

**AGRARIAN QUESTION AND THE
LOCAL GOVERNMENTS IN KERALA**

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ABSTRACT

The experiment of democratic decentralisation in Kerala is now nearly two decades old. The present study focuses on one of the weakest but an overwhelmingly important links of the democratisation project, viz., its failure in the goods producing sectors. The Local Governments (LGs) have not been very successful in generating sustainable livelihood opportunities either in industry or agriculture. The failure of LGs in agriculture is particularly noteworthy because it is identified as a LG subject, best governed at the lowest level of government. But, the crisis in the agricultural sector, or stunting of capitalist development in agriculture to be precise, cannot be blamed on the LGs. It is best seen as a part of a larger and long drawn out process of structural transformation of the Kerala economy. An analysis of the agrarian question delineates factors blocking the agrarian transition and underlines the need for a thorough overhauling of the social organisation of production for overcoming the present impasse. Even though LGs have a major role in resolving the agrarian question; it presupposes greater involvement of higher tiers of government and deeper cooperation among different tiers. The big question is whether the neoliberal State apparatus could be made to move?

Key words: Agrarian question, Land reforms, Local Level Planning, Atomisation of farming, Land market

Section I

Introduction

The experiment of democratic decentralisation in Kerala, one of the most comprehensive programs of participatory local level planning in India, perhaps globally too, is now nearly two decades old. The experience accumulated over the period is pervasive enough to undertake a thorough review of the ambitious project. Not surprisingly, therefore, the literature that look into the experiment in its various dimensions is growing. The present study is an attempt to throw more light on one of the weakest but an overwhelmingly important links of the democratisation project in the state, viz., its failure in the goods producing sectors. The Local Governments (LGs) have not been very successful in generating sustainable livelihood opportunities either in industry or agriculture. The failure of LGs in agriculture is particularly noteworthy because the design of decentralisation in the country identifies it primarily as a LG subject, best governed at the lowest level of government. Moreover, as the state legislations, as well as various follow up measures would testify, agriculture has been in the forefront of devolution in Kerala. In spite of earnest efforts at decentralisation, the LGs have not been able make a mark in the agricultural sector. It is true that there have been some success stories and model projects that deserve attention and detailed review for delineating lessons for LGs elsewhere because they hold a promise for the future. But, the larger picture of LG intervention in agriculture has been rather lack lustre.

The decline of agriculture in Kerala as we discuss in some detail later has been much more dramatic than in the rest of the country. The share of agriculture in the State Domestic Product (SDP) and employment has been declining almost incessantly over the past four decades. Production and area under cultivation of food products have been registering absolute and unabated decline since mid 1970s. Dairy and poultry have not also been spared. The state also had the ignominy of farmer suicides. But, can the overall and generalised process of agrarian crisis, which commenced much earlier than the decentralisation experiment, be attributed to and hence blamed on the LGs? The literature on the crisis in the agricultural sector provides some useful insights into the question. The studies have come up with a host of apparent and immediate causes such as decline in area, yield, labour shortage, high wages, absentee landlordism, etc. The symptoms identified are manifestations of a more deep seated problem that requires to be delineated. In doing so the present study makes use of the framework of the agrarian question, a conceptual frame widely used in studies on agrarian transition.

The decline of agriculture, in fact, can be seen as a part of a larger process of structural transformation of the Kerala economy led by the services sector. Interestingly, the overall growth of the regional economy has been fairly impressive compared to the rest of the states or the national averages. Apparently, the decline of agriculture does not appear to have bogged down the process of structural transformation of the economy. On the contrary, the dependence of the regional economy on agriculture appears to have declined over time. The general process of accumulation, growth and development of the regional economy has possibly bypassed the primary sector. Therefore, as we argue in detail later, it may not be wrong to say that the state had bypassed the agrarian question. We however hasten to add that even though the state had bypassed the agrarian question; it had done so without resolving it. The agrarian questions of labour, poor peasants, gender, environment and food security remain unresolved and virulent. The agrarian question has worsened in some of its manifestations such as livelihood security of peasants and workers, particularly women, dependent on agriculture; growing gap between food production and the demand for food; environmental crisis caused by the changes in land use pattern, especially conversion of wet land; adverse impact of decline of agriculture on the rest of the rural economy; the absurdity (as reflected in the inability to use land in production) of the emerging land use pattern, etc.

But, what can the LGs do in resolving the agrarian question? Notably, the history of state policy in agriculture has been one of conspicuous failures. Many major intervention measures such as one of the most radical land reforms in the country, introduction of green revolution technology, spread of high yielding varieties, group farming, and finally the decentralisation strategy have all failed to stem the slide in agriculture. Obviously, resolution of the agrarian question in the state presupposes a deeper understanding of the question. Our idea is to interrogate the social organisation of production to see why it fails to make use of land, labour, and knowledge in production as they were used in the past. This is not meant to glorify the past of Kerala agriculture, which in its social content was highly oppressive and draconian to say the least. The pre-capitalist social relations of the region, referred to in the literature as *Jathi-Janmi-Naduvazhi Medhavitham*, was overthrown as they were offering fetters to the development of productive forces. But, ironically, social organisation of production evolved since then is making agriculture almost impossible in the state now. The impasse in agriculture is manifested in chronic unemployment and underemployment of land as a means of production, that too in spite of the growing gap between domestic production and demand for agricultural products. People hold on to land, not to use in cultivation, but in its capacity as a relatively secure asset: the means of production function of land is losing its importance vis-a-vis the asset function. On the reverse side what we see is 'walking away' (desertion) of agricultural labourers from the sector. The inability to attract labour, use machines, and improve technology is also linked to the social aspect of agriculture. We see the need for a thorough overhaul of the social organisation of production for bringing land back to production and overcoming the agrarian crisis. The LGs will have a great deal to contribute in addressing the agrarian question; but as we argue in the paper, there are many aspects

of the question that goes beyond the reach of local people and the lower tier of government. Resolution of the agrarian crisis in the state will require greater involvement of, and cooperation among, different tiers of government.

The paper is organised into five Sections. In Section II, which follows the introduction makes a detailed presentation of the problem, the conceptual framework and the methodology we employ in the study. Section III, is a detour into the history of agrarian relations of the region, which is used to draw some important lessons in unravelling the contemporary crisis. Section IV is devoted to an analysis of our village survey data, focussing mainly on production relations on the one hand and economics of cultivation on the other. Section V is a critique of local development plans pertaining mainly to the agricultural and related sectors. It also brings together important conclusions and policy recommendations of the study.

Section II

Agrarian Question in Kerala

The Kerala economy, while showing an admirable performance at present in terms of overall growth, is characterized by a general stagnation in agriculture associated with a substantial deceleration in area under and production of food crops¹. The share of agriculture and allied activities in the State Domestic Product (SDP) fell from around 22 percent in 1999-2000 to a mere 8.83 percent in 2013-14. The share of primary sector as a whole declined from 29 percent to 9.17 percent during the period. Correspondingly, the share of tertiary sector has gone up significantly (by 20 percent points), that is, from about 51 percent to nearly 70.89 percent. The growth in the contribution of the secondary sector was marginal during the period. The status of agriculture as a major employment provider has also been declining at a quick pace². Thus, what we are witnessing now is a structural change in Kerala economy, which is characterized by a substantial decline of agriculture, in terms of both income and employment, and the emergence of the services sector as the mainstay of the economy.

A look at the area and production of crops (we leave out plantation crops) reveals a worrisome trend, and it is alarming in the case of food crops such as paddy and tapioca and several other important crops of the state including coconut. The total area under food crops in the 1970s was around 20 lakh hectares. Presently it is in the region of 13 lakh ha. There has been a steady decline in the cultivation area of paddy from the middle of the 1970s; after reaching a peak of 8.8 lakh hectares in 1974-75, at

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1. The data on state domestic product and area, production and productivity of crops we use in the paper are drawn from various issues of Economic Review, published annually by the Kerala State Planning Board. For crop wise details see Statistical Appendix, Tables A. 1 and A. 2.
 2. The share of agriculture and allied sectors in employment declined from 57.4 percent in 1983 to 29.5 per cent in 2009-10 in Kerala. At the national level the share of the sector was as high as 53.2 per cent in 2009-10. Data on employment are from the Surveys on Employment and Unemployment, conducted by the National Sample Survey Organization.

present (2011-12) it is just 2.08 lakh hectares, which is a huge loss of about 6.7 lakh ha. The decline in paddy area at an annual rate of roughly 20,000 ha in the last three decades is surprising. This decline has been all pervasive and all the regions in the state have experienced the slide. The regions like Kuttanadu, Kole areas and Palakkad with higher levels of paddy productivity are also facing this problem. Presently the area under paddy cultivation is less than 10 percent of the gross cropped area as against 30 percent in the 1970s. Naturally, the production of rice also has declined in similar fashion in the absence of significant increase in productivity. The present production of rice is around 5.69 lakh tonnes (2011-12) as against a peak of 14 lakh tonnes in 1972-73. It is so inadequate that it can meet only one-fifth of the state's requirement.

The crops such as coconut and tapioca, which are very important in the life of the people of the state, have also recorded sharp decline in area and production in recent years, particularly after launching the liberalization policies. The cultivation area of coconut that stood around nine lakh ha a decade ago has come down to around eight lakh ha now. This is particularly significant because in the 1980s and 1990s there was considerable conversion of paddy lands into coconut cultivation, perhaps because of the less labour-intensive nature of coconut cultivation compared to paddy. Similarly, tapioca witnessed a decline of about 1.6 lakh ha of cultivation area.

Some of the labour-intensive crops like pulses, sugarcane, sesamum, ragi and some millet used to be among the principal crops of the State. Their decline in the cultivated area in recent times has been not just alarming; rather these crops have become almost extinct in the State. Pulses (mainly green gram and black gram) which were cultivated in about 44,000 ha in 1960 witnessed a staggering decline in area and they are presently cultivated in just about 3660 ha (2011-12) now. These are actually major legumes consumed in Kerala. Similarly, sugarcane was an important crop in the state that supplied raw material to three sugar factories and several traditional jaggery units. Its cultivated area varied in the region of 8,000 to 9,000 ha till 1991. However, afterwards it has seen a steady decline, bringing down the area to somewhere near 2,600 ha currently. (All the sugar factories in the State are closed down, only a few traditional jaggery units remain now.) Much more serious was the decline of sesamum (gingelly). It was cultivated in nearly 11940 ha of land in 1960. This status was almost maintained with some variations and marginal declines till the middle of the 1980s. But the crop faced drastic reduction in its cultivation area in the 1990s and presently it is virtually vanished from the State (its present cultivation area being a nominal 190 ha). The places like Onattukara which have very favourable soil conditions for the cultivation of sesamum have given up its cultivation completely. Such a huge decline of the crop is surprising as the State has considerable domestic demand for sesamum.

A number of other crops also have been facing a similar fate. Ragi, which was cultivated in about 5,300 ha in the 1960s, has almost entirely vanished from the State. The cultivation of groundnut steeply declined to a little over 1,000 ha now from a high of 13,000 ha in the 1960s. The trends

obtaining in the case of crops like pepper and ginger which occasionally fetch attractive returns also have not been different. The area under these crops has been witnessing a high level of variation across the years, but the downward trend is clear, particularly in the recent times. Pepper cultivation reached a peak of above 2.0 lakh hectares in the year 2002, but by 2011-12 it fell to about 85000 ha. In the case of ginger there has been a reduction of around 8,000 ha of cultivated area in the last two decades. It should be noted that it is not the labour-intensive crops alone that are being replaced in the State. Cashew, for example, needs very little labour in the cultivation and harvesting processes. But a continuous decline in area is recorded in this crop. Also, this is happening in a situation when the demand for raw cashew nuts for the cashew processing factories of the state is being met by imports from African countries.

A much more serious problem has been the decline of area under vegetable cultivation. The area under vegetables that stood at about 3.28 lakh ha in 1975 has steadily declined to somewhere in the region of less than 2.0 lakh ha currently³. Such a huge decline in vegetable cultivation has made the state heavily dependent on vegetable imports from neighbouring states. Perhaps, banana is the only food crop that registered a positive growth in cultivation area in recent times. The decline in agriculture has affected the allied activities as well; the cattle population in the state witnessed a sharp fall from 33.96 lakh in 1996 to 21.22.lakh in 2003 and further to 17.35 lakh in 2007 (Planning Board 2012:143-47). During the Tenth plan period (2001-02 to 2006-07) the production of milk, and eggs registered negative growth. Thus a substantially major portion of the food requirements of the state is met from the imports of food grains, vegetables, meat and eggs from the neighbouring states and the supply from the Central Government pool. A situation of utterly inadequate domestic production of food grains and other food articles can have serious implications for the food security of the state. The decline in area of a few crops is normally compensated by a corresponding expansion in the area of other crops. What is surprising in the context of Kerala is that this is not happening. Instead, the tendencies like large scale fallowing of land, conversion of farm lands for other purposes, nominal or non-intensive cultivation, leasing, etc., are increasingly gaining ground. This is reflected in the decline in net sown area on the one hand and in the increase in area under non-agricultural uses, and fallow on the other. The practice of leasing land is particularly significant as it was completely stopped by the early 1970s and any form of tenancy is illegal in the post-land reform Kerala.

Important dimensions of the crisis which may help in delineating the agrarian question of the region may be summarised here. The crisis is not just a relative decline of agriculture; it is more severe as reflected in absolute decline in employment, production and income generated in the sector, worsening of the food security situation, and growing indebtedness and misery of peasants and agricultural labourers (Nair and Menon 2009, Mohanakumar and Sharma 2006). Large scale conversion and filling

3 The figures for both the years include area under tapioca. Although the data on vegetables over the years exhibit considerable fluctuations on account difference in coverage, the general pattern of decline is sustained. Planning Board, *Economic Review*, Various years, Government of Kerala.

up of wet land, mainly paddy land, reported from almost everywhere in the state is leading to an ecosystem crisis. The decline of agriculture tends to knock down allied activities such as animal husbandry, poultry, village industries and the rural economy in general. The crisis has affected almost every crop in the non-plantation sector, and its impact was felt almost everywhere in the state, leaving hardly any region out of its influence. The state has lost much of its cropping diversity; across crops as well as within each crop (the state lost many rice varieties). The indiscriminate impact of the crisis, reaching every region as well as crops, underlines the need to search for general factors for the crisis, instead of confining to crop or region specific issues.

The literature has come up with a host of apparent and immediate causes such as decline in area, stagnation in yield, technological backwardness, absence of mechanisation, labour shortage, high wages, instability in product prices, environmental degeneration, preponderance of small holdings, etc. The study by Kannan and Pushpangadan (1988) situates the problem in the context of declining yield rates (particularly of paddy) and increasing real wages of agricultural labour. The decline in yield and production is chiefly attributed to the inadequate and ill-conceived development of critical factors such as water management and land development, a problem aggravated by environmental degradation since the mid-seventies. Kannan and Pushpangadan (1990) showed a relationship between low yield and decline in area as the low yield areas registered a higher level of decline in cultivated area. Apart from paddy, a number of other crops also have witnessed stagnation in yield. This indicates that there is a technological stagnation in non-plantation agriculture since the mid-seventies.

A good number of studies on agricultural stagnation in the State have been empirical in nature. But, there have been some attempts to conceptually link the crisis in agriculture to the overall transformation of the economy. The 'Dutch disease' argument for instance attributes the crisis to the 'resource movement' and 'spending effect' caused by the migration-remittances boom commenced in the 1970s. The 'Dutch disease syndrome' is argued to have pushed up the wages as well as the prices of non-tradable inputs including land (Balakrishnan, 1999; Harilal and Joseph 2003). The movement of labour to non-agricultural activities, and opportunities outside the state, has resulted in considerable increases in real wages for agricultural work in Kerala compared to other states in India (Baby 1996, Jose 1974). Labour shortage is certainly an issue to reckon with, but why it is not leading to mechanization; and why the labourers leave agriculture despite unemployment and a steady increase in real wages remains a puzzle. An explanation of the crisis cannot brush aside the impact of the 'spending effect' on the ratio between the prices of tradable agricultural products on the one hand and non-tradable inputs on the other, which is predicted to worsen because remittances induced spending would continue to put pressure on non-tradable prices (Harilal and Joseph 2003). Those who produce tradable commodities in Kerala are at a definite disadvantage; they will have to work with high input (non-tradable) prices, but cannot increase the output price. The prices of tradable commodities cannot be increased by producers based in Kerala because they are exposed to competition, not only in markets outside Kerala but within the state as well from competitors based outside the state.

The migration-remittances boom is also seen to have played a major role in boosting the asset function of land at the expense of its means of production function (Harilal 2008). Migrants, and for that matter anybody with investible funds, consider land as an attractive, and at the same time fairly secure asset for investment. It becomes a self fulfilling proposition because the flow of remittances into the land market pushes up land prices making it more attractive in terms of capital appreciation. High and increasing land prices may be attractive for those who value the asset function, especially the speculators, but not for those who wish to buy land for agricultural activities. The returns from agricultural activities may not be high enough to offset the interest cost on capital invested in buying land. Those who own and operate land for livelihood may find it attractive to alienate land because of uncertainties in agriculture on the one hand and the attraction of land prices on the other. In the context of Kerala, the conversion of land into a speculative asset has assumed alarming proportions and it has become a hindrance to industrial investment too (Harilal, 2009 and 2008). If this is true, the impact of high land prices must be far higher on agriculture, because unlike industry, land is the most important means of production in agriculture. An argument raised in the tradition of agrarian political economy by Namboodiripad (1984a), although in the national context, is significant to be mentioned here (See also Patnaik 1990). According to him the high price of land (which is the capitalized form of capitalist Ground Rent that retains in it all earlier forms of pre-capitalist rent) is a hindrance to the development of agriculture as the capital investors would find it difficult to realize reasonable returns from land considering the high cost of cultivation (that includes the interest on capital invested in purchasing land). Needless to say that this ground rent argument, raised by early Marxist writers including Kautsky and Marx himself, assumes importance in the context of Kerala, which is witnessing speculative investment in land and even what may be referred to as 'financialisation' of the land market.

The immediate and apparent causes identified in the literature beg questions regarding more fundamental forces at operation. For instance, the symptoms such as decline in area, yield, technological stagnation, environmental degradation, etc, are manifestations of more deep seated problems. Each of them raises queries regarding the social aspect of agricultural production in the state. Although the factors identified in the literature are all important, none of them are insurmountable if social organisation of production is dynamic enough. It is difficult to deny the fact that physical endowments of the region, such as soil fertility, water availability, agro-climatic conditions, genetic resources, quality of labour, traditional and modern knowledge on farming, etc., have much greater potential than what is realised. The point will become all the more clear when we consider the fact that the same mass of land and related resources were used for achieving much higher production decades ago. Further, the absolute decline in agricultural production cannot be explained in terms of a shift in the land use pattern favouring industry. Large tracts of agricultural land in Kerala are remaining unused or under used in its capacity as means of production. What ails Kerala agriculture is not scarcity of land but sheer inability to use it.

An important limitation of the literature on contemporary crisis is its inability to connect the crisis to the social organisation of production in agriculture. It is surprising because agrarian relations were at the centre of the discourse on development as well as politics in the state for more than a century at least up to land reforms and its immediate aftermath. In fact, the understanding of agrarian relations was quite widespread in the state, not confined to the academia or political arena, but every walk of life including popular art forms, literature and cinema. It was the redundancy and the repressiveness of the pre-capitalist agrarian relations of the region, known as *Jathi-Janmi-Naduvazhi Medhavitham*, which blocked not only development of productive forces in agriculture, but the very modernisation of Kerala society, that led to massive mobilisation of the people against it. Decline of the old system and introduction of radical land reforms might have led scholars to take production relations for granted. As a result there have not been many efforts to study and characterise the nature of agrarian relations in the post land reform period and to see how they influence production and growth. There were of course some major studies on land reforms focussing on its comparative merit as well as limitations (Mannathukkaren 2011, Radhakrishnan 1989, Herring 1983, Raj and Tharakan 1983, Krishnaji 2007, Varghese 1970). An important redistributive gap pointed is the exclusion of the plantation sector from reforms, especially land ceilings (Raviraman 1997). The main argument in this genre is regarding the exclusion of 'actual tillers' of the soil who belonged to the most deprived castes in the state (Planning Board 2011, Devika 2010, Krishnaji 2007). According to this argument the land reforms of the 1960s have not been successful in redistributing land to the 'actual' tillers of the soil, rather the intermediary tenants, who were cultivating the lands with hired labour, were the major beneficiaries. The intermediary tenants, many of whom have become absentee land owners, had only a secondary interest in farming (Eswaran, 1990). The re-emergence of leasing, including reverse leasing needs to be understood in this background. Studies have also pointed out the land reforms induced fragmentation of holdings and the consequent scale disadvantage. Even the supporters of the reforms acknowledge the constraints that the fragmentation of land holdings put on modern scientific and mechanized farming techniques.

The available studies do not add up in giving a comprehensive picture on agrarian relations. Since the focus was on redistributive lapses of land reforms they did not choose to address the question of agricultural production. There is hardly any study giving a clear picture on production relations in agriculture, leave alone its dynamics over time or its impact on production. Who owns and tills the land in Kerala now? Who is gaining or losing land in the state? Has there been a differentiation of the peasantry in the post land reform period? Is there increasing concentration in spite of the ceiling limits? Why capitalist development of agriculture is eluding the state in spite of land reforms and the overthrow of pre-capitalist barriers? Why contrary to the expectation of capital accumulation, de-accumulation is taking place in the sector? How agriculture is structurally linked to the rest of the sectors? What are the nature of class conflicts and alliances in agriculture and other spheres of power that matter for the development of the sector? How influential are the agrarian classes in deciding

State policy pertaining to the sector? Incidentally, these questions are not unfamiliar to the literature on agrarian political economy. These broadly are the concerns of the literature on agrarian question. In the present study, therefore, we follow the broad conceptual framework of agrarian question, for the simple reason that such questions are built into the very framework of analysis.

It needs to be emphasised here that the exact specification of the agrarian question will depend a lot on the temporal and spatial context in which it is posed. During the early phase of the literature on agrarian question in industrial countries an important concern was development of capitalism in agriculture. (For a comprehensive review of the literature see Akram-Lodhi and Kay 2010 a & b and Moyo, et. al., 2013). It corresponds broadly with the problematic of ‘production’ in Bernstein (1996)⁴. It was oriented towards identifying and analysing different possible ways of capitalist development on the one hand and phasing out of pre-capitalist production relations on the other. The pre-capitalist fetters had to be removed to facilitate development of productive forces so that agricultural production can catch up with the expansion in demand made possible by population growth and industrial development. It is the same question that was central to the people’s movement against the *Jathi-Janmi-Naduvazhi Medhavitham* in Kerala. The Kerala movement however was not narrowly oriented to the question of ‘production’; it was also a movement against colonialism and for national liberation. Nonetheless, in this study we will have to revisit the ‘production’ question because in spite of the downfall of the pre-capitalist regime, development of capitalism in the sector (agrarian transition) remains almost stunted in Kerala. This is the question that we examine in Section III, where we revisit the agrarian history of the state to see whether there was anything in the process of transition responsible for the observed stunting of capitalist development in agriculture. As we shall try to demonstrate the specific ways in which the transition from pre-capitalist arrangements have occurred indeed have a lot to do with the present day stalling of agrarian transition.

The scope of the agrarian question appears to have widened later from development of agriculture in itself to its facilitating role in the overall capitalist transformation of the economy. This is the problematic Bernstein refers to as “accumulation’. With the above turn agriculture was looked forward to produce surplus, i.e., over and above its reproduction requirements, and transfer it to facilitate capital accumulation and development elsewhere in the economy. A more important concern, as revealed by early writings on the subject, we touch upon in Section III, is that of possible class alliances and conflicts, the problematic of ‘politics’. The Kerala story reveals an interesting picture of class/ caste alignment and realignment during and after the struggle against the pre-capitalist regime, and for land reforms, which in our opinion had a critical role in the evolution of the state’s agrarian scene. There are political and geographical questions too in the articulation of which class conflicts and alliances within and across nations play overwhelmingly important roles. In the contemporary world, characterised

4 Interestingly, new scholarship in agrarian political economy is highly critical of the position taken by Bernstein (1996) and Byres (2002), especially their Eurocentric approach which tend to ignore among other things the limits imposed by the world system on agrarian transition in developing nations (Moyo, et. al. 2013 and Patnaik (2012)

as it is by neoliberal globalisation, the agrarian question appears to acquire many new and apparently disparate dimensions (Moyo, et. al., 2013, Akram-Lodhi and Kay 2010 b).

The role of agriculture in facilitating the overall capitalist transformation was discussed in the early literature, quite understandably in a nation-state centric framework (McMichael 1997). The linkages and balances between sectors and regions within the nation had overwhelming importance then than now. Globalisation and its impact on the world system have complicated the issue of structural balances within national economies. In such a scenario overall development of capitalism of a nation need not wait for the resolution of its agrarian question. The global division of labour opens the possibility of breaking the structural balances and limits within nations⁵. Agriculture, for instance need not be the source of surplus for accumulation, raw materials, or demand for capitalist transformation in the rest of the sectors. In other words globalisation opens up the possibility of bypassing the agrarian question. In our opinion this perhaps is what is happening in the recent story of structural transformation of the Kerala economy. In spite of the agrarian crisis, the regional economy has been able to carry on the process of structural transformation. A few decades ago everyday life of most people and regions in Kerala moved in and around agriculture. In today's Kerala even in rural areas agriculture is a highly marginalised activity, with low and rapidly declining dependence of the rest of the sectors. Kerala has bypassed the agrarian question. But, bypassing the agriculture is no guarantee that accumulation and capitalist development of the region would progress without problems. Global integration of the regional economy, which severed the link between agriculture and the rest of the economy, is growing into a major determinant, which need not be always benign, of the development dynamics of the region.

The possibilities opened up by globalisation have prompted scholars to speak in terms of the 'end of agrarian question' (Bernstein 1996, Byers 2002). The redundancy argument however is being challenged by scholars (Moyo et.al 2013), who draws the attention to the emergence and accentuation of several new agrarian questions. Our position in this regard in the context of Kerala is clear. The agrarian question in Kerala is far from dead. On the contrary, even though the agrarian question is by and large bypassed, it remains unresolved. Underdevelopment of agriculture is aggravating questions of food and livelihood security, ecology, and gender. Development of capitalism in agriculture is stunted. The long drawn out struggles of the people, and the consequent radical land reforms, had removed the pre-capitalist fetters on development of the forces of production. Wage labour relations and production for market have come to dominate agriculture in the state. Yet what is happening in the sector is 'de-accumulation' not accumulation of capital; not concentration or centralisation but dilution, scattering and desertion. Land is put to disuse or other uses than agriculture. In the place of fetters erected by pre-capitalist social relations new barriers appear to have come up. What are they? How are

5 The integration into the world system can operate in the reverse direction as well, as it appears to have happened in many third world countries, where the adverse terms of integration blocks agrarian transition and accumulation of capital in general in the peripheral country (Moyo et. al 2013, and Patnaik (2012).

they ensuring stunting of capitalist development of agriculture in the state? These are the questions that we take up for in-depth analysis in Section IV of the paper. The focus of the paper, however, is on the question of production because we consider it as an important initial step in understanding other questions such as that of labour, gender, food security, and environment.

Limitations of secondary data sources, particularly in relation to social aspects of production, were a major constraint for studies in the area. Data from secondary sources such as NSSO can be put together to build a picture on the distribution of land according to size classes of ownership or operational holdings. But, it is difficult to connect the data on distribution to farming practices, economics of farming, or labour relations. The present study therefore is based primarily on a survey of nine villages drawn from the midland region of the state, focussing exclusively on non-plantation agriculture. A profile of the villages is given in Appendix Table A.3.⁶ The village studies were combined with field visits, unstructured interviews of key informants, survey of cultivator and labour households using structured questionnaires, and analysis of LG plans and related records. The study also makes use of available secondary sources of data.

Section III

Land Relations in Kerala: Recapitulating the Past

A comprehensive and conclusive historical account of land and agrarian relations in Kerala prior to colonial period is yet to emerge although there have been significant efforts in this direction.⁷ There seems to be a fair amount of consensus among historians that there was no common political authority or centralized system of governance in Kerala in early times or medieval period.⁸ Medieval Kerala had several chieftaincies or principalities. It is pointed out that at the time of or even before the later Chera Empire, that is, before the 9th century A.D., field cultivation had developed to such an extent that the primitive communal form of society was already withering and class divisions started making their appearance. The emergence of the system of feudal landed property was the essence of such a path of development (Namboodiripad, 1952). It is also argued that the private ownership of land

6 The villages were drawn from midland region of the state with a view to focus on non-plantation agriculture especially paddy. An important consideration behind the choice of the villages has been the existence of prior studies to facilitate comparison of change over time. The village survey was undertaken with a wider set of objectives than what is addressed in the present paper.

7 The works by Namboodiripad (1952), and Pillai (1970) are the two early attempts to explain the agrarian system in the pre-colonial Kerala. Subsequently, the works of Ganesh (1991), Varier and Gurukkal (1996), are two other important contributions in this area.

8 It has been argued that the material conditions of Kerala are different from other parts of India as field cultivation in Kerala does not require artificial irrigation by canals and other forms of public works. This made possible for the people of Kerala to arrange their life in a way different from people in other part of the country (See Namboodiripad 1952). The peculiarity of the terrain of Kerala, which provided protection from external invasion, is another reason for the decentralised political arrangement.

began in Kerala long before the Sangham Age (Pillai, 1970), presumably in the initial period of the Christian era.

The evolution of private property in land was intimately connected with the evolution of caste system in the State which resulted in the accumulation of landed property in the hands of the 'higher' (Savarna) castes (Namboodiripad, 1952:36). The traditional system of land tenure in Kerala is called *Janmi-Kudiyan Sampradayam* which literally means landlord-tenant system (as *Janmi* means landlord who possesses land as a birth right and *Kudiyan* is a tenant). However, in the initial years of the formation of hereditary land rights the land ownership was not specifically characterized as *Janmam* (birth) rights (Ganesh, 1991). The growth of *Janmam* right had its roots in the emergence of a stratified agrarian society between the 9th and 12th centuries (Ganesh, 1991). The ownership of land by a *Janmi* does not imply any services or dues to the chieftain or ruler. In this sense his right over land is autonomous (Ganesh, 1991). The rights and obligations of landowners and the producing classes were decided on the basis of accepted practices. Dues to the King from the land produce were called *Komuraippadu* (customary obligation), which later became formal land revenue. The tenants or the leaseholders gave rent to the land owners as decided by custom. The produce was thus divided among the land owner, ruler and the tenant. The farm workers (*adiyalar* or bonded labourers) had no right over the produce. They lived on the farms and were provided with consumption items for livelihood.

Although a systematic and chronologically organized narration of agrarian structure and social life in the Middle Ages is still not available, indications are that the agrarian system was undergoing tremendous changes during the period between the 12th and 15th centuries. By the beginning of the 16th century the temples and Brahmans, along with the ruling chieftains have become the owners of most of the available lands in the state (Ganesh, 1991). These lands were cultivated by tenants who paid a share of the produce to the landlord. These cultivators were not a monolithic class; they included large landholders (on superior tenure called *kanam*), who got lands cultivated by others on sublease or simple lease holders (*verumpattomdars*) with smaller holdings. The period following the 12th century witnessed the emergence of large number of intermediaries in land possession, use of money in obtaining land rights and the practice of land mortgage. All these add up to radical changes in the agrarian structure of Kerala that resulted in considerable expansion of agriculture in the Middle Ages. The expansion was observed in both food crops and cash crops. The production of food crops was extended to new areas. The use of plough was wide spread from the 9th century itself, indicating an improved cultivation practice. Use of manure (greenleaf and cow dung) was also practiced. There was remarkable growth in population. The spread of agrarian settlements throughout the region is an indicator of demographic growth (Varier 1989).

The signals of vibrancy in the narratives of agrarian history, especially suggestions on geographical and demographic expansion and growth of production, are interesting to be noted in contrast to the all round decline of agriculture in the present. A relevant question in this context is whether the agricultural

sector generated significant surplus during the medieval period. The difficulty in arriving at a quantitative assessment of the agricultural surplus for the period is obvious. However, certain features are noteworthy. Firstly, there was a substantial population who were not involved in agricultural production like the king and his servicemen, Chieftains and the militia, the landholders and their servicemen, temples and their servicemen, artisanal and handicraft population, people associated with educational institutions (like *salas*), medicine men, ritualists, tradesmen etc. It is obvious that without agricultural surplus these classes of people could not be sustained. Further, the available indications are that those classes of people outnumbered the producer population. Secondly it was a period of considerable advancement in culture. This was reflected in the growth of Sanskrit literature, philosophy, art forms like *koodiattom*, spread of ayurveda and other traditional systems of medicine, architecture and astrology, and development of Malayalam as an independent language of Kerala.⁹ Thirdly, the emergence of numerous principalities (or small kingdoms) during the period could be a sign of sufficient agricultural surplus to maintain the state apparatus.¹⁰ Fourthly, if the feudal rent is predominantly in the form of kind, the accumulation of wealth by the possessing classes takes place essentially in the form of use values. Surplus product received as use value is lavishly spent and the unspent is often wasted. Thus the conclusion is unmistakable, the medieval Kerala, particularly from the Perumal period, was an era of agrarian expansion and growth in human settlements and the agrarian system of the period was able to generate a surplus that was required to feed a population in which the producing class was smaller in size compared to the non-producing dependent classes.

Towards the end of the seventeenth century the system of land relations discussed above was disturbed as tensions developed within it. The intermediary tenants who held the actual controlling rights of lands began to violate the customary obligations to the landlords and the temples, whereas the fragmentary nature of the political powers characterized by the existence of small chieftaincies was not helpful in controlling the increasing assertiveness of the intermediary tenants. This situation demanded a restructuring of the politico-economic order in which the ruler should be able to control the crisis by asserting the State power. This was achieved first in the former Thiruvithamkur area of the present Kerala state, where “the customary forms of politico-economic power had given way to a formal kingship supported by a new politico-legal apparatus” (Ganesh, 1991: 317). This was achieved in the aftermath of the establishment a new unified State of Thiruvithamkur by a Raja of Venad who subjugated all principalities in the southern part of Kerala and extended the territory up to the Cochin State and brought the whole area under a monarchical rule. A similar process of unification on smaller scale had taken place in the region north of Travancore that led to the creation of another State, Cochin, in the central part of Kerala.

9 The first generation Malayalam writers like Poonthanam Namboothiri and Thunchath Ezhuthachan, considered as the father of Malayalam language, belonged to this era.

10 R.S.Sharma pointed out that hundreds of States emerged in India during the early middle ages in the context of larger yield and great agrarian expansion (Sharma 1984).

The system of land revenue and the privileges of temples, Brahmans and other landowners were formally fixed instead of following customary practices. In the new dispensation, in Travancore the State became the owner of about one-half of the total land by the end of the 18th century (Varghese, 1970). Under the new land revenue system the full assessment of revenue was imposed only on Sircar *verumpattom* (simple lease) lands which comprised only half of the Sircar lands. The lands under all other tenures were treated as favoured tenures including the *Janmom* lands owned by Brahmans and were exempted from taxes. The tenants' rights and obligations were also formalized. Permanent leases and mortgages were converted into birth rights of the cultivator (designated as *kudijanmom* lands) (Ganesh, 1991). Lease transactions were documented and officially recorded. *Kuzhikkanam* was encouraged and concessions (*naduvukkur*) were given to tenants for fresh planting in an attempt to enhance production in both garden lands and wet lands. All these measures, the land settlements, formalization of land revenues and tenurial conditions and the encouragement for agricultural expansion, must have been a strategy for mobilizing and strengthening the resource base of the newly organized monarchy. But, the conflicts in the politico-economic order, and its resolution in Travancore and Cochin, had sown some seeds of change in the system which would later facilitate entry of capital into agriculture. The tenants who cultivated the State lands (i.e. *pandaravaka pattom* lands) had to pay only a moderate land revenue and those cultivated non-*pandaravaka pattam* lands were paying a rent (in kind) which was lower than that was given by the tenants of private landlords. The changes in land relations were notably becoming favourable for expansion of agriculture. The tenants who cultivated the government lands did not have any ownership or transfer rights on lands. But the class of tenants who cultivated government lands was gradually increasing in number as population increased. They also brought more government lands under cultivation taking advantage of the concessions offered by the Travancore government.

In order to bring more land under cultivation the government considered it necessary to grant full ownership right to cultivators of government lands. In pursuance of this objective, the Travancore government issued a royal proclamation (called *Pattom* proclamation) in 1865 which conferred full ownership rights to the tenants of state-owned lands with rights to sales, transfer and mortgage. With this such lands became the private property of the tenants and thereby a new class of peasant proprietors emerged in Travancore. By allowing free transferability and sales the land has become a commodity in the market. This caused a spurt in land sales and also in reclamation of waste lands resulting in considerable expansion of cultivation. Also, by the end of the 19th century there began large scale reclamation of vampy areas surrounding the Vembanad lake in the northern part of Travancore area. The shallow parts of the lake itself were reclaimed for paddy cultivation by several rich families in the region. The process of large scale reclamation that started in the 1880s continued till the 1930s and about 20,000 acres of land have been reclaimed for paddy cultivation during the period. The rich families, which included rich tenants from Christian communities and a few traditional landlords, who resorted to large scale reclamation, became owners of large tracts of paddy lands. The small

tenants and peasants who were able to reclaim on a smaller scale also have been able to enhance their land possession. In addition, the land ownership was diffused among several castes of people connected with agriculture except the castes of bonded labourers or those who are at the 'lowest' rung of the caste hierarchy.

The expansion of agriculture through reclamation of backwater areas marked the first major step in the development of capitalist agriculture in Travancore. Even with the help of low-paid servile workforce reclamation involved huge investment. It required enormous amount of labour and materials for erecting huge and long earthen ring-bunds around hundreds of acres of backwater areas and dewatering the enclosed areas. In the initial period dewatering was carried out by human labour with the help of wooden water wheels of different sizes. Dozens of such water wheels were used to dewater each block of backwater area marked for reclamation. Manual labour was employed day and night for several weeks or months dewatering and erection of ring-bunds. The materials used for the bunds were coconut trunks, bamboo poles, clay and green leaves. The collection and transportation of these materials in large quantities to the reclamation site and erection of bunds and their subsequent maintenance are extremely labour-intensive. This labour was supplied by the unfree and 'depressed-caste-dependent-servile' workforce (Rammohan, 2006). That is, the emerging capitalist agriculture was heavily dependent on unfree labour in its early days. Even after the introduction of modern technology (like mechanical pump sets) for dewatering, the need of large scale labour for the construction and protection of bunds remained. The unfree labour continued to be the backbone of not only reclamation agriculture but the entire agriculture in the state till the days of the land reforms when the agricultural labour was effectively freed from bondage.

Although the labour relations remained pre-capitalist the reclamation agriculture (and large scale owner cultivation) presented substantially the features of a capitalist venture. A fairly developed credit market supported the reclamation and cultivation at the time. The state was an important actor in the reclamation agriculture as it encouraged reclamation and offered loans at concessional rate of interest and land tax exemptions (Pillai and Paniker, 1965). However, large scale reclamation could not have been possible with the limited state lending and hence the local private money lenders (who lent in cash and paddy) had a bigger role in the credit for reclamation. They were supporting the cultivators in the times of crop failures also (Government of Travancore, 1932). Apart from the credit market, the product market was also fairly developed at the time. The paddy produced in the large scale owner cultivation was almost entirely for the market. The reclamation entrepreneurs were quick to adopt the modern technology of motor pumps for speedy dewatering when a British company introduced it in the state.

The new situation was favourable to prosperous tenants of private landlords, peasant proprietors, usurers and traders to purchase lands from impoverished peasants and even indebted landlords. A new class of landlords and owner cultivators emerged in the process. Several tenants of private landlords

simultaneously became cultivators of their leased in land and owned land. The small holders among the tenants and the new class of land owners were contributing their family labour in cultivation, while the large holders were cultivating their lands with bonded labourers as before. Thus in Travancore a system of peasant proprietorship, large scale owner cultivation and the traditional tenancy together came into being. Obviously, the above changes, especially increasing orientation of production towards market and profit, strengthening of the land market, growth of a market for credit, emergence of peasant proprietors, mobilization of capital for investment required for land reclamation, etc., are clear signs of capitalist development in agriculture. But, it was surrounded by many barriers in its course of development such as colonial drain of surplus from agriculture, barriers erected by colonial government against diversification into industries, remaining pre-capitalist restrictions on land and labour market, etc. One notable feature of capitalist development of agriculture as it was being unfolded was its dependence on pre-capitalist modes of exploitation of unfree labour. Agricultural labourers belonged to the 'lowest' castes like Cherumas and Pulayas who were mostly bonded labourers. Though slavery was abolished in Travancore in 1885, they continued to work as dependent labourers. The living conditions of those bonded labourers did not improve to any significant extent as they were still tied to the land owners and tenants in the absence of any alternative employment avenues. Even though there were considerable arable waste lands available the agricultural labourers belonging to the lower castes like Pulayas were not allowed to cultivate such land. They did not benefit from the State policies related to land and agriculture.

The kind of changes that took place in Travancore and Cochin did not take place in Malabar, the northern part of Kerala. There the customary land rights and relations continued till the invasion of the Mysore ruler in the second half of the eighteenth century. The heavy revenue assessment and state monopolies over trade introduced by the Mysore rulers worked against expansion and transformation of agriculture (Ganesh, 1991). However, these changes were short-lived as the Mysoreans had to leave the place with the ascendancy of the British rule. The arrival of the British on the scene brought considerable changes in the land and agrarian relations all over Kerala, as elsewhere in India, which can be summarized as below.

In the customary framework of relations, although the landlords enjoyed wide powers they had no right to evict the tenants as long as they paid the rent and other services promptly. The British rule transformed this customary feudal system into a formal and legalistic system which granted unlimited powers to the landlords including the power of eviction on any ground and instituted a land revenue system that enabled the government to levy land taxes at its will (Namboodiripad, 1984b). The British made the land revenue, first imposed by Tipu Sultan, a permanent institution and imposed land revenue on even uncultivated lands if they are possessed by someone. The burden of land tax was very heavy particularly in Malabar and Cochin that resulted in huge extortion of the peasantry and its pauperization.

The British period witnessed growing trend of production for the market as different from the earlier production for consumption, as can be seen from the expansion of commercial crops for export. It however prevented the natural development of this change into capitalist mode of production based on large scale industry and modern agriculture as it happened in Britain. Even while there was considerable expansion in agriculture and commercial crop production, the essentially feudal mode of production and the dominance of agriculture in the economy were retained. The existence of a land market, higher rent due to the increased demand for lease and the growth of the cash crops farming together contributed to the steady rise of land prices in Kerala. The colonial character of the economy marked by very low development of industry coupled with the decline of the limited native industries (like cotton textiles) due to the increased imports from Britain and the domination of British capital left not much investment opportunity for the native bourgeoisie. Those native people who were having surplus thus resorted to money lending, mortgage or purchase of land.

As the British legal system provided unlimited powers to the landlords and the chieftains in their lands, they were frequently resorting to evictions to change the tenants for raising the rent. Even the *Kanomdars*, the intermediary tenants, were also resorting to this practice to their sub tenants, the simple lease holders. In Travancore the conditions of tenancy in jannom lands of the private landlords where deplorable and similar to the oppressive conditions existed in Malabar. Evictions of tenants were common in such lands. In Malabar and Cochin and to a lesser extent in Travancore the evictions denied livelihood to a huge population during the 19th century and in the first half of the 20th century and that triggered considerable resentment among the peasantry. The contradiction between the landlords (including both *janmis* and big *kanakkar*) and the peasantry (small *kanakkar* and *verumpattakkar* or tenants-at-will along with the agricultural labourers) became acute. Pauperization of the peasantry and even the small landlords was growing throughout the British period owing to high taxation and agricultural indebtedness (Panikker 1992:47). In this background the anti-feudal movements began to take shape in various forms in different regions of Kerala. The peasant movement that gained strength in Malabar slowly spread to different parts of the State. The problem of peasants and agricultural labourers received considerable attention in the political activities in the State starting from 1930s. The formation of Kisan Sabhas and the labour union and the leadership of the Communist Party enabled the peasants and agricultural labourers to carry out their struggles in a more organized manner. Such struggles spanning over a period of roughly three decades led to the adoption of a radical land reforms agenda by the Communist Party in 1957 when it came to power in the unified Kerala State.

Land Reforms and Alignment of Classes

The Communist Party viewed the land reforms not only as an economic project but also a political one to democratize the rural society. The party had suggested various measures for land management, expansion of cultivation in cultivable waste lands, development of co-operatives and

village panchayaths, irrigation and rural credit, procurement of paddy, etc¹¹. The Communist Government within a week of its formation brought out an ordinance restraining the landlords from evicting tenants. Fixation of fair rent, fixity of tenure and ownership rights to tenants, ownership rights to hutment dwellers (*kudikidappukar*) on the land they possessed, reasonable ceiling on land holdings and mobilization of maximum land for redistribution and ultimate abolition of tenancy system were the major thrust areas of the Kerala Agrarian Relations Bill (KARB) of 1959. The provision that the rights of landlords on leased-out land would automatically vest in the State Government was particularly important. The tenants would be the *de facto* owners of the lands thus vested in the Government and those lands would be eventually transferred to the tenants. The provision for ceiling on land holdings was also a radical one aimed at curbing land monopoly and achieving more distributive objectives. The plantations (coffee, rubber, tea, cashew, cardamom etc.), private forests and the lands owned by religious and charitable organizations were kept outside the purview of the land reforms. This was in accordance with the Central Government's guidelines and also because of the fact that the plantation of the time involved substantial foreign (British) capital on which the state government was not in a position to take any legislative action.

Even though the political mobilisation against the structure of pre-capitalist relations of production was fairly broad based, with almost all sections of the people except the landlords (*Janmies* and big *kanakkar*) being committed to the cause, the KARB broke the apparent unity, and brought certain fissures in the alliance against *Jathi-Janmi-Naduvazhi Medhavitham* to the fore, which precipitated since then and assumed a major role not only in shaping the future of agriculture but even larger politics of the region. This is an aspect of agrarian relations of the region we wish to define clearly here so that it can be used for deciphering later developments in agriculture and politics surrounding it. As we have already noted, in spite of the continuing grip of the pre-capitalist arrangement, the latter half of the nineteenth century and the first half of the twentieth century witnessed emergence of a nascent bourgeoisie in Kerala agriculture, especially in Travancore and Cochin. Many of these budding capitalist farmers had freehold land as well as land they possessed as tenants. Although they were keen on establishing ownership right over the land they held as tenants, they were completely opposed to the idea of any ceilings on ownership. This was true of all rich tenant-cultivators who were demanding free hold over the land they received from *Janmies/ Devaswams* as tenants. They were opposed to the provision of land ceilings, and the vesting of surplus land in government and its eventual redistribution. Further, all those who cultivated land by employing unfree agricultural labourers were opposed to the idea of *kudikidappu*, which as they rightly anticipated would debase the pre-capitalist ways of surplus extraction and accumulation. In a way these provisions of the Bill were threatening to nip in the bud the capitalist development in agriculture; by removing the main source

11 With regard to these and several related issues, the communist party had taken position and widely campaigned for that. These are available in several publications (For example see Namboodiripad 1999).

of surplus/mode of accumulation on the one hand and the room for concentration and centralisation of capital on the other. The KARB, as it was equally opposed to the landlords as well as the incipient capitalist class, was capable of inviting a combined and hence formidable opposition to it.

The landlords and other propertied classes under the leadership of the Congress party began a massive struggle (called '*vimochana samaram*' or 'liberation' struggle) against the Government within a few days after the Bill was passed. A broad anti-government platform was built-up. The struggle was carried to very aggressive proportions leading to serious law and order problems. Finally, the Central Government dismissed the Communist Government using the special Constitutional provisions citing deteriorating law and order situation in the State. The period since then saw many legislative efforts to dilute the KARB-1959. A new act called Kerala Land Reforms Act was passed in 1963. The 1959 Bill had made illegal all evictions of tenants retrospectively from November 1956, while the new Act 1963 deleted that provision, thereby legalizing thousands of evictions effected during the period. The ceiling was raised to 36 acres for a family of five and the exemptions were enlarged to include cashew estates of 10 acres and over, pure pepper and coconut gardens of more than five acres and paddy lands reclaimed from backwaters (in Kuttanadu area of Travancore).

The changes in the ceiling limit and exemption granted to various types of land have resulted in huge reduction of surplus land available for distribution among the landless. As per the estimates in 1957, there was about 7.5 lakh acres of land as surplus above the ceiling limit (some estimates show even higher area), but in 1964 the Government declared that there was only 1.2 lakh acres of surplus land in the State, that is a huge reduction of more than six lakh acres from the estimated surplus. This has seriously undermined the redistribution agenda of the 1959 Bill. The land reform survey 1966 showed that the implementation of the Act was not just tardy but was negligible. This situation came to an end only in 1967 when a new coalition Government led by the Communist Party of India (Marxist), the left-wing section of the by then divided Communist Party.

The new government in a few days of assuming power introduced an ordinance to restore tenants evicted after April 1964 as well as to prevent future evictions. Subsequently, in 1968, the new government prepared a comprehensive amendment to the 1963 Act with the intension of retrieving the lost goals aimed at in the 1959 Bill. The gift deed provisions of the 1963 Act that resulted in substantial reduction of surplus land were amended in the new 1969 Act to stop further manipulations. The ceiling limit of 36 acres fixed in the 1963 Act was brought down to 20 acres in the 1969 act. This amendment helped to retrieve some of the land back to the 'surplus' fold. The Act also provided the landless hutment dwellers (*kudikidappukar*) fixity of tenure and the right to purchase up to 10 cents of land in villagers (5 cents in Municipal areas and 3 cents in Corporation areas) from the landlord at a nominal price, which was fixed at 25 percent of the market value of the land (12.5 percent in case the landlord has surplus land). Moreover, half of this price had to be paid to the landlord by the Government and only the rest by the beneficiary, that too in 12 instalments. The creation of new tenancies was

banned with retrospective effect from April 1964. With these amendments the system of tenancy had come to an end in Kerala from January 1970.

The KLRAA 1969 is the land reform law that has been in force since then although there have been some amendments brought in it subsequently. A Congress-led coalition brought an amendment in 1972 to legalise transfers of surplus lands through gift deeds. But this amendment was later struck down by the judiciary. However, the political forces behind that amendment brought still another amendment in 1979 validating all such land transfers through gift deeds from 1964. Several other types of evasions of ceiling limit were taking place throughout the period from 1970 to 1980 (the entire period had Congress-led coalition governments in the State) by means of bogus claims and transfers (such as making surplus land part of tourist hotels, film studios and other business enterprises which had been specifically exempted from the preview of the ceiling legislation) (Raj and Tharakan 1983).

Balance Sheet of Reforms

In spite of the stiff and sustained resistance a substantial part of the reforms agenda was implemented through governmental action, ably facilitated by agitations of the peasants and agricultural labourers. The enforcement of the provision for tenancy abolition was far more successful compared to the ceiling provision. A fairly reliable estimate indicates that about 1.25 million tenants benefitted by land rights and among them a million tenants newly acquired land ownership through the transfer of rights, that is, they were completely landless earlier.¹² Among them more than two-third (0.66 million) had holdings below one acre while all of them together got about 0.25 million acres of land. That is, they got small parcels of land, about one-third acre on the average. About 0.8 million acres leased-in land was in the hands of 0.44 million tenants with holding of 1 to 5 acres in size who could acquire ownership over them. About 10 percent of all tenant households (that is, a little over 0.1 million in number) who had operational holdings above 5 acres in size could gain significantly through transfer of ownership right on the land leased in by them. They gained by about 0.85 million acres. Approximately 1400 households among them with large holdings above 15 acres in size were able to increase the area owned by them from 0.13 million to 0.45 million in this way (Raj and Tharakan, 1983: 62). Obviously, therefore, a significant number of the tenant beneficiaries, who were perhaps the most powerful among them, were opposed to the provision of land ceilings, not to mention about their opposition to the provisions in favour of agricultural labourers.

Thus, in brief, about 1.25 million tenants got ownership rights on about 1.9 million acres of land they held under lease. In this, about 1.75 million acres of land (0.65 million acres leased out by large land owning households with 25 acres and above and 1.1 million acres leased out by other large

12 Raj and Tharakan, 1983. All the estimates given here about the pre and post-land reform land distribution are taken from this study.

holders like temples, trusts, royal households etc.) was leased in from large land holders in the upper strata of the society. Thus a significant portion of the State's land (State had only 5 million acres of land under cultivation at the time) was transferred to the people lower down as a result of the land reform measures. In addition, the hutment dwellers who got rights over their small plots was about 0.35 million in number, according to the Land Reforms Survey 1966-67. They must have gained ownership right over a total of 0.03 million acres of land. The surplus land to the tune of about 0.077 million acres (out of a total surplus land of about 0.10 million acres taken over by the Government) was distributed to about 0.17 million landless families so far.

An assessment based on the data available for the immediate post-land reform period (mid 1970s) indicate that there has been considerable decline in land concentration and substantial distributional effect by way of increased number of ownership holdings. While the number of small holdings increased the number in upper size classes declined. In addition to the distributive aspect, another offshoot of the land reforms was the increase in the number of wage labourers in agriculture or what can be termed the proletarianisation in agriculture. As the system of attached labour was coming down, there was significant growth in the number of wage labourers in agriculture from 1951 onwards and this growth has been phenomenal from 1961 and rose to a very high rate by 1971 in the aftermath of the land reforms (from 1.12 million in 1951 to 1.35 million in 1961 and again to 1.91 million in 1971).

The decline of the traditional system of labour relations in the aftermath of the land reforms contributed to the growth of trade unionism among agricultural labourers. The period from the 1960s to the 1970s witnessed rapid growth of trade unions among agricultural workers.¹³ The enhanced collective bargaining strength of the workers contributed significantly to the increases in real wage rates of agricultural labourers in Kerala in the 1960s and the 1970s (Jose 1974.). It is a widely known fact that this trend continues in Kerala even today (Baby 1996). It is also an accepted fact that the conferment of full ownership right to agricultural labourers over their hutment dwelling (*kudikidappu* lands) under the land reforms has enhanced the reserve price of their labour as the ownership of small holdings offered them a permanent and settled habitation. Labour became free from feudal bonds, free to sell labour power to the buyer of her/ his choice.

Perhaps the most important question in this context is how the land reforms helped the agricultural production and growth. Although the process of land reforms was going on for a long period, its major component, the tenancy reform, was effectively completed by 1970-71. The evictions of tenants were considerably reduced during the Communist Government of 1957-59 and in many parts of the state

13 In Travancore region (in Alappuzha district, precisely), the trade union among agricultural labourers started in the 1940s itself along with the growth in industrial workers' organization in coir industry. However, the union activities spread widely across the state in the 1960s and the 1970s witnessed a much larger growth in terms of workers' participation and the number of struggles. For example, the leftist trade union Kerala State Karshaka Thozhilali Union increased its membership from 48,000 in 1971 to 1,30,000 in 1973. Several right-wing trade unions also came in to the scene during the period. For a detailed account see Jose (1976), and Jose (1979).

the tenants stopped paying rent and they became de facto owners of the leased-in land during the 1960s itself. The entire period of the 1960s and up to the middle of the 1970s the area under cultivation and the agricultural production, particularly rice and coconut, were growing at a reasonably rapid rate. There was an increase of nearly 25 percent in the gross income from land (estimated at constant price) between 1960-61 and 1970-71. The contribution of the primary sector to the net State Domestic Product was also growing up to 1974-75. However, after this period, there has been a general decline in agriculture (excluding plantation crops which showed varying trends), particularly food crop agriculture, which is the theme of the present study.

Our reading of the history of agrarian relations of the region, especially when contrasted with more recent period, entails some important lessons, which are valuable in understanding the contemporary agrarian crisis. First, land which is fast losing its significance as a means of production in contemporary Kerala, hence being relegated to increasing disuse and also misuse, had a pre-eminent role in production until recently. Land was the principal means of production of the region, which therefore was put to use quite intensely, and agriculture was the main source of income and livelihood of the people. Moreover, land in Kerala was a source of substantial surplus that fed a large class of dependent population. Land and agriculture had also supported a flourishing feudal culture, which was by all means quite rich compared to similarly situated regions. But, like everywhere else, the feudal edifice of prosperity in Kerala was built on unfreedom, and extreme forms of exploitation of the tenants and the landless agricultural labourers, who were virtually agristic slaves. The spread of cash crop cultivation, growth of trade, integration into the world system, development of land and credit markets, pro-tenant/pro-cultivator changes in land relations effected in Travancore and Kochi regions since the second half of eighteenth century, consequent emergence and spread of peasant proprietorship, state patronage of investment in plantation as well as reclamation of swampy land in Kuttanadu and Kole areas, etc, were conducive for development of capitalist production in agriculture. But, the penetration of capital into agriculture, by which production became more market oriented and profit driven, was based on pre-capitalist relations of labour. The source of surplus and accumulation remained as in the past the unfree labour of the poor tenants and the agristic slaves.

The platform of resistance and struggle against the 'upper castes-land lords-chieftains combine', which characterised the pre-capitalist formation of the region, was quite broad based. But, as the struggle against the oppressive system progressed and took concrete forms, such as growth of peasant movement, dalits uprisals, militant trade union movement of the agricultural labourers, and finally introduction of radical land reforms there appeared fissures in the underlying class/social alignment. Even though the well-off sections among tenants were generally in favour of land reforms for protecting their interests as tenants, they were opposed to the idea of land ceiling. This was true of the nascent group of capitalist farmers too who already possessed, or were keen to acquire land beyond the ceiling limits. Such sharp contradiction of interests, in fact, was visible in the case of all moves that threatened the pre-capitalist ways of exploitation of labour of poor tenants and the agricultural labourers. This

was particularly evident in the case of the protracted resistance against the provision of land ceiling, which succeeded to a great extent in defeating the redistributive intend of land reforms. Equally adamant was the position of the landlords and even well off tenants against the provision of '*kudikidappu*'. The contradiction between the old and new land owners on the one hand and the workers- including poorer sections of tenants who had to sell labour power for earning a livelihood- on the other, which remained muted for long because of serfdom, erupted and grew into open conflicts and violence as workers organised and started bargaining. In the larger environment of political coalitions in the state, it meant protracted isolation of CPI (M) during 1970s, a party which was in the forefront of the people's movement against dilution of the provisions related to surplus land and its redistribution, and the agricultural workers movement.

Notwithstanding the stubborn resistance, and the defeat of the redistributive provisions, the land reforms did give a final and decisive blow to the pre-capitalist modes of exploitation of labour in agriculture. It ended many forms of unfreedoms of poor tenants and agricultural labourers. Those who worked on land as attached serfs became free wage labourers. One immediate outcome of freedom of labour was conspicuous and sustained increase in wages, which happened in spite of a major increase in the number of agricultural labourers. In spite of the threat of unemployment, the workers broke the practice of working for wages, and other conditions of work, set unilaterally by the employers. Another important outcome of land reforms, which is yet to be acknowledged properly, is the freedom of mobility that it had established. Those who were forced to work on the land until then used the freedom of mobility to protest by walking away from agriculture. The period since land reforms witnessed a process of desertion of agriculture by workers, and their migration into occupations other than agriculture, within the village, nearby urban areas, other states in the country and abroad. It is an interesting tale of labour geography, wherein workers combined space and mobility in the struggle for liberation from exploitation in the present, and memories of servitude of the past¹⁴.

As we shall see subsequently, under pre-capitalist relations, concentration of land in the hands of big landlord families was a mechanism of aggregation of farm power vis-a-vis input suppliers and traders of agricultural products. Inputs were predominantly locally sourced. Product markets were sparsely integrated with external sources within or outside India. They were highly segmented because of product differentiation (predominance of local varieties) and costs and delays in transportation. In such segmented markets the landlords, who controlled most of the marketed surplus, and endowed with physical and financial resources to keep stocks, had a better control over the market compared to today's atomised farming units selling undifferentiated products in globally integrated markets to big

14 Labour geographers highlight the agency of labour in shaping the contemporary economic geography of the planet (Herod 2001). The history of internal and external migration of the people of Kerala has a special place in the history of capital-labour relations of the region. Capital and labour had both used spatial mobility and the threat of mobility as a weapon in the conflicts. Desertion of agriculture by labour can easily be counted as a response not only to low earnings in the sector but also the social stigma associated with farm labour.

monopsonic buyers. Similarly, the land lords used to coordinate common farming tasks such as upkeep of infrastructure (annual repair of village tanks and irrigation channels, making of bunds, dewatering, etc.) and observance of customs and practices related to farming. There existed a system of micro (local) governance of farming practices including those related to land and water management. The overthrow of the traditional arrangements broke such continuities required in farming without replacing them with democratic alternatives visualised by the architects of the land reforms in the state.

Section IV

Land Relations and Economics of Paddy Cultivation

The main purpose of our analysis of economics of paddy cultivation using the village study data is to see the relationship between production on the one hand and social organization of production on the other. As such, before getting into the details of costs and returns it will be useful to set the background of land relations in the selected villages. The broad setting of the history of agrarian relations and the land reforms of the more recent past are generally applicable to the selected villages. Appendix Tables 1 and 2 will help summarize the situation prevailing in the study villages. The size class distribution of land holdings presented in Table 1 highlights preponderance of small holdings and the problem of parcelisation as seen in the villages. Although smallholder agriculture is a widely noted phenomenon (Viswanathan et. al. 2012: 41-50, Reddy and Mishra 2010:43-69) it is particularly pronounced in Kerala¹⁵. Land reforms, family partition, and the rise in land prices along with other possible factors would have contributed to the preponderance of small holdings. The preponderance of small holdings is an important attribute of the phenomenon of atomisation of farming, which in our opinion is central to the understanding of contemporary agrarian relations of the region. Atomisation of farming, however, has another important dimension to it, viz., absence of collective action, or inability of atomistic units to come together for collective action. Atomisation puts farmers at a disadvantage vis-a-vis other more organised and larger actors in the relevant commodity chains such as traders, processors, retailers, suppliers of inputs and credit, etc. Further, atomisation is a barrier for organising cooperative labour processes which is needed for efficient agriculture in many areas.

The distribution of land among farming and non-farming household brings out yet another critical dimension of land relations in Kerala (See Table 2). There is a clear divorce between ownership of land and interest in cultivation. Except in two villages farming households own less land compared

15 According to NSSO surveys the average area owned by rural households was 0.81 hectare excluding the landless in 2003 at the all India level. The average size of operational holdings in the State declined from 0.74 ha in 1967 to 0.33 ha in 1991 and further to 0.26 ha in 2003. In India 80 percent of the households own less than 1 hectare of land. In Kerala 95 percent of rural households own less than 1 hectare. Further, in the state 92 per cent of the operational holdings operate less than 1 hectare of land.

to non-farming households¹⁶. This is a clear indication of the growing contradiction between means of production and asset functions of land. People in Kerala invest and possess land not so much for using it as a means of production in agriculture as they do it as an asset for its assured value appreciation. Another piece of evidence for the growing contradiction between the two functions of land is the rise of land prices and the pressure of speculation in the land market. This as we discuss subsequently is reflected in the costs and returns of farming. What happens on the margin in the land market is important. Crop failures and other uncertainties and consequent indebtedness may force cultivators to alienate their land; but on account of high land prices it is difficult for peasants to buy land for cultivation. Therefore, lands alienated by peasants are likely to be bought by those who value the asset function of land than the means of production function. Aggregation of land for farming is next to impossible.

Table : 1

Size Class Distribution of Landholdings

| Land holding size | No. of house holds | No.of households (%) | Total area (in cents) | Area (%) | Average Area per household (cents) |
|-------------------|--------------------|----------------------|-----------------------|----------|------------------------------------|
| Up to 20 cents | 2277 | 59.11 | 21092 | 11.42 | 9.26 |
| 21-50 cents | 685 | 17.78 | 23165 | 12.55 | 33.82 |
| 51-100 cents | 434 | 11.27 | 32430 | 17.57 | 74.72 |
| 101-200 cents | 280 | 7.27 | 39194 | 21.23 | 139.98 |
| Above 200 cents | 176 | 4.57 | 68743 | 37.23 | 390.59 |
| All | 3852 | 100.00 | 184624 | 100.00 | 47.93 |

Source: RULSG Survey of Villages 2012-13.

Another aspect of production relations that show up in the costs and returns of farming is the predominance of wage labour relations. The dominance of hired labour and wage labour relations deserves special mention in the context preponderance of small holdings in the state. As we shall see in some detail later even the smallest size class of landholdings use more hired labour (65 percent) than family labour (See Appendix Table A.8). Yet another characteristic feature of agriculture in Kerala is near complete orientation of production for the market. In paddy production retention for consumption is negligible. Even the small holders sell their produce in the market and meet their consumption requirements by buying from the market or the public distribution system. Local producers do not

¹⁶ We defined farming households on the basis of the main occupation of the head of the household. The broad picture does not change even if we relax the condition and include households with any member reporting agriculture as the main occupation.

have any control over the product markets in the neighbourhood, which are deeply integrated with national or even global markets¹⁷. It need not surprise us that atomisation of farming and globalisation of markets occur simultaneously. Neoliberal policy favours national, regional and global integration of markets but resists efforts to aggregate farm power. One more important aspect of land relations we wish to underline is the return of leasing. Our data includes some respondents who have leased out and some others who have leased in land for cultivation.

Table: 2

Distribution of Land: Farming and Non-farming Households 2012

| Panchayat | Non-farming Households | | | Farming Households | | | Total | |
|--------------|------------------------|------------|----------------|--------------------|------------|----------------|-----------|------------|
| | No of HHs | Owned area | Owned area (%) | No of HHs | Owned area | Owned area (%) | No of HHs | Owned area |
| Anthicaud | 323 | 8065 | 41.42 | 103 | 11407 | 58.58 | 426 | 19472 |
| Bharanikavu | 608 | 26285 | 86.01 | 51 | 4277 | 13.99 | 659 | 30562 |
| Erimayur | 255 | 7728 | 43.06 | 42 | 10221 | 56.94 | 297 | 17949 |
| Ezhome | 347 | 14322 | 72.06 | 49 | 5553 | 27.94 | 396 | 19875 |
| Muttill | 318 | 18351 | 53.16 | 86 | 16167 | 46.84 | 404 | 34518 |
| Nedumudi | 344 | 9414 | 57.08 | 52 | 7079 | 42.92 | 396 | 16493 |
| Nemmara | 581 | 11914 | 57.65 | 52 | 8753 | 42.35 | 633 | 20667 |
| Pulimath | 431 | 18541 | 90.35 | 31 | 1981 | 9.65 | 462 | 20522 |
| Wadakanchery | 227 | 3698 | 80.99 | 10 | 868 | 19.01 | 237 | 4566 |

Source: RULSG Survey of villages 2012-13.

The problems of calculating cost of cultivation of crops are well known. It is not just the farmers' tendency to exaggerate the costs and understate the returns that comes in the way. The practical problems of collecting accurate data are too many. Huge numbers of farmers with different size holdings, lack of uniformity in the application of various inputs, varying agro-ecological features of land, infrastructural and location factors and a total lack of proper accounting by farmers etc. make the task very difficult. Such problems become more serious in the case of seasonal and short duration crops like paddy. We have taken maximum possible care in recording the costs from farmers. The costs collected here pertain to the major paddy season of 2012-13 (Puncha cultivation of Kuttanadu and Kole lands and Mundakan crop in other areas). The cost and production data were collected from all nine panchayaths covered in the study. A few farmers in four of those panchayaths were found cultivating leased lands. The costs and returns of lease cultivation are separately worked out. In

17 In the case of paddy local rice mills and local network of marketing have almost completely disappeared in the survey villages. The families and petty traders who used to buy paddy from local cultivators, for household processing and retailing are displaced by large millers with highly advertised brand name.

addition to the paid out costs, costs with the imputed value of family labour and imputed value of interest on land price in the context of own cultivation have also been worked out.

The overall average cost of paddy cultivation excluding family labour cost (Cost-A) works out to Rs.14484 per acre and when the family labour cost is imputed (Cost-B) it is Rs.17407 per acre (See Table 3). At cost A (that is, without family labour) the net income works out to Rs.12095 per acre and at Cost B (with imputed value of family labour) the net income works out to Rs.9172 per acre. However, a qualification needs to be added here. The gross income shown here includes the value of straw, which is not an assured income in all the places. The yield rate of straw is very low in places like Kuttanadu, Kole lands, Palakkad where combined harvesters are used for harvests when the straw is shredded into small pieces. In such cases the straw has to be baled into bundles mechanically which is rarely done in these places. But in other places the straw is mostly recovered. In any case, the straw has a good price in all the areas. Without straw value also a reasonable operating profit is realized in the sample crop even when the cost of family labour is imputed. A few factors favoured the paddy cultivators during the year. Firstly, it was a normal year without any crop damages and secondly, the procurement price of paddy offered by the State Government was attractive during the year, which was considerably above the market price. The procurement was fairly effective in major paddy producing areas of Palakkad (Erimayur and Nemmara Panchayaths in our sample), Kole (Anthicaud in the sample) and Kuttanadu (Nedumudi).

Table : 3

Cost and Returns of Paddy Cultivation (Rs. per acre)

| Panchayat | Cost-A | Cost-B | Cost-C | Gross Income | Net Income @ Cost-A | Net Income @cost-B | Net Income @ cost-C |
|-----------------|--------|--------|--------|--------------|---------------------|--------------------|---------------------|
| Anthicaud | 17882 | 20061 | 37640 | 36926 | 19044 | 16865 | -714 |
| Bharanikkavu | 17175 | 24775 | 54775 | 21000 | 3825 | -3775 | -33775 |
| Erimayur | 13430 | 15782 | 47032 | 27108 | 13678 | 11326 | -19924 |
| Ezhome | 9769 | 12840 | 16417 | 16012 | 6243 | 3172 | -405 |
| Muttill | 14398 | 18176 | 44218 | 19948 | 5550 | 1772 | -24270 |
| Nedumudi | 17424 | 19540 | 30108 | 29141 | 11717 | 9601 | -967 |
| Nemmara | 16170 | 18655 | 37822 | 30384 | 14214 | 11729 | -7438 |
| Pulimath | 15354 | 22468 | 50545 | 23799 | 8445 | 1331 | -26746 |
| Wadakanchery | 12267 | 14145 | 53589 | 27942 | 15675 | 13797 | -25647 |
| All Panchayaths | 14484 | 17407 | 38187 | 26579 | 12095 | 9172 | -11608 |

Note : Cost A= All paid out costs; Cost B = Cost A + Family Labour; Cost C = Cost B + Interest on Land value (5%)

Gross Income = Grain value + Value of Straw + Subsidy received

Source: RULSG Survey of villages 2012-13.

However, if we add the interest on land value in the cost of own cultivation, instead of rent in the context of lease cultivation, the net income turns out to be negative, that is a loss of nearly Rs.12, 000 per acre at the overall level and that is substantially higher in a majority of panchayaths where land prices are very high. The rent or interest on the land value being the opportunity cost of land such a calculation is reasonable and it could be a factor that farmers may consider in their calculations on cultivation, especially in taking decisions on buying land for augmenting farm size. Notably, this is a phenomenon observed across almost all crops in Kerala, and in fact, more acutely in the case of crops grown on garden land, where the land price rule relatively high (See Tables 4 and A.10). Even though there exists difference of opinion among scholars on the treatment of land prices in computing costs (George 1988), the data show how rising land prices tend to overwhelm other parameters.

The cost and income data across the panchayaths indicate that in general the incomes are higher in the major paddy producing areas like Kuttanadu, Kole and Palakkad. The variations in incomes are more substantial than the variations in costs. That is, in some of the villages even while incomes and productivity are significantly less the costs remain almost on par with the better endowed villages. The incomes after deducting the paid out costs (Cost A) and imputed value of family labour (Cost B) also are higher in those major paddy areas. Another panchayath, Wadakanchery, also showed a higher income although its costs were significantly lower. This can be mainly attributed to better soil conditions suitable for good paddy productivity in the area. There is one panchayath, Bharanikkavu, which showed a negative income of Rs.3775 when the family labour cost is included in the production cost (Cost B). This perhaps implies that without family labour the paddy cultivation cannot be made profitable here. It is significant that Bharanikkavu, a village in Onattukara region famous for paddy cultivation earlier, is presently an insignificant paddy producer facing the problems of high production cost and a low productivity rate. Agriculture has receded to the background in this village in the context of increasing remittance income and the growth of non-agricultural sectors. As land prices are very high here the Cost C (with interest on land price) is highest in this village making agriculture extremely unattractive. Reclamation and conversion of paddy land for non-agricultural purposes are rampant here.

The variations in the net incomes of different villages are indicative of the substantial differences in productivity, cultivation practices and the level of mechanization. The higher net incomes (net of cost B) are reported from villages (like Anthicaud, Nemmara, Wadakanchery and Nedumudi) where productivity is higher. Those are villages where the level of mechanization is also relatively higher. The low levels of net income per acre in a majority of villages and the fact that seven out of nine villages are single cropped areas make it clear that a large majority of cultivators cannot make a living by depending on agriculture alone as a huge majority of cultivators are small holders. The net incomes of farmers in small size-classes are ridiculously insignificant and even the relatively larger holders cannot make a living by agriculture alone. Incomes from other sources are important for them. If agricultural income alone is taken, many of the households fall below poverty level income. Larger land holdings are required to make a living from paddy cultivation. But acquisition of more land is constrained by various factors, among them the chief remains the high price of land.

Table : 4**Net Returns For Selected Crops In Kerala, 1980-81 To 2009-10**

| Crop | Net Returns (per hectare) Based on | | | | | | | |
|--------------|------------------------------------|---------|---------|---------|---------|---------|---------|---------|
| | Cost A | | | | Cost B | | | |
| | 1980-81 | 1984-85 | 2008-09 | 2009-10 | 1980-81 | 1984-85 | 2008-09 | 2009-10 |
| Autumn Paddy | 427 | 1032 | 13401 | 14515 | -1516 | -4886 | -33136 | -42695 |
| Winter Paddy | 531 | 1499 | 14425 | 11902 | -1451 | -3648 | -35986 | -42788 |
| Summer Paddy | 1339 | 913 | 11106 | 5754 | -1335 | -3721 | -33948 | -39319 |
| Coconut | 5246 | 6254 | 19764 | 22174 | -6460 | -27512 | -412940 | -440650 |
| Pepper | 1326 | 2514 | 32490 | 39850 | -5812 | -28755 | -344107 | -325534 |
| Tapioca | 4517 | 5333 | 41558 | 57198 | -4510 | -18234 | -252659 | -369023 |
| Arecanut | 5634 | 16939 | 23250 | 37039 | -4948 | -8872 | -302575 | -363079 |
| Ginger | 6886 | 43975 | 100564 | 132392 | -1220 | -20707 | -111943 | -164484 |

Note: Here cost B includes all paid out costs, interest on fixed assets (excluding land) and interest on land value.

Source: Department of Economics and Statistics, Cost of Cultivation of Principal Crops in India, different Years, Government of Kerala.

It is interesting to note that the returns are found much more attractive in the case of lease cultivation (See Table 5). The survey data on the costs and returns in lease cultivation in four panchayaths (of course with small numbers of samples) show that costs are significantly less and incomes are more than that in own cultivation discussed above. The cost A and Cost B (i.e., without and with family labour) at Rs. 12456 and Rs.14704 per acre respectively are less by Rs.2000 and Rs.2700 respectively than the cost A and cost B in own cultivation. The cost C (Rs.19127 per acre) which includes the rent paid to the land owner is substantially lower than the cost C (Rs.38187) in own cultivation which included interest on land price. This is because the rent is considerably less than the interest on land price which is very large in the context of high land prices in the State. The average rent was found in the region of Rs.4500 while the interest on land price was in the region of Rs.20000 per acre. The Gross Income of Rs.30482 per acre in lease cultivation is nearly Rs.4000 higher than that of own cultivation. This is the result of a higher productivity (20 quintals per acre) in lease cultivation compared to the productivity (of 18 quintals per acre) in own cultivation (See Table A.4). The increased productivity and the cost advantages resulted in a better net income situation in lease cultivation compared to the own cultivation. The net income at cost A (when the family labour is not considered) works out to a little above Rs.18000. The net income after paying rent (that is after deducting Cost C) is also positive in all the villages, although it is not very attractive in two villages (Ezhome and Nedumudi).

Table : 5**Cost And Returns of Paddy (Lease-cultivation)****(Rs. per acre)**

| Panchayat | Cost-A | Cost-B | Cost-C | Gross Income | Net Income @ Cost-A | Net Income @ Cost-B | Net Income @ Cost-C |
|-----------------|--------|--------|--------|--------------|---------------------|---------------------|---------------------|
| Anthikad | 13301 | 14857 | 20611 | 37961 | 24660 | 23104 | 17350 |
| Ezhome | 7279 | 9898 | 10600 | 13355 | 6076 | 3457 | 2755 |
| Nedumudi | 14746 | 17924 | 24122 | 31470 | 16724 | 13546 | 7348 |
| Wadakanchery | 11519 | 13313 | 16102 | 29519 | 18000 | 16206 | 13417 |
| All Panchayaths | 12456 | 14704 | 19127 | 30482 | 18026 | 15778 | 11355 |

Note: Cost A- All costs except family labour and rent; Cost B – Cost A+ Family Labour; Cost C- Cost B + Rent on leased land.

Source: RULSG Survey of villages 2012-13.

The variations in gross incomes realized by farmers across the villages are the result of differences both in the productivity of paddy and in the farm gate prices received by farmers on their product sales. The variation in productivity is always expected as it is influenced mainly by natural factors but the price variation is a more serious issue. The productivity is relatively higher in major paddy producing areas like Kole, Kuttanadu and Palakkad. The highest productivity of 22 quintals per acre is reported from Anthicaud panchayath in Kole area. The lowest productivity is found in Ezhome (10.6 quintals in per acre) in Kaippad land and Bharanikkavu (10.8 quintals) in Onattukara region. Both these places fall in the region where paddy cultivation is fast declining. The farm gate prices received by the farmers vary significantly. In areas where Government procured paddy the procurement price was uniform and most of the farmers in those areas benefitted from procurement price. But the Government procurement scheme was not applicable in all the places; it was restricted to major paddy producing areas. In our sample, the Government procured paddy from five panchayaths, Anthicaud, Erimayur, Nemmara, Wadakanchery and Nedumudi. In all these places, a majority of farmers got the procurement price of Rs.1500 per quintal, which was substantially higher than the market prices. A few farmers in these villages and all the farmers in the rest four villages where there was no procurement programme had to depend on market prices offered by the private traders. The market price varied from Rs.800 a quintal in Muttil to Rs.1500 a quintal in Bharanikavu. A majority of farmers who sold to private traders got a price in between Rs.900 to Rs.1200 per quintal. Nearly 30 percent of the farmers had to depend on market prices offered by the private traders. The panchayaths where there was no procurement are not major paddy producing areas and have relatively lower productivity. Hence the farmers in those areas are disadvantaged due to the double burden of lower productivity and less price.

Although a reasonably attractive procurement price was offered by the Government, the problems often faced by the farmers in the full realization of the procurement price need a mention here. The Government's procurement operations are carried out by private agencies which on various pretexts make deductions from the actual price due to the farmers. They often make deductions on the charge that the paddy is not sufficiently dry (in Nedumudi 5 percent weight is deducted, no strict standards are followed in this case by the agencies). Again, the agencies illegally take a transportation charge, an average of Rs.75 per quintal, from the farmers. Thus on these two accounts the farmers lose about Rs.150 per quintal. It means the effective procurement price is less than the declared rate of Rs.1500. In places where farmers are less organized, the agencies are more aggressive. Another major problem is the delay in the payment for the procured paddy; the Government takes several months to release the money to the farmers' accounts. In the case of crop losses the farmers never get in full whatever support officially sanctioned. All these amount to disincentives to farmers.

Although the cost of production per unit of land is found higher in major paddy producing regions the unit cost of produce is in general lower in such areas whether with or without adding family labour cost. The panchayaths Wadakanchery, Anthicaud and Nemmara with relatively lower costs per unit of produce (Rs.731, Rs.817 and Rs.825 per quintal of paddy respectively) reported better productivity (See Tables A. 4 and A. 5). Nedumudi, a major paddy area is an exception in this where a higher unit cost is reported (Rs.1066 per quintal). This is due to the lower productivity reported there. The panchayaths of Bharanikkavu and Pulimath which reported higher unit costs (Rs.1430 and Rs.1129 per quintal respectively) are areas where paddy cultivation is declining due to higher costs and relatively lower productivity. The two other panchayaths Muttill and Ezhome, which showed reasonable unit cost (that is less than the overall average unit cost), have lower costs and lower productivity and significantly less net income also. The averages of nine villages show that the cost per quintal of paddy is Rs.888 without considering family labour and Rs.1093 with family labour cost, both significantly lower than the procurement price of Rs.1500 per quintal. However, with the reported market price in the range of Rs.900-Rs.1200 per quintal the cultivation may not be attractive. Moreover, in case there is no procurement, the chances are that the market price could be kept still lower by the trading lobby, which would make paddy cultivation a loss. Hence the case for public procurement is strong, and its wider coverage is also important.

When the costs are computed separately for various size classes it is found that the smaller holdings in general incur a higher cost per unit of land and per unit of produce. The pattern is found invariably the same in all the Panchayaths except Ezhome (See Tables A. 5 and A. 6). The two lowest size-classes, that is up to 50 cents(half an acre) and up to hundred cents(one acre), in general have a higher cost of production when cost A and cost B are considered. In Anthicaud, for example, the highest cost A (Rs.20523) and the highest cost B (Rs.23177) are incurred by the lowest size class of below 50 cents. The cost incurred by the top size-class, that is, the farmers holding above 2.5 acres, is significantly less in Anthicaud. Almost similar is the pattern in all other panchayaths except Ezhome.

The unit cost of produce also is higher for the small size-classes below one acre compared to the larger size-classes in most of the panchayaths. In Anthicaud, for example, the bottom two size-classes below one acre land incurred significantly higher costs, Rs.831 and Rs.841 per quintal without considering family labour while the costs of top two classes are Rs.776 and Rs.749 only. When family labour cost is considered the bottom two classes incurred a cost of Rs.927 and Rs.1104 per quintal where as the cost of top two classes remained at Rs.809 and Rs.756 per quintal. A similar pattern is seen in other five Panchayaths also. The higher cost per unit of land and the higher cost per unit of produce in the smaller sized farms perhaps indicate the lower scale advantage and lower efficiency of small farms.

A look at the net incomes received by various size-classes shows that in general the smaller size-classes realize a lower net income per unit of land compared to the larger size-classes. This is natural as the cultivation costs per unit of land of smaller size classes are higher than that in the larger sized farms, as was seen above. Even while a higher productivity was observed in small farms, the unit cost of produce was found higher in those farms. As can be seen (See Table A.5), the net incomes of the two lower size-classes (Rs.10681 and Rs.12069) after deducting cost A are lower than that received by the two higher classes (Rs.12720 and Rs.14107). When the cost of family labour (cost B) also is deducted the net incomes of two lower size-classes are considerably reduced (Rs.5525 and Rs.9013) compared to two top classes (Rs. 11533 and Rs.13217 respectively). The differences in net incomes between the lower classes and higher classes have widened when the family labour cost is accounted as the smaller farms employ more family labour than the larger farms. As is expected, the net incomes after deducting the cost C (that is, cost including the interest on land value) are negative in all the classes. The differences in losses across the classes are related to the differences in net incomes and the varying land prices in different locations and villages.

Table: 6

Cost of Cultivation and Income (Rs./Acre)

| Cost Category | Size - Class | | | | |
|---------------------------|----------------|----------------|-----------------|---------------|-------|
| | Below 51 Cents | 51 - 100 Cents | 101 - 250 Cents | 251 and Above | All |
| Per Acre (Rupees) | | | | | |
| Cost-A | 14944 | 14962 | 13809 | 13154 | 14484 |
| Cost-B | 20100 | 18018 | 14996 | 14044 | 17407 |
| Cost-C | 39891 | 39003 | 35870 | 36137 | 38187 |
| Gross income | 25625 | 27031 | 26529 | 27261 | 26579 |
| Cost per Quintal (Rupees) | | | | | |
| Cost -C | 2586 | 2367 | 2288 | 2204 | 2387 |

Note: Gross income includes income from straw value and subsidy received

Source: RULSG Survey of villages 2012-13.

Input Component-wise Costs

A break-up of the costs according to various input components show that the manual labour is the single largest component among the inputs. The overall average shows that 45 percent of the total cost is incurred on hiring labour for farm work (See Table A.7). The imputed value of family labour is 17 percent and with it the total manual labour cost works out to 62 per cent of the total cost. Along with this if we add the cost of machine labour, which is 15 percent; the total labour cost comes to 77 percent. Although there are differences in this composition across the villages, the manual labour remains the largest component everywhere. Even Anthicaud, the panchayath reported the lowest manual labour cost has 41 percent share (30% hired labour and 11% own labour). The highest is reported in Ezhome where the cost of hiring labour is 64 percent and the imputed value of own labour is 24 percent. In areas such as Bharanikkavu, Ezhome and Pulimath, where machine labour is not significantly used, the manual labour cost is more than 70 percent of the total cost. As we will see, the physical quantity of manual labour in agriculture is on the decline. But cost wise its share is the highest still. It has several implications. The growth of mechanization in farming is tardy in spite of a widely felt shortage of agricultural labour in the State. The cost of machine labour is only 15 percent of the total cost presently. This is certainly a higher ratio when compared to the situation prevailing a decade ago (the machine labour cost was 5 percent of the total cost in 1999 according to the Expert Committee on Paddy Cultivation of the Government of Kerala). However, the progress in mechanization is very slow although its need is felt more acutely now in the context of labour shortage and high cost of labour. In most of the paddy areas tillage is the only mechanized activity. The use of combine harvester is found only in major paddy producing areas like Kol, Palakkad and Kuttanadu. But in these areas also the combine harvesters are not uniformly used in all the fields due to infrastructural problems. The transplanters are used only in a very few places. In garden lands mechanization is almost absent in the State.

A look at the details of manual labour employment in paddy cultivation reveals certain important features. As is known in the context of Kerala, the share of hired labour in total manual labour is generally very high. At the overall level 83 percent of the labour is contributed by hired workers and the rest 17 percent is the contribution of family labour (See Table A. 8). A similar pattern holds true in all the panchayaths also with some panchayaths recording still higher share of hired labour as in Nemmara (93 percent), Nedumudi (85 percent) and Erimayur (84 percent). A size-class wise disaggregation of the composition shows that in general the share of family labour is higher in smaller holdings than that in larger holdings. As can be seen, in the smallest size-class (below 51cents) the family labour was 35 percent of the total labour input, in the next higher class 24 percent, then 16 percent and in the largest size-class (above 2.5 acres) it was 9 percent. This shows that as the size of farm goes up the share of family labour comes down. This of course is an expected behaviour and widely seen elsewhere also, but what is more striking is the substantial share of hired labour in farming even in small holdings including the tiny ones below half an acre in size. However, it should be mentioned here that the predominance of and preference for non-agricultural activities and shortage of family labour to undertake farm work are the major reasons for this behaviour.

It is also important to note that there are considerable variations in manual labour use across the classes with the lower size-classes in general have higher manual labour input per unit of land. The combined data of the villages show that the smallest farm uses 61 person days of labour per acre of paddy land, and it steadily decreases as the size goes up. The largest size-class is using only 28 person days per acre (Table A.8). The same pattern is visible when panchayath level data are separately seen. The difficulty in using machines in small, isolated and remote farms is a reason for this. Lack of scale advantage for small farms is certainly another major reason. If a small farm needs say half day or a few hours of service for an operation, quite often the farmer has to engage a worker for the whole day as he may not get service by hours. Hence the farmer will have to pay for the full working day and normally it is accounted as one day's work. It is also likely that as much family labour as possible is employed by small farmers in their attempts to maximize production. These could be the reasons for higher costs in small farms.

The variations in manual labour use across panchayaths deserve attention as an analysis of the reasons for it may throw light on factors such as the status of mechanization. The differences in manual labour use across villages are so considerable that while in one village, Anthicaud, 16 person days' work is involved in one acre of land; it is 62 days' work in another village, Ezhome (Table A.8). The level of mechanization is the highest in the former village (26 percent of the total cost is incurred on machine labour there) and it is least in the latter with only 2 percent of the total cost on machine labour (See Table A.7). Similarly, in another significantly mechanized village, Wadakanchery, the manual labour use is 19 person days per acre (where the cost on machine labour is 27 per cent of the total). It appears that mechanization is not the only labour reducing technique. The use of chemical weedicides helps significantly in reducing the labour requirement for manual weeding. As is seen (See Tables A.7 and A.8), wherever the weedicides are used the manual labour is relatively less (example, villages such as Anthicaud, Nedumudi and Erimayur) compared to the areas where weedicides are not used. It appears that the tendency to use weedicides to reduce the labour requirement is stronger in areas where wage rates are higher (like Anthicaud and Nedumudi).

There is evidence to suggest that the manual labour use is declining over time in Kerala. A comparison of our survey data of Nedumudi panchayath (which falls in Kuttanadu region) with the cost of production data collected for the Farm Management Studies (conducted in Kuttanadu in Alleppey district) shows that there is significant decline in the use of manual labour in paddy farming. The FMS showed that a total of 56 person days (average of three years from 1962-63 to 1964-65) work was required for an acre of paddy cultivation in Kuttanadu then, whereas presently it is 28 person days according to our data. This is mainly the effect of mechanization. The mechanized tillage started in Kuttanadu in the 1970s and the use of combine harvesters started only recently. The estimates provided by a farmers' association in Anthicaud suggest that with the introduction of combine harvesters the manual labour requirement for harvesting is reduced by 15 to 20 person days. Another estimate provided by the farmers in Muttill Panchayat (Wayanad district) shows that due to mechanization in

tillage and land preparation (harvesters are not used there) something like 20 to 25 days of labour per acre is saved there. Earlier, roughly 80 to 85 days of work was involved in an acre which has come down to 48 presently. A quick look at the gender division of farm work reveals some interesting patterns that call for more detailed enquiry. Female participation compared to male in family labour is relatively less than hired labour; hired labour is dominated by the female workers. It is a pattern seen almost uniformly across panchayaths. How this pattern varies across activities, especially with varying degree of mechanisation is an interesting question to be pursued.

The farmers who solely depend on agriculture for their livelihood often face the problems of instability of incomes and debt crisis and their consequences. The survey period being a normal year we did not come across many cases of crop failures on account of climate change, widespread pest attack, etc. But, farmers in the survey villages, as they recounted their experience in the immediate past, are prone to such risks. Notably, the more entrepreneurial farmers who venture into large scale cultivation of commercial crops like ginger by leasing in land are also susceptible to such production failures or market failures leading to unbearable levels of indebtedness.

Our evidence shows how atomisation of farming is making agriculture unviable in the state. Smaller farms have a clear disadvantage over the larger ones in cost of production per unit of output as well as area, productivity, and net income. They are also less amenable for mechanisation. The average size of holdings is grossly inadequate to earn a livelihood from agriculture. Further those who earn their livelihood from farming, or for that matter anybody interested in it, find it difficult to enhance the farm size because of high and rising land prices. High and rising land prices attract people who are not specialised or interested in farming into the land market displacing genuine farming interests from land. Government procurement plays a critical role in ensuring fair prices to the farmers. Conversion of agricultural land for non-agricultural purposes or even fallowing makes neighbouring areas less suitable for agriculture, a problem which is acute in paddy areas. Land use conversion is contagious. The lease land farming is found to be more efficient compared to direct cultivation by the owners measured in terms of costs, productivity and net income. That collective action, an antidote to atomisation, is a source of strength for farming is clear from the experience of farmers associations, involvement of organisations such as Vegetable and Fruit Promotion Council of Kerala (VFPCCK), *Kudumbashree*, collective efforts at mechanisation, public procurement of paddy, etc.

Section V

A Critique of LG Plans in Agriculture

The picture emerging from the analysis of land relations, costs and returns is quite sharp and unmistakable. It clearly delineates factors responsible for stunting of capitalist development of agriculture in the state. The main question that needs to be addressed now is the ability of LGs in addressing the identified factors that constrain development of agriculture. The LGs have a major role in facilitating development of agriculture, but, as a perusal of their planned efforts amply proves the LGs left to

themselves are ill-equipped in addressing and overcoming the factors responsible for the observed stunting of capitalist development. Many of the barriers to development are beyond the reach and powers of the local people and the LGs. The resolution of the agrarian question will require greater cooperation among different tiers of government. Let us take some of the important factors that make agriculture virtually impossible in the state to illustrate our argument. But before that we need to have a general idea on the programmes initiated by the LGs in the selected villages.

As we have already noted the design of decentralisation in the state attaches pride of place to agriculture and allied sectors. The primary sector activities lead the list of subjects and institutions devolved to the LGs in the state. Moreover, even though the plan grant-in-aid devolved to the LGs was generally free of conditions, the state government has insisted on a minimum percentage of the grant to be used in the goods producing sectors, which comprises mainly of agriculture and allied sectors¹⁸. In contrast there are upper limits proposed for allocation of plan grant-in-aid to infrastructure and service activities. As the guidelines from above suggests the LGs in general show a preference to go for infrastructure and services related projects. As our focus group discussions in the villages and perusal of *gramasabha* records suggest this revealed preference in allocation is a reflection of popular demand. For instance, the introduction of democratic decentralisation has resulted in an unprecedented expansion of rural/ local roads networks in the state. The demand from below is also reflected in the remarkable improvement in the quality of village roads; *kacha* roads are rarely seen now; whereas rural roads with cement concrete top are not rare to see! In our opinion this is a reflection of the growing importance of the asset function of land. People want every piece of land to be connected by road and power lines to enhance the real estate value. It is also obvious that the virtual 'violence' of roads we see in rural Kerala does not augur well for agriculture because roads very often cut irrigation/ drainage channels, convert agricultural land for the formation of roads, and facilitate conversion of land for non-agricultural purposes. In spite of the guidelines from above the LGs tend to fall short of fulfilling the minimums prescribed for the goods producing sectors, especially when we consider the difference between allocation across sectors and the actual expenditure. The data presented in Table 7 are self explanatory and support our hypothesis regarding the bias against the goods producing sectors. Interestingly, the liberalisation of guidelines from above at the beginning of the Twelfth plan appears to have worsened the problem; there has been a marked fall in plan allocation as well as expenditure in the goods producing sectors, especially agriculture. Our micro level enquiry reveals some more disturbing pieces of evidence. This calls for a revival of the broad guidelines from above. Even the fund allocated to the agricultural sector is diverted to construction of roads and other construction works in the pretext of farm road, building of bunds, watershed development, etc.

18 This was so till the end of the eleventh five year plan. But, in the twelfth plan the approach changed with a more liberal attitude regarding minimum and maximum prescribed for sectors. This has given rise to the concern widely expressed in the state that investment in agriculture would tend to decline in LG plans.

Admittedly, the allocation and expenditure of funds is a broad reflection of popular preferences. Nonetheless, the collective will and the process of making it at the level of LGs appears to reflect private costs and benefits than social costs and benefits. It is widely acknowledged that the markets fail on account of the inability of private actors to take externalities into account. The making of collective will at the level of LGs leave considerable scope for factoring in social costs and benefits, which tend to escape private calculations. But, there is no guarantee that the political process at the local level would live up to its scope and potential. It takes time for the collective costs and benefits to surface and ultimately influence public opinion. Interestingly, accentuation of environmental problems, such as acute shortage of drinking water and pollution, and scarcity of pesticide free vegetables and safe food in general, etc, are prompting many LGs to place renewed emphasis on agriculture, by increasing allocation of resources and innovating comprehensive development programmes. The ability to factor in social dimensions of costs and benefits in the formation of public opinion, and persuade citizens to value collective good, is a major challenge confronting local democracy. There is evidence, as our analysis of the local development plans in the selected villages, especially the innovative and successful projects suggests, for some definite signs of maturing, *albeit* slow, of the local political processes. But, the overall picture is far from satisfactory; it underlines the need for long drawn out struggles for mainstreaming the politics of common good.

Table : 7
Plan Allocation and Expenditure Across Development
Sectors of Grama (Village) Panchayaths

| Year | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Productive sec.allocation/ total allocation | 0.24 | 0.29 | 0.33 | 0.32 | 0.26 | 0.21 | 0.10 | 0.09 |
| service sec. allocation/ total allocation | 0.58 | 0.59 | 0.56 | 0.54 | 0.53 | 0.50 | 0.59 | 0.55 |
| infrastructure sec. allocation/total allocation | 0.18 | 0.13 | 0.11 | 0.14 | 0.21 | 0.29 | 0.31 | 0.36 |
| productive exp/total exp | 0.23 | 0.28 | 0.33 | 0.33 | 0.26 | 0.21 | 0.10 | 0.09 |
| service sec. exp/total exp | 0.59 | 0.60 | 0.54 | 0.52 | 0.49 | 0.49 | 0.62 | 0.56 |
| infrastructure exp/total exp | 0.19 | 0.13 | 0.12 | 0.15 | 0.25 | 0.30 | 0.28 | 0.34 |
| agriculture allocation/ total allocation | 0.15 | 0.18 | 0.24 | 0.24 | 0.19 | 0.16 | 0.07 | 0.07 |
| agriculture exp/total exp | 0.15 | 0.18 | 0.25 | 0.27 | 0.21 | 0.18 | 0.08 | 0.08 |

Source: Planning Board: Economic Review, Government of Kerala, Various Years.

Coming to the content of the agricultural development programmes in the LG plans, in general, the surveyed panchayaths have the following typology of schemes.

- 1) Subsidized fertilizer distribution for paddy (and occasionally for vegetable cultivation in garden lands).
- 2) Subsidized seed distribution for paddy (occasionally for vegetables and plantains).
- 3) Subsidized tractor tillage.
- 4) Financial support to *padasekhara samitis* (farmers' associations) to buy agricultural machineries like threshing machine, tractor etc. This is quite often limited to some panchayaths and not budgeted every year.
- 5) Financial support for Kudumbashree units for lease land cultivation of paddy and vegetables.
- 6) Financial support to farmers for buying sprayers –this is occasional.
- 7) Support for making bunds and dewatering (pumping) in places like Kuttanad and Kol areas.
- 8) Infrastructural support like making of farm roads, culverts, small bridges etc.
- 9) Watershed schemes –very limited in extend.
- 10) Financial support to bring fallow land under paddy cultivation- occasional and limited to some panchayaths.
- 11) Provision of production bonus for paddy cultivators.

In the above programmes, the schemes like subsidized fertilizer distribution for paddy, pumping and dewatering support, subsidized seed distribution etc. are prominent and implemented regularly every year. The programmes that need huge investments like purchase of machineries like combine harvesters or tractors find no place in the Panchayat budgets. Such investments occasionally come from the higher tiers of government or as collaborative efforts. The infrastructural development like farm roads, culverts, strengthening of outer bunds etc. are always taken up, but such schemes never match with the requirement. The budgetary constraints are always a problem in panchayath level schemes for land and water management. But, the resources constraint cannot be explained independently of the growing asset function of land and the pressure of real estate interests. In many cases farm roads, canal roads, etc., are used as an excuse for diverting funds for non-agricultural purposes. In Bharanikkavu, for instance, canals do not bring water to the farms, but provide road connectivity, and facilitate conversion of paddy land for other purposes.

It is important to note that most of the schemes presently handled by the panchayaths were there earlier too, implemented through various government departments. There is conspicuous rarity of new and innovative ideas; instead stereotype schemes dominate. But, what is encouraging is the presence, although not widespread, of highly promising programmes of local origin with potential for emulation. The mechanisation cum labour programme of Vadakanachery Bloc Panchayat which is slowly spreading

into other areas is a good example. Even in the case of stereotypical projects decentralisation has some advantages. Once they are brought under panchayaths in the decentralization programme, there seems to be two major advantages. Firstly, the local level specificities are addressed to a large extent in the local level planning process. Secondly, the role of panchayaths in implementation of programmes has enhanced the efficiency and accountability of implementation considerably. But the resource constraints remain.

There have been some experiments initiated by the panchayaths in the field of agricultural production. The programme to expand a second paddy crop in Nedumudi panchayath, promotion of vegetable cultivation in Anthicaud panchayath and attempts to bring fallow paddy lands under cultivation in Anthicaud are some such experiments. In all these cases the panchayaths took initiatives to encourage *padasekhara samitis* (farmers' associations), and *Kudumbasree* units (women self help groups) to take up the production programmes. The landless *Kudumbasree* members were helped in getting lands on lease, provided small supports in cash and kind (like free seeds and fertilizers for vegetable cultivation)etc. In Nedumudi even a substantial support of Rs. 5000 per acre was provided in one year to paddy cultivators for undertaking a second crop of paddy. However, such attempts have been occasional successes depending on the quality of leadership in the local areas. They are not growing into sustainable models of income generating activities of the participants. They find it difficult to transcend the amateur/ demonstration stage for want of sustained institutionalisation. The fate of *Kudumbashree* farming is a case worth mentioning here. They invariably face the problem of rising rent demand from the landowners or denial of land for cultivation for the fear of losing the land on the part of owners. The producers also run the risk of discontinuities in the LG programmes.

It is possible now to return to the question set in the beginning regarding the LG capabilities to address the main constraints encountering agriculture. The growing contradiction between means of production and asset functions of land perhaps is the main stumbling block facing agriculture in the state. The continuous rise in land prices, and its impact on returns net of 'Cost C' and the transfer of land from farming to non-farming households/ non-farming purposes discussed in the previous Section are the signs of the worsening contradiction. A possible way out of the crisis is the separation of the two functions because it is not easy to do away with the asset function of land. Those who hold on to land as an asset in Kerala need not be the rich alone. But, it is important to ensure by way of regulation and even legislation that land is put to use in agricultural production. Those who own land for its asset function, and do not want to use it as a means of production will have to be encouraged or mandated to allow its use in production by others. Making leasing legal is one way of handling the problem. A detailed discussion of the suitability of alternative leasing arrangements although important is beyond the scope of this paper. But, leasing can lead to familiar problems attached to it such as unfair rent or unsustainable use of land necessitating collective action and regulation. It calls for an overhauling of land use and land relations and land governance in the state. Obviously LGs will have an important role in implementing and governing such a land regime. But, it is clear that legislative as well as

administrative initiatives will have to flow from the higher tiers of government. Yet another means of separating the two functions of land is prohibiting conversion of agricultural land especially paddy land for non-agricultural purposes. Since speculation depends a lot on the possibility of conversion prohibiting it if successful would save agricultural land and hence production from speculation.

Another important factor identified as constraining agriculture in the state is the growing contradiction between atomisation of farming and globalisation of agriculture. We have already seen the limits to agriculture set by preponderance of small holdings and parcelisation of land. It is causing clear disadvantages to small holders in costs, mechanisation, productivity, and net returns. The issue here is not just possible presence of scale advantages in farming. A more important problem is the disadvantage that the atomised farming units, who enjoy hardly any strength of collective action, face in their dealings with more organised players in the input, output and credit markets. Atomised farming units run into the might of monopolies and monopsonistic players in most markets they enter into. More than the preponderance of small holdings it is their inability to aggregate their strength through collective action that ails agriculture in most countries. Agarwal (2010), suggest promoting collectivities as solution to the problem¹⁹. Aggregation of farmers' power and their collective action can start at the local level mediated by LGs and a host of other local level institutions such as farmers cooperatives, self help groups (SHGs), peasant and workers unions, etc. But, such collective action at the local level cannot be led to their logical conclusion without the help of higher tiers of government. But, notably the neo-liberal policy environment tends to operate in the opposite direction wherein all such collective action of the people is discouraged to ensure free markets. The state policy more often than not support monopolies and monopsonic players and not farmers cooperatives or similar such institutions of the people. The state support for contract farming and the marketing chains may be mentioned here. In our opinion neo-liberal State does not resolve but add to the contradiction between atomisation of farming and globalisation of agriculture.

A programme worth citing here to drive the argument home is that of the newly introduced state level paddy procurement programme in the state. Our study on costs and returns shows how farm viability is critically dependent on such collective action in the area of marketing. As many years of experience of prior to procurement makes it clear. in the absence of State intervention traders would try to drive down the prices sometimes even below the cost of production. It is the same lesson that we draw from vegetable cultivation programmes of the LGs. Wherever the programme is supported by organised marketing, such as the intervention by the Vegetable and Fruits Promotion Council of Kerala (VFPCCK) the farmers get better prices and the projects produce commendable results. We have also come across instances of farmers suffering heavy losses because they produced much in excess of their marketing skills and resources. As a remedy large post harvesting and marketing initiatives will

19 In our approach farmers' collectivities by itself cannot resolve the issue. Governments at various levels will have to play a proactive role in facilitating agriculture. Our argument is in favour of active and strong State intervention. It may be required in marketing, infrastructure development, research and development, socialization of risk, etc.

have to be organised; but, it would not be feasible without the active involvement of higher tiers of government. Needless to say such programmes are best designed, coordinated, and implemented with the help of lower tiers of government, and most importantly participation of the people.

Can the responsibility of agricultural research and extension be left to the small and micro farms? They are activities with well known scale advantages. The farm size in India, not to speak about the state, is too small to expect them to take up such big responsibilities. All the same, as we have found out from our field, farming requires continuous knowledge services and support. For instance, farm machinery found most suitable in one agro-climatic zone may turn out to be the most unviable in another. This is one of the main reasons for surprising variability we saw in the use of machines in the surveyed villages. Incidentally, in spite of high wages and labour shortage, machines are yet to make a presence in the garden land agriculture of the state. The LGs will be a useful partner in the saga of research and extension, provided that higher tiers take functions that cannot be done efficiently at the local level.

Agriculture cannot be successful if organised as a highly individualised and atomistic activity because of the presence of externalities and the need for cooperative labour and collective regulation of individual farmers and farms. This is obvious from our study of the villages such as Anthicaud and Kole land in general. Kole land cannot be cultivated without minimum cooperation among cultivators ensured for long by the *padavusanghams*. In fact such collective and customary coordination/ regulation were in operation in most villages in Kerala. With the ending of the pre-capitalist system many such local practices and conventions have disappeared. The democratic alternatives visualised during the struggle against the old system never came into existence. Any new system of collective management or cooperation would mean limits to freedom of individuals and private property. Introduction of such limits for common good even though welcome can be done only by ensuring participation of the people on the one hand and cooperation of different tiers of governments on the other. A good example to be cited here is the experience of statutory restrictions on conversion of paddy/ wet land. Agriculture in the state, especially wet land agriculture and its attendant positive externalities cannot be protected without stopping conversion. A policy mix incentivising cultivation, disincentivising fallowing and prohibiting conversion; which is implemented with the help of a strong regulatory arrangement, ensuring active involvement and participation of the people, will be required to address the issues at hand.

An important reason for the sudden failure of agriculture in Kerala in the aftermath of land reforms as argued out in Section III has been the removal of the pre-capitalist conditions of exploitation of labour and accumulation. There is no option for Kerala agriculture other than working with free labour, which obviously cannot be available under conditions of low wages and submissiveness of the old world. Kerala agriculture therefore cannot perhaps compete with other states or other sources of cheap supply of products produced by unfree labour. Further, as our costs and returns analysis suggest, atomisation of farming is not particularly suitable for mechanisation. Kerala can have only a high

wage and highly mechanised agriculture. It requires viable models of mechanisation of farm work on the one hand and proper rewarding and protection of the rights and dignity of farm labour on the other. Models such as the *Harithasena* of Wadakanchery are promising. But, here again inter-tier cooperation of governments is critical in deciding the viability of such programmes. *Harithasena* now owns large number of tractors, planting machines, harvesters, and other farm machinery the investment required for which would not come from a village panchayath or even a Bloc panchayath. Moreover, considering the capacity accumulated in machinery and trained workers its service area cannot be limited to a village or two. Therefore, the project requires horizontal and vertical cooperation among governments as well as institutional innovation, most of which are beyond the reach of any LG taken in isolation²⁰.

Although our focus is on production, an aspect of redistribution which has an indirect bearing on production deserves to be mentioned here. Agricultural labourers, because of limited number of days of employment, and marginal farmers, on account of small farm size, cannot depend exclusively on agriculture for their livelihood. They are under pressure to diversify or leave agriculture. One of the major but unfinished (defeated) agendas of land reforms, viz., redistribution of surplus land, assumes special importance here. The tillers of the soil, which includes agricultural workers with or without own farm land and the marginal farmers, who have genuine interest in farming needs to have more land to earn a livelihood from agriculture. Available surplus land, and public land illegally possessed by the plantations should be redistributed among the tillers of the soil. As a complementary measure paddy land lying fallow may be procured by the State and distributed among the tillers of the soil so that land is brought back to cultivation. Needless to say that it would be difficult for the new land owners to hold on to land and continue cultivation without the concomitant support of collective action we outline in the paper.

Kerala cannot compete- in mass produced agriculture with other poor regions of the world (and of course heavily subsidised agriculture of developed countries in giving subsidies) - in reducing wages and multiplying miseries of those who are caught up in agriculture. The escape route for Kerala agriculture is product differentiation. Agriculture in Kerala may survive if it can make its own niche (specialised) markets. Kerala agriculture is endowed with a tropical variety that cannot be easily matched or duplicated. It also has a committed (loyal) demand base in every locale, which is increasingly becoming sensitive to quality, safety, freshness, fairness, etc. Further, Malayalee Diaspora shows a preference for Kerala varieties such as Palakkadan matta and is ready to offer a premium price. For instance, indigenous rice varieties such as *Njavara* and *Pokkali* have good demand base to be developed. Kerala agriculture can boast of hundreds of such speciality crops and products. Rare varieties of

20 Admittedly the proposed alternative of mechanized agriculture presupposes displacement/mobility of agricultural labourers from the sector. It is consistent with the existing Kerala situation where agricultural labourers tend to move out of agriculture. The situation in Kerala therefore is ideal now for mechanization because it can be done without hurting labour and to the advantage of labour.

Kerala are likely to impress foreigners as well. But, who will take the responsibility of nurturing and developing the nuanced demand pattern, assure that the products are of prescribed origin, quality, safety, etc. Kerala society and the LGs of the land should be able to do it for the sake of protecting its village economies as well as crop/ biodiversity. Each village or region can come with a plan to protect popular local varieties and crop diversity, by intervening in production as well as market development.

Agriculture involves high level of risk owing to its dependence on weather, pest attack etc. This risk has been compounded by uncertainties of trade and prices on the one hand climate change on the other. Such risk cannot be borne by atomistic farmers. Risk should be socialised. Society should organise proper insurance against risk and bear most of its burden too. Insurance programmes in agriculture are in a rudimentary stage of development. Programmes intended for socialisation of risk such as insurance can succeed only if participation of people and cooperation among different tiers of government can be ensured.

To conclude, in this study we outlined the social aspects of production that makes agriculture nearly impossible in Kerala. Agriculture is in deep crisis because the architecture of social relations push capital, land, and labour away from its fold. Winning land, labour, and capital back to agriculture, so that the most pressing aspects of the agrarian question such as the livelihood of the dependent population, deepening environmental crisis, etc., can be addressed, is not an easy task. But, it is not impossible. It requires an overhauling of the agrarian/ land relations in the state. The fate of agriculture cannot be left to the discretion of individual land owners. As the speculative price spiral in the land market and the ascendancy of the asset function of land at the expense of its means of production function shows, what is individually wise need not be collectively so. The challenge is to move from impossibility of agriculture to its immense possibilities by being collectively wise. The private property right over land will have to be limited to ensure the primacy of production and other socially desired goals. Agriculture by its nature requires cooperative labour processes within farms and cooperation across farms. Moreover, there are umpteen reasons why farm power needs to be aggregated to make agriculture viable. This is particularly true in the contemporary age of national and global integration of markets and heightening of scale and market power at post harvesting stages down to retailing. But, aggregation of the power of atomised farms, and successful cooperation among the farmers, will require State support. The local governments are better positioned in enabling cooperation among farms and aggregation of their strength. The LGs, however, cannot do it alone. They will need proactive involvement and cooperation of higher tiers of governments, which quite obviously presupposes a clear movement away from the current neo-liberal regime. Needless to say that the transformation of the social organisation of production we visualise depends on politics, not only local but of higher levels too. Democratic decentralisation is no guarantee for the rise of such politics; but it opens up scenarios and hence opportunities to realise the need for it.

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STATISTICAL APPENDIX

Table: A.1

Area Under Cultivation of Important Crops in Kerala (Area in '000 Hect)

| | Crops | 1961-62 | 1971-72 | 1981-82 | 1991-92 | 2001-02 | 2011-12 |
|-----|---------------------------|---------|-----------------------|---------|---------|--------------|---------|
| 1. | Rice | 752.69 | 875.2 | 806.9 | 541.32 | 322.36 | 208.16 |
| 2. | Jowar | 1.43 | 1.5 | 1.16 | 4.6 | - | 0.28 |
| 3. | Ragi | 5.2 | 5.0 | 1.4 | 1.9 | - | 0.24 |
| 4. | Other cereals and millets | 6.74 | 5.1 | 2.80 | - | - | - |
| 5. | Pulses | 43.52 | 37.8 | 32.4 | 24.7 | 2.9 | 3.66 |
| 6. | Sugarcane | 14.43 | 7.6 | 8.01 | 8.08 | - | 2.6 |
| 7. | Pepper | 99.85 | 116.4 | 108.07 | 169.7 | 203.95 | 85.33 |
| 8. | Chilies | 3.32 | 3.2 | 1.26 | 0.59 | - | 1.32 |
| 9. | Ginger | 12.04 | 11.9 | 12.38 | 14.8 | 10.7 | 6.9 |
| 10. | Turmeric | 4.85 | 4.2 | 3.25 | 2.86 | 3.56 | 2.97 |
| 11. | Cardamom | 28.68 | 47.5 | 56.37 | 61.8 | 41.3 | 41.6 |
| 12. | Arecanut | 56.74 | 86.7 | 61.54 | 63.4 | 93.2 | 104.54 |
| 13. | Mangoes | 61.19 | 56.1 | 60.1 | 76.7 | - | 75.56 |
| 14. | Citrus Fruits | 1.96 | 2.0 | - | - | - | - |
| 15. | Banana and other plantain | 42.67 | 47.9 | 49.26 | - | - | - |
| 16. | Cashew nut | 55.02 | 100.7 | 142.36 | 117.3 | 89.7 | 54.05 |
| 17. | Tapioca | 236.7 | 303.3 | 243.5 | 142.2 | 111.18 | 74.5 |
| 18. | Sweet Potato | 8.08 | 5.2 | 5.09 | 2.5 | - | 0.24 |
| 19. | Ground nut | 15.98 | 14.7 | 9.39 | 13.4 | - | 1.71 |
| 20. | Sesamum | 11.94 | 11.8 | 14.57 | 10.7 | | 0.19 |
| 21. | Coconut | 504.8 | 730.3 | 652.8 | 846.2 | 905.7 | 820.87 |
| 22. | Cotton | 9.59 | 7.5 (180 kg bales) | 6.22 | 8.3 | 3.76 (hectr) | 0.4 |
| 23. | Tobacco | 0.703 | 0.8 | 0.5 | 0.32 | - | 0.021 |
| 24. | Tea | 37.4 | 37.1 | 36.16 | 34.7 | 36.9 | 37.02 |
| 25. | Coffee | 18.8 | 32.9 | 57.9 | 82.3 | 84.8 | 84.41 |
| 26. | Rubber | 133.07 | 188.6 | 248 | 419.2 | 475.03 | 539.57 |
| 27. | Banana | - | - | - | 22.06 | 50.8 | 59.06 |
| 28. | Other plantains | - | - | - | 43.4 | 55.18 | 48.75 |

Source: Planning Board: Economic Review, Various years, Department of Economics and Statistics, Government of Kerala.

Table: A.2**Trends in Production of Important Crops in Kerala ('000 Tonnes)**

| | Crops | 1961-62 | 1971-72 | 1981-82 | 1991-92 | 2001-02 | 2011-12 |
|-----|---------------------------|---------|---------|---------|---------|--------------|---------------|
| 1. | Rice | 988.15 | 1352 | 1339.86 | 1060.22 | 703.5 | 568.9 |
| 2. | Jowar | 0.61 | 0.8 | - | 2.34 | - | 0.21 |
| 3. | Ragi | 7.5 | 4.8 | 1.13 | 1.67 | - | 0.26 |
| 4. | Other cereals and millets | 3.3 | - | - | 2.25 | - | - |
| 5. | Pulses | 16.89 | 13.1 | 21.41 | 17.98 | 6.28 | 3.12 |
| 6. | Sugarcane | 37.11 | 39.1 | 47.95 | 54.7 | - | 26.3 |
| 7. | Pepper | 26.55 | 25.1 | 28.5 | 41.56 | 58.24 | 37.99 |
| 8. | Chilies | - | 2.7 | - | 0.599 | 0.6 | 1.28 |
| 9. | Ginger | 11.18 | 23.3 | 31.98 | 48.63 | 40.18 | 37.13 |
| 10. | Turmeric | 4.26 | 4.4 | 6.07 | 5.89 | 7.89 | 7.95 |
| 11. | Cardamom | 1.26 | 1.51 | 2.8 | 2.78 | 8.38 | 10.22 |
| 12. | Areca nut (million nuts) | 8091 | 12832 | 10738 | 12572 | 84.68 (ones) | 121.62 (ones) |
| 13. | Banana and other plantain | 312.34 | 362 | 317.88 | - | - | - |
| 14. | cashew nut | 84.44 | 113 | 79.82 | 97.91 | 65.86 | 36.74 |
| 15. | Tapioca | 1618.71 | 5429 | 4041.16 | 2737.35 | 2455.89 | 2567.95 |
| 16. | Sweet Potato | - | - | - | - | - | - |
| 17. | Ground nut | 13.53 | 16.8 | 8.3 | 9.45 | - | 2.15 |
| 18. | Sesamum | 2.53 | 3.7 | 3.76 | 2.02 | - | 0.076 |
| 19. | Coconut (million nuts) | 3247 | 4054 | 3024 | 4206 | 5479 | 5941 |
| 20. | Cotton | - | 7.9 | - | 2.31 | 6.07 | - |
| 21. | Tobacco | 0.91 | 1.7 | - | 0.61 | - | 0.037 |
| 22. | Tea | 37.42 | 43 | 50.71 | 68.38 | 66.09 | 57.9 |
| 23. | Coffee | 8.14 | 14.1 | 26.98 | 34 | 66.7 | 68.17 |
| 24. | Rubber | 24.59 | 89 | 139.45 | 343.1 | 580.35 | 788.94 |
| 25. | Banana | - | - | - | 301.52 | 375.9 | 514.05 |
| 26. | Other plantains | - | - | - | 200.52 | 393.18 | 330.63 |

Source: Source: Planning Board: *Economic Review*, Various years, Department of Economics and Statistics, Government of Kerala.

Table: A.3**A Profile of Villages Surveyed**

| Name of Panchayat | District | Zone | Area (Km ²) | No. of HHDs | Density of Population (in km ²) | Total Persons | Male (%) | Literacy (%) | SC (%) | ST (%) | Bench mark Studies |
|-------------------|--------------------|----------------------------------|-------------------------|-------------|---|---------------|----------|--------------|--------|--------|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 |
| Ezhome | Kannur | Zone -V (Northern Midland) | 21 | 4297 | 917 | 19261 | 45 | 85 | 9 | 0.17 | Study in 1980 |
| Muttill | Wayanad | Zone -XII (High-ranges) | 47 | 7998 | 745 | 35281 | 49 | 78 | 3 | 15 | 1961 Census |
| Nemmara | Palakkad | Zone -VIII (Palakkad) | 37 | 8810 | 992 | 36549 | 49 | 79 | 13 | 0.70 | 1961 Census |
| Erimayur | Palakkad | Zone -VIII (Palakkad) | 34 | 7079 | 910 | 30645 | 49 | 77 | 21 | 0.09 | NIL |
| Wadakanachery | Thrissur | Zone -IV (Central Midland) | 29 | 7873 | 1150 | 32811 | 48 | 84 | 13 | 0.05 | 1906 - Slater Study |
| Anthicaud | Thrissur | Zone -IV Central Midland-kolland | 13 | 5278 | 1651 | 21449 | 47 | 88 | 11 | 0.26 | 1961 Census |
| Nedumudi | Alappuzha | Zone -XI (Kuttanad) | 26 | 4916 | 758 | 19701 | 48 | 88 | 8 | 0.08 | 1985 Study |
| Bharanikkavu | Alappuzha | Zone -I (Onattukara) | 23 | 9485 | 1509 | 35426 | 46 | 88 | 16 | 0.15 | 1961 Census |
| Pulimath | Thiruvananthapuram | Zone -III (Southern Middle Land) | 27 | 8570 | 1199 | 32293 | 46 | 84 | 17 | 0.50 | NIL |

Source: Census 2011.

Table: A.4**Productivity Panchayat Wise - Own and Lease Cultivation**

| Panchayat | Own cultivation (Quintal Per Acre) | Lease cultivation (Quintal Per Acre) |
|-----------------------|---------------------------------------|---|
| Anthicaud | 22.0 | 22.4 |
| Bharanikkavu | 10.8 | - |
| Erimayur | 16.2 | - |
| Ezhome | 10.6 | 8.8 |
| Muttill | 16.2 | - |
| Nedumudi | 17.9 | 18.2 |
| Nemmara | 19.1 | - |
| Pulimath | 15.1 | - |
| Wadakanchery | 20.5 | 21.1 |
| All Panchayats | 18.0 | 20.1 |

Source: RULSG Survey of Villages 2012-13.

Table: A.5
Average Cost Size-class Wise (Paddy Own Cultivation)

| Panchayat | Size-class | Rupees Per Acre | | | | Rupees Per Quintal Produce | | |
|--------------|-----------------|-----------------|--------|--------|--------------|----------------------------|--------|--------|
| | | Cost-A | Cost-B | Cost-C | Gross Income | Cost-A | Cost-B | Cost-C |
| Anthicaud | Below 51 Cents | 20523 | 23177 | 40756 | 41518 | 831 | 927 | 1639 |
| | 51 - 100 Cents | 18381 | 21433 | 39012 | 36583 | 841 | 1104 | 2000 |
| | 101 - 250 Cents | 15402 | 16070 | 33649 | 34377 | 776 | 809 | 1694 |
| | 251 and Above | 14568 | 14703 | 32282 | 32689 | 749 | 756 | 1659 |
| | All | 17882 | 20061 | 37640 | 36926 | 817 | 968 | 1819 |
| Bharanikkavu | Below 51 Cents | 23000 | 33000 | 63000 | 23500 | 1725 | 2475 | 4725 |
| | 51 - 100 Cents | 11350 | 16550 | 46550 | 18500 | 1135 | 1655 | 4655 |
| | All | 17175 | 24775 | 54775 | 21000 | 1430 | 2065 | 4690 |
| Erimayur | Below 51 Cents | 18465 | 21687 | 52937 | 27979 | 1114 | 1316 | 3189 |
| | 51 - 100 Cents | 12339 | 15907 | 47157 | 26096 | 882 | 1113 | 3313 |
| | 101 - 250 Cents | 12163 | 13453 | 44703 | 26920 | 810 | 893 | 2971 |
| | 251 and Above | 12442 | 13362 | 44612 | 28721 | 746 | 801 | 2699 |
| | All | 13430 | 15782 | 47032 | 27108 | 881 | 1031 | 3085 |
| Ezhome | Below 51 Cents | 9663 | 13432 | 17009 | 16927 | 795 | 1133 | 1445 |
| | 51 - 100 Cents | 9164 | 13017 | 16594 | 15350 | 888 | 1204 | 1544 |
| | 101 - 250 Cents | 9976 | 11076 | 14653 | 15349 | 917 | 1025 | 1362 |
| | 251 and Above | 11952 | 13376 | 16953 | 14958 | 1149 | 1281 | 1625 |
| | All | 9769 | 12840 | 16417 | 16012 | 874 | 1143 | 1470 |
| Muttil | Below 51 Cents | 15100 | 20200 | 46242 | 25100 | 629 | 842 | 1927 |
| | 51 - 100 Cents | 16735 | 20497 | 46539 | 21762 | 877 | 1078 | 2448 |
| | 101 - 250 Cents | 12251 | 16697 | 42739 | 17800 | 798 | 1093 | 2792 |
| | 251 and Above | 9091 | 11260 | 37302 | 14245 | 778 | 965 | 3167 |
| | All | 14398 | 18176 | 44218 | 19948 | 825 | 1046 | 2598 |
| Nedumudi | Below 51 Cents | 13567 | 19517 | 30085 | 26000 | 978 | 1309 | 2043 |
| | 51 - 100 Cents | 19099 | 21311 | 31879 | 29641 | 1174 | 1301 | 1961 |
| | 101 - 250 Cents | 17032 | 18135 | 28704 | 29568 | 991 | 1072 | 1694 |
| | 251 and Above | 15559 | 15987 | 26555 | 29214 | 908 | 933 | 1549 |
| | All | 17424 | 19540 | 30108 | 29141 | 1066 | 1191 | 1844 |
| Nemmara | Below 51 Cents | 16372 | 22843 | 42010 | 32180 | 781 | 1090 | 2008 |
| | 51 - 100 Cents | 15292 | 18037 | 37204 | 28668 | 754 | 881 | 1824 |
| | 101 - 250 Cents | 20222 | 20222 | 39389 | 32149 | 1074 | 1074 | 2088 |
| | 251 and Above | 14521 | 15287 | 34454 | 30970 | 802 | 842 | 1899 |
| | All | 16170 | 18655 | 37822 | 30384 | 825 | 942 | 1918 |

Cont'd..

| | | | | | | | | |
|----------------|-----------------|-------|-------|-------|-------|------|------|------|
| Pulimath | Below 51 Cents | 15807 | 25312 | 53389 | 24231 | 1109 | 1902 | 4051 |
| | 51 - 100 Cents | 14561 | 17492 | 45568 | 23043 | 1129 | 1348 | 3516 |
| | All | 15354 | 22468 | 50545 | 23799 | 1116 | 1700 | 3857 |
| Wadakanchery | Below 51 Cents | 13791 | 17782 | 57226 | 23100 | 945 | 1293 | 4066 |
| | 51 - 100 Cents | 12238 | 13925 | 53369 | 30792 | 609 | 704 | 2791 |
| | 101 - 250 Cents | 9588 | 10108 | 49553 | 24459 | 716 | 745 | 3723 |
| | 251 and Above | 13312 | 13475 | 52920 | 35725 | 631 | 638 | 2523 |
| | All | 12267 | 14145 | 53589 | 27942 | 731 | 872 | 3317 |
| All Panchayats | Below 51 Cents | 14944 | 20100 | 39891 | 25625 | - | - | 2586 |
| | 51 - 100 Cents | 14962 | 18018 | 39003 | 27031 | - | - | 2367 |
| | 101 - 250 Cents | 13809 | 14996 | 35870 | 26529 | - | - | 2288 |
| | 251 and Above | 13154 | 14044 | 36137 | 27261 | - | - | 2204 |
| | All | 14484 | 17407 | 38187 | 26579 | 888 | 1093 | 2387 |

Note: Cost A – Total Cost excluding Family Labour; Cost B – Cost A + Family Labour; Cost C – Cost B + Interest on Land value (5%)

Gross Income - Grain value + Value of Straw + Subsidy received

Source: RULSG Survey of Villages 2012-13.

Table : A.6
Cost and Returns of Paddy Cultivation Size-class Wise (Rs. Per Acre)

| Panchayat | Size-Class | Cost-A | Cost-B | Cost-C | Gross Income | Net Income @Cost-A | Net Income @ Cost-B | Net Income @ Cost-C |
|--------------|-----------------|--------|--------|--------|--------------|--------------------|---------------------|---------------------|
| Anthicaud | Below 51Cents | 20523 | 23177 | 40756 | 41518 | 20995 | 18341 | 762 |
| | 51 – 100Cents | 18381 | 21433 | 39012 | 36583 | 18202 | 15150 | -2429 |
| | 101 - 250Cents | 15402 | 16070 | 33649 | 34377 | 18975 | 18307 | 728 |
| | 251 andAbove | 14568 | 14703 | 32282 | 32689 | 18121 | 17986 | 407 |
| | All | 17882 | 20061 | 37640 | 36926 | 19044 | 16865 | -714 |
| Bharanikkavu | Below 51Cents | 23000 | 33000 | 63000 | 23500 | 500 | -9500 | -39500 |
| | 51 - 100Cents | 11350 | 16550 | 46550 | 18500 | 7150 | 1950 | -28050 |
| | All | 17175 | 24775 | 54775 | 21000 | 3825 | -3775 | -33775 |
| Erimayur | Below 51Cents | 18465 | 21687 | 52937 | 27979 | 9514 | 6292 | -24958 |
| | 51 – 100Cents | 12339 | 15907 | 47157 | 26096 | 13757 | 10189 | -21061 |
| | 101 – 250Cents | 12163 | 13453 | 44703 | 26920 | 14757 | 13467 | -17783 |
| | 251 andAbove | 12442 | 13362 | 44612 | 28721 | 16279 | 15359 | -15891 |
| | All | 13430 | 15782 | 47032 | 27108 | 13678 | 11326 | -19924 |
| Ezhome | Below 51Cents | 9663 | 13432 | 17009 | 16927 | 7264 | 3495 | -82 |
| | 51 - 100Cents | 9164 | 13017 | 16594 | 15350 | 6186 | 2333 | -1244 |
| | 101 - 250Cents | 9976 | 11076 | 14653 | 15349 | 5373 | 4273 | 696 |
| | 251 andAbove | 11952 | 13376 | 16953 | 14958 | 3006 | 1582 | -1995 |
| | All | 9769 | 12840 | 16417 | 16012 | 6243 | 3172 | -405 |
| Muttil | Below 51 Cents | 15100 | 20200 | 46242 | 25100 | 10000 | 4900 | -21142 |
| | 51 - 100 Cents | 16735 | 20497 | 46539 | 21762 | 5027 | 1265 | -24777 |
| | 101 - 250 Cents | 12251 | 16697 | 42739 | 17800 | 5549 | 1103 | -24939 |
| | 251 and Above | 9091 | 11260 | 37302 | 14245 | 5154 | 2985 | -23057 |
| | All | 14398 | 18176 | 44218 | 19948 | 5550 | 1772 | -24270 |
| Nedumudi | Below 51 Cents | 13567 | 19517 | 30085 | 26000 | 12433 | 6483 | -4085 |
| | 51 - 100 Cents | 19099 | 21311 | 31879 | 29641 | 10542 | 8330 | -2238 |
| | 101 - 250 Cents | 17032 | 18135 | 28704 | 29568 | 12536 | 11433 | 864 |
| | 251 and Above | 15559 | 15987 | 26555 | 29214 | 13655 | 13227 | 2659 |
| | All | 17424 | 19540 | 30108 | 29141 | 11717 | 9601 | -967 |
| Nemmara | Below 51 Cents | 16372 | 22843 | 42010 | 32180 | 15808 | 9337 | -9830 |
| | 51 - 100 Cents | 15292 | 18037 | 37204 | 28668 | 13376 | 10631 | -8536 |
| | 101 - 250 Cents | 20222 | 20222 | 39389 | 32149 | 11927 | 11927 | -7240 |
| | 251 and Above | 14521 | 15287 | 34454 | 30970 | 16449 | 15683 | -3484 |
| | All | 16170 | 18655 | 37822 | 30384 | 14214 | 11729 | -7438 |

Cont'd..

| | | | | | | | | |
|----------------|-----------------|-------|-------|-------|-------|-------|-------|--------|
| Pulimath | Below 51 Cents | 15807 | 25312 | 53389 | 24231 | 8424 | -1081 | -29158 |
| | 51 - 100 Cents | 14561 | 17492 | 45568 | 23043 | 8482 | 5551 | -22525 |
| | All | 15354 | 22468 | 50545 | 23799 | 8445 | 1331 | -26746 |
| Wadakanchery | Below 51 Cents | 13791 | 17782 | 57226 | 23100 | 9309 | 5318 | -34126 |
| | 51 - 100 Cents | 12238 | 13925 | 53369 | 30792 | 18554 | 16867 | -22577 |
| | 101 - 250 Cents | 9588 | 10108 | 49553 | 24459 | 14871 | 14351 | -25094 |
| | 251 and Above | 13312 | 13475 | 52920 | 35725 | 22413 | 22250 | -17195 |
| | All | 12267 | 14145 | 53589 | 27942 | 15675 | 13797 | -25647 |
| All Panchayats | Below 51Cents | 14944 | 20100 | 39891 | 25625 | 10681 | 5525 | -14266 |
| | 51-100 Cents | 14962 | 18018 | 39003 | 27031 | 12069 | 9013 | -11972 |
| | 101-250Cent | 13809 | 14996 | 35870 | 26529 | 12720 | 11533 | -9341 |
| | 251 and Above | 13154 | 14044 | 36137 | 27261 | 14107 | 13217 | -8876 |
| | All | 14484 | 17407 | 38187 | 26579 | 12095 | 9172 | -11608 |

Note: Cost A-Total Cost excluding Family Labour; Cost B-Cost A+ Family Labour; Cost C-Cost B+ Interest on land value (5%)
Gross Income- Value of grain + Value of Straw +Subsidy received

Source: RULSG Survey of Villages 2012-13.

Table: A.7**Cost of Production Component Wise (Own Cultivation) (Rs. Per Acre)**

| Input component | Anthi-caud | Bharani k kavu | Erima-yur | Ezhome | Muttill | Nedu-mudi | Nem-mara | Puli-math | Wada-kanch-ery | All Panch-ayats |
|----------------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|---------------|----------------|-----------------|
| Family Labour | 2179 (11) | 7600 (31) | 2352 (15) | 3071 (24) | 3778 (21) | 2116 (11) | 2485 (13) | 7115 (32) | 1877 (13) | 2923 (17) |
| Hired Labour | 6114 (30) | 9917 (40) | 7266 (46) | 8167 (64) | 8238 (45) | 7927 (41) | 8823 (47) | 10430 (46) | 5807 (41) | 7763 (45) |
| Machine Labour | 5280 (26) | 1933 (8) | 2741 (17) | 276 (2) | 1840 (10) | 1907 (10) | 2722 (15) | 1698 (8) | 3817 (27) | 2545 (15) |
| Animal Labour | 0 (0) | 0 (0) | 0 (0) | 67 (1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 11 (0) |
| Seed | 676 (3) | 1000 (4) | 356 (2) | 386 (3) | 883 (5) | 1339 (7) | 478 (3) | 55 (0) | 710 (5) | 597 (3) |
| Manure | 2046 (10) | 0 (0) | 271 (2) | 260 (2) | 1174 (6) | 0 (0) | 1114 (6) | 758 (3) | 260 (2) | 725 (4) |
| Chemical Fertilisers | 1397 (7) | 2133 (9) | 1595 (10) | 49 (0) | 1245 (7) | 2031 (10) | 1729 (9) | 1377 (6) | 656 (5) | 1261 (7) |
| Pesticides | 732 (4) | 242 (1) | 346 (2) | 0 (0) | 95 (1) | 719 (4) | 302 (2) | 20 (0) | 227 (2) | 323 (2) |
| Weedicides | 643 (3) | 0 (0) | 276 (2) | 0 (0) | 23 (0) | 722 (4) | 117 (1) | 0 (0) | 29 (0) | 242 (1) |
| Other Expenses | 996 (5) | 1950 (8) | 579 (4) | 493 (4) | 900 (5) | 2779 (14) | 887 (5) | 1017 (5) | 761 (5) | 1006 (6) |
| TOTAL | 20063 | 24775 | 15782 | 12769 | 18176 | 19540 | 18657 | 22470 | 14144 | 17396 |

Note: Figures in bracket indicate percentage to total

Source: RULSG Survey of Villages 2012-13.

Table : A.8
Manual Labour Spent in Paddy Cultivation

| Panchayat | Size-Class | Family labour (%) | Hired Labour (%) | Person days per acre |
|-----------|-----------------|-------------------|------------------|----------------------|
| Anthikad | Below 51 Cents | 25 | 75 | 36 |
| | 51 - 100 Cents | 33 | 67 | 26 |
| | 101 - 250 Cents | 22 | 78 | 14 |
| | 251 and Above | 15 | 85 | 13 |
| | All | 22 | 78 | 16 |
| Erimayur | Below 51 Cents | 32 | 68 | 68 |
| | 51 - 100 Cents | 27 | 73 | 52 |
| | 101 - 250 Cents | 12 | 88 | 42 |
| | 251 and Above | 9 | 91 | 32 |
| | All | 16 | 84 | 41 |
| Ezhome | Below 51 Cents | 30 | 70 | 68 |
| | 51 - 100 Cents | 29 | 71 | 60 |
| | 101 - 250 Cents | 11 | 89 | 49 |
| | 251 and Above | 7 | 93 | 80 |
| | All | 18 | 82 | 62 |
| Muttil | Below 51 Cents | 32 | 68 | 56 |
| | 51 - 100 Cents | 23 | 77 | 68 |
| | 101 - 250 Cents | 34 | 66 | 49 |
| | 251 and Above | 24 | 76 | 26 |
| | All | 27 | 73 | 48 |
| Nedumudi | Below 51 Cents | 57 | 43 | 67 |
| | 51 - 100 Cents | 18 | 82 | 37 |
| | 101 - 250 Cents | 12 | 88 | 25 |
| | 251 and Above | 10 | 90 | 24 |
| | All | 15 | 85 | 28 |
| Nemmara | Below 51 Cents | 38 | 72 | 88 |
| | 51 - 100 Cents | 19 | 81 | 55 |
| | 101 - 250 Cents | – | 100 | 56 |
| | 251 and Above | – | 100 | 42 |
| | All | 7 | 93 | 48 |
| Pulimath | Below 51 Cents | 31 | 69 | 67 |
| | 51 - 100 Cents | 19 | 81 | 45 |
| | 101 - 250 Cents | 42 | 58 | 52 |
| | All | 32 | 68 | 54 |

| | | | | |
|----------------|-----------------|----|----|----|
| Wadakanchery | Below 51 Cents | 41 | 59 | 38 |
| | 51 - 100 Cents | 29 | 71 | 21 |
| | 101 - 250 Cents | 26 | 74 | 13 |
| | 251 and Above | 17 | 83 | 21 |
| | All | 23 | 77 | 19 |
| All Panchayats | Below 51 Cents | 35 | 65 | 61 |
| | 51 - 100 Cents | 24 | 76 | 46 |
| | 101 - 250 Cents | 16 | 84 | 33 |
| | 251 and Above | 9 | 91 | 28 |
| | All | 17 | 83 | 35 |

Source: RULSG Survey of Villages 2012-13.

Table: A.9
Gender Division of Manual Labour Spent in Paddy Cultivation

| Panchayats | Size-Class | Family Labour | | Hired Labour | | Manual Labour | | |
|--------------|-----------------|---------------|------|--------------|------|---------------|----------|-------|
| | | Female | Male | Female | Male | Female | Male | Total |
| Anthicaud | Below 51 Cents | 11 | 9 | 34 | 26 | 45 (56) | 35 (44) | 80 |
| | 51 - 100 Cents | 22 | 57 | 75 | 84 | 97 (41) | 141 (59) | 238 |
| | 101 - 250 Cents | 10 | 31 | 58 | 90 | 68 (36) | 121 (64) | 189 |
| | 251 and Above | 36 | 27 | 211 | 138 | 247 (60) | 165 (40) | 412 |
| | All | 79 | 124 | 378 | 338 | 457 (50) | 462 (50) | 919 |
| Erimayur | Below 51 Cents | 4 | 42 | 72 | 24 | 76 (54) | 66 (46) | 142 |
| | 51 - 100 Cents | 56 | 42 | 225 | 40 | 281 (77) | 82 (23) | 363 |
| | 101 - 250 Cents | 30 | 45 | 455 | 97 | 485 (77) | 142 (23) | 627 |
| | 251 and Above | 11 | 35 | 396 | 79 | 407 (78) | 114 (22) | 521 |
| | All | 101 | 164 | 1148 | 240 | 1249 (76) | 404 (24) | 1653 |
| Ezhome | Below 51 Cents | 67 | 26 | 149 | 63 | 216 (71) | 89 (29) | 305 |
| | 51 - 100 Cents | 102 | 55 | 293 | 86 | 395 (74) | 141 (26) | 536 |
| | 101 - 250 Cents | 41 | 17 | 355 | 129 | 396 (73) | 146 (27) | 542 |
| | 251 and Above | | 41 | 416 | 150 | 416 (69) | 191 (31) | 607 |
| | All | 210 | 139 | 1213 | 428 | 1423 (72) | 567 (28) | 1990 |
| Muttil | Below 51 Cents | | 9 | 14 | 5 | 14 (50) | 14 (50) | 28 |
| | 51 - 100 Cents | 23 | 65 | 201 | 92 | 224 (59) | 157 (41) | 381 |
| | 101 - 250 Cents | 18 | 69 | 118 | 50 | 136 (53) | 119 (47) | 255 |
| | 251 and Above | 13 | 20 | 72 | 30 | 85 (63) | 50 (37) | 135 |
| | All | 54 | 163 | 405 | 177 | 459 (57) | 340 (43) | 799 |
| Nedumudi | Below 51 Cents | 25 | 27 | 27 | 13 | 52 (57) | 40 (43) | 92 |
| | 51 - 100 Cents | 20 | 35 | 166 | 88 | 186 (60) | 123 (40) | 309 |
| | 101 - 250 Cents | 13 | 25 | 171 | 104 | 184 (59) | 129 (41) | 313 |
| | 251 and Above | 14 | 54 | 421 | 173 | 435 (66) | 227 (34) | 662 |
| | All | 72 | 141 | 785 | 378 | 857 (62) | 519 (38) | 1376 |
| Pulimath | Below 51 Cents | 10 | 40 | 98 | 11 | 108 (68) | 51 (32) | 159 |
| | 51 - 100 Cents | 7 | 17 | 91 | 14 | 98 (76) | 31 (24) | 129 |
| | 101 - 250 Cents | | 85 | 102 | 16 | 102 (50) | 101 (50) | 203 |
| | All | 17 | 142 | 291 | 41 | 308 (63) | 183 (37) | 491 |
| Wadakanchery | Below 51 Cents | 26 | 4 | 34 | 9 | 60 (82) | 13 (18) | 73 |
| | 51 - 100 Cents | 14 | 10 | 47 | 13 | 61 (73) | 23 (27) | 84 |
| | 101 - 250 Cents | 9 | 37 | 94 | 37 | 103 (58) | 74 (42) | 177 |
| | 251 and Above | 12 | 64 | 305 | 59 | 317 (72) | 123 (28) | 440 |
| | All | 61 | 115 | 480 | 118 | 541 (70) | 233 (30) | 774 |

| | | | | | | | | |
|----------------|-----------------|-----|-----|------|------|-----------|-----------|------|
| All Panchayats | Below 51 Cents | 143 | 157 | 428 | 151 | 571 (65) | 308 (35) | 879 |
| | 51 - 100 Cents | 244 | 281 | 1098 | 417 | 1342 (66) | 698 (34) | 2040 |
| | 101 - 250 Cents | 121 | 309 | 1353 | 523 | 1474 (64) | 832 (36) | 2306 |
| | 251 and Above | 86 | 241 | 1821 | 629 | 1907 (69) | 870 (31) | 2777 |
| | All | 594 | 988 | 4700 | 1720 | 5294 (66) | 2708 (34) | 8002 |

Note: Figures in bracket indicate percentage to total manual labour

Source: RULSG Survey of Villages 2012-13.

Table: A.10**Estimates of Cost A And Cost B For Selected Crops In Kerala**

| Crop | Cost Per Hectare(in Rupees) | | | | | | | |
|--------------|------------------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|--------------------|
| | 1980-81 | 1981-82 | 1982-83 | 1983-84 | 1984-85 | 2007-08 | 2008-09 | 2009-10 |
| Autumn Paddy | 2773 (4716) | 3635 (6003) | 3543 (6697) | 4295 (8387) | 4377 (10095) | 19851 (61245) | 25223 (71760) | 27747 (84957) |
| Winter Paddy | 3268 (5250) | 3822 (6871) | 3921 (7345) | 4391 (8579) | 4780 (9927) | 24198 (74421) | 28883 (79294) | 33778 (88468) |
| Summer Paddy | 3256 (5930) | 4325 (7079) | 5064 (7667) | 5272 (8791) | 5422 (10056) | 24640 (72420) | 29546 (74600) | 33183 (78256) |
| Coconut | 2739 (14445) | 2849 (15291) | 2885 (17753) | 2847 (26187) | 2921 (36687) | 23265 (270200) | 25393 (458097) | 30406 (493230) |
| Pepper | 1506 (8644) | 1579 (8982) | 1545 (9747) | 1370 (21651) | 2276 (33445) | 21325 (399228) | 23744 (400341) | 31861 (397245) |
| Tapioca | 1782 (10809) | 1870 (12609) | 2034 (13537) | 3460 (26 767) | 3386 (27953) | 36633 (310760) | 38426 (332643) | 43087 (469308) |
| Aracanut | 2387 (12969) | 3150 (14906) | 3443 (16608) | 2903 (26999) | 3387 (29198) | 32029 (312700) | 33447 (359272) | 36019 (436137) |
| Ginger | 7413 (15489) | 10370 (21942) | 11372 (23911) | 17711 (34840) | 19645 (42813) | 76293 (249748) | 85580 (298087) | 119547 (416423) |

Source: Directorate of Economics and Statistics, Cost of cultivation of Principal Crops in India, Government of India, Various years.

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