6.1: INTRODUCTION

Indian agriculture experienced severe distress for more than two decades now. This situation provoked many studies that analysed the emergence and perpetuation of this situation in various parts of the country (Good discussion is available in the collected works: Reddy and Mishra 2009; Deshpande and Arora 2010; Barah and Sirohi 2011). Keeping in view their core hypotheses, the studies could be broadly categorised into four broad groups. The first group located the reasons in the agricultural production and productivity domain. The argument centers on failure of crops and thus the bellied expectations of the farmers. The declining productivity of crops figures out to be prominent cause of severe distress among farmers (Bhalla 2012; Pal 2009; Chand 2009; Sirohi and Barah, 2011). The second argument takes on the changing agrarian structure and the technological change forcing the farmers under non-viability threshold. Their discussion particularly revolves around adoption of the seed-water–fertilizer technology of mid sixties and marginalization of land holding. Among these two, the role of technology in increasing cash components in overall input purchases and forced commercialization under the vitiated market conditions both in factor and product markets remains to be an important part of discussions. The resultant change in the agrarian structure is the focal point of some important studies (Vaidyanathan, 2006; Reddy and Mishra 2009; Rao 2009; Assadi 2010; Deshpande and Khalil, 2010). Third, the changing village situations and individualization of the farmer along with increasing dependence on the State get some reference in the sociological narratives of agrarian distress (Vasavi 1999, 2004 & 2010; Mohanty 2005). Fourth group of studies argue about the product market failures that has resulted in low prices and lower net income to the farmers. The net income barrier forced the farmer not to pay the borrowed loans from banks or from money lenders, thus leading to credit market failure in rural India (Shetty, 2009; Nair and Menon 2009; Deshmukh, 2010; Revathi and Galab 2010, Gill 2010; Chengappa et al, 2011; Puhazhendhi, 2011; Srivastava 2011). Last group involves studies that take a holistic view and argue that each of these factors had their own force to push the farmers towards acute distress situation and hence one cannot separate the influence of individual factors (Deshpande 2002, GoK 2002; Reddy and Galab 2006; Deshpande et al 2008; Behere and Behere 2008; Gyanmudra 2010).
One of the major hypotheses that emerge out of wide discussion from literature is about the rapidly changing constituents of agrarian conditions. Essentially the first observation of any analyst is attracted by the fact that the average size of holding has been shrinking. The concern is not so much due to the small size of average holding but it is more about the speed at which this is happening. That leads to increased non-viability of the size of holding and there is a continuous slide from medium –small-marginal holdings to landless agricultural laborer. The situation is made complex due to the policy steps taken over the last few decades, which include the introduction of the technological change of mid sixties. The new technology introduced crops and inputs thereby increased the cash component in the total cost of cultivation. Product market situations also changed significantly and Indian agriculture moved towards rapid commercialization. All these changes jointly impacted the need for cash funds and investment in agriculture, which had a significant increase in demand for credit. The credit market had its imperfections with a sizeable share controlled by the informal sector and formal institutional credit had its own problems (Shetty 2009; Radhakrishna Committee Report 2007). Therefore, there are two important components, we feel that need investigation are - the changes in agrarian structure and the concurrent changes in the credit markets.

There are a number of studies that have attempted to analyse the agrarian change in Tamil Nadu and Karnataka independently (Athreya etal, 1990; Djurfeldt and Athreya, 2008; John and Barbara Harris 2007; Kurien 1980; Bayliss-Smith 1984). These studies have largely looked into the changing production conditions, the negative externalities of the green revolution, the intensification of the process of commercialization and de-peasantisation of the marginal and small farmers. It is, however, interesting to note that credit market operations in changing agrarian conditions, the prevailing imperfections in both the factor and product markets and their negative impacts appear only sporadically and incidentally in their investigation. The studies on agrarian changes, moreover, largely utilize secondary data and reach to the most expected conclusions. They have largely adopted Marxist framework and hence leaves the issue unattended as far as its linkages with imperfections in credit market is concerned. Whereas, other studies though have attempted to analyse the failures/imperfections of credit markets, these entirely overlooked changes in agrarian conditions. The approach of most of these studies is from the standpoint of banking as a business preposition. Hence, bypass the agrarian changes and village power structures. Besides, many studies on banking in India evade the very existence of the informal credit market. The connections between these two (agrarian change and credit market imperfections) need attention and hence is taken up for discussion in this chapter.
6.2: APPROACH

The investigation into the connections between the agrarian changes and credit market could be approached at different levels and different ways. However, our discussions with experts in the field warn us about limitations of usual studies based on survey method or secondary source of information as these do not necessarily help researcher in getting an understanding the nexus between the two. For better understanding, the interface between two needs a bottom-up approach. This will not only help in providing household level information, but also ethnographic information related farm household(s) under observation. Hence, we decided to select a few villages in the two states for understanding the interface of the changes in agrarian structure and credit market at micro level.

To contextualize agrarian change and credit market operations, we have adopted the case-study method. This was done keeping in mind to bring out the implicit and explicit understanding of agrarian change and imperfections in the credit markets. The method not only offers an opportunity to understand how ‘farmers’ essentially perceived change in agrarian conditions over last few decades, but also reflections of unnoticed perceptions unattended by analysis based on secondary source of information. Moreover, it will also help us in bringing out unrecorded facts and practical difficulties faced by farmers during credit market operations. In addition to these, following are the main reasons for selecting the approach for the study:

- Any field study enhances the scope to shed light on the changing production conditions and relations in the country side.
- It helps to understand the micro-changes in the agrarian changes.
- Micro-level study brings out the invisible spots in the credit market failures.
- It helps to capture the diverse nature of indebtedness and causes
- It highlights the inter-linkages between various elements of agrarian change and farmers’ indebtedness in a given agrarian setting.
- It also helps to understand the impact of multiple loans borrowed at varied interest rates on the farm households (indebtedness as a process)
- The coping mechanism of increasing indebtedness and distress among farm households in a given agrarian setting is rarely discussed in the literature.

6.2.1 Selection of Regions, Villages and Respondent

Our survey of literature in the earlier chapter, have clearly established that agrarian change and consequent distress is not only confined to agriculturally backward regions but are also
prevalent in the agriculturally advanced regions. Tamil Nadu and Karnataka stand out prominently in the regards for our examination. For the case study purpose, we selected two regions each from these two states followed by two villages from each of the regions. The selection of agrarian regions, irrigated and dry (rainfed) in both the states was done in a such way that they represent different levels agrarian conditions (in terms of structure of land holdings, favourable vis-à-vis high risk-based resource endowments such as rainfed vs. assured irrigation etc.,) and phases of development (technology adoption, commercialization, market support & other infrastructural facilities. Keeping in mind above criterion, we selected Thanjavur district from Tamil Nadu and Mandya from Karnataka were selected as irrigated regions and Dharmapuri and Raichur as dry regions respectively. Further, two villages having predominant share of irrigation and enough market support were chosen from Thanjavur and Mandya districts. These villages were major the beneficiaries of canal irrigation and were also adjacent to towns where market was relatively developed. Similarly, villages from Dharmapuri (Tamil Nadu) and Raichur (Karnataka) were selected in such way that they represented predominantly rainfed agricultural economy with less market supports. The motive behind this selection process is to identify the impact of differential agrarian change (also includes the extrinsic changes) on the production conditions, production relations and indebtedness of farmer households. After selecting these villages, 6 case studies from each village were undertaken. However, given the repetition of information in our sample case studies, we finally restricted it to only best three case studies from each village for the analysis purpose. Some of these are presented in annexure 6.1. No scientific sampling techniques were used here as our intention was not to use the data in any manner to arrive at population estimates, but to uncover the nexus between the credit market and the agrarian changes and how it exist. We spent sufficient time in the villages to understand the changes that have taken place in the agrarian structure and also the difficulties faced by farmers in the credit market operations.

The respondents chosen for the case studies were purposively picked up from three farmer categories; Marginal, Small and Semi-Medium/Medium farmers. We interviewed few large farmers to understand dynamics of power structure in the villages. However, we kept them out of our focus. It is essential to know that large farmers enjoy the advantage of economics of scale as far operational holdings are concerned, large marketable surplus, easy access to institutional as also informal sources of credit and moreover as a class they are politically and economically strong. Above all these groups of farmers do not necessarily bring out the problems effectively as their power interests are always tied with the existing imperfections. Hence, in the context of seeking answers to the nexus between credit market operations and agrarian structure, we did not give much attention to them. In each region nearly 12-13 farmers
studied, data saturation method (when we get repetitively similar stories and answers) was used to limit the number of cases in field investigation.

### Table 6.1: Selection of Sample Case Studies

<table>
<thead>
<tr>
<th>State</th>
<th>Regions</th>
<th>Districts</th>
<th>Villages</th>
<th>No. of Case Studies Selected for Observation</th>
<th>Final Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Tamil Nadu</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry</td>
<td>Dharmapuri</td>
<td>Village 1</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Village 2</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Irrigated</td>
<td>Thanjavur</td>
<td>Village 1</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Village 2</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>II. Karnataka</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry</td>
<td>Raichur</td>
<td>Village 1</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Village 2</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Irrigated</td>
<td>Mandya</td>
<td>Village 1</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Village 2</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

The broad issues dealt in the field investigation for examining changing agrarian scenario and the credit market operations in our micro study included:

a) **Agrarian Change**

- Agrarian structure and land market operation
- Changing production conditions and Production relations
- Commercialization of agriculture
- Price of agricultural commodities
  - (Market failure, Distress sale, interlinked market etc.)
- Income of the farm households (Major sources)

b) **Credit Market Operations**

- Indebtedness (Source-wise, purpose-wise, rate of interest etc)
- Cascading effect

c) **Distress coping mechanisms**

- Informal sector employment
- Livestock rearing
- Migration to cities
- Money lenders support

### 6.3: AGRARIAN STRUCTURE & LAND MARKET OPERATIONS

Land, being an essential natural resource, occupies the centre place in socio-economic, political and cultural life of rural society. It not only functions as a principal capital for the farmers, but also a way forward to maintain or achieve socio-economic status and overall economic well-
being. Hence, in the debate over agrarian change, the structure of land holding remains to be the focal point. In fact, over the last few decades, India has witnessed substantial changes in the structure of land holdings across the states. These changes are also visible in our selected states. The broad macro and micro overview on changing structure of land holdings in these two states indicates following developments: First, substantial decline in average size of holding among marginal and small farmers compared to others and increasing size of agricultural laborers appears to have accelerated the process of de-peasantatisation. Our case study respondents told also vindicate the phenomenon by showing how migration is rampant among these groups in the selected regions. Second, irrigation has made a significant difference in the farm household. It has provoked strong forces of commercialization. Third, farmers with medium and large size of holdings along with availability of irrigation became the power centres. These are playing major roles in technology adoptions and spread and detecting pricing of the produce due to scale effect. They have also wielded the financial power in the villages and have clearly brought in class differentiation in rural society.

When we look at the aggregate picture of four districts, all the three districts are characterized by the swelling marginal holdings and extent of marginalization is quite high in irrigated regions (Table 6.2). Such a process adds to the share of rural proletariats and consequently poses a threat for agriculture to be a viable activity. This may result in leaving the land fallow or over the period could force farmers to leave agriculture. If small & marginal holdings are considered to be unviable, then table 6.2 clearly indicates us that Mandya (94.6 per cent), Thanjavur (92 per cent) and Dharmapuri (91.6 per cent) have almost reached to the point of that declaration. Interestingly, the proportion of area operated by them area far less than their share in total holdings. These have serious implications income distribution from farm operations. Though share of large size of holdings (capitalist farmer) appears to be negligible, they control significant proportion of area. In irrigated region, size of holding above 4 ha (10 acres) provides significant amount of power and economic freedom. Even if these farmers are not categorized as capitalists, they at operates as pseudo capitalist. Their proportions in all districts are quite significant. Thus, as a class these capitalistic farmers have emerged as the dominant agrarian class in the absence of landlord (large capitalist) farmers. In some places even though landlords ceased to be an important part of the agrarian class structure, there are quite good number of them show the tendency of absentee landlordism or moving out permanently to the cities. Since the class has ability to provide better education for their children, some of their sons may move out village for greater opportunities in urban towns. Thus, the land is looked after by the son(s) who remain in the village or by their parents. Such incidences are reported by some of our respondents as well as Athreaya (2008) in his study of two villages in Tiruchirappalli district.
The change witnessed by dry regions in their structure of land holdings more prominent than that of their counterpart (irrigated) regions in both the states. In Raichur district of Karnataka, the share of unviable marginal & small holdings and area operated by them saw an increase of 27.6 and 21 percentage points over the last 30 years. Whereas, in Mandya the increase observed to be 12.6 and 26.5 percentage points respectively in the same period. Similar pattern of change is observed in irrigated and dry regions of Tamil Nadu. However, it is important to note that the process of change noticed for area operated in irrigated regions was stronger than changes in size of holdings. In other words, the marginalization process across the regions is also accompanied by consolidation of area operated in marginal and small holdings size group. And it is quite stronger in irrigated regions as compared to the dry regions. This phenomenon is pointer to the various changes taking place within the structure of land holdings. The developments at large, however, could be result of upward forces (consolidation within the group\(^1\)) or downward (marginalization of semi-medium, medium or large holdings).

Tenancy is found to be widely prevalent in the irrigated village of Karnataka while its incidence was less prevalent in the irrigated villages of Tamil Nadu. Interestingly in the former, we found

\(^1\) Purchase of small piece of land of small and marginal farmers from same group or fellow brother or kin.

**Table 6.2: Changing Structure of Land Holding in Selected Regions of Tamil Nadu and Karnataka**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Karnataka</th>
<th>Tamil Nadu</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raichur 1976-77</td>
<td>Mandya 1976-77</td>
</tr>
<tr>
<td></td>
<td>2005-06</td>
<td>Dharmapuri 1976-77</td>
</tr>
<tr>
<td></td>
<td>2005-06</td>
<td>Thanjavur 1976-77</td>
</tr>
<tr>
<td>Marginal Percentage Holdings To All (%)</td>
<td>14.0</td>
<td>27.6</td>
</tr>
<tr>
<td>Small Percentage Holdings To All (%)</td>
<td>19.5</td>
<td>33.5</td>
</tr>
<tr>
<td>Semi-Medium Percentage Holdings To All (%)</td>
<td>27.4</td>
<td>25.7</td>
</tr>
<tr>
<td>Medium Percentage Holdings To All (%)</td>
<td>28.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Large Percentage Holdings To All (%)</td>
<td>10.2</td>
<td>1.6</td>
</tr>
<tr>
<td>All (in Lakhs) Percentage Holdings To All (%)</td>
<td>5.03</td>
<td>7.24</td>
</tr>
</tbody>
</table>

**Percentage Area Operated To All (%)**

| Marginal | 1.8 | 7.3 | 20.7 | 43.2 | 16.0 | 36.2 | 23.6 | 37.0 |
| Small    | 6.2 | 21.7 | 25.4 | 29.4 | 21.7 | 29.3 | 25.3 | 27.6 |
| Semi-Medium | 16.8 | 31.4 | 29.4 | 19.5 | 30.1 | 21.5 | 25.6 | 21.2 |
| Medium   | 37.7 | 30.0 | 19.9 | 7.0 | 25.7 | 10.8 | 19.2 | 11.2 |
| Large    | 37.4 | 9.7 | 4.7 | 0.9 | 6.4 | 2.2 | 6.3 | 3.1 |
| All (Lakh ha) | 10.87 | 11.53 | 2.76 | 3.24 | 4.58 | 4.46 | 5.87 | 5.17 |
| Avg. Size (ha) | 4.6 | 2.2 | 1.2 | 0.6 | 1.6 | 0.8 | 1.1 | 0.8 |
| % Net Area irrigated | 7.8 | 20.0 | 30.1 | 40.4 | 17.9 | 24.0 | 81.6 | 82.3 |

**Note** – Marginal (below 1 ha); Small (1-2 ha); Semi-medium (2-4 ha); Medium (4-10 ha) & Large (10 & above ha)

poor farmers leasing- in land to widen the income generating sources. Similarly, reverse tenancy was also common. This implies unviability and unprofitability of agriculture.

In the dry village of Tamil Nadu there was no trace of tenancy. However, it was noted to be dominant feature of land market operations in the dry villages of Karnataka despite legal ban on tenancy in the state. Landless labourers or marginal farmers have leased-in land to the extent of 5 to 10 acres. Extensive cultivation strategy is followed by the rural poor to enhance income in the rain-fed villages. Although the rent of leasing-in land is low in the region but risk of crop failure was reported to be very high. The NSSO (2003) figures for the share of tenant holdings, is not more than 5 percent of the total operational holdings in Karnataka. These ironically, stand in contrast to our findings of a very high prevalence of tenancy in the selected irrigated and dry villages of the state. Under reporting of tenancy with the fear of losing the land was cited to be a major factor. Farmers in almost all the districts except Raichur reported that low size of land holding is the severe constraint on income generation capacity.

In an overall analysis of case studies, we found that land is slipping out of the hands of the marginal farmers. The consolidation of power in the hands of large farmers also indicated prevalence of class differentiation in the villages. However, emerging trends of migration, both distress-led and better opportunities-oriented migration of new generation youths could pose serious challenge to this in near future. This development in fact is giving rise to a new structure where more numbers of higher aged group farmers are left to look after their agriculture. Most of the marginal farmers find land not as an effective livelihood support system. This situation is compounded by non-availability of investible funds, product market imperfections and increasing stress of cost of cultivation. This phenomenon is quite strong in the irrigated regions as compared to the dry regions.

6.4: PRODUCTION CONDITIONS AND PRODUCTION RELATIONS

Many political economic factors operate in the villages, which involves the combination of both intrinsic and extrinsic changes. These do not always act in tandem for the interest of all agrarian classes but sometimes work at cross interest of some classes. Hence different agrarian settings may depict different level of changes in the production relations.
Important Features of the Four Agrarian Villages

6.4.1 Young Generation and Agriculture

Our case studies indicated only a few joint family farm households now existing in the village. This system of family has more or less collapsed. Most of the young working members of the family have either migrated out of the village or have separated from the parents. The average size of family was not above 4-5 members. Most of the families have at least one or two members staying in city and working in urban informal sector. Hence, shrinking average family size and increasing nuclear family has enhanced the dependence of farm households on agricultural labourers thus increased the wage component in the total cost of cultivation. The increase in the demand for hired labour in the farm operations was expected to exert pressure on wage rates; however nothing of the sort has happened. Money wages did increase but real wages have been stagnant forcing the labour to migrate to closer urban areas for work. Incidentally the construction boom in and around urban areas are providing opportunities to the labour to establish their families in the urban slums. Besides mechanization of agriculture since eighties has eventually shifted the surplus labour away from agriculture and the process gained further momentum in nineties. Nineties also witnessed a pace of rapid urbanisation accompanied with the expansion of informal economy. Hence, availability of attractive wages in the nearby cities, towns and neighbouring states are the major cause behind the rise in the share of agrarian population who commute regularly to cities from rural areas, or migrate seasonally, or permanently. Thus, rural area is witnessing the emerging class of “foot loose labourers” who are free to move out of agriculture to enhance their income, in consequence shrinks the availability of agricultural labour-force mostly the young. Hence, piece wage rate or contract system of work is gaining importance in all the four villages studied. Farmers also advance loan or money to have a continuous availability of labourers.

6.4.2 Rural Proletariats and Landless Labourers

The agrarian class is dominated by increasing share of rural proletariats evident from a bulge in the share of marginal holdings. Subsequent fragmentation in the marginal holdings adds to the share of the rural poor i.e, near landless farm households and landless labourers who comprises nearly 40 to 50 percent of the total agrarian population. For this agrarian section wage income is the major source of livelihood. It is the near landless or those possessing small patches of land who take up agricultural labour operations on the medium and large farmers’ lands.
Moreover, operation of the employment guarantee schemes such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has further created shortage of labour in the village leading to better bargaining power of labourers in the wage market. In the irrigated and dry villages of Tamil Nadu most of the farmers stated that the successful operation of MGNREGA is one of the major reasons behind rise in wage bill. In Tamil Nadu, the average wage rate is one of the highest in India. While, in the irrigated village of Karnataka the labourers largely go to work in the garment factory, or sugarcane industry in Mandya town. In dry villages, seasonal migration is a common trend among the poor. Besides, there is a considerable section of the farm households work in the informal economy.

6.4.3 Changing Power Structure in the Agrarian Class

The old patron-client relationship, in which to assure sustainable flow services from labourers lond-lord used strategy of tying them though offering of food, clothes and other customary benefits, are rapidly disappearing due to the pro-poor welfare policies of the State. These include provision of rice at Rs.1, housing benefits, mid-day meal schemes and access to the cheap credit through Self-Help Groups. The welfare schemes have released the hold of large farmers on the labourers. Incidentally, these measures have also altered the production relations in the villages of Tamil Nadu and Karnataka. The benefit from MNREGA in gaining employment has not been very effective (Rajalaxmi et.al., 2008) and that could be the prime reason of a high share of population migrating from dry villages of Karnataka to cities in slack season for employment opportunities mainly in the construction industry. The change in production relations in the villages in Tamil Nadu and Karnataka was quite visible with landlords losing control on the tied labour and that seems to give an impression that the labour now can bargain wages. That is unfortunately not true; there are two parallel changes that need to be noted here. First, the average size of holding is declining and that has brought more number of marginal farmers into the fold of agricultural labour. Second, the cash requirement in the agricultural operations has increased and the marginal farmers depend on the large farmers (also acting as moneylenders) for cash as also inputs. The interlocking with the land lords thus continues in another form. At times the marginal farmers with very tiny holdings leased out their land to the large farmers and work as labourer on their own land along with the land of the landlords. A sort of reverse tenancy noted mostly in Karnataka villages. This phenomenon was also noted earlier by (Barah and Sirohi 2011).

In Nutshell, from above analysis it can be finally concluded that the villages in irrigated regions of Karnataka still continue to be predominant agricultural economy as income flow is regular and there are not many risky years. There is emergence of allied agricultural activities and these
are increasing at a good speed. There seems to be some transition visible between the two separate pictures. On the other side, the villages in irrigated regions of Tamil Nadu have already undergone this phase and turned agriculture as a secondary or residual activity. The other allied economic activities are taking a dominant role in these villages of Tamil Nadu.

Rainfed (dry) villages of both the states have continued with predominant agricultural economy but the out migration of agricultural labour and ultra-marginal farmers continues. This phenomenon has changed the agrarian structure and production relations in the villages. The remittances from the family members staying in cities and seasonally migrants continue to push the economy of the villages. This has led to increasingly presence of high age group workforce in agriculture.

6.5: COMMERCIALISATION OF AGRICULTURE

6.5.1 Cropping Pattern in the Irrigated and Dry Villages

Paddy and Veetu pairu (Black gram, gingelly and groundnut) are the major cash crops grown in the irrigated villages of Tamil Nadu. When we asked the farmers the reason behind growing only a few crops, they answered that the Thanjavur belt falls under heavy rain-fall zone and soon after the harvest of paddy, it usually rains for two consecutive months. Therefore, none of the crops could survive in such a situation except black gram, gingelly or groundnut. Thus the region faces climatic constraint and imposes a limit on the cropping pattern. These crops in the region are also known as Veetu pairu. Over the period, the farmers in the region developed a cropping pattern, suitable to these climatic conditions. As a result, there are three cropping seasons in this region. First, cultivation of Kuruvai paddy with the help of canal water (released from mettur dam)\(^2\). Second, cultivation of Veetu pairu or thaladi and, third, cultivation of Samba paddy. In the recent years, a few farmers with bore-well irrigation have started cultivating sugarcane. The third crop is grown only by a few farmers with bore-well irrigation.

The irrigated villages of the Karnataka receive canal irrigation for agricultural purpose. Paddy and sugarcane constitute the principal crops besides irrigated ragi. With the improved variety of paddy, farmers in the village grow paddy two to three times in a year. Paddy also provides the much needed fodder to the livestock, as well as food-security to the farm households. Further, well established sugarcane factory, easy access to formal credit, favourable price policy for the sugarcane crop, all together give the sufficient incentive for the farmers to undertake sugarcane

\(^2\)This is also known as kuruvai cultivation. It is worth to note here that the farmers in this region earlier were cultivating long term paddy crop, but now most of the farmers opt for short term paddy.
cultivation on a regular basis in the region. In addition to agriculture, from the past few years, farmers in the region have also undertaken the cultivation of mulberry crop and are effectively engaging themselves in the production of sericulture to generate additional income and to meet immediate expenditures of agriculture and household. Thus, the crops grown in the region characterizes all features of commercial agricultural economy.

While, the rainfed villages of Tamil Nadu is one of the drought-prone area. Agriculture here is largely based on seasonal rainfall. But, in the recent past with the spread of ground water irrigation, well and bore well, have played a key role in helping the farmers to undertake commercial agriculture. Hence, the farmers’ in the dry villages could broadly be classified into two categories; one dependent on fully rain-fed cultivation, and the others with some irrigation availability. Hence, the cropping pattern in the region shows a stark difference in the crops grown under well or bore-well irrigation vis-a-vis rain-fed condition. This situation encourages the farmers to go for a wide varieties of crops fully rain-fed like coarse cereals, avare, groundnut, palma rosa, cotton and tapioca etc as well as irrigated crops such as paddy, sugarcane, onion, turmeric and horticultural /floricultural crops. We noticed that farmers with irrigation in the rainfed region try to maximise the profit by moving from high gestation period crops such as sugarcane, turmeric to that of low gestation period crops such as vegetables and Samarthis (Chrysanthemum flower). These crops generate weekly income that in turn helps the farmers to meet various expenses in agriculture as well as at the farmers’ household. The proximity of Dharmapuri to Bangalore may be one of the important factors behind encouraging the growth of horticultural and floricultural crops.

The dry villages of Karnataka though happen to be a tail-end region of Tungabhadra dam reservoir, these more or less represent the same features of dry villages. These villages receive canal water for 7-9 days in a year. That too quite irregular and insufficient to irrigate full land. The cropping pattern in the region is largely dominated by coarse cereals and cotton. Therefore, farmers receiving 7-9 days of canal irrigation take risk to grow commercial crops such as cotton and chilli. On the contrary, the farmers without any access to canal water grow coarse cereals or red-gram. Given the constraints of climatic factor, low irrigation, and salinity of ground water, majority of the farmers in the region are left without any option to increase their cropping intensity and they grow only single crop in a year. Hence, short period availability of irrigation plays crucial role for the farmers to cultivate cotton or chilli they also grow red-gram or coarse cereals.

The cropping pattern has undergone changes in this region. Earlier farmers were growing sunflower and groundnut along with cotton and coarse cereals. In recent years greater exposure
to pest attack and the decline in the yield of groundnut due to water scarcity have made these crops least preferred by the farmers. This has been taken over by large scale cultivation of Bt cotton in the region. It is not the crop is most preferred. But better price support of cotton, suitability of soil and little assurance to get profit has been driving farmers to go for these crops. A few farmers rotated the cropping sequence in order to maintain the soil fertility and overcome the negative externalities of mono-cropping.

Thus within a similar eco-type i.e., irrigated or dry there are different forces which play crucial role in determining the cropping pattern and changes in it and are both intrinsic and extrinsic in nature such as irrigation facility, quality of soil, geographical location, rain-fall pattern, market facility for the crops grown, nearness to city etc., which play crucial role in determining farmers income and indebtedness.

6.5.2 Constraints Confronted

The irrigated villages of Tamil Nadu although comes under assured canal irrigated region, not all the farmers in the region can go for second or third crops as they lack regular supply of canal water. Moreover, lack of timely rain and abundance of untimely rain or flood in kharif affect the yield of the crops. Only farmers having bore well irrigation have the option to grow second or third crop, or cultivate sugarcane. In a nutshell, the farmers of irrigated region face delays in cultivation of crops or loss of a cropping season due to delay or untimely supply of water from mettur dam; and have little choice to diversify the cropping pattern due to climatic constraints: Further, frequent flood, mono-cropping, heavy application of chemical fertilizers, increasing incidence of pest attacks lead to declined soil fertility, crop loss and have reduced the yield level in the region. Many farmers in the region have reported that they have stopped growing groundnut mainly because of the pest problem.

Most of the farmers in the irrigated villages don’t have bore well facility therefore all of them cannot cultivate two or three crops in a year. Moreover, farmers with the bore well facility do not seem to in advantages position. They are also facing the constraint to irrigate the land due to erratic supply of power. Many farmers in our case studies reported that in the rainy season we get power supply throughout the day. But in the summer season, power is supplies only 1 or 2 hours in a day and that too in the odd hours. Most of the farmers in fact expressed their displeasure over of power supply. One of our disgruntled farmers reported that in the name of free supply of power, the government has actually put us in the loss making business. Since they are supplying it free of cost, we have lost the right to ask question about the irregular supply. Given the loss they incurred just due to shortage of power supply, some farmers even
shown their willingness to pay electricity for a few months during the peak agricultural season when the crops require frequent watering.

Land is a major deciding factor dictating the cropping pattern in the deltaic region. Farmers in the upland and low lying areas have only a few options in terms of the crop choice. The farmers in the low lying area cannot grow crops other than paddy because other crops cannot survive under excess water. On the contrary, the farmers in upland area cannot cultivate paddy or sugarcane unless they are equipped with assured irrigation facility. These farmers are largely compelled to grow black gram, gingerly or groundnut. Besides that, farmers with bore well irrigation also face difficulty in irrigating the crops due to erratic supply of power. Hence, it becomes difficult for the farmers to reap the expected benefits.

In the irrigated village of Karnataka farmers face certain difficulties in the price front. Sugarcane growing farmers generally sell the produce to the sugar industry which acts more like an oligopolistic in terms of price fixation and usually sets terms not favourable to the farmers. Some farmers have complained that once they sign an agreement with the industry, they lose autonomy in their decision making including the time of harvesting the crops. The decision of harvesting the sugarcane crop, suitable to industrial firm’s time, affect the yield and profit level of the farmers as the crop is harvested either too early or too late. The small farmers in particular, complain about the discrimination they face at the sugar industry, as the industry gives priority to the large farmers. Further, a few farmers have experienced delay in the disbursement of cash after harvesting of sugarcane and sometimes it takes three to four months to receive the payment. The delays in payments cause borrowing from informal sector to cultivate crop in the next season. These problems are persisting and affect their profitability of the crops. Moreover, being the canal irrigated region farmers are vulnerable to flood and crop loss which is a recurring phenomenon. Recently in the year 2008-09 farmers have witnessed the adverse impact of flood in terms of crop loss and loss of fertile soil etc. The other major problem, is mono-cropping as it adversely affects the soil fertility and yield of the crops, so the profit.

As far the dry villages of Tamil Nadu are concerned, farmers can be broadly classified into risk takers and the risk averters. The farmers who undertake cultivation of cash intensive crops such as tapioca, cotton and palma rosa, generally play gamble on monsoon. If the farmers get timely rain then they may get some return on investment. The other risk-averse group can be named as part-time farmers as agriculture is not their main source of livelihood. They cultivate land just for the sake of self-consumption and that too largely coarse cereal. Even though they incur loss, it is manageable for them. Two set of problems come out clearly from our observations.
First, the risk faced by farmers growing cash crops in the rain-fed conditions is quite high and the risk taking attitude is fast weaning out. Second, as far the irrigated farmers are concerned they are unable to use the water efficiently for irrigating the field due to erratic supply of power. Farmers opined that in the peak agricultural seasons the power supply is very erratic in nature and in the entire day only 2-3 hours the power is supplied and at odd hours. These discrepancies have affected irrigating the fields as required, and also delays in the operation of agricultural activities. And as known, delay in irrigating the land by one or two days could affect the growth of the plant and yield substantially.

The case studies conducted in the dry region of Tamil Nadu clearly indicated a wide difference in the income generating capacity of the irrigated and un-irrigated farm groups as observed among the marginal farmers. In lines with the persisting idea that marginal holdings in rainfed areas do not provide sufficient income for the farm households therefore, farming alone cannot be their main activity. On the contrary we found that marginal farmers under irrigated condition are able to generate sufficient surplus to manage cultivation and other expenses along with livestock income. While, for the marginal farmers with rain-fed holdings, agriculture is subsidiary activity and the main source of income is wage income/remittance and livestock income. We also observed that farmers with irrigation also have more live stocks compared to those without irrigation, that indicates the interdependence of agriculture and agricultural based allied activities.

As the irrigated agriculture contributing towards enhanced income of the farm households also induce demonstration effect among the other farm households in the village without irrigation. While, interviewing the farmers it became apparent that most of the farmers have spent a considerable amount to deepen the well or to dig bore-wells in the dry villages. Most of the investment in this region is made on bore or open wells. Without this, agriculture is highly uncertain and risky. Therefore the indebtedness is also severe in this region.

Notably, among all the farmers interviewed in the dry villages of Karnataka, we found that it is the marginal farmers who have not received any irrigation and they undertake cultivation under rain-fed condition. The cropping pattern of these farmers comprised of traditional crops such as tur, bajra and sometimes sunflower, and rarely cotton or chilli. It is clearly evident that marginal farmers primarily grow crops to fulfill their consumption requirement and are less-connected with the market. Consequently, their crop economy is unaffected by the problems of commercial farming and so also the benefits such as high profit. Hence, financial constraints prohibit the marginal and small farmers to undertake huge investments. These farmers rest with no option, but to cultivate once in a year, and look for wage income to sustain their livelihood,
hence, they behave more as ‘part time farmers’. As such small parcels in the rain-fed region are unable to sustain the needs of farm households; hence, these farmers are not serious about agriculture as a profession.

Among the small and medium farmers, almost all receive canal irrigation in some part of their land, if not all. Hence, availability of irrigation for short period facilitates such an act. The cultivation of the crops may fetch the farmers a good return if climate and other factors remain conducive. Hence, most of the farmers prefer to grow cotton or chilli. It is a rational decision made by farmers to maximize their profit with the given resource base. Yet, the reality is economic burden due to debt and inability to meet other necessities. Hence, pressure to repay the loan borrowed at high interest rate, expectation to earn profit to meet various expenses, demonstration effect (of the fellow farmers reaping benefit) acts as a push factor to opt for high risk commercial crops. The high risk of agriculture in the regions reveals by the fact that farmers received the expected profit once in four to five years. Thus, farmers are compelled by their economic situation to grow these crops, whether they incur continuous loss or not (due to increase in the cost of inputs and wages). Many of them stated that if we count our own labour then we are left with no surplus. With the evidence of the profit generated once in a few years, it becomes near to impossibility for the farmers to come out of the clutches of indebtedness and leads to perpetuation of indebtedness and associated distress.

6.5.3 Increasing Cost of Cultivation

In the irrigated and rainfed villages of Tamil Nadu most of the farmers reported that agriculture is becoming increasingly unprofitable for them because of the high cost of cultivation. According to the farmers in the recent years the bargaining capacity of the labourers has improved in terms of hours of work which has reduced to 3-4 hours per day and they demand higher wages³ than available on MGNREGA works. To avoid the labour shortage and hassle of managing the work, farmers are opting for ‘piece rate wage’ or ‘contract system of labour supply’⁴ (contracting entire operation such as planting or harvesting for a pre-negotiated amount) which provides better bargaining power to the labourers, but higher wage bill to the farmers. It was therefore, not surprising in our entire field work, farmers complaining about the increasing cost of cultivation due to higher wages.

³ The prevailing wages both in the irrigated and dry villages varies from Rs. 120-150 per day per female worker and Rs.250-300 per day per male worker.
⁴ Under the “contract system of labour supply” wage is not paid to the individual labourers but for a particular task price is fixed immaterial of the number of labourers performing the task. And generally the amount paid for such a system of work is higher than the wages paid for the work done through wage labourers.
In the irrigated village of Karnataka the wage rate is not very high, unlike the successful employment generation due to MNREGA in Tamil Nadu; we didn’t find the poor farmers enthusiastic about it. It may be due to the poor operation of the scheme which could be a major cause behind not influencing the agricultural wage rate in the state. But farmers complained about the increase in the cost of fertilisers and other inputs used in agriculture as the main cause of rise in the cost of cultivation. While, in rainfed village of Karnataka, farmers face the problem of a different kind. Here farmers largely grow one crop in a year, thus, in the peak agricultural season when all the farmers (some of them are also agricultural labourers) are busy to work in their own land it is difficult to find labourers. Hence, it increases the wage component due to lack of labour force, and importantly for cotton, more number of labourers are required in a given time for plucking. Hence, due to supply bottleneck and therefore, the wage demanded increased.

6.6: MARKET IMPERFECTIONS

A marketing system with strong and adequate infrastructure play important role in development of agriculture. Market infrastructure in particular is not only a key for the expansion of the size of the market, transfer of appropriate price signals, but assuring remunerative prices and proper income for farmers. So far agricultural marketing system and its operations in both the states are concerned some studies highlight their grave concern over the extent of imperfections (Deshpande and Naika 2004; Deshpande and Prachita 2003 and 2004). These studies in particular clearly brings out that agricultural markets are imperfect and price discovery mechanism is far from satisfactory. Moreover, in the event of any price collapse, the welfare loss to farmers is very high in Karnataka and non-delta region of Tamil Nadu. Their study also shows that facilities created in market yards are inadequate and the benefits available to the farmers from regulated markets depend on the facilities/amenities available rather than the number of regulated markets in the area.

In our case studies, the farmers from irrigated villages of Tamil Nadu and Karnataka reported more or less common marketing problem faced by them during sale of their crops. Even though Thanjavur is known as “Rice bowl of Tamil Nadu, due to lack of marketing facilities, harassment from workers, officials staff and commission agents at market yard have forced many farmers to sale their produce much below TNSP (Tamil Nadu Support Price) to traders. When asked what types of problems they faced during marketing of their produce, the following reasons came out prominently. First, the government norms for maintaining the maximum permitted moisture level of paddy while selling are very strict. Second, they need to pay bribe to the officials and other workers who help to stock the grain, or dry the paddy. Third,
the transportation costs and wages for the labourers are quite high. This also force us to sell the produce at whatever agreed prices, pay whatever amount demanded by workers for unloading to avoid further cost on the same thing. Third, the process of marketing takes entire day or two of farmers’ time. Further, malpractice takes place at market yard too, where they get the cheap supply of paddy from nearby regions where TNSP is not in vogue and such stocks are shown as the stocks supplied from the Thanjavur region.

The marketing situation is in no way different for other crops such as black gram, gingelly or groundnut. While discussing the situation with some farmers, most of the farmers opined that artificial hoarding of these crops takes place by the private traders (or middlemen). Prices for these crops are kept low after the harvest for few months by hook or crook way by the traders. The traders generally spread panic of price fall by providing some convincing reasons like over- supply/arrivals of the produce in and around regions and nearby states. To farmers’ surprise soon after a few months of harvesting period, the price of these crops increases. But by that time most of the farmers run out of stock to sell. This clearly indicates failure of marketing system in the state. The state of irony of marketing system in the state get reflected by following apt statement of one of our respondent farmer- “when we sell the produce we get less profit but when we buy even for our home consumption we pay double the price”.

Similarly, most of the marginal and small farmers in the irrigated villages of Karnataka sell their produce in the village to the traders even though they knew the fact that they may get less price for the paddy. The small and marginal farmers shared the view that they have to incur transportation cost, spend time and money on labour and their stay there. Besides they consider that the big farmers produce is sold fast in the market because of the favouritisim of officials towards big farmers. Hence, to avoid all the inconvenience they avoid selling the output in the APMC yard. But most of the medium farmers sell their produce in the APMC yard and have no such complaints against APMC yard officials.

In the dry village of Tamil Nadu too the farmers are not satisfied with the price they get for the output sold. Marketing is the biggest problem that they face. One of our respondent farmer stated that “ I bought onion seeds for Rs.48,000 besides that we did three times weeding and applied pesticide for seven times, but when we sold that we didn’t get the expected profit”. Some farmers strongly felt that when they buy inputs whether it is seed of onion or turmeric, pay triple time the actual cost but when we sell the price falls.

On the contrary, in the dry villages of Karnataka we found that most of the farmers have borrowed loan at high interest rate (3 per cent per month) to meet cultivation expenditures.
And, around 90 per cent of the farmers have borrowed from the middlemen. Therefore, it becomes compulsory for the farmers to sell the commodities as early as possible either to APMC or to the middlemen. Further, if farmers sell their produce to APMC through middlemen, to avoid the hassle in the APMC yard, they are expected to pay 3 per cent commission to middlemen for the commodity sold. This shows the existence of interlocked market\(^5\) in the region. It is not that the farmers are unaware of the negative repercussion on net income by participating in such a market. But, they are forced to sell their produce soon after harvest as they have to clear the wages to the labourer and repay the loan borrowed from input sellers and middlemen. In fact, these clearly show that farmers are compelled by the circumstances in which they find themselves. They are aware of the fact that if they do not sell their produce to or through the middlemen, then middlemen will not lend money for the next season. And such an act on their side may put them into serious trouble in undertaking next season cultivation. Therefore, there arises the gap between the actual income earned and the potential income of the farmers that results in fewer surpluses. Hence, the farmers are caught between a situation where they are deprived from proper price and income on one hand and also forced to settle their commitment towards repayment of debt at high interest rate on the other. The entire process makes the farmer to live at the mercy of moneylender (cum trader). The nature of livelihood in agriculture for the farmers of dry village portrays much similar picture of what is continued to be stated that “Indian farmer born in debt and dies in debt”.

The other problems faced by the farmers are low profit earning for the produce sold in the market. Increase in the cost of cultivation on the one hand and low price on the other leaves farmers with less scope to earn surplus. As farmers in Raichur don’t have market facility in the nearby area, therefore they sell the produce in the market to the middlemen. But, farmers to their surprise found wide fluctuations in the price of cotton this year, in the beginning the price of cotton was Rs.3,000 per quintal but later on in a few months it increased to Rs. 6,000. Therefore the farmers who sold their cotton at last received better profit than other farmers given the fact that this year the price was remunerative for cotton in the past four to five years. All these are evidence of market failure in the region. Therefore a farmer says that: “We must have raitru market, where we can sell our product ourselves”.

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6.7: NET INCOME OF THE FARM HOUSEHOLD

With changes in agrarian conditions, farm household in India seems to have been witnessing changes in their structure of income. Our field interactions with farmers indicated how wage income, remittance and allied activities are increasingly playing significant role in meeting household as well as investment needs. The role of wage in sustaining household economy of marginal farmers and income from remittance in supporting small and medium farmer economy is increasingly felt. The composition of income of farmer household from the irrigated region of Karnataka reflects the process of change and adaptation. Sericulture and cattle rearing have enlarged their scope of income generation from agriculture. Whereas, increasing contribution of remittance from their migrated educated sons are not only helping to support family income, but also have created better avenues of investment in agriculture.

The income received from remittance ranges from 50 to 80 percent of the total income of farm households in the irrigated villages of Tamil Nadu. The agrarian economy of irrigated villages of Tamil Nadu largely manifests features of “residual agrarian economy”, where the contribution of the agriculture sector is minimal. It is strange that the fertile Kaveri delta region famous for its three cropping seasons, Kuruvai, Thaladi and Samba, is now showing sign severe agrarian crisis. Except a few farmers with bore well irrigation, most of the farmers are not in a position to grow three crops in a year because of delay in the water supply from Mettur dam. Further, few times in a year canal irrigation is not available. As already discussed flood, pest attack and marketing failure are the major reason for the low profit generated by most of the farmers in the region.

Leasing-in is a key strategy to enhance income in the dry villages of Karnataka especially by the poor farmers. Agriculture still contributes to less than 50 percent of their total income. We found two sets of farm groups. First is least dependent on agriculture. This group grows subsistence crop to support their consumption needs and depends upon wage income for other livelihood needs. Whereas, the second group heavily relies on agricultural income and is quite vulnerable to the rise and fall of prices of their produce. This is also group, who undertakes cultivation of commercial crops at large scale. However, with the rising input cost, mainly wage bill and other input prices, their net income from agriculture is severely getting affected. Similarly, credit and product market imperfections also pose serious constraint on their profitability of the produce. Distress sale and loan repayment obligation immediately after harvest in particular are quite prominent in the region.
In the dry villages of Tamil Nadu, the analysis of income of farm households from all sources clearly gives the insights on changing contours of agrarian economy. The component of other income sources such as remittances, income from livestock products and wages play crucial role. There is a significant decline in the importance of crop income in the rural economy. The net income from farming is not sufficient to sustain their farming operations. On one side, there is severe market failures that keep the farmer tied to wholesalers and on the other hand the cash requirement in the cost of cultivation is increasing. Since the farm income forms about half of the total income of the household, the farmers seems to be managing somehow with such non-profitable enterprise. This is further compounded by the predominance of money-lenders (both institutional and non-institutional lenders). Borrowing is viable option if we assume or put pre-condition that the credit input of ‘X’ amount generates ‘X+ I’ income and the incremental income ‘I’ is sufficient to pay back the interest as also contribute to the net income generation. It is however a fact that this does not happen in the actual situation especially in rainfed farming and even sometimes in irrigated farming. That pushes the farmer into vicious a debt cycle.

6.8: VICIOUS CYCLE OF FARMERS’ INDEBTEDNESS

Farmers borrow with an expectation that they will be able to generate "Y = X + I" income out of the borrowed funds, say “X”. But actually the farmer generates income “Y” which is far lower than the expected income of "X + I". The inequality is $Y < X + I$ ... ... ... ... (1). This difference causes / contributes towards indebtedness. The burden of indebtedness is found to be severe in the irrigated village of Tamil Nadu and least in the irrigated Village of Karnataka. As the inequality given in equation (1) above is directly a function of formation of expectations by the farmers. In the irrigated village the debt burden is severe across all farm sizes, this should not be misled with the assumption that the high indebtedness is due to high income generation from agriculture. On the contrary, it is due to the high aspirations created by the farm households owing to the remittance send by their sons working abroad or who are in the informal economy. The share of borrowing for non-agricultural purpose primarily construction of house, sending sons abroad, social functions, education etc has overshadowed their borrowings for agricultural purpose. Hence, the high indebtedness of farm households is backed by the informal sector income. Some of the farmers opined that we borrow not to repay the debt through agricultural income but the income which we get from remittance. Non-repayment of debt and default rate is found to be high in the irrigated village of Tamil Nadu, still the loan do not perpetuate and take its miserable form of distress because majority of the loan is taken from institutional sources. We found most of the farmers gained benefit from the loan waiver scheme in 2009.
The dry villages of Karnataka represent extreme realities of rain-fed cultivation. Moneylenders or middlemen are the major sources for borrowings for the farm households. Almost all the farm households borrow from the moneylender, and interlinked credit market is a common reality of this village yet, farmers participate voluntarily in interlinked markets. And against the general perception of moneylenders as ‘the exploiter and cause of rural distress’ we found almost all the farmer portrays moneylender in a positive shade and consider them as the sole agency who helps them in the severe need of credit and because of whom they could undertake agricultural operation. Hence, the burden owing to high rate of interest or loss of profit by selling the crop soon after harvest is not taken as a serious issue. The dry villages of Tamil Nadu signify the condition of the irrigated villages of the state where the borrowing and repayment capacity is largely determined by the income gained from informal economy. Moneylender is one of the major sources of borrowing for the marginal farmer or the farmer without irrigation facility. Almost all the households have borrowed from Self help groups (SHGs), although SHG is a formal credit agency nevertheless gained criticism for the loan provided at high rate of interest (varies from 2 to 3 percent per week) thus the burden of repayment of the loans fall heavy.

6.9: CASCADING EFFECT OF INDEBTEDNESS

There are good numbers of studies India that have widely discussed the major issues in rural credit in general and agricultural credit for the farmers in particular (Satish, 1998; Golait, 2007). Though most of the studies talk about structure of rural credit and spread of formal credit, these hardly look into farmers’ dependence on informal credit sources (moneylenders). The increased dependence on informal credit outlets is evident in Tamil Nadu by 12 percent and 25 percent in the case of Karnataka during the past one decade. Presently 53 and 46 percent of the total credit requirement is being met by the informal credit agents. Although studies have cited indebtedness as the major contributory factor behind agrarian crisis over the recent decade (Parthasarthy and Shammem 1998), the nature of agrarian change has its roots in the nature of debt, often from multiple sources and at high interest rate which intensify the crisis for the farmers.

A major gap noted in the literature in the analyses of indebtedness is to understand the process of distress emergence. Authors seem to have ignored the multiple impact of borrowing owing to sources, purpose, interest rates etc. Which are crucial as far creating economic burden of debt in terms of repayment of loan and interest (or both) are concerned in relation to the income of the farm households. When it comes to the situation of individual farmer and the possible way the multiple borrowings could effect on increasing the intensity of debt burden we have
tried to bring out the framework of the *modus operandi*. And how farmer fails to repay the debt and remain in a state of perpetual indebtedness. The major reason is the kind of data available on credit and its various characteristics. The major data sources on farm credit based on sample survey i.e., All India Debt and Investment Survey Reports provides the major source of borrowing and purpose of borrowing, average amount of indebtedness, or the average amount of outstanding loan etc. But, beyond a certain limit, it is not possible to understand the phenomena of cumulative impact of indebtedness which is the real cause of the misery of a significant farm population.

In general, it is pertinent that their probability to borrow from multiple source of credit will be high in small and marginal farmers. Similarly, the share of informal loan tends to be high because of the lack of collateral or less bankability. Thus, it is evident that beyond a limit or a “threshold point” the vicious cycle of indebtedness could be decisive in pushing the farmers under severe distress. It also implies that most likely, it is the small and medium farmers who borrow more with the expectation to raise the profit from agriculture. Farmers borrow from one source and if that fund is insufficient they are forced to borrow from another informal source. If the generated income out of this investment is sufficient to pay back the loans or the installments then we can fairly say that the agricultural credit system is working effectively as expected and the farmers pay-off their loans regularly to borrow in the next season when need arises. But this does not happen and a “Cascading Effect” of the borrowing takes place.

Cascading effect’ could be defined as the automatic process of creating fresh loans in addition to the accumulation of number of previous loans either without paying the principal or the interest or both of the of earlier loans, Mainly an outcome of the inability of the farmers to repay. Tables 6.3 and 6.4 explain the "Cascading Effect" where if farmers have taken three loans in three periods, and borrowed different amounts for example Rs. 6000, Rs.3000 and Rs. 1000. Within five months if the farmer has not paid any principal for the first amount except the interest then the principal will remain unpaid and he would be required to pay Rs. 1500 towards interest in that period. Along with the earlier loan he raises two more loans. For the second loan he has paid around Rs. 200 interest but all these loans raised in different periods will put extra burden on the amount which he is supposed to pay.
Table 6.3: Cascading Effect

<table>
<thead>
<tr>
<th>SI No</th>
<th>Period</th>
<th>Loan Borrowed X</th>
<th>Interest Payable R</th>
<th>Repayment P</th>
<th>Loan Carried Forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I</td>
<td>X₁</td>
<td>R₁</td>
<td>P₁&lt; (X₁+ R₁)</td>
<td>X₁’= P₁</td>
</tr>
<tr>
<td>2</td>
<td>II</td>
<td>X₂</td>
<td>R₂</td>
<td>P₂&lt; (X₂+ R₂)</td>
<td>{X₂’+ P₁}+{ X₂’- P₂}</td>
</tr>
<tr>
<td>3</td>
<td>III</td>
<td>X₃</td>
<td>R₃</td>
<td>P₃&lt; (X₃+ R₃)</td>
<td>{X₃’+ P₁}+{ X₃’- P₂}+{ X₃’- P₃}</td>
</tr>
</tbody>
</table>

All Nᵢ Xᵢ Rᵢ Pᵢ < (Xᵢ+ Rᵢ) {Xᵢ’+ P₁}+{ Xᵢ’- P₂}+{ Xᵢ’- P₃}+ ... +{ Xᵢ’- Pₙ} +{ Xᵢ’- Pₙ}

Note: X – Borrowed amount; R – Interest amount; P – Payments made during the year; X’ – Residual Loan plus Interest; Here it is assumed that the income generated out of borrowed funds is insufficient to repay principal and interest.

Table 6.4: Cascading Effect with Example

<table>
<thead>
<tr>
<th>Period of taking debt</th>
<th>Due payment of principal and interest</th>
<th>Amount of credit</th>
<th>Months</th>
<th>Principal Repayment</th>
<th>Interest payment (5%)</th>
<th>Total amount to repay</th>
</tr>
</thead>
<tbody>
<tr>
<td>L₁</td>
<td>P₁ + R₁</td>
<td>Rs 6,000</td>
<td>January</td>
<td>None</td>
<td>300 x 5 (until June)</td>
<td>(6000)+ 1500</td>
</tr>
<tr>
<td>L₂</td>
<td>P₂ + R₂</td>
<td>Rs 3,000</td>
<td>April</td>
<td>None</td>
<td>100 x 2</td>
<td>(3000)+ 200</td>
</tr>
<tr>
<td>L₃</td>
<td>P₃ + R₃</td>
<td>Rs 1,000</td>
<td>June</td>
<td>None</td>
<td>-</td>
<td>(1,000)+ 0</td>
</tr>
<tr>
<td>Lₙ</td>
<td>Pₙ+Rₙ</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Accumulate loan</td>
<td>(P₁+R₁)+(P₂+R₂)+(P₃+R₃)+ ... + (Pₙ+Rₙ)</td>
<td>Total 10,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11,700</td>
</tr>
</tbody>
</table>

Credit per-se is not a problem in itself. In fact it helps the farmers to undertake productive activity and to meet various expenditures when their sources of incomes are not enough. But inability to repay the credit back in the specified time joins the Cascading Effect and it is a sign of stagnation. It hampers growth by diversion of resources towards unproductive purpose (such as repayment of interest). The inability to repay a single loan even though do not put farmer in a situation of distress but the ‘cumulative’ nᵢ numbers of Cascaded loans along with interest certainly does. Many times a farmer does not find himself in a position to repay interest amount let forget the principal amount. On the other hand, the lenders insist to pay the interest on time as it acts their prime sources of income. The real problem lies in the interest amount, which has the tendency to increase compounded until the principal amount is not paid fully. Hence, with the low income generating capacity, it becomes difficult for a farmer to repay the principal as well as interest in due date. This puts the farmer literally with no surplus or a little surplus in hands which is neither sufficient to meet the productive expenditure not the consumption expenditures. Paradoxically, many a time a farmer goes for a new loan to repay the already existing loans. It becomes near to impossibility for a farmer to come out of the perennial problem of indebtedness as well as the resultant distress.
There need on further emphasis on the statement that credit plays important role to undertake productive activity or to meet consumption expenditures when farmer run short of their own finance. It plays facilitating role. However, it is important to note that if farmer is unable to repay the loan due to crop loss, low profit etc., it adversely affects his economic condition with increasing burden of loan and accumulating interest. Often, such a condition leads to going for again fresh loan to get rid of previous loan without any improvement in his earnings. This in fact results in “cascading effect of indebtedness”. Here, we explain the process of farmers getting indebted through Cascading Effect, factors restricting farmers to come out of the burden of indebtedness, and its overall impact on the farmer’s economic and social condition.

In the villages we investigated, we found a few farmers with cascading indebtedness. Among those we have taken a case study of a farmer typically representing the very process or operational mechanism. This help us to critically analyse the circumstances which forces him to take various loan generally at high interest rate and the adverse effect of such borrowing on the his household. Table 6.5 shows, one of the sample farmers engaged in borrowing of credit at different point of time from almost six sources. In a period of eight years, he could able to pay a part of one loan. But in the entire period, the other loan remained unpaid and accumulated to Rs. 3.8 lakhs. And, he paid above Rs. 3 lakhs towards interest and the unpaid interest rate is
Sanmugham, an owner of a small grocery shop in his town, bought six acres of land eight year ago with the hope that it will help him in generating additional source of income from agriculture. Even though not having enough money in the hand, he ventured into purchasing of land. And for settling this land deal, he borrowed Rs. 2 lakhs from his relatives. He, in particular, emphatically stressed that with purchase of land his fate had already taken him on board of perpetual indebtedness.

Soon after the land purchase, he was greeted with several problems unimagined. The quality of soil (*saul mannu*) was poor in nutrient contents. Moreover, it needed leveling and smoothening to arrest further soil erosion. He also realized that unless he replace the top soil with good soil and invest in land leveling, there were no chances to get better yield and profit. He looked for a loan of Rs. 50,000 but managed to get only Rs. 25,000. He invested it for replacement of top soil with that of good quality and leveling of 3 acres of land and the rest 2 1/2 acre land left fallow. Even though, his initiatives gave him better yield for his crop, he was not able to fully utilize his land both under cultivation and that left fallow due to insufficient water. On one hand, the income generated through agriculture was so inadequate that he was in no position to repay his debt. He felt quite humiliated. To come out from this, de-silting and deepening the existing well appeared to be the only promising way out. For this, he again borrowed Rs. 25,000 from his father-in-law to invest into it. He was still hopeful and believed that this investment will pay a way out to repay his entire loan and also generate sufficient profit to support his family. But to his despair, it is now 10 years he is still leaving under debt burden. Every year it is extremely difficult for him to pay even the interest for the amount of loan outstanding.

It is not that he didn’t undertake high value commercial crops to earn sufficient profit. He in fact, in the past 7 years went for cultivation of sugarcane, turmeric and paddy. But some or other issues dropped in and ate away his profit. For example, in the when he took decision to cultivate turmeric, when price of turmeric during sowing season was attractive. Hence, he took a loan for cultivation as it required handsome money for the purchase of inputs. But when actual time of harvest came, he was shocked to see prices at floor. Even though he waited for a month, prices did not go up. Finally, to settle his outstanding interest payment towards loans he had to sell the produce at lower prices. Even in the case of marketing of sugarcane he faced undue delay in settling his dues. In previous year, he kept sugarcane in 3 acres of land. For which he spent around Rs.70,000/-. Overall he received almost lakh rupees for his produce. Even after four month have passed away he is still to receive unsettle amount of Rs. 20,000/-. Not only these, he also pointed out that how it becoming more difficult for him to cope up with increasing cost of cultivation every year. Now he has to borrow large amount for agricultural operations. This was not the case when he entered in agriculture. In the end, he aptly summarizes the state of farmers. He says “we are surrounded by so many risks and agriculture if not a gamble, is certainly a mirage. It shows us a hope when prices are high and some farmers report us handsome profit. We run behind, borrow and invest only to come out of debt cycle. This is also like we keep betting every time in the hope of winning even though we are losing, thinking next game will be ours. Some consider themselves fortunate if their sons working in non-farm activities, providing monetary support for the household expenses”.

above Rs. 70,000. Thus it is a perfect example of how indebtedness when not repaid behaves as a process.
Table 6.5: Borrowing, Repayment and Income Pattern of Sample Farmer (Mr. Shanmugham) from all Sources

<table>
<thead>
<tr>
<th>Number of Period (Months) for which Money Borrowed</th>
<th>Amount (in Rs.)</th>
<th>Purpose of borrowing</th>
<th>Principal Amount Paid (in Rs.)</th>
<th>Interest Amount Paid (in Rs.)</th>
<th>Accumulated interest Amount (in Rs.)</th>
<th>Amou nt of loan outstanding</th>
<th>Farmer's Net income from all sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>80</td>
<td>House construction</td>
<td>2</td>
<td>0</td>
<td>19.2</td>
<td>19.2</td>
<td>80</td>
</tr>
<tr>
<td>84</td>
<td>200</td>
<td>Purchase of land</td>
<td>2</td>
<td>0</td>
<td>288</td>
<td>48</td>
<td>200</td>
</tr>
<tr>
<td>6</td>
<td>50</td>
<td>Agriculture expenses</td>
<td>2</td>
<td>20</td>
<td>4</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>12</td>
<td>25</td>
<td>Crop loan</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>12</td>
<td>20</td>
<td>Levelling the land</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4.4</td>
<td>20</td>
</tr>
<tr>
<td>84</td>
<td>25*</td>
<td>Digging well</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>25</td>
<td>-</td>
</tr>
<tr>
<td>All -</td>
<td>400</td>
<td></td>
<td>2</td>
<td>20</td>
<td>311.2</td>
<td>74.6</td>
<td>380</td>
</tr>
</tbody>
</table>

Note: * Rs.25000 loan was borrowed from the relative by the farmer 7 years before and it is an interest free loan.
Source: Primary Source
Note: Accumulated interest is the interest which the farmer is supposed to pay from the day of raising a new loan

6.10: CONCLUDING REMARKS

Overall, our analysis of case studies clearly brings out that the villages in irrigated regions of Karnataka still continue to be predominant agricultural economy as income flow is regular and there are not many risky years. There is emergence of allied agricultural activities and these are increasing at a good speed. There seems to be some transition visible between the two separate pictures. On the other side, the villages in irrigated regions of Tamil Nadu have already undergone this phase and turned agriculture as a secondary or residual activity. The allied economic activities are taking a dominant role in these villages of Tamil Nadu. Dry villages of both states have continued with predominant agricultural economy but the out migration of agricultural labour and ultra-marginal farmers continues. This phenomenon has changed the agrarian structure and production relations in the villages. The remittances from the family members staying in cities and seasonally migrants continue to push the economy of the villages. This has led to increasingly presence of high age group workforce in agriculture. Wage income now forms significant share of income of marginal farmers, whereas remittances for small and medium farmer households. Besides, increasing cost of cultivation, product and credit market failures are widely present in these regions and continue to pose severe threat to their profitability.

In changing agrarian conditions, marginalisation comes out to be one of the prominent threats to the economic viability of farming. Similarly, sub-marginalisation or near landlessness is progressing very fast in both irrigated and dry regions and states. This has emerged to one
among the important threats to the farming occupation. The indebtedness among selected farmers largely appears to be falling on well documented reasons of crop failure, and imperfections in product and credit markets. However, the increasing influence of market forces in the decision making of farmers with less support from formal credit sources seems to have provided such momentum to perpetual indebtedness and reinforced by process, called the Cascading effect. Its manifestation particularly is quite strong among marginal, small and medium farmers of dry regions of both the states.
ANNEXURE 6.1

Case 1 (Irrigated Region, Tamil Nadu)

Murugan owns an acre of irrigated land in the tail end region of Cauvery Delta River. He cultivates Samba Paddy (one seasonal rice crop) as the major crop and grows black gram as a residual crop. The region is primarily dependent on the Cauvery river water for irrigation and the availability of water is dependent on various factors such as, the onset of southwest monsoon rains, inter-state water dispute and the opening of water from Mettur dam. Water for irrigation is only available for few months. Therefore, he needs to adjust or reschedule the cultivation accordingly with consequential risks to bear. Due to the lack of availability of other sources of irrigation such as borewell, he always faces scarcity of water for undertaking agriculture operation both at the initial and later stages of cultivation.

In the last season, due to poor yield from both paddy and black gram crop his returns were very meager; the net income was just Rs. 4000. Earlier groundnut crop was cultivated in the region, but a now days nobody cultivates groundnut in the locality because the fertility of the soil has declined. The persistent use of fertilizers and pesticides has affected the soil fertility and new varieties of weeds have come up. There have been no significant changes in agriculture practices especially in the use of labour. Earlier we have used our own seeds but now we need to depend on the seed market. He has taken a loan of Rs. 35,000 form cooperative society by mortgaging 40 gm of gold jewel and utilized the money for raising the crops. Since the crop yield was poor, he was not able to repay the loan amount. But, he is not entirely dependent on agriculture for his livelihood. For survival, he and his wife work as labourer in the village and earn Rs.3000 and Rs. 2000 per month respectively. Another source of income for him is from rearing goat, they have some ten units of goats.

For him agriculture is like a gamble. If the climatic conditions are favorable he is able to generate some profit otherwise it is in loss. Last year too he suffered a huge crop loss. In most of the years it is difficult to reap the investment made in agriculture. He feels “now a days agriculture has become a costly affair, the cost of inputs has increased drastically; besides at the peak time even labour charges goes up to Rs.500 per man day. The income generated from agriculture is not sufficient to sustain the livelihood. Most of the farmers are willing to opt out off agriculture and the new generation is not at all interested in taking up agriculture”.

Case 2 (Irrigated Region, Tamil Nadu)

Kuthaperumal owns less than an acre of land in the tail end region of Cauvery delta region. His prospects from agriculture seem to be bleak. It is very difficult to employ labour, as the wages have increased from Rs.200 to Rs.250 and in addition to the wages, he needs to provide refreshments like tea, vada etc to induce laboures to work, yet times even alcohol. Earlier the situation was better and there was no need to pay anything extra above the wage rate.

Three years back, he had taken a loan of Rs. 20,000 for cultivation purpose, of which he has paid the interest Rs. 5000, and the principal amount is still pending. Apart from that, he has even taken an educational loan of Rs.40000 for his son for which he had paid Rs. 1,500 towards interest. Whenever he is in need of money or any monetary commitments to fulfill he migrates to Kerala to work at a construction site where in the wages are comparatively quite high compared to Tamil Nadu and works for few months to pay the debts from the earnings. For him agriculture is becoming a burden. He is not able to sustain his livelihood solely from agriculture and has to take up labour work to run the family. He always faces scarcity of funds.

Case 3 (Irrigated Region, Tamil Nadu)

Mr. Natrajan has an ancestral land of five acres of irrigated land in Cauvery delta region. He is highly indebted farmer. He has taken loan from both institutional and non-institutional sources. He undertook cultivation year after year with the hope that, he would be able to generate good income and would be able to pay off the debts with the returns but his plans went contradictory and found himself with higher debts. For instant, in the last season, the cultivation of paddy crop cost him Rs.47,000. However, he just received Rs. 50,000, a net profit of Rs.3,000. On the other hand, cultivation of Gingelly crop cost him 15,000, but he could get income of Rs.17,000, a meager income of Rs.2,000. In total, the net profit from these two crops was around Rs.5,000. He feels if he had to take into account all expenditures such as the family labour there was not profit out of the crops. He has outstanding loan of near about four and half lakh rupees from various banks such as lead bank, cooperative society and SBI. Out of which he was able to pay only the interest of SBI loan and the principle amount is still pending. He has taken the loan for agricultural and irrigation purposes like digging bore-well, getting electrical connection and creating infrastructural facilities in the land etc. In addition to this outstanding loans, he also has taken a loan of Rs.25,000 for setting up dairy.

Apart from his agricultural expenditure, he has invested substantial sum of money on his children’s education. He has three children, two daughters and a son, the son is studying BE course in a private college, one of his daughters.
is studying undergraduate course and the other daughter is studying in school. For his daughter’s education he has taken an educational loan of three lakh and Rs.60,000 form SBI for which he has already paid the interest of Rs.40,000 and for his son’s education his maternal uncle has extended help by giving two lakh of rupees, which the son has to repay on getting the job. He has worked in Qatar for 12 years and returned back to be with the family and to look after the agriculture. From last 30 years, he is engaged in agriculture. He has invested considerably on infrastructural developments of the agricultural land with the hope that his prospect will improve and he would also be able to generate good income for agriculture. But things were not as expected for him with every passing of year, he has accumulated debts due to low return from agriculture and constant crop loss.

He feels his soil is fit for only cultivating paddy and residual crops and he cannot grow other crops. He is facing lot of agricultural problems. Earlier labour supply was more and wage rate was low therefore much of the surplus was there in agriculture. Now it is very difficult to find labourers to work in the fields though the wages has gone up considerably. He feels it is due to MGNREGA and also migration to town in spite of low payments. We need to bring labourers from far off places as far as 30 km away and need to bear the transport cost which come to be around Rs.1,500. In addition, we have to provide tea and snacks. These days people think low of agriculture. He feels that he has provided good education for his children and if he is not able to repay the debts he would sell the land and would settle the debts. He is not very optimistic of future generation to undertake agriculture.

Case 4 (Irrigated Region, Tamil Nadu)

Mr. Vayyadurai is a small farmer and he owns five acres of land. The geographical location of his land is suitable for cultivating only paddy crop. He grows three seasonal paddy crops in a year. His net profit for each season is Rs. 15,000 and the yearly profit turns out to be Rs. 45,000. He feels that lot of changes has taken place in agriculture. Earlier we were dependent on animal power which is now been replaced by machines; so in the case of manures with fertilizers. The wages have increased considerably and so the cost of cultivation. Apart for that, his own expenditure pattern has changed; he need to spend more on luxuries and the cost of living has increased. Earlier farmers were respected with high esteem but now days nobody respect them because their economic status has come down. There was a popular saying that farmers are the backbone of the country but now there is no spinal cord itself. The cooperation among the farmers has declined.

He has taken crop loans of Rs. 48,000 from SBI in 1996 and Rs. 48,000 form cooperative society in 1994 and defaulted on both the accounts. To marry off his daughter he sold ten acres of land and utilized the loan taken in 1994 from cooperative society. He feels that government’s loan waiver has prompted him not to repay the loan. The government is responsible for creating a mindset among the farmers not to repay the debts taken for banks to utilize the loan waiver scheme. But if he would be pressurized to repay the debts he would sell off the land and pay his debts.

Case 5 (Irrigated Region, Tamil Nadu)

Mr. Gajapathisakthivelu owns 20 acres of irrigated land in Cauvery delta region. He is engaged in agriculture from last 25 years and cultivates Paddy, Black gram and groundnut crop in his land. The cropping pattern is the same since he has undertaken agriculture, the geographical location of the land is suitable for these crops. He considers that being a farmer he had spoiled his life. He has to face lot of adversities. For him indebtedness is the biggest among them. He feels ‘nobody wants to pay interest and prolong the indebtedness but lack of profit is the reason for that’. Many farmers in the region are part time farmers and some have even sold their land. Due to subsequent loss in agriculture, they send their sons abroad to repay their debts and to earn money. He himself was in severe indebtedness in 2006. At that time, his debt was around five lakh rupees, but somehow he had repaid the same. Now days it is difficult to predict climate and it has changed a lot. The pest attacks have increased, the incessant rains and prolonged dryness has worsened our misery, apart from the insufficient water for irrigation from the river. In the last four to five years the price of inputs of Seeds, Urea and DAP has increased many fold besides the wages. In the last season he suffered crop loss on paddy crop and his expenditure was Rs.1.3 lakh rupees but he was able to sell the produce only for Rs.80,000. He suffered a net loss of Rs. 50,000. The prospects of good yield from groundnut and black gram crops in three acres of land are bleak due to delay and insufficient water supply from the Cauvery river.

For cultivating crops he has taken loan from SBI and cooperative society to the extent of two lakh rupees. Out of which Rs. 40,000 was from cooperative society against 160 gm of gold jewel. He has cleared off his earlier debt of one lakh rupees in cooperative society with the profit earned in that year. Whenever he is short of funds or he need to do important agricultural expenditures, he often has to turn towards moneylenders who charge interest between 36 and 60 percent per annum.

Marketing paddy produce is one of the common problems faced by the farmers in the region. To sell the produce to traders is not lucrative; the price given by them is lower than the MSP. The MSP should be increased so that we can get some profit. The government has opened DPC’s (Direct Procurement Centers) in the villages to procure paddy form the delta farmers, which are very beneficial for the paddy growing farmers. There are some defects in functioning of the DPS, if the moisture content of the paddy is above the prescribed limits then Rs.10 is deducted for
each bag (60 kg) of paddy and by citing this reason the employees exploit us. Moreover, in some instance the DPC official buy paddy form non-delta region at lower price and sell as the procurement from the delta region and cheat the farmers. He runs his family with minimum subsistence expenditure and sometimes even cannot afford the basic requirement of food expenditure. He does not want his children to take agriculture as a profession, even if; they have to take some meek jobs.

Case 6 (Irrigated Region, Tamil Nadu)

Mr. Ramamurthy worked in the primary health center as nurse with Rs. 12,000 per month; he invested his entire earnings in agriculture. Now he owns 15 acres of land in the Cauvery delta region and cultivates two seasonal paddy crops and residual crops black gram or green gram. The climate is suitable for these crops because the region receives continuous incessant rainfall for two months in the paddy cropping season. He feels that in last 30 years the cropping pattern has changed significantly due to mechanization and adoption of new technology. He has become more market oriented from self-sufficiency, new types of presets and weeds that has come up. The profit from agriculture has declined considerably due to the increase in the prices of inputs, which did not reflect in the prices of the output, which has remained somewhat stagnant.

Because of increasing cost of expenditure, people are not willing to be in agriculture. In agricultural peak season he always faces scarcity of labourers and he is not able to get the worker in right time which hinders the agricultural operation. There are certain agricultural operations, which has to be done by manual labour and cannot be replaced by machinery. Earlier, during the green revolution period, the extension officers from agricultural department used to guide us on methods of cultivation but now nobody comes from the office. He is facing erratic supply of electricity; electricity is available for only two hours in a day, which is not sufficient to irrigate the fields, so, he has to leave some of the land as fallow. Earlier there was no scarcity of laboures since the bounded labour system was prevailing. Some ten years back he himself had kept some bounded-labourer in his land, belonging to Ramanathapur and Pudukkotai district, at that time he did not face the problem of labour shortage.

He has taken a loan of six lakh rupees from SBI two years back, the loan period is for nine years, he has to pay the principle and interest twice a year. He has paid two dues of Rs. 90,000 each. He has repaid the crop loan of Rs. 50,000, which he has taken from PACS. Apart from these loans, he has taken a jewel loan of Rs.60,000 form SBI against 48 gm of gold jewel for cultivation purpose. Arranging money is not a problem for him whenever he is in need of money he get monetary help form one of his brother who is employed in Singapore. The biggest problem he faces in agriculture is due the scarcity of electricity and shortage of labour. He gets the agricultural inputs such as fertilizers, seeds and pesticides from the local input sellers and settle the amount after harvest. He prefers to sell his paddy produce to the local trader who used to collect the paddy from his fields rather than to the DPS at lesser price because of convenience.

Case 7 (Dry Region, Tamil Nadu)

Mr. Palani is a marginal farmer, living at the outskirts of Dharmapuri district of Tamil Nadu. He has two and half acres of land in which he cultivates sugarcane and paddy crops in each acre of land. In the remaining half an acre, he cultivates fodder for his cows. To increase his prospects of earnings from agriculture, in the last five years he has spent a considerable sum of money in developing infrastructure in the land by digging a well, levelling the field and use the fallow land for cultivation of fodder.

In the last cropping season, he earned a net profit of Rs. 15,000 from sugarcane for which the expenditure was around Rs. 30,000. His paddy harvest was 20 bags, which he reserved for household consumption. He has a cow, which provides him a monthly income of Rs. 1,000 to support his minimum livelihood expenditures. The earning from agriculture is not sufficient to meet his family expenditures. Moreover, he has to look after the educational expenditures of his three children, which has become increasingly beyond his means. Against all odds, he is providing education to his children, as he does not want them to take up agriculture as a profession.

He feels that earlier in the joint family system all family members work in the field, so requirement of labour was less and we were self-sufficient and agriculture was profitable. Even when they suffer crop loss the burden was not so severe. But now things have changed due to the disintegration of joint family system. Today, we are dependent on the market entirely for labour and inputs for which the wages and input cost have increased considerably. Due to the implementation of MGNREGA the wage rate has gone up and we are facing scarcity of labour. It is very difficult to generate a surplus in agriculture, if now we face crop loss; it will take three-four months to overcome the loss.

He has taken a loan of Rs. 10,000 from SHG, at the interest rate of 24 percent, which he has to repay in ten instalments of Rs. 1,000 each along with the interest. He feels he had paid six instalments promptly but now he is facing difficulty, so he has reduced the EMI to Rs. 500. He has also taken a loan of Rs. 20,000 from one of his relative at the rate of 24 percent interest towards medical expenditure and he has not repaid it yet. And again for the children’s education in the current year he has to lookout for some loan.
He feels because of problems and difficulties in agriculture farmers are not interested in agriculture and are moving out to cities to meet survival and livelihood needs. It is true also in the case of agriculture labourers, who find enough employment avenues in cities and prefer to work in less physical labour requirement jobs. For him agriculture is becoming unsustainable and he is entirely dependent on the earning form livestocks’ to meet the household consumption expenditure. He sees a very bleak prospect in agriculture in the future. If his expenditures and indebtedness go beyond a limit he has no option but to sell the land. Land is the only livelihood asset, which he possesses, and if once he sells it, then it would be difficult to manage the living and cannot again create the asset.

**Case 8 (Dry Region, Tamil Nadu)**

Mr. Kasi is a marginal farmer and owns 1.5 acres of land, of which hardly 20 cent of land has assured irrigation facility. When he was in a joint family, he had substantially large agricultural land but later due to the division of land amongst his five siblings, he inherited only a small piece of land. Earlier, he used to cultivate beetle leaves and paddy but, after the division of land he changed the cropping pattern to cotton and tapioca crops which require less irrigation and can sustain drought. The well water is shared among his five brothers; available to each brother for half an hour in a day and is not sufficient to grow crops like beetle leaves and paddy. So Kasi shifted his cropping pattern which now fetch him less profit than earlier.

He feels the cost of inputs has increased, for instance; the cotton seed price has increased from Rs. 700 per Kg. to Rs. 1,000. Similarly, all other input costs have also increased. Labourers prefer to do contract works (removing weeds, preparing fields etc.) in the land and demand Rs. 3,500 for half an acre do a particular nature of work. He is facing difficulties in meeting the household expenditures and regularly goes for wage labour. He laments about his critical financial condition, once he could not even buy grains and pulses from PDS shop. A few months back, he even sold two tamarind trees to meet his expenditures. His family consumes PDS rice, which is low in nutrition and of bad quality, earlier the situation was not like that they use to consume good diet food comprises of grown rice, cereals and pulses.

In the last cropping season, he suffered a crop loss, he cultivated cotton crop and incurred a loss of Rs. 2,500 due to delay in sowing seeds. The cost of cultivating an acre of cotton is Rs. 7,500 and he was able to harvest cotton for Rs. 5,000 only. Generally, he cultivates cotton or tapioca depending on the current market price, if the current market price is good for cotton crop he goes for cotton cultivation with the expectation that the future cotton price would be favourable. He feels lack of irrigation is the prime reason behind growing rain-fed agriculture and subsequent crop loss.

He has an outstanding housing loan of rupees four lakh which he has taken some eight years back. Apart from that he has a jewel loan of rupees one and half lakh in a cooperative society for which, he is paying an annual interest of Rs. 3,880 and renewing it every year. Furthermore as a relief, he got a loan waiver of Rs. 20,000 under central government loan waiver scheme. Recently, he has taken a credit of one and a half lakh rupees from one of his relatives at the rate of 36 percent interest per annum, which is also outstanding. He opines that people in need of money borrow even at 60 percent interest rate per annum. It is because his one son is working as a lorry driver in the city and sends monthly remittance, which helps him to somehow manage the living expenses, and towards meeting the interest payment of the loan.

**Case 9 (Dry Region, Tamil Nadu)**

Mr. Mani is a small farmer in Kallangam village of Dharamapuri district. Some forty years back he bought four acres of land from his mother-in-law out of which one acre land has the irrigation facility. Since he bought the land, he started cultivating rain-fed crops like coarse cereals and groundnut. A year back, he has invested four lakh rupees in deepening his well to cultivate cash crops and increase his agricultural prospects. After deepening the well he was able to cultivate sugarcane crop in the current season. Until now, his expenditure on raising sugarcane crop is Rs. 60,000 and if nature and the market price is favourable to him, he is expecting to get a profit of around 1.5 lakh rupees.

Before the implementation of MGNREGA, wages were very low and labourers were available in abundance but now the situation has changed a lot. Earlier, he used to keep bullocks, the revenue generated from bullocks were sufficient to run the household expenditure. But, due to increase in the rearing cost in terms of fodder he sold the animals. He feels that government schemes have benefitted all sections of the society but has badly affected the agriculture. To run his household and other consumption expenditure he has to depend on the revenue from the sale of milk and whenever there is no work in the field he goes for mason work.

He has a debt of four lakh rupees, which he borrowed for deepening the well and for electrical connection. He has taken a loan of two lakh rupees from a cooperative society against mortgaging gold jewels and another one and half lakh from the moneylender at 24 percent interest rate per annum. Apart from that, he has borrowed Rs. 50,000 from one of his relative to get electricity connection. He is required to pay Rs. 35,000 as interest for the loan taken from
the cooperative society, but he is able to pay only Rs. 12,000; whereas the principal amount remains unpaid. He feels that income is low in agriculture because of the un-remunerative prices of the products.

**Case 10 (Dry Region, Tamil Nadu)**

Mr. Raju is small farmer from Ugrana halli village of Dharamapuri district of Tamil Nadu. He has three acres of dry land and he cultivates rain-fed crops like Ragi, jowar, Pulses and Tur. For him, there are no much changes in cropping pattern. In addition, to the coarse cereals from the last ten years he is cultivating (Palma Rosa) a fragrant grass, which is drought tolerant crop and fetches good profit. The price per-kg of grass is around Rs. 2,500. This crop grows well under rain-fed conditions and generates handsome profit. Earlier, when the wage rate was low there was some surplus but now the wage rate has increased, we are left with no surplus. Similarly, there were more number of members in the family, hence the whole family did most of the work in the field, and there were no requirement of external labour. Moreover, he use to sell the produce to the traders in the village itself. Now, the cost of cultivation has increased due to increase in rent of hiring a tractor for tilling the land, the price of inputs such as fertilizer has increased, so he is left with no surplus.

The climate has changed, earlier he opines that he use to get three rains a month but now if it rains even for a month also, it will be beneficial for agriculture. Earlier, he did not apply fertilizers and pesticides but now he is quite dependent on it. There are many problems associated with the application of fertilizers, the fertility of the soil has declined and if after applying fertilizer, rain doesn’t come it will burn the plants. The most important obstacle in agriculture is lack of rain. In the last two-three years, due to paucity of rain, crops didn’t grow well and he incurred losses.

Those farmers who have well and good irrigation facility, undertake agriculture properly; but for the rain-fed farmers the scope is very less. Agriculture is not profitable for farmers like him; he has to depend on another source of income for his livelihood and even to meet food expenses. In the initial stage of crop growth, there is an abundance of rain but in the later stages when water is required more there is no rain at all. He feels since he does not have irrigation facility, he shifted towards cultivating grass crop, which requires less rain, but even the minimum required rain is available many a times.

**Case 11 (Dry Region, Tamil Nadu)**

Mr. Ponnuswamy is economically strong and progressive medium farmer in the Sogathur village of Dharamapuri district. He owns 5.5 acres of land in which four acres have irrigation facility. He cultivates paddy, groundnut, onion, cotton and sugarcane crops. He feels, there has been not much change in cropping pattern over the years, he grows the same type of crops. For the past few years he has started cultivating a double BT variety of cotton which is less prone to pest attack and so the expenditure on pesticides is less. Similarly, he has undertaken cultivation of (floriculture) flowers and vegetable in a small plot of land. He uses only hybrid variety of seed for cultivation, since the yield through HYV is good. He feels his cropping pattern is guided by the motive to earn profit, and he accordingly changes the combination of crops. He keeps the paddy harvest for household consumption.

Last year he has earned a net profit of one lakh rupees from good yield and price of onion crop. Some seven months back he has even bought a nearby agriculture land for four lakh rupees, one lakh rupees is due, which he needs to repay and he has also bought a plot for two lakh rupees. He arranged money for purchasing the assets largely from his savings and by mortgaging 160 gm of gold jewellery. Earlier, he used to access credit from cooperative society and three years back, some of his loans were even waived off, now the cooperatives society is refusing to sanction new loans. Whenever he is in need of money, he borrows money from individuals on interest and repays it out of the profit from agriculture. He grows (chrysanthemum) Sampange flower which gives him a regular income of Rs. 1,500 per month, which he utilizes for paying the interest.

He feels he himself work in the field, therefore he gets some profit. He also faces a scarcity of labour during the agricultural operations due to the functioning of parallel wage labour work under MGNREGA, which delays some of the works and ultimately affects his income. Earlier, the wage rate was low but now it has increased to double. Nearly half of the cultivation expenditure is mostly on labour. Previously, he used to grow traditional varieties of crops but now HYV. The biggest problem in agriculture is the scarcity of labour, which has aggravated by MGNREGA. The labourers demand higher wages and work for less number of hours. If the situation persists, it would be difficult for him to repay his loans.

Marketing products is also one of the most important problems faced by farmers. The government should fix the price because of price fluctuations, farmers are suffering and don’t get proper price for their produce. Due to lack of storage facility, he is compelled to sell the product as soon as it is harvested. The cost of cultivation has increased drastically and it is difficult to manage agriculture. In the current agricultural scenario, the average number of members in farmer family has declined. Besides, members opt to get employed in some jobs and stays outside and earn. Hence only a few people remain in agriculture, therefore, the dependence on external labour has increased.
Case 12 (Dry Region, Tamil Nadu)

Mr. Raja has seven acres of land out of which some three acres have irrigation facility and one acre is fallow. Earlier he used to grow groundnut, sugarcane and coarse cereals. For the past four-five years, the rain was not sufficient. But, in the current year the rain is good and hence got some water in the well. Until 2001, he cultivated sugarcane and paddy in one acre of land besides coarse cereals. Afterwards rain was not sufficient; therefore, he started cultivating tapioca, which is drought resistant crop. Lack of proper irrigation facility and scarcity of rain has resulted in less area under cultivation.

To increase his area under cultivation he had invested substantially in levelling the land. Thereafter, he was able to extend cultivation in four acres of land, which otherwise left fallow before levelling or grow some coarse cereals which gave him low yield. To increase his income prospects and to generate profit, he experimented with growing different varieties of crops like groundnut, paddy, Ragi, Sami and tomato. He got profit of Rs. 5,000 from groundnut and Rs. 2,000 from samai crop. But, he suffered loss of Rs. 2,000 on tomato crop due to unseasonal rains.

He feels expenditures has increased and profit has declined, even under these circumstances he cannot leave agriculture because he does not have any other option. He feels, that he does not engage large numbers of labourers and he himself does most of the work in the field. Lack of irrigation and rain is the biggest problems in agriculture. Under the government’s loan waiver scheme, his loan was waived off but the bank employees betrayed him and took the money away. Therefore, he does not have faith in the bank and does not go to the bank for credit. He has a pair of bullocks and a cow but he is facing difficulty in managing it and providing fodder.

Case 13 (Irrigated Region, Karnataka)

Puttuswamaiah is a marginal farmer, he owns two acres of land and along with it he has leased in 1.5 acre of land to earn more and maintain extra expenditure. His has two sons, one son is working in a garment factory in Bangalore and earns Rs. 5,000 per month, and the other son is in school. His two daughters are married. His land has sufficient irrigation through canal water and he also has a 310 feet depth bore-well, which he has dug recently, but he feels it is of no much use. His cropping has remained the same; he cultivates Sugarcane in two acres, Paddy in 1.5 acre and Ragi in the remaining 1.5 acre. He has not changed the cropping pattern since these crops gives him better income. He earns Rs. 15,000 per year from subsidiary activities like, income from milk by rearing a cow and buffalo, a pair of bullock to plough land.

He always plant good qualities of HYV seeds bought from market, and apply both manure and fertilizer but the proportion of manure has declined and the proportion fertilizer has increased. He feels he use bullocks to plough land all the family member work in the field. During agricultural season there is shortage of labourers and they are not available in the required time. The wage rate for male is Rs. 200 and in addition to it they need to be give food two times in a day. He sells his produce to local traders since it is difficult for him to transport it to market at some lesser price than the market price. The crop yield from Sugarcane has increased earlier the yield was 30 tons per acre but it has increased to 40 tons per acre. The Sugarcane factory is located nearby so, it is convenient for him to sell the output and the price received is remunerative. Due to increase in the usage of fertilizer, dependence on labourers and purchasing seeds from market the overall cost of cultivation has increased.

He has no problem in getting crop loan from bank, he is availing loan from bank from last 20 years and prompt in repayment and renew it whenever he is in need of money. Recently he has taken a crop loan of Rs. 30,000 and if he needs additional money he has some gold jewel against which he can avail more loans. He feels as nobody in his family is in government job and there is no regular source of monthly income under this circumstances agriculture credit very important for farmers because they need to buy fertilizers and inputs and apply it in right time. Earlier mutual labour exchange was practiced in the village so there was no shortage of labour. But now the practice has disintegrated and we are facing scarcity of labourers. If there is no flood or crop loss and supply of water in canal is good agriculture is profitable. He feels it is difficult to understand the problem of farmers, the nature of work in agriculture is like that they don’t get time even to take food at right time and sometimes they need to postpone the food.

Case 14 (Irrigated Region, Karnataka)

Ramesh is a graduate farmer and owns 3.5 acres and in addition to it leased in one acre land, he pays Rs. 8,000 per crop for the leased land. He has sufficient irrigation facility from both canal and bore-well. He is a part-time LIC agent and earns Rs. 10,000 per month. He is also engaged in sericulture. He is the only son to his parents, therefore decided to look after agriculture. He cultivates Sugarcane in 3.5 acres of land and Mulberry in one acre land apart from that he has one acre Coconut plantation. For him agriculture is profitable due to diversification.

Earlier he used to cultivate Banana, Mulberry, Coriander, Sugarcane and Paddy but now he has stopped cultivating Banana and Paddy since these crops need to be irrigated daily and require lot of water. He feels that earlier he used
more cow manure and less of fertilizer but now the quantity of manure has decreased and application fertilizer has increased. He ploughs his land by bullocks and all the family member work in the field. There is scarcity of labourers even though he pays good wage (Rs. 200). Earlier the working hours for labourers were from 12 hours per day but how it has reduced to seven hours.

He sells the produce to local traders as it is difficult for him to transport to market. The prices received for crops are remunerative but cost of cultivation has also increased. He uses only hybrid seeds, even his coconut tree is of hybrid variety. He does most of the work in the fields and employee very less labourers. He faces acute shortage of labour for cutting sugarcane crop and workers are not available at the desired time. The labourers have their own source of income such as goat or cow rearing, they go for wage labour to cities, and their food requirement is fulfilled by PDS rice.

He has taken a loan of Rs. 50,000 five years back for digging bore-well from cooperative society; he is paying the interest every year and renewing it. Apart from that he has taken a crop loan of Rs. 80,000 from SBI two years back and repaying the principal and interest regularly. Recently he took a loan of Rs. 20,000 from Syndicate bank. Ten years back due to the expenditure in construction of house and his marriage he incurred a debt of six lakh rupees. To overcome his debt he sold 0.75 acre of land and settled all the debts. But now the situation has changed, he has regular source of income as an LIC agent. The value of agriculture land has increased many a times the land, which was sold for Rs. 30,000 some 10 years back, is now selling at eight lakh rupees. For him agriculture is profitable, the income is sufficient. He feels that his children will not undertake agriculture because they don’t have the habit of doing physical work.

Case 15 (Irrigated Region, Karnataka)

Kumaraswamy is a small farmer and he owns 5.6 acres along with it he has leased in 2.1 acres of land and his total operational holdings is 7.16 acres of land. He has brought all land under canal irrigation except 1.5 acres in which he grows Mulberry plants. His cropping area comprises of 3.1 acres of Mulberry plants, one acre of Sugarcane, Two acres of Paddy crop and in the remaining land Coconut trees, Teak plantation and Kollu. He keeps 30 percent of the Paddy produce for the household consumption and for seeds and sells the remaining portion. His cropping pattern has remained the same over the years and the only addition to it is Mulberry plantation. In the last cropping season he incurred a profit of rupees one lakh from Mulberry cultivation, Rs. 45,000 from Sugarcane, Rs. 30,000 each from Paddy and Coconut.

He cultivates different crops so, even if one crop incur loss, he manage with the profit from other crops. The biggest problem he faces in agriculture is due to the shortage of labourers. He says nobody wants to come for agriculture work, he gives advance money and book the labourers and even when they are in need of money he provides financial assistance which he deducts from the work done by laboures. The wage rate for male is Rs. 200 and for Female is Rs. 80 in addition to that two time food is provided to them. Throughout the year there is work for labourers only during the time when we till the land there is no much work for labourers, since most of the work is done by machines like ploughing and sowing paddy and even he apply weedicides to reduce the labour for manual removal of weeds. Though he is aware that the usage of fertilizer and weedicides is not good for the soil but he has no other choice.

He sells produce directly in the market and did not sell through the middleman. He always use short duration HYV seeds, the agricultural extension official provide necessary guidance and information about the good varieties of seeds and the ratio of fertilizers and pesticides need to be applied. He feels he did not take loan from informal sources and whenever he is in need of money he access loan form banks. He has taken a credit of Rs. 30,000 from cooperative society at the interest rate of 12 percent per annum and Rs. 15,000 from SHG at the rate of 24 percent per annum. He regularly pays the interest and he has cordial relationship with the bank employees. He feels without bank credit it would be very difficult to do agriculture as most of the farmers have no regular source of income and when operational expenditure are to be undertaken the bank credit is very useful.

He feels if the farmer is educated it is easy for them to do agriculture, farmers economic condition has not improved much. Earlier farmers were happy but now there are lot of problems faced by farmers. Similarly, earlier the land was more fertile and there were more earnings, the climate was good and there were no scarcity of water and rain used to come on time but now the situation has changed. He feels that the reason for scarcity of labour is, the younger generation don’t stay in the village, the people are not superstitious and because of education there is lot of prospects of employment in cities. According to him labour and irrigation is the most important deterrent in agriculture.

He feels if the conditions are favourable for agriculture, to earn two or three lakh is not a big problem. He feels that he and his family is leading the life in most ordinary manner. If agriculture is done properly and the entire family member work properly than agriculture is profitable. The price of Paddy, Sugarcane and Mulberry is good. No farmer would like to sell his land , in any given situation he won’t like to sell his land and will be in agriculture but it is difficult to say whether his children will undertake agriculture as profession.
Case 16 (Irrigated Region, Karnataka)

Mr. Mariswamy Gowda is a small farmer and owns 3.7 acres of land; he has leased out 1.5 acres of land for Rs. 15,000 per year and operates 2.2 acres of land. His land has good canal irrigation facility, he cultivates Sugarcane crop on two acres of land and in the remaining 20 cents of land has Coconut plantation. He rotates the crops i.e., in one season cultivate Ragi and Paddy crops and in the next season cultivates Sugarcane crop so, his yield is good and crop rotation good for the fertility of the soil.

He feels the labour charges has increased over a period and he is facing scarcity of labour due to migration of labourers to Bangalore and apart form that in each household one or two members are in town so, there is more demand of labour. Though in his village farmers used to give advance money to book the workers for work and payment in kind is prevailing but he does not give any advance and always pay wages in cash. To attract labourers for work he provides food and sometimes alcohol to male labourers but still it is difficult to find labourers. The number of working hours has also decreased from 12 hours in a day to eight hours.

He prefers to sell his produces to the local traders at somewhat lesser price than the price he had got in the market because there are difficulties involved in selling the produces in the market in terms of transport cost and time to be spent. Compared to earlier days the income from agriculture has increased but the cost of cultivation has also increased. Agricultural outcome depends on proper irrigation and timely availability of labourers for work than we can expect good harvest. He feels the biggest problem farmers are due to scarcity of labourers, electricity and irrigation and if these three are properly provided there is no much problem in agriculture.

He has taken a crop loan of Rs. 20,000 some three years back from SBI and repaid Rs. 15,000 and the remaining amount was written off under the government’s loan weaver scheme. Similarly he has taken a jewel loan of Rs. 15,000 form cooperative society and he had renewed it by paying the interest. Some six months back has taken loan of Rs. 20,000 from SHG at 24 percent interest and repaid Rs. 9,000 and Rs. 11,000 is due. He feels that he has taken the loans for agriculture purpose, since sometimes he has to wait for two or three months after selling the produce to get the money and in the meantime he needs to manage the agricultural expenditures, so for the short term he get the loan and when the gets the money he settles the loans. There has been some instance when there was crop loss and he had to settle the pending loans at that time he sold some gold jewels and settled the due amount. He feels agriculture credit very is important for agriculture, since the cost of cultivation has increased and it is difficult for the farmers to manage the agricultural expenditure without it.

He feels that MNREGA is not functioning properly in his village, people with less land prefer to migrate to cities and people with more land is struggling due to scarcity of labourers. Sometimes he is required to arrange labourers from far-off places like Mandy. He feels he is entirely dependent on agriculture for his livelihood and he cannot do any other work. For him agriculture is a traditional occupation and the land is inherited from their elders therefore, he would never sell his land and he is not optimistic of his son doing agriculture.

Case 17 (Irrigated Region, Karnataka)

Mr. Rajanna owns 7 acres and operates 6 acres of land. He has left an acre land uncultivated due to lack of irrigation. His all 6 acres of land is under canal water. He also owns two buffalos and one sheep and uses milk for home consumption. His elder unmarried son working as development officer earns 24,000 per month and second daughter, a lecturer and earns 18,000 per month. His youngest son doing BBA. These two send him Rs.15,000 per month. He normally grows sugarcane in 4 acres and paddy in 2 acres. It cost him around 50,000. He is dependent on labourers for the work to be done. He therefore, prefers to grow sugarcane, as it requires little care and less labour. Besides, paddy is grown for consumption purpose and sell. He is satisfied with the profit generated from sugarcane and paddy. Earlier, he used to grow maize and ragi mainly to meet the food requirements. In terms of seeds usage and other agricultural practices, he consults his son. He now purchases the seeds from agro-shops and follows new agricultural practices. He uses both tractor and bullock. He supplies sugarcane to the factory for the past 20-30 years. Earlier he had sugarcane crusher, but now he does run it due to labour problem.

He had taken a loan of one lakh two years back from cooperation bank at 4 per cent rate of interest per month. He has paid only 30,000 towards principal and rate of interest. Later, on this loan Rs.45,000 was waived off. He had also taken an education loan of two lakhs for her daughter’ education and she is paying it every month. With the profit generated from agriculture and remittance of his sons and daughter, is able to repay the debt and there is not much pressure on him. Now he is seeking loan for her daughter’s marriage.

There has been lot of change in agriculture over the last two decades. The wages and facilities provided to labourers have increasing. Earlier, he had two permanent labourers at his service for farm operations, but no one is ready to work. Moreover, in order to retain them he offer male workers Rs.200 and female worker Rs. 100 along with food, tea and beedi and gives Rs.50 more to meet their travel charges from their home to his field. Earlier, members of household were available for managing agriculture. Now all his sons and daughter have moved to cities for studies and work. Apart from these changes, are now adopt new methods, new seeds, inter-crop cultivation to increase. But
at the same time, cost of cultivation has also increased quite significantly. The cost of cultivation of sugarcane moreover depends upon distance between land and factory. His land comes under unreserved area, area beyond 10 km periphery of factory. Therefore, he does not get free facilities such as supply the labour and transportation cost provided by the factory. Even though the distance between field and sugar factory varies, price offered for sugarcane is universal. He feels that this is quite unfair practice.

Case 18 (Irrigated Region, Karnataka)

Mr. Paringi dudu Madhya hails from joint family having 17 members. His one son is a lawyer and the other son is the owner of a fertilizer shop, but he does not get any financial assistance from them. He owns one cow and three buffalo. From these, he gets milk for home consumption and sale 4 litres in the market. Even though his son owns fertilizer shop, he has to pay for input purchase. He owns 10 acres and 20 guntas, of which 6 acres is irrigated by canal and rest by borewell. He has two bore wells and water is sufficient. He grows sugarcane in 4 acres, paddy in 4 acres, ragi in one acre and fodder crops in rest of land. He normally grows sugarcane, paddy and ragi and there is no change in the cropping pattern. Earlier he had less land, but over the period, he purchased more land from the profit generated from agriculture. Earlier the wages of the labourer were low but now it has increased. Earlier he used organic manure but now is fully dependent on fertilizer. Because of using fertilizer, the cost of cultivation has increased. Despite this, agriculture is quite profitable activity for him.

He does not face any problem in getting loan. In previous year, he had taken a crop loan of 50,000 from society at rate of 1% interest per month from society. He generally takes loans from society and repay soon after the harvest. Sometime, he also borrows from friends and relatives on zero interest rate. Last time he had borrowed it for his daughter’s marriage and returned it soon after the harvest. He however, feels that cost of leaving and cost of farm operations is increasing every year. The expenditure on basic minimum needs of household has increased. Moreover, expenditures on education and health are quite significant. In the last 50 years wages of labourer has increased manifold. He sells paddy to traders in village to avoid time and cost of transportation. In case of other crops, he goes to nearby Mandya market. He has also storage facility. If the price in the market is not good, he stores and sells it when it increases. He has four sons and their wives to look after agriculture. Most of them are well settled and are happy.

Case 19 (Dry Region, Karnataka)

Mr. Abdul, a 65 year old farmer, owns 2 acres of land. He has two sons. The elder son drives jeep he gets Rs.3, 000 per month and younger one is bill collector and earns Rs. 4,000 per month. Earlier he was a tailor, but with increasing preferences of people towards readymade garments, he had to leave profession. Later on, he bought four buffalo on loan and worked as a part time land agent to maintain his household expenses. The livestock economy particularly dairy gave him good profit and with that he owned 2 acres of land around 15 years before. When he bought the land, he used to get canal water for his field, but as agriculture started developing in upper region, it was increasing become difficult to get the water. Now he does not get any supply from canal and agriculture is total depend on rain. He grows crop once in a year. Last year, he grown tur and sunflower. These gave him net income of 11,000 rupees. Earlier when he had irrigation (2 times for few months), he grew Groundnut and Tur. With the irrigation, the yield of groundnut was high but now yield has drop significantly. This he is continuing with same crops. He uses both the own preserved seeds and buy from the market. Last year, the seeds purchased from the society were of not good quality and the yield was not good.

He is increasing facing the problem of labour. The wages has increased for both female (100 rupees per day) male (150-200 rupees per day). Earlier the wage was very low and workers worked from 8 am to 4 pm. Now these work from 10 am to 4 pm. Moreover, they do not work properly and need one person to supervise them. Earlier, he paid their wages in kind, now in cash. Similarly, with his own four bullocks earlier, he tilled the land, but now with the shortage of family and hired labour as well as fodder, he is using tractor to till the soil, paying Rs.400 per hour as rent. After paying these all, he is left with meager amount and even sometime incurs losses. He complains that many farmers are not able to manage agriculture as cost of cultivation is increasing every year. The prices are so fluctuating, that sometime they manage to get profit and sometime not. Many farmers who incurred losses moved out of village and migrated to Bangalore and Hyderabad to find employment in off-season. Moreover, with changing lifestyle of people, many non-essential things have become essential. Earlier he hardly bothered about education and health. Their movement is limited and therefore incurred less expenses on transportation. Marriages and ceremonies have become expensive and no way, he can avoid expenses on these while living with people. The work given in MNREGA is very less and irregular and with this people cannot maintain their livelihood. Therefore, people move to migrate in the off-season to the cities earn and invest it again in agriculture. This sometime helps their family to remain in agriculture. If farmers get profit from agriculture, their hopes increase. Even if they make losses, they continue with agriculture expecting next year price will be good and they would be able get some surplus.

He feels with increasing cost of leaving it is becoming difficult for him to continue with agriculture. If he incurs losses, he looks for loan from bank, moneylenders, friends and relatives. If he has taken a loan from bank, he does get fresh loan until he clears the earlier. In this case, he arranges loan from other sources and pay back. Sometime he
borrows from multiple sources to pay interest of those who pressurize. If he could not pay them in time, he requests them to extend loan and pay some penalty. It is very common for him and he cannot manage without it. Recently he cleared a loan of Rs.5,000, which he had taken at the rate of 3% interest for 5 months from the middlemen. He also cleared other loan of Rs.8,000, which he had taken from the input seller (3% interest, 5 Months before). He is paying properly the interest and the principal to these people (input seller & Middlemen), to make sure loan in the next cropping season. Generally, he sells his produce through the middlemen from whom he borrows the loan. The middlemen, however, does not force to sell him and taken his decision into account and his readiness for selling at the prevailing price. His sons are not settled properly in the city. Sometimes he arranges money for them to pay their house rent. In past 3 to 4 times he has leased-in land to repay his loan.

Case 20 (Dry Region, Karnataka)

Mr. Budappa has four members in the family, and two of them have gone to Bangalore for work. In agricultural off-season, they move to city and earn 300 per day on construction site for a period of six months. He gets around Rs.6000 per month from his sons. He owns an acre of land but operates 2 acres of land, leasing additional acre of land from his migrated brother. He pays his brother Rs.6,000 as a rent for year. Earlier with canal irrigation, he used to grow sunflower and groundnut, but now he cultivates tur and bajra. Because of scarcity of water and he undertakes rain-fed cultivation. Earlier he used to preserve seeds but now he is not using that seeds. The yield from the seeds bought from market gives good yield

He purchases chemical fertilizer, manure and seed from agricultural office. Earlier he used bullocks, but now he hire tractor for ploughing. He sells Tur to the traders in nearby market and bajra in village to the village traders. Earlier it was difficult to get paddy or rice from the market but now the situation is not so he are consuming more of rice and the availability is more. The wage rate for labourers has increased substantially. It has affected his profitable. He has never visited bank to get the loan. He takes sometimes from the farmers and returns them after the harvest. Wage income forms his major source of income besides income from crop. In a month, he go around 22 days and earns Rs.200 per day in off-season. He works 6 months in a year as wage labourer. He feels that compared to earlier days wage income has increased. The cultivation of tur is not always profitable. It helps him to get some for home consumption. He needs some land even it is less. Even though agriculture is not that profitable but with wages, he manages his daily expenditures.

Case 21 (Dry Region, Karnataka)

Mr. Baswa belongs to schedule tribe and has one cow and small bull. He got loan under the Pradhan Mantri Rojgar Yojna (PMRY) but he incurred loss. Under the scheme, he got one buffalo but that died soon after, putting him into financial problems. He owns 2.2 acres of land and operates 4.20 acres leasing in addition 2 acres of land on rent of Rs.24,000 per year. He does want to dig the well since ground water contains high salt in his village. From last 10 years, he is in agricultural profession and grows sunflower, groundnut cotton and chilly. Earlier he was growing sunflower, groundnut and cotton. However, due to more pest attack he has switched to BT cotton and chilly. These crops appear to be more profitable to him. Many farmers in his village grow these crops. Particularly last year, these crops fetched prices and earned handsome profit. In recent days, he is using tractor to till the land. Labour is scarce in cropping season as most of them own land. Most of the labourers and small holders this year did not go cities for employment as some of these small farmers got good price on cotton and chilly and labourers more wages. He sells his produce through the middlemen from whom he regularly borrows loan. Whenever he needs credit, they provide him at 3% interest per month. Since cultivation of cotton and chilly need around 25000 and 10000 per acre respectively, without credit it would be impossible for him to continue with these crops.

Six year back he had taken a loan of Rs. 45,000 from Syndicate bank at 1 per cent rate of interest per month. He paid only 5,000 rupees and rest of his loan was waived off. A year before he again borrowed loan of Rs.37,000 from the same bank at 60 paisa per month rate of interest. He has not paid both interest and principal. A year back, he had also taken loan of Rs.17,000, from middlemen and cleared the loan with additional interest payment. He is not able to pay the principal and interest amount properly because of loss incurred by him 2 years’s before on cotton. The price was very low and he had to sell it 500 rupees per quintal. Last year, the price increased to Rs. 6000 per quintal and he was able to pay back his Rs.30,000 loan. Without credit, he feels that it would be difficult to cultivate these crops when the cost of inputs, rent for the tractor, wages to the labourers and cost of living is increasing every year.

NREGA does not function well in his village. They provide very limited days of work. Therefore, people prefer to go to Bangalore. There has been significant change in his village. More number of people is getting educated and migrating to towns and cities. The educated youth particularly avoid staying in village, as they do not want work in their own field. Banking facility is less. The agriculture in general is profitable if prices are remunerative. If profit is good more number of farmers lease-in land. Earlier the leasing rate was Rs.4,000-5,000, this has now increased to Rs.12,000. Moreover, in general, marketing is big problem and many a times he gets less price. 
Case 22 (Dry Region, Karnataka)

Mr. Raman has four sons working in the cities. He gets around Rs. 40,000 from his sons in a year to meet expenses towards agriculture and home consumption. He owns 4 acres and 3 guntas, but operates 8.3 acres of land, leasing in addition 4 acres of land at the rent of Rs.5,000 per acre. He complained that his village received canal water regularly 20 years before. But when agriculture was developed in surrounding areas, his tail end village stopped receiving water. Sometime they get during month of November to January and that to very limited days. His land has higher salt contents; therefore, developing irrigation is also not useful. Earlier, he used to grow traditional variety of cotton, but that did not give good yield despite more application of fertilizer and pesticides. He has now switched to Bt cotton, which gave him good yield. However, price remains to be his important concern. He grows cotton in 3 acres, gram in an acre of dry land. On leased-in land, he cultivates cotton and castor. Earlier he did not get much profit from cotton and on gram and incurred losses. He even grew sunflower, bajra and tur during monsoon that too did give him good income. Last year, he grew cotton and castor to get better price and to retain soil fertility. He uses tractor for agricultural operations. The availability of labour in village is low and he pays them extra to get them to work in his field. In case he fails to get labouerers in the village, he arranges them from nearby villages. He has to spend more money to bring them here.

Previous year, he took loan from Grameen bank of Rs. 30,000 and repaid it. The problem with banks is that if he takes a loan from one bank he cannot take loan from other banks or society until he clears them. He is very much depend on banks and approach to them during cropping season. Earlier he was indebted and to clear his loan back he sold his irrigated land 15 years before. If pressure of debt is high then he borrows from others and repay. Credit rotation is a common practice in his village. He gets inputs from the input dealer and repays them after harvest. Input dealer charge him 2-3% interest. To meet all expenditures, from tilling the soil to pay the wages, he at least needs Rs.10,000 per acre and without loan, he cannot manage it. This year to pay back the loan he had to sell the produce early at lower price. After few weeks, price increased by 3,000 per quintal he had to incurred huge loss. His sons are not well educated; they therefore will have to look after agriculture. I did not want my children to be in this profession. People who work in other professions are economically better. He feels they do not have to take such risk and incur no losses like him.

Education has now increased compared to earlier days and more numbers of people are migrating to cities in search of regular jobs. Four members his family has gone to Bangalore since the past 3 years. NREGA is not operating well due to corruption and only people close to officials get employment in it. He gets ration from ration shop, albeit not sufficient for his family. Earlier because of more members in the family, it was not difficult to keep more livestock but now the situation has changed due to education. Sometime excess of rain also causes damage to the crops. Even though he wants profit, he does not get as expected due to untimely or over rainfall and low prices in the market.

Case 23 (Dry Region, Karnataka)

Mr. V. Gowda owns 6.5 acres and it is fully rained. He had dug a well but could use the water for irrigation purpose due to high salt content. Last year, he grew cotton, tur, jowar and jute. The profit on these crops solely depends on the price in the market and often these very fluctuating in nature. Most often, he grows the same crops. He sells his produce in the Raichur market except Jute, which he sells to the traders from Guntoor, Andhra Pradesh. There good number of trades and the price received for the jute is satisfactory. Earlier, he used to grow sunflower, but due to low price and unfavourable climate conditions, he has shifted to cotton and jute. The yield of the crops is high. He prefers to sell his produce through middlemen as it is hassle free and less time consuming. The direct marketing of cotton requires at least 20 days of waiting period. Moreover, that delays settlement of payment. To avoid this problem, he pays 3 per cent commission to middlemen for arranging early sale of his produce and settlement of bills. In case of he requires credit; middlemen cater his need on argent basis.

Every year he takes loan from the middlemen and repay during the harvest season. While giving loan, the middlemen make sure which crops are grown and on how much area are grown. He pays them principal and interest once in a year only. In case of crop failure, he gets pressure from middlemen for settling the loan. He manages by extending period of settlement by paying the interest amount. If the pressure of non-repayment continues, then he approaches our friends and relatives. This makes his life quite difficult as he faces even more problem in getting loan for new seasonal farm operation. In such a situation, sometimes he takes loan from 4-5 people. In previous year, he took two loans Rs. 20,000 and Rs. 10,000 respectively from local cooperative and middlemen for the crop purpose. He has not paid the principal amount and interest and will pay them after harvest. He generally clears his loan if he gets good profit. This year he hopes to earn good amount of profit due to remunerative price of cotton and clear all his due amounts borrowed previously. Sometime if he does not get loan from middlemen, he purchase inputs from input dealers on credit. The input dealer generally charges 3% rate of interest and it varies season to season. In case of shortage of fertiliser during sowing seasons, he pays Rs.50 to 100 per bag in addition. Even though selling to middlemen or input dealers are costly, he borrows from them to secure future loans. He feels that agriculture is like lottery for him and get good profit once in 3 to 5 years. More importantly, credit is the most important one as access to credit reduces his great deal of distress. He feels that without credit it is not possible to manage his household economy. His money is not sufficient to maintain household expenses and for sure, it cannot be managed with 5-6
acres etc. Even those with 10 acres of land face the problem in managing their livelihood. Let his alone. In this village, almost 60-70 percent household buy rice from ration shop. Otherwise, it is not possible to buy from retail stores. Without ration, life would be even more difficult.

Farmers in the village are increasingly using tractors and other machineries. This has made work fast and to great extent, demand for labourers is met by this. With increasing mechanization, family members not been absorbed in agriculture are going to city. He feels labour shortage is biggest from in his village. In sowing season, he find difficult to get labourers as most of them have land. Moreover, seasonal migration is rampant in the village and it has affected agriculture. This has increased wages of male and female as well as working hours from 8-9 to 7 hours including one hour rest. To deal with labour shortage, he hires around 30 people from nearby villages, which not only cost him additional wage, but also transport charges. Even though he spends more but even the price of the crops has also increased. Moreover, there has been also change in terms of employment. In recent days ‘contract system of labourer’ is very popular. Even they negotiate higher amount for a piece of work, but his work is done fast. He cannot completely rely on family labour.

**Case 24 (Dry Region, Karnataka)**

Mr. Rayadu owns 12 acres of dry land, but operates only seven acres. He has leased out 5 acres of land to settle his debt taken 5 years back. For this, he gets Rs. 30,000 per annum. Due to high salt content in the water, he could not dig the well. He also owns a pair of bullocks, which gives him Rs.400/day in sowing season. Last season, he sowed cotton in 5 acres, tur and jowar on one acre each. For this, he incurred almost 27,000 towards input cost. Earlier, he cultivated groundnut and sunflower. However, due to pest attack, he later shifted to remunerative cotton (Bt) and tur crops. Now he keeps tractor and implements for ploughing, and other farm operations. These are economical and work is done fast using these. Despite this, he needs quite good number of labourers. Earlier wages were low and there was not much difference between male and female. Now it increased almost 10 times. In the last two three years wages have doubled. Last year, he spent almost Rs.30,000 on wages to get 50 quintals of cotton. Moreover, working hours of labourers have also reduced to 6-7 hours. Since cotton is highly labour intensive, the demand for labourers is more in this cotton-growing region. He sells his produce in Raichur cotton market through the middlemen. The price is fixed in the market (APMC) according to the quality of standard. The middlemen inform him about the price fetched, the rate at which it was sold. For his services, he is charged 3% of total value as a commission.

He borrows loan from the middlemen and sell his produce through them only. Sometime he incurs losses by selling middlemen from whom he had borrowed money. However, he still sells through middlemen to secure timely loan. This more importantly reduces his tension in searching loan for next season. He borrows credit to meet expenditure towards wages, pesticides, and to meet household expenditures. If the production is low, he requests to extend the period of loan and amount. If he fails to do so then he approaches other moneylenders and clears his debt. These moneylenders charge 3 percent interest rate per month. Two years back he had taken loan of Rs. 10,000 from relatives; still he could not pay them back. He had also taken a loan of 50,000 from two moneylenders at the 3% per month rate of interest, of which he has paid around 17,000 towards interest payment. He is yet to pay principal amount. He strongly feels the importance of credit without which it would be very hard for him to cultivate the commercial crops. This year he received good price for cotton and therefore was able to clear interest amount taken from the middlemen.