60 per cent of the people who received free relief were women (Greenough, 1982; 190).

9. In Bangladesh, where death rates for females are normally higher than females at nearly all ages, the disadvantage of young females (under 10 years) appears to have been exaggerated during the 1974-75 famine, but disaster diminished or even reversed the disadvantage of older women in most age groups by raising male death rates more than female death rates. In 1975, mortality was higher for men than for women from age 25 on (Watkins, 1985; 656).

10. The mortality rates among the children in many of the famines were found to be higher than other age groups. Lardinois found that as a result of famine of 1876-8, the greater deficits in the census of 1881 occurred in numbers of children under 10 years (Lardinois, 1985;). The most-reliable age-specific deaths from famine come from the records of the Demographic Surveillance System in Matlab thana, Bangladesh. As compared to the averages for the five years prior to the independence in 1971, the greatest increases during the famine occurred among the children aged 1-11 months followed by children in the age-groups of 5-9 years (Chen et al, 1977;416).

11. In Bangladesh famine, the death rates among the people above 45 were one of the highest and only next to those among the children (Chen et al, 1977; 416).

12. Ashton et al (1984, 617-8) attribute the higher mortality rates among the old people above 40 years to the food allocation system would be less favourable to the less privileged group of above 40.

13. For details on the out-migration from the Madras Presidency during the period 1872-1891, see Lardinois (1985: 458-60). Narrating the effects of famine of 1935 on a Chinese

village, an eyewitness wrote; the village had a population of 530 people in 76 families. In the winter of 1935, 25 entire families left the village, from each of 39 families one to three persons left the village, leaving only 12 families intact" (Hao Pun-Sui, 1939; 249).

14. When Lardinois (1985;) compared the population of Madras in 1872 and 1881 censuses, he found that a substantial proportion of population perished due to the famine 1876-78. Despite that, in 1881 census, 95 to 98 per cent of the total population in Madras resided in their district of birth.

15. In fact, the investment in gold and silver (which can be soon liquified in difficult times) is one of the insurance mechanisms devised by the peasants to fight the hunger in the event of famine (Morris, 1975: Jodha, 1975).

16. The districts of Kurnool, Cuddapah and Bellary were ceded to the East India Company by the Nizam of Hyderabad in 1800 for the maintenance of a body of troops known as Hyderabad subsidiary force and in payment for the troops furnished during the Mysore Wars (Maclean, 1877; 21). Though the rights of sovereignty over Kurnool district (then called as Kurnool Proper) were vested with the company, muslim rule continued till 1839, when the Nawab was dethroned for his rebellious conduct. For a brief period, the district was administered by an agent to the Governor. The agency administration lasted till 1858/59 when the taluks of Cumbum, Markapur and Koilkuntla from the Cuddapah district and that of Pattikonda from Bellary district were added to Kurnool Proper and the whole formed into a Collectorate. In 1860/61, 99 villages were transferred to Nellore, while ten from Bellary and six from Cuddapah were added to the district. The district remained intact till 1953, save some minor changes.

17. See The Letter of the Commissioner of Kurnool, October 12, 1841, para. 3.

18. See The Letter from the Commissioner of Kurnool to the Chief Secretary to the Government, October 25, 1843, No.36, paras 11 and 13.

19. Since land revenue was collected in accordance with each year's produce, the cultivators were reluctant to undertake any developmental activities in the land, as increase in production would only mean more payment of land revenue to the government. Though Munro attributed the unsatisfactory agricultural production in the region to the poverty of the people, Nilmani Mukherjee refuted such an explanation by saying that "to the ryot poverty and high assessment were much the same thing. The one was the cause of the other. Poverty prevented the ryot from making the land productive and high assessment deprived him of the fruits of his labour" (Mukherjee, 1962; 259).

20. There were scarcities in 1802-1804, 1805-07, 1824 and famines in the years 1833 and 1854.

21. There was a widespread depression in the prices during the period 1826-1852, barring the famine period of 1832-34 (Gribble, 1875; 315-6).

22. See Settlement Report of Kurnool Proper, 1863, hereafter SRKP, Appendix B and also see Settlement Report of Pattikonda Taluk, PBR, June 10, 1871, hereafter SRPT, p. 4240.

23. Letter from the Commissioner to the Chief Secretary of Government, December 16, 1839, para. 41.

24. Though the logic of RS was to encourage the cash crop cultivation, it had barely picked up. There was marked extension of cultivation of indigo and sugarcane in the region during the period 1800-20. However, cotton did not show a corresponding increase due to the subsistence nature of the ryots, high cost of cultivation and heavy assessment. Nevertheless, cotton to some extent was cultivated because of the compulsions of land revenue payment in cash (Mukherjee, 1962; 266: Raju, 1941; 90-91).

25. Although cash crop cultivation was taking place and area was extended (to the cultivation of food grains), land did not become saleable due to the high assessment. Munro felt (in 1807) that "even a remission of 50 % would not immediately render the lands saleable. It would be hindered ... by three factors - want of the ryot's confidence at first in the permanence of the remission, the unwillingness of all other castes excepting the

cultivating castes to buy land and the general poverty of the ryots" (See Munro's Report dated August 15, 1807, cited in Mukherjee, 1962; 287). Land market could not have developed during the period 1807-50 due to the low prices of the agricultural commodities, availability of cultivable wastes and a slow population growth.

26. A Collection of Papers Relating to the Inam Settlement in the Madras Presidency (Madras, 1948), p. 324.

27. A comparison of the prices during the period 1862/63 to 1875/76 with the averages for the earlier period 1843/4 to 1861/2 shows that the prices of food grains doubled (and even trebled) during the period 1863/4 to 1867/8. Though the prices declined from 1868/9 onwards, they were still higher compared to the average for the period prior to the American Civil War.

28. The revision of land revenue rates also reduced the burden of taxation and facilitated the expansion of cultivated area. For instance, with a reduction of 10 to 75 per cent in the assessment in 196 villages in Kurnool Proper, the cultivated area expanded (SRKP, para. 109). The Collector wrote in 1865 that consequent upon the revision of land revenue rates in Pattikonda, "the cultivation has increased yearly in almost mathematical regularity ... In the other taluks (excepting Cumbum and Markapur) there has also been an increase of cultivation and revenue". See Letter from the Collector of Kurnool to the Board, PBR, April 28, 1865, p. 2225.

29. In these taluks, the share of assessment to total gross produce on ordinary lands was 19 per cent in 1862/3. However, with the decline in prices, it increased to 25 per cent in 1873/4. The figures are calculated from Ibid., p. 2236.

30. Ibid., pp. 2225-2231.

31. In 1863, an increase (of 10 to 100 per cent) of assessment in 174 villages in Kurnool Proper resulted in relinquishment of land especially in Nandikotkur (Chetty, 1886; 51). In Pattikonda, encouraged by expansion of cultivated area till late 1860s, the colonial government enhanced the land revenue. The settlement officer himself admitted that "the sudden addition of

Rupees 27773 or 14 per cent to the demand of a taluk like Pattikonda, devoid of wealth and irrigation, is doubtless a serious enhancement" (SRPT, p.421Ø). Not heeding to the apprehensions of the settlement officer, the government introduced the new rates in the taluk in 1872/3 and "a large extent of land (Acres 28923) was relinquished in consequence of the high rates of assessment imposed by the Settlement Department" (Annual Settlement Report of Kurnool, PBR, April 1, 1875, p.25Ø9). Similarly, the ryots in Koilkuntla relinquished 1669 acres owing chiefly to the heavy assessments (Annual Settlement Report of Kurnool, PBR, May 24, 1876, p.4613).

32. "During the American war ... the cotton producers had prosperous time of it. Land owners ... invested their unusual profits in land". See Settlement Report of Koilkuntla Taluk, hereafter SRKT, 1871, p. 7.

33. Census of India, Madras, 1872, p.

34. SRKP, para 36.

35. The amount of arrears for which coercive processes were issued increased from Rs. 307 in the triennium ending with 1861/2 to Rs. 1.Ø4 lakhs in that ending with 1875/6. The amount of arrears for which sales were resorted increased from Rs. 311 to Rs. 1Ø275 during the same period (Benson, 1889; 2Ø).

36. SRKT, p.8.

37. Between 1865/6 and 1871/2, the population of the district increased by 18.63 per cent. In some taluks, the population increased by more than 2Ø per cent. See PBR, October 22, 1869, p. 8359 and also 'Taluk-War Statements of Kurnool District', Census of India, Madras, 1883.

38. SRKP, para 36.

39. SRKT, p. 7.

40. SRKP, para 37.

41. As the registration of births and deaths was started only in the late 1860s, the imperfections in the system were many. The village servants, who collected data on vital events, in the absence of any legislation and extra amount of remuneration for this work, showed little interest in the collection of vital statistics. So, there was an under registration of the births and deaths (especially of females). This problem became more acute in 1877, as the village servants, like others, wandered away from the villages in search of food. Besides, the people who left the villages for food or work "perished by the road sides, in ditches, in jungle paths, and away from human inhabitations, ... It was not uncommon thing to district officials in their tours across the country to come upon numerous bodies and skeletons in the course of a morning ride ... (and) it is probable that all mortality occurring this way was left unrecognised". However, notwithstanding the disorganized village administration system and disrupted family and social life, the registration of deaths clearly portrayed the intensity of famine in all the severely affected areas. Fourteenth Annual Report of the Sanitary Commissioner for Madras, 1877 (Madras, 1878), hereafter Fourteenth Annual Report of the Sanitary Commissioner, p.75.

42. The divergence between the intensity of famine and number of deaths (especially towards the end of the famine) was mainly explained in terms of famine induced diseases. See W.R.Cornish, 'The Influence of Famine on Growth of Population', published as an Appendix to The Fourteenth Annual Report of the Sanitary Commissioner, hereafter Cornish The Influence of Famine, p. lxxvi, Lardinois, 'Famines, Epidemics', p.

43. In response to the questions by Famine Commission, the Board of Revenue estimated these figures. Taking the average area for the period 1872/3 - 1875/6 and yield figures presented by the Collectors and the Settlement Department, the Board estimated that total food production was 4.52 lakh tons. Deducting 16000 tons for seed requirements and 1.95 lakh tons for human consumption (at the rate of 1.5 lbs per diem), the Board estimated that the surplus in the district was 2.41 lakh tons. For details see, PBR, December 19, 1878, pp. 11106-11122. Though Board admitted that these figures were not reliable for the Zamindari districts, they are fairly reliable for Kurnool as there were no Zamindaris. Moreover, the yield figures for the

district were based on actual experiments, while for other districts they were estimates.

44. The value of food grains imported into the Madras Presidency had increased from Rs 45.71 lakhs in 1875-6 to 430.95 lakhs in 1876/7 and to 763.56 lakhs in 1876/7. See Ibid, p. 11261.

45. Fourteenth Annual Report of the Sanitary Commissioner, p.9

46. Ibid p.10

47. Ibid, p. 7.

48. The fallacy of food availability decline approach is evident in the following statement; "the loss of life depended chiefly on the accessibility of the taluks for the supply of grain, and the comparative richness of th country. Thus, the parts of Ramallakot, most distant from the railways, are much richer than greater part of Pattikonda" and hence, the loss was relatively low in the former (Benson, 1889; 7).

49. The mechanism through which these classes suffered was more or less the same across the districts in the Presidency. When crops failed, the agricultural operations came to a standstill resulting in drying up of employment opportunities. The prices increased due to hoarding of food stocks and the tenants and small ryots who were also part-labourers suffered in the above process. With the decline in demand for manufactured goods such as cloth and non-availability of raw material many weavers were thrown out of the employment. These classes could stay in the villages till the cattle and jewellery were exhausted and credit dried up. Later on, they wandered or reached the relief camps. However, many people were soon exhausted and mortality rates started showing an upward trend. See Report of the Famine Commission, pp. 17-18.

50. See W.R.Cornish, The Influence of Famine, p. lxxxviii.

51. Ibid., p. lxxiv.

52. Ibid. Cornish in order to find empirical support to the observations made by his subordinate officers and himself, conducted a special census in a large number of villages in the Presidency. The results of this census supported his observations. The results of the special census are, however, doubtful, because of the following reasons. Firstly, the 1872 census, with which the results of the special census were compared, under enumerated the females. Secondly, as Cornish himself admitted, the higher mortality for men could be in some degree due to "the imperfect way in which the female mortality was registered". Fourteenth Annual Report of Sanitary Commissioner, p. 80.

53. See Census of India, 1881, Madras Presidency. However, this result is also subject to the limitations of sex-wise population data in the censuses of 1872 and 1881. See foot note 85.

54. Fourteenth Report of Sanitary Commissioner, op.cit. p. 79.

55. Ibid. p.78.

56. The reasons are the following: (1) Demographic reasons: The number of women exposed to the risk of conceiving varies under the effect of the mortality and the disturbances in nuptiality rates: (2) Medical and sanitary reasons: The general state of under-nutrition brought about a loss in the weight of individuals ranging from 20 to 30 per cent. The tests carried out at the relief camps revealed that the men who weighed on an average 50 to 54 kg did not weigh more than 35 kg, while the weights of women, which on ordinary days were 43 to 45 kg, fell to 28 kg. Human beings can tolerate loss of weight to the tune of 5 to 10 per cent, with little functional disorganisation. However, a loss of 35 to 40 per cent would result death and before that, it must have resulted in the stoppage of ovular cycles for women. (3) Social reasons: A large number of couples were affected by migration or lack of privacy in the relief camps (Lardinois, 1985; 462).

57. Analysing the civil conditions in the Presidency, the Census Commissioner remarked that the large number of widowed "noticed for the famine districts explain themselves, because they occur in the famine districts. In the great mortality, an abnormal number of husbands and wives died. The wives of the former have not remarried, because of law and custom does not allow it; the husbands of the latter have not remarried, because they cannot afford to do so". See Census of India, Madras, 1881, Vol.1, p.73.

58. The collector's replies to the Famine Commission suggest that no emigration from this district was recorded. Report of the Famine Commission, pp. 297 & 303.

59. See PBR, No. 30, February 27, 1901, p. 250. Similar statements were made in PBR, No. 77, Feb 26, 1900, p. 233 and also PBR, No. 30, Feb 28, 1902, p.201.

60. Annual Settlement Report of Kurnool District, in Reports on the Settlement of the Land Revenue of the Provinces under the Madras Presidency, 1882/83 (Madras, 1884), hereafter Annual Settlement Report of Kurnool, p. 3-4.

61. For, in four taluks (in which this phenomenon was alleged to be prominent) the total land that was set free was 79997 acres; out of which the assessed land was only 34797 acres. Despite the efforts made by the district administration for five years, only 6223 acres were brought under cultivation. See PBR, No. 260, July 20, 1898, p.11.

62. PBR, No. 30, February 28, 1902, p. 81.

63. PBR, No. 36, February 15, 1895, p.2. And the ryots in Pattikonda and Cumbum taluks relinquished their lands with a view to leave them fallow for a year or two and hence, there was a fall in the occupied area. Settlement Report of Kurnool, 1893/94, p.9.

64. The percentages of cultivable wastes to the total cultivable area in the black soil taluks of Sirvel, Ramallakot and Nandyal were 20.38, 19.48 and 19.29 respectively in 1895. See

PBR, No. 36, February 15, 1895, p. 2.

65. Another reason was the overspread of nath grass the removal of which required deep tillage with a few pairs of bullocks which the poor people were unable to bear. We admit that this was one of the important reasons. But problems of weeding and so on did exist in the red soil taluks also.

66. PBR, No. 431, November 17, 1894; and also PBR, No. 36, February 15, 1895.

67. A comparison of caste-wise acquisition of cultivable wastes in a village in Rayalaseema during the period 1890 to 1947 shows that small farmers belonging to Yadavas, Valmikis and Muslims were the principal beneficiaries in the occupation of cultivable wastes (Rajasekhar, 1988; 18-20).

68. An enquiry into the causes of non-occupation of cultivable wastes in Anantapur district also showed that "paucity of cultivating ryots" was the chief reason for the lack of agrarian expansion. See PBR, No. 103, May 1, 1895, p.7. Same was the case in Bellary also; "the lands now waste are so chiefly from the want of people to cultivate them". See PBR, No. 2207, August 1, 1883, p.5.

69. Settlement Report of Pattikonda Taluk of Kurnool District, PBR, No. 132, April 27, 1906.

70. In Kurnool district, average annual wage rate for rural unskilled labour was ranging between 3 to 6 annas, while in Godavari district it was ranging between 2 to 3 annas (Rao,1985; A-65).

71. PBR, No. 477, November 30, 1887, p. 8.

72. In parts of Kurnool district the cattle are "sold by poor ryots who cannot feed them throughout the year". See PBR, No. 371, November 18, 1895, p. 5. In Bellary district, "the ryots

dispose of the cattle after cultivation and purchase them afresh with the return of the sowing seasons. This is done to save feeding charges". PBR, No. 481, November 17, 1894, p. 3.

73. Annual Settlement Report of Kurnool, 1876/77, p. 3.

74. For instance, C.Benson, who toured the Greater Bellary and Cuddapah districts in the early 1880s, remarked that, "nothing struck me more than the seeming dearth of cattle ... Even in ordinary times ... it does not seem likely that enough cattle would be available to the ryots" PBR, February 19, 1881, p. 876-77.

75. Annual Settlement Report of Kurnool, 1879/80 p.3.

76. In 1883, the collector had given widest publicity to the persons dispossessed during the period of famine to come occupy the lands. Yet he received only a few applications from the returning migrants. Annual Settlement Reports of Kurnool, for the years 1882/3 to 1884/5.

77. This paragraph is based on the Annual Settlement Reports of Kurnool, Various Issues.

78. After examining the total transacted area and prices in the district for the period 1882/86, C.Benson arrived at Rs. 16 as average land value in the district (Benson, 1889; 104-5). During the same period, average price realised at the revenue sale was only Rs 0.80. See Annual Settlement Reports of Kurnool, Various Issues.

79. In the taluks of Pattikonda and Koilkuntla, the commutation rates were fixed on the basis of district average prices. Benson's comparison of the commutation rates with local prices shows that the settlement rates were "little favourable to the ryot at Pattikonda and a little less favourable at Koilkuntla". He noted that such high assessment rates would "prevent any accumulation by the ryots" and would not enable them to "form a reserve store on which to support themselves during an unfavourable season" (Benson, 1889; 27).

80. Regarding Benson's observation that the assessments were high in Koilkuntla and Pattikonda taluks, the Board commented that he "may possibly be right, but the question need not be discussed" as the government already ruled out the possibility of revising the assessment rates in these taluks. See PBR, No. 262, May 29, 1889, p. 17.

81. Annual Settlement Report of Kurnool, 1881/82, p. 3.

82. In the years following the famine, "the ryots sowed as much land as possible with food grains". See Annual Settlement Report of Kurnool, 1878/9, p.7.

83. Large quantities of jowar and rice were imported for sale in the Kurnool market from Hyderabad Dominions during the famine year of 1899/1900. See letter from the Collector of Kurnool to the Board of Revenue, PBR, No.341, July 21, 1900, p.4.

84. Fourteenth Annual Report of Sanitary Commissioner, p. 78.

85. A Shrotriem village (called Gattupalli) was sold to the government towards the payment of land revenue arrears in 1878/9.

86. Season and Crop Report of Madras Presidency, 1911/2, p.1.

87. PBR, No. 551, December 17, 1900, p. 51.

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