CHAPTER - VII

OBSERVATION, FINDINGS AND RECOMMENDATIONS

7.1 INTRODUCTION

This chapter concludes the research work by emphasizing some important, observation and findings emerging from the study. The present study was considered important to the researcher because till today agricultural labour, agro- industrial labour are treated as unorganized and weaker section of the society to achieve the predetermined objectives and tested the hypothesis of the study, the primary and secondary data and information was collected with a view to throw light upon the important aspect of agro industrial sector. These aspects were relating to profile of the study area, profile of cropping pattern. Agro industrial units position, rural employment, rural occupation wage & income structure and impact of Agro-industrial units on rural development.

On the basis of the analysis and interpretation of collected data and information. Some important observation and findings are drawn and important recommendations are made for consideration.

7.2. Major Characteristics :

1. The agro-based industries are more labour-intensive than non-agro-based industries. Moreover, the share of agro-based industries in value added is higher than their share in productive capital. The agro-based
industries are mainly characterised by high labour-intensity and high labour productivity.

2. Agro-based industries play a dominant role in the industrial economy. The relative importance of agro-based industries increased in the state during 2005-06-2009-10. It has been found they were highly localised in the state of Maharashtra and assumed a prominent place in the industrial sector of the state. Even now, these industries show an upward trend in the matter of development.

3. The state of Maharashtra accounted for a relatively high share in agro-based industries in terms of factories and employment in 2005-06. By 2009-10, it improved its position significantly in terms of its share in employment and productive capital in relation to its share in the population.

4. Considering the composition of different types of agro-based industries in Maharashtra, the present study has shown that the industry group "Manufacture of play wood and processing the Grape and Grape Products" played a vital role among the agro-based industries of the study area between 2005-06 and 2009-10, followed by the industry group, "Manufacture of Sugar and Dairy products."
5. At the all-India level, the importance of the industry group "Manufacture of Jute and Cotton Textiles" was prominent in the agro-industrial sector. It accounted for the largest number of factories, productive capital, employment and value added.

6. The nature of employment in agro-based industries was diverse, depending upon the nature of the agro-based industries under consideration. It was observed in this study that permanent employment was extensive in the maize industry, followed by the sugar industry and Dairy industrial units. In contrast, the employment in grape processing and jolly board industries was of a seasonal and casual nature respectively.

7. The composition of employment (i.e., white-collar, skilled, and unskilled) depended largely upon the nature of the; agro-based industry and the level of technology employed in it. The study reveals that while unskilled workers constituted a great majority in the maize industry, the sugar industry the Jolly board industry and Dairy units, almost all were skilled workers in the grape processing industrial units.

8. The setting up of agro-based industries brought about changes in the cropping pattern of the villages where they had been established. At the same time, this new cropping pattern-threw open new employment opportunities in the farm sector (i.e.,
indirect employment). The close relationship between the agro-based industries and the cropping pattern has been analyzed in this light. Some of the agro-based industries developed following the availability of the irrigation facility and the changes in the cropping pattern. For example, in irrigated areas, it was the-cultivation of maize and sugarcane that led to the setting up of the maize mills, and Sugar factories. In some other cases, such as grape, the setting up of agro-based industries was not linked with the provision of the irrigation facility. Generally speaking, the changes in the cropping pattern and the setting up of agro-based industries went hand in hand. The setting up of agro-based industrial units was not always the only factor that brought about changes in the cropping pattern. Some of these changes might have been due to the provision of the irrigation-facility. It follows from this that agro-based industries *perse* may not lead to a major change in the cropping pattern. However, given the supply of the necessary inputs (*i.e.*, water, chemical fertilisers, pesticides, developed seeds, etc.) and the suitability of the soil, agro-based industries can induce shifts in the cropping pattern.

9. The agro-based industries created employment opportunities in different ways. They not only provided employment
opportunities in the industrial units (i.e., direct employment) but created considerable additional employment opportunities in the farm and tertiary sectors. The additional employment in the farm sector was the result of the changes in the cropping pattern consequent upon the setting up of agro-based industrial units. The increase in the volume of farm employment depended upon the number of mandays of labour required, both for the newly introduced (agro-industrial) crop and the replaced (non-agro-industrial) crop.

10. Among the three agro-based industrial crops covered by the study, the cultivation of sugarcane required a larger number of mandays of labour than the other two crops (i.e., grape and maize). The grape crop stood next to sugarcane in this respect. Of the four villages covered by the study, Ranjani the sample village was benefited the most by the addition of the highest number of mandays of employment following the cultivation of grape. As opposed to this, employment opportunities were reduced in village. This was due to the fact that a larger number of mandays of labour were required for the replaced crop (i.e., soyabean) than for the agro-industrial crop (i.e., sugarcane).

11. The development of the tertiary sector and the employment opportunities created in that sector were based on the nature of
employment and the level of technology adopted by the agro-based industry. Among the four industrial places, the tertiary sector of the sugar factory provided more employment opportunities than that of the others. Next in order was the tertiary sector at the place where the maize mills were situated, followed by the tertiary sector of the grape processing establishment. The employment in the tertiary sector of the jolly board factory was the lowest. The reason for better employment opportunities in the tertiary sector of the Sugar factory was the capital intensity of the industry, in which the share of the white-collar and administrative personnel was substantial because of the higher salaries they received resulting in higher purchasing power for different goods and services at the place where the agro-based industrial units were situated.

12. The impact of agro-based industries on the occupational positions of agriculturists was minimal, for very few agriculturists participated in the entrepreneurship of agro-based industries.

13. The establishment of agro-based industries brought about significant changes in the occupational positions of agricultural workers. Some of the workers, who were employed in agricultural occupations before the setting up of agro-based
industries, took up agro-based industrial occupations after they were established. The persons entering the working age group for the first time had taken up agro-based industrial occupations and were engaged in independent wage work in the agricultural sector without going in for non-independent wage work. It has therefore been inferred that there was a break in the conventional cycle of "occupation by age." Following this, there was a severe dearth in the availability of non-independent workers in the agricultural sector even with increased remuneration. In other words, there was a change in the attitude of agricultural workers, and they wanted to be independent wage-earners rather than non-independent wage workers. Incidentally, they were neither punctual in attending to their work nor sincere in doing the work because of the pressure of demand for agricultural labour. In short, the role of agro-based industries was vital in improving the occupational status of agricultural workers, for they provided seasonal employment to agricultural workers in the non-agricultural season.

14. Agro-based industrial occupations have emerged as a new and important dimension in the occupational structure of the rural areas as a result of the setting up of agro-based industries. Dependence on a single occupation declined considerably, and
there was expansion of occupations with the opening up of opportunities for agro-based industrial employment in addition to their earlier occupations. There was, therefore, an improvement in the occupational status of the workers, who were earlier engaged in agricultural occupations and now employed in agro-based industries.

7.3 Observations and Findings:

The summary of the major observations and findings of the study is presented as follows:-

7.3.1 Profile of the Study Area:

1. Comparing to other talukas in Sangli District the rain fall in Kavathe Mahankal Taluka is very low. So, its is considered as dry area which is favourable for food grains cultivation and horticultural activities.

2. The 100% population is residing in rural areas. It means that all the population of the Kavathe Mahankal Taluka is living in rural area and also depending on agriculture.

3. It has been found that the geographical migration of the workers seeking employment in agro-based industrial units was inter-state, inter-district and intra-district in nature and that it was
more widespread among the workers of sugar and khand-sari sugar industries. The maize industry was characterized by the inter-district and intra-district mobility of the workers, while "daily movement" was the important feature of the workers engaged in the grape processing industry. One broad observation that has been made is that there was a close relationship between the nature of the agro-based industry and the type of geographical migration. For instance, maize and grape processing industries, which do not generally require skilled personnel, were responsible only for inter-district migration. The sugar and jolly board industries were on a different footing in view of the sophisticated nature of their technology, which required skilled technical personnel. These industries had to draw their skilled workers required from far-off places, even beyond the state boundaries, thus stimulating inter-state migration. It may therefore be concluded that the nature of the industry exercised an enormous influence on the nature of the migration; and this has been amply demonstrated by the workers employed in the industries taken up for study.

4. The agricultural labour constitute 18.12% & agro based industrial labour was 8.05% during the study period i.e. 2006-2010.
5. It was observed that the cultivator constitute 24.17% as the total warring population in the study area during the year 2005-06 - 2009-10.

6. The sex composition of the male, female was 50.97% and 49.02% respectively.

7. It was observed that the farmers in the study area were changed their cropping pattern as per the requirement of agro based industries so each crop were given much importance rather than food grain crops. They started to cultivate Sugar cane, cotton oil seeds, chili, grapes etc.

7.3.2 Profile of cropping pattern, agro based units and rural employment under study area:

1. A great majority of the workers employed in agro-based industrial units were drawn from the agricultural sector, particularly from the wage-earning occupations. The local agricultural workers took up most of the unskilled, semi-skilled and manual jobs in agro-based industries.

2. The impact of the agro-based industry depended on the nature of industrial units. In maize, grape processing and jolly board, the rural population employed earlier in agriculture was, substantially benefited. But in the sugar factory, only those employed in
unskilled jobs in the season were drawn from the agricultural occupations. This was not so with the other workers, because of the nature of the jobs, which required educational, qualifications or skills.

3. The shift in or increase in the number of occupations, depends upon the nature of employment in agro-based industries. For instance, there was a shift in the occupations of those who were employed in the maize industry; but those employed in other industries, *i.e.* grape processing, took up agro-based industrial occupations, in addition to their original occupations.

4. The role of agriculturists was pivotal in starting the jolly board factories and maize mills. It was the agriculturists, as mentioned earlier, who took up the entrepreneurship of the agro-based industrial units. However, these agriculturist-entrepreneurs did not dissociate themselves from their agricultural occupations. The participation of agriculturists in the entrepreneurship of the grape processing establishments was found to be minimal.

5. The employment pattern of agro-based industries revealed that the employment opportunities created by these industries differed from one industry to another, and depended on the nature of a particular agro-based industry. While some industries provided substantial permanent employment, some others created seasonal employment.
For example, permanent employment was found to be significant in the Jolly Board and sugar industries. Contrary to this, permanent employment was observed to be minimal in the grape processing and Maize processing industries. It was also found that of the four types of agro-based industries, the grape processing industry required the lowest amount of capital per manday of employment. On the other hand, the sugar industry was the most capital-intensive agro-based industry among the four selected for the study.

6. Employment in the maize and sugar industries resulted in a shift in occupation for they provided substantial permanent rather than seasonal and casual employment. As opposed to this, there was practically no shift in the occupation of the workers employed in the grape processing and jolly board industries. Since the employment provided by the grape processing industry was taken up only by women workers, there was a perceptible improvement in the occupational status of the women workers employed in it. In the other industries, it was the occupational status of male workers which registered an improvement.

7. Migration has been also studied in terms of the tenure of stay of the workers in the place where the agro-based industry was situated. As regards this aspect of migration, with reference to different kinds of agro-based industries, it was observed that there was a
close relationship between the permanency of the job (i.e., terms of employment) and the nature of the agro-based industry. In the case of permanent workers employed in agro-based industries in general, permanent migration was conspicuous, while in the case of seasonal workers, who were mostly employed in the grape and sugar industries, seasonal migration was the predominant feature.

8. Consequent on the setting up of agro-based industries and the cultivation of agro-based industrial crops, the structure of agricultural output in the selected villages had undergone a change. The growth of agricultural and industrial sectors in rural areas paved the way for the growth of the tertiary sector. As a result, growth centers emerged in three out of the four selected places, and some ancillary industries were established in rural areas.

9. The establishment of agro-based industries gave an impetus to the development of roads and communication facilities in the countryside. Moreover, the means of transport changed. Because of improved transport and communication facilities, rural folk had increased access to the growing towns. By the operation of the demonstration effect, the affluent sections of the rural population switched over to a new way of life—"urbanised rural life."

10. The production in agriculture is also highly immobile. Other industries can adjust their production at a short notice in response
to the changing pattern has its own fixed time and farmer has to wait for it whatever may be the demand position of these products. The economic life of a plant may be 10 to 20 years of even more. Once plant is in no position alter the course of production. Hence, according to the changes in price, cost and demand a producer is unable to adjust his output, the area of crop or the level of output. In industries, such adjustment is easy and possible. The cost structure may be changed, production level can be adjusted through contraction and expansion and even the output can safely be preserved to take the advantages of market conditions. In agriculture one has to face greater price, demand risks in view of its inability to make quick adjustment in supplies according to change in demand. So the agro based industries production was low.

11. Agriculture also requires larger proportion of land in relation to its employment of other factors than the industry. Moreover, it is also scattered over a large area with uneconomical and small size units. This raises organizational problems, which are not present in industry. Hence, the benefits of large scale organization better known as economies of scale and the division of labour are not possible in agriculture particularly in the agricultural sector of Kavathe Mahankal taluka.
12. Dry farming should be undertaken in low rainfall area with proper conservation of moisture and reducing loss of moister by evaporation through deed ploughing and harrowing. Crops like millets, pulses, oilseeds and forage crops may be raised. In these regions, drought resistant varieties may be cultivated. Sunflower is another crop which can be successfully adopted. It was not observed in study area. These crops are not grown in study area.

13. In the study area the hilly areas may be utilized for mixed farming and raising of sheep and goats.

14. The sugarcane production has exceeded the target in the last three years of the Tenth Plan. Increased prices over and above the statutory minimum price offered by the State Government have contributed to the expansion of the area under sugarcane production. A number of sugar factories have been established in both the traditional and non-traditional areas. Sugarcane development was undertaken by the sugar mills with the help of loans provided under the Sugarcane Development Fund, administered by the Ministry of Food. The production of cane reached a record level of over 20 million tons in 2006-07 & 2009-10.

15. A comparison of the profiles of the villages covered by .agro-based industries with the profile of the village not covered by any type of
agro-based industry revealed that the latter lagged behind the former in all respects. While there was a perceptible improvement in the occupational position of the rural population residing in the villages covered by agro-based industries because of their employment in those agro-based industries, there was practically no change or improvement in the occupational position of the population residing in the village without any agro-based industry. A similar trend was observed in regard to the incomes of the rural folk. The agricultural workers living in the villages covered by agro-based industries were able to "lead a more comfortable life in the sense that they did not have to struggle any longer for the minimum necessities of life. This was not so in the village not covered by any agro-based industry. As a matter of fact, the agricultural workers of this village were living below the subsistence level. A review of the wage structure of the village having no agro-based industry and of those covered by agro-based industries confirmed the fact that the increase was more substantial in the latter villages than in the former village. This was mainly because of the existence of agro-based industries in the latter villages, and because the wage rates of different workers—casual and attached—were higher. In brief, it may be concluded that the setting up of agro-based industries in or around the villages
transformed the rural economy completely and improved the standard of living of the rural masses.

16. The cropping pattern may be in accordance with the soil and water requirements of the area. Crops standing longer on the land and needs more water could be easily substituted by leguminous crops and soyabean etc. which are ready within shorter span. But it was not observed in study area due to agro based industries.

17. In the irrigation command areas of sample villages, water consuming crops like Maize, Sugarcane, Grape, Groundnut and Wheat could be grown.

18. The minimum wages in agriculture labourers are not revised periodically. In Kavathe Mahankal taluka the minimum wages are not revised by any reasons. The wages are the same and remained constant from last three years. No government policy, government legislation have compelled the landlords and big farmers to revise the agricultural wage rates. Nobody is punished by the Govt. in Kavathe Mahankal taluka so far as for not making payment to agricultural labourers by the revised rate of wages by considering the living index of the agricultural labour at village level.

19. An analysis of the study reveals that permanent employment was significant in the maize industry, which accounted for 65.06 per
cent, followed by the sugar factory with 31.80 per cent, of the total employment provided by these factories.

20. The seasonal-permanent employment is the highest in the sugar factory 30.91%, it is negligible in the Jolly Board Plywood Industry. A very large share, i.e., 98.45%, of the workers are in seasonal employment in the Grapes processing establishment.

21. As regards casual employment, it is extensive in the Maize Factory, accounting for 34.93% of the total employment. Next in order is the sugar factory, which accounted for 22.90% of the total employment of the sugar factory. While it is 12.66% in the Jolly Board Plywood industry, this type of employment is absent in the Grapes processing establishment.

22. In respect of the type of workers employed, unskilled workers constituted more than 50% of the total workers in the Jolly Board Plywood industry i.e., 62.66%. Next in order is the Maize Industry which accounted 59.24% and 32.61% in sugar factory. On the other hand, skilled workers accounted for an almost 88.88% share in the Grapes processing Units, followed by 46.60% in the sugar factory, 27.33% in the Jolly Board Plywood Industry, and 16.78% in the Maize industry.

23. Another important change that may be noticed from the cropping pattern during the period was the increase in the acreage under the
cultivation of Sugarcane, Maize and Grapes. This was mainly because of the changes in the irrigation policy.

24. The cropping pattern in Ranjani was not influenced by the development of the maize industry. On the other hand, the cultivation of maize, consequent upon the provision of assured canal irrigation, led to the speedy development of the maize industry in Ranjani village.

25. The percentage share of the Grapes crop considerably increased, signifying the growing importance of this commercial crop in the village.

26. The area under cultivation increased substantially in the surrounding villages after the setting up of the Grapes processing establishment in Agalgaon because of their fear of incurring loss on Grapes cultivation, Grapes was not grown by the farmers of Agalgaon village in the initial years of the setting up of Grapes processing establishment. Of course, the setting up of the Grapes processing establishment in Agalgaon might also be one of the reasons for the cultivation of Grapes in Agalgaon village, since it eased the marketing process because of its proximity to the Grapes processing unit.

27. But the sugarcane cultivated in 2005-06 was utilized for the manufacture of plywood. The land under sugarcane cultivation
increased from 25% to 42% during the period. The farmers shifted from the raising of the sugar cane (i.e., a long-term crop) to the cultivation of sugarcane. This increased acreage under sugarcane cultivation was the result of the setting up of a Jolly Board Plywood Industry Deshing and sugar factory in the Kavathe Mahankal village.

28. The experience of Maize industry, another agro-based industry, is different in that the maize industry units in Ranjani came into existence consequent upon the extensive cultivation of maize in the surrounding areas.

29. The relationship between the agro-based industry and the cropping pattern is different from industry to industry. The changes in the cropping pattern and the setting up of agro-based industries go hand in hand. In this way, the setting up of agro-based industrial units is not always the single most important factor that brings about changes in the cropping pattern, but may be the consequence of irrigation.

30. It is evident that the mandays of labour required for the same acreage with the changed cropping pattern in 2008-09 increased by 47.59% in Kavathe Mahankal, 76.11% in Ranjani, 76.90% in Agalgaon and 69.33% in Deshing over 2005-06.
RURAL OCCUPATION, WAGE AND INCOME STRUCTURE

1. The setting up of agro-based industries in or around rural areas influenced the wage levels and occupational structure of the workers in rural areas. This was true for all the ten selected villages irrespective of the nature of the agro-based industry situated in each one of them. The increase in wages had been more pronounced in the case of women and children than in that of male workers. In other words, the decrease in the wage differentials among male, female and child workers was spectacular in the agricultural sector during the period of the study.

2. For agricultural annual wage workers, the increase in wages was more substantial in the villages covered by assured canal irrigation and agro-based industries than in the villages covered only by the agro-based industry.

3. A comparison of the wages of agricultural workers from the selected villages with the wages of unskilled workers employed in agro-based industries shows that the wages of unskilled workers, which were the lowest in agro-based industries, were perceptibly higher than the highest wages in agriculture. Further, the present high wages in agriculture might have been an offshoot of the setting up of agro-based industries, without which they would have
been lower. The impact of agro-based industries on the rural wage structure was two-fold—direct and indirect. First, the agro-based industries employed agricultural workers for their unskilled operations and were paying much higher wages than the wages paid in agriculture. This was the direct impact on the wage levels of agricultural workers and their earning capacity. Secondly, the agro-based industries generated a pressure of demand for agricultural workers, for they created* additional employment in the farm sector by the cultivation of agro-based industrial crops on the one hand, and drew a considerable number of workers from the existing agricultural labour force of the villages on the other. As equal to this was a substantial increase in the wage rates for agricultural operations.

4. The optimal landholding was found to be from 15 to 20 acres because the average income per acre was the highest for agriculturists with land holdings of 15 to 20 acres. The increase in the average income per acre was lower for the agriculturists with larger landholdings, say, of more than 20 acres, than for small landholdings (i.e., less than 10 acres). However, an interesting fact is that the farmers with landholdings of 5 acres or less had a higher average income per acre. This was due to such factors as personal supervision, extra care and relatively less investment.
5. A comparison of the average income per acre between the agriculturists cultivating agro-based industrial crops and those cultivating traditional crops (*i.e.*, non-agro-based industrial crops) has shown that the average income per acre was higher for the former group than for the latter. Of course, because of the inherent characteristic of risk involved in the cultivation of agro based industrial crops, the per acre income of some of these agriculturists was lower than the per acre income of the agriculturists cultivating traditional crops.

6. The agro-based industries contributed a significant increase in the per capita incomes of the households of agricultural workers—a fact which implies that the standard of living of the landless and the near-landless workers improved. The increase was found to be more substantial for the households with a low per capita income (*i.e.*, less than Rs. 400) than for those with a high per capita income. This suggests that there had been a reduction in the income disparities among the rural wage-earning households. As a result, there were changes in the consumption pattern, and the rural population enjoyed better conditions of life. The increase in the incomes was due to the high rates of wages in the agricultural sector following the creation of additional employment in the farm sector by the cultivation of agro-based industrial crops, which
required a larger number of mandays of labour than the replaced traditional crops.

7. The wage differentials between agricultural workers and agro-based industrial workers were the widest in the place where the maize mills had been established. They were very narrow in the place where the grape processing establishment had been set up.

8. The increase in income was relatively more pronounced in the "villages covered by the sugar and jolly board industries; and this can be ascribed to the cultivation of sugarcane, which was an offshoot of the operations of the sugar industry. It was less in the villages covered by the other industries.

9. There was a close relation between status and poverty in study area i.e. self employment and poverty, self employed are small in number, they are found in both the taluka. The objective of this interest might be to improve the basis for economizing assistance to the poor or for trying to make sure that the assistance provided for the poor is better targeted. But as argued later, considerable caution is needed in drawing policy conclusions from some of the recent theory of poverty dynamics about whom among the poor is deserving of government help or aid.

10. Larger the family size greater the level of poverty and smaller the size of family smaller the level of poverty. The poverty ratio was
4.6 percent in the 15 year span. If the poverty ratio is brought down to 4.4 percent in the country as a whole, we can certainly claim a miracle happening in the next decades. Socio economic factors that have delayed poverty reduction are still persisting. To eliminate these, proper measures need to be taken.

It is true that, goals of production and the need for management decisions concerning the allocation of inputs are strikingly similar between agricultural and industrial production must be carried on the social demographic background in the agriculture sector, which demands a separate study of agricultural economics.

11. It was observed that there was an absence of machinery for enforcement of the Minimum Wages Act. No machinery or officer is appointed by the Govt. of Maharashtra to implement the Act.

12. Agricultural activities are so complex varied and diversified that no other activities such as industrial, commercial, trade or business can compete. It includes not only arable crops but also live stock, plantation, pastures, horticulture, fisheries, forestry, animal husbandry, poultry, dairy, sheep farming and cattle-raring. All have some outstanding features of their own. All have their own culture and contribution to the economy. But the farmers and
agricultural labourer are relying on agriculture only in the study area.

13. It has been revealed by the present study that the average level of employment is quite high in the irrigated villages. The farmers and agricultural labourers without land are working larger number of days than the agricultural labourers with land.

14. An increase in the number of agricultural labourers will reduce the number of days employed if it is not accompanied by corresponding increase in the demand for labour. The demand for labour depends upon the availability of irrigation facilities the intensity of land use and the adoption of new technology in agriculture. In the non irrigated sample villages percentage of agricultural labourers to total agricultural workers is more than in the irrigated villages. In the non irrigated villages the lack of availability of irrigation is the main cause of low intensity of land use and non adoption of new technologies in agriculture. Thus lack of development of agriculture is the root cause of low level of employment of farmers and agricultural labourers in the non irrigated villages of Kavathe Mahankal taluka. The farmers and agricultural labourers are working for larger number of days in land improvement work and not in crop production in non irrigated sample villages in Kavathe Mahankal taluka.
15. It was found that the absolute amount on food expenditure increased as the level of income increased but the proportion of total expenditure on food items had no significant association with income of farmers and agricultural labour families in the sample irrigated villages. Even in case of non food items no relation was observed with income. This shows that even the income of the farmers and agricultural labour families in the irrigated villages was not so high as to allow the operation of Engel's law of family expenditure. The average total expenditure of non cultivating labour households was lower than the cultivating labour household and farmers in the irrigated villages.

16. The per capita expenditure of farmers and agricultural labour families in the non irrigated villages was lower than in the irrigated villages. The farmers and agricultural labour household both in the irrigated and non irrigated villages spend little money on milk, pulses and edible oil.

The average propensity to consume was higher in the non irrigated villages for both the categories of farmers and agricultural labourers than in the irrigated villages. The per capita expenditure was in excess to per capita income in the non irrigated villages. Most of the farmers and agricultural labour families incur debt to make both ends meet. While it was observed that agricultural
labour with land in the irrigated villages have small savings, the landless farmers and agricultural labour household have not any saving. On the contrary, they incur debts.

17. According to the consumption norms laid down by the Planning Commission it would be seen from this study that none of the farmers and agricultural labour households in the study area have per capita expenditure of Rs. 1296 which was considered by the Planning Commission (1982-83) as the minimum required to provide the level of nutrition required to perform their work efficiently and hence it was observed that almost all farmers and agricultural labour households in the study area are living below the poverty line.

7.3.4 IMPACT OF AGRO BASED INDUSTRIAL UNITS ON RURAL DEVELOPMENT

1. The “harvesting and threshing” operation was the highest paid in both the years (i.e. 2005-06 and 2009-06) in the villages having agro-based industries. “Ploughing” took the next position and “sowing, weeding and transplantation” were the lowest paid types of work.

2. The impact of agro-based industries on the incomes of agriculturists is determined by the nature of the crop linked to the
agro-based industry. Since the cultivation of an agro-based industrial crop involved risk and a substantial capital investment, the farmers either made enormous profit or incurred losses, depending upon different factors—natural, marketing, governmental policy of pricing agricultural produce.

3. An important finding has been that the role of agro-based industries was very significant in increasing the incomes of the households of the workers employed in agro-based industries. More significant is the fact that the households of lower income groups benefited much, and that almost all the households were elevated to higher income groups. These households benefited by direct employment in the agro-based industrial units. Thus, the tendency had been towards a reduction in income disparities among the rural households, which is a healthy sign of prosperity.

4. The nature of the industry also had influenced the rural-urban composition of the workers employed in agro-based industries. Considering the rural-urban composition of the workers in the industries under study, it was observed that the workers hailing from rural areas constituted a major segment of the total workforce in three agro-based industries, i.e. maize industry, grape processing units and jolly board plywood industry particularly the latter.
Moreover, the workers hailing from urban areas in the sugar industry formed a dominant group.

5. The cropping pattern, i.e., the cultivation of grape, and the setting up of the grape processing industry go hand in hand. The cultivation of the grape crop is the inducing factor for the establishment of the grape processing industry. As regards, the sugar factory, it is its setting up which induces the farmers to embark on the cultivation of sugarcane. Of course, the cultivation of sugarcane is made possible because of the provision of assured canal irrigation facility.

6. The employment pattern of agro-based industries reveals that the employment opportunities created by these industries differ from one industry to another, depending on the nature of the agro-based industry.

7. Agro-based industries, irrespective of their nature and type, brought about significant changes in the occupational pattern of the rural population. The impact of these industries was the most pronounced on the occupational positions of agricultural workers; and it was the least in the case of agriculturists. Consequent on the setting up of agro-based industries, there was an expansion in the range of occupations in rural areas.
8. The impact of agro-based industries was significant on the income levels of all categories of the rural population. The increase in incomes was more spectacular in the households of agricultural workers and the workers employed in agro-based industrial units themselves.

9. While the participation of workers hailing from rural areas, was significant in the maize mills (about 70%), the grape processing units (66%), and Jolly board plywood industry (98.33%), it was relatively less in the sugar factory (45.97%).

10. The changes in occupational distribution are quite minimal. The only notable change is that 26.43 per cent of the working population took up rickshaw pulling in addition to their earlier agricultural occupations. These persons had been migrating seasonally to Mumbai in the non-agricultural season and taking to rickshaw pulling. This phenomenon was the outcome of lack of employment in the agricultural sector on the one hand and low rates of wages on the other.

11. It may be concluded from the foregoing analysis that the changes in the socio-economic profile of sample villages in terms of occupational pattern, wages and incomes were quite nominal and not substantial.
12. The increase in the per acre incomes was the highest in Kavathe-Mahankal and Deshing villages. The increase was moderately high in Agalgaon and Ranjani villages. While the increase in the former two villages was due to the operations of the agro-based industries.

13. Consequent on the setting up of agro-based industries and the cultivation of agro-based industrial crops, the structure of agricultural output in the selected villages underwent a change. The growth in the industrial and agricultural sectors in rural areas gave an impetus to the growth of the tertiary sector, *viz.*, banking, transport, communication, hotel business etc.

14. As a result of the, setting up of the Sugar Factory at Kavathe-Mahankal emerged as a growth centre. Similarly, the development of *maize* mills in Ranjani transformed the town into a growth centre. It became a marketing centre because of the existence of a large number of *maize* mills. Further, an ancillary industrial unit, *viz.*, came up in the wake of the functioning of a number of *maize* mills, providing employment to 75 workers. The transportation required for the supply of *maize* to the maize mills and the marketing of *maize* mills to distant places, including other states, promoted the development of the tertiary sector, such as workshops, hotels, restaurants, cinema houses, etc. A similar activity was observed in is Deshing & Shirdhon, the place of
location of the Jolly Board Factary only Agalgaon where the Grape Processing establishment was located did not show any signs of developing into a growth centre. This was so because there was functioned in a part of the season.

15. The agricultural workers of the selected villages are able to find employment almost throughout the year. The seasonal movement to other places for employment has ceased after the setting up of agro-based industries. They do not have to struggle any more for their minimum requirements of life. Moreover, there has been a considerable change in their way of life. They take maize as a staple food instead of the traditional food-grains, such as jowar and bajra. Above all, they own consumer durables like Bikes, T.V. and Cell Phone. Thus, there has been a great deal of improvement in the standard of living of these agricultural workers.
7.4 RECOMMENDATIONS -

It is observed that, there are a number of possible measures which can improve and develop the position of agro industrial units related aspects the agro-industrial units. Development of rural economy and potential employment of occupational opportunity and to add to their welfare substantially As revealed by the study, the following are the areas in which special remedial measures are immediately required.

1. In recent years a number of programmes such as Farmers Development Agency (SFDA) Marginal Farmers and Agricultural Labourers Development Agency (MFALDA) Food For Work Programme, National Rural Employment Programme (NREP) Integrated Rural Development Programme (IRDP) Prime Minister Razgar Youjana (PMRY), National Rural Employment Gaurantee Programme etc. were helped to improve the economic conditions of farmers and agricultural labourers in study area. Under these schemes the poverty eradication had indicated a considerable change in the poor households of farmers and agricultural labourers in the Kavathe Mahankal taluka. This constituted the one third (1/3) of the estimated number of poor household both farmers and agricultural labourers in rural areas of Kavathe Mahankal taluka. But out of this not even 20 percent of these households might have losses the poverty line. It means still they are living below poverty line.
2. Our plans have failed to create more employment opportunities especially in the rural areas and successive plans have given lower priority to agriculture irrigation and small scale industry, which are of the greatest concern to the rural poor. The large scale industry, sugar industry received higher allocation of resources which are capital intensive and which have a long gestation period. The output performance against the targets in the plans is miserably poor. It is the low output per unit of labour which is the main cause of low income in the study area. The patterns of allocations need to be changed in favour of agriculture, irrigation and rural industries which are of greatest concern to the rural poor. Thus there should be greater investment in agriculture and allied activities for rural development of the state and of the study area.

On the other hand, it has been found that there is a dearth of convincing evidence supporting disguised unemployment as an empirically valid concept even in the less developed countries like India. With the given technology the large scale transfer of labour from agriculture to industry may reduce output in agriculture. It is very well known that there is shortage of labour during the harvesting and sowing season. The seasonal unemployment of farmers and agricultural labour is much more important than the open
unemployment. The farmers and agricultural labourers will work at such peak times to get higher incomes.

3. Most of the recent studies on agricultural labour including the present study have concluded that introduction of new technology in agriculture has increased employment and wages of agricultural labourers.

A number of other studies have come to the conclusion that more innovations occur in already labour shortage areas. The more imperfections in the inter regional labour markets, and the concentration of labour requirements in the periods of peak demand the more mechanization will occur. According to these studies, the introduction of new input increases the demand for agricultural labour at peak seasons. The result is an increase in wages during those periods; and this increase can be considerable if there is an effective organization of labour. The trouble and disputes become more frequent among farmers and agricultural labourers. Under these circumstances, the large farmers go for labour saving machines. The employment effects of mechanization will differ in the short and in the long run one must be aware of this destination. In the initial stage mechanization will lead to an increase in the demand for agricultural
labourers as there is an increase in the intensity of cultivation. But when there is complete mechanization this trend will be reversed.

4. On the other hand, in irrigated villages in Kavathe Mahankal taluka availability of irrigation, adoption of new technology and higher intensity of land use have contributed to a higher level of employment. Both Male and female farmers and agricultural labourers work for a larger number of days in crop production. In the non irrigated villages measures should be undertaken by the government to develop dry land farming, watershed development and soil conservation. The employment of female agricultural labourers was very low in the irrigated villages as well as in non irrigated villages. Female labourers will have to be provided more employment in agricultural and other subsidiary occupations. The farmers and agricultural labourers have both in irrigated and non irrigated villages have very little non agricultural wage employment in the area under study.

5. The Government till today unfortunately gave a secondary place to the generation of additional wage employment in the rural area. The National Rural Employment Programme is designed to provide supplementary employment to the rural poor farmers and agricultural
labourers during the periods of seasonal unemployment. The total outlay on N.R.E.P. was much lower than on Integrated Rural Development Programme in all five year plans. The tenth five year plan allocated Rs. 1600 cores for N.R.E.P. while for I.R.D.P. the total estimated expenditure was Rs. 4500 cores in the State.

6. In Maharashtra 234.45 lakh mandays employment was generated under N.R.E.P. and the actual expenditure were Rs. 16.40 cores in 2005-06. Assuming that for the full employment of farmers and agricultural labourers needs to work for 300 days in the year. It accounts to provide wage employment for about 6800 farmers and agricultural labourers in Maharashtra. Therefore, one can say that N.R.E.P. provided full time wage employment to less than 2 percent (1.90) percent of total farmers and agricultural labourers in Maharashtra state. These farmers and agricultural labourers are provided wage employment in canal construction, soil conservation, social forestry, road construction and minor irrigation projects.

The peace work under N.R.E.P. is rather allow requisite materials and funds are not made available on time. As per the Government of India guidelines contractors are banned from the execution of the N.R.E.P. works. But the staff at the Taluka
Development Board, Public Work Department and Forest Department who are executing the NREP works is inadequate and the numbers of works are many. The Junior Engineers in charge of the works do not have the necessary experience to organize labourers and extract work from them. The effective supervision is not possible. Hence, more funds and effective supervision of rural development works have to be ensured by the Government.

7. To test the difference between the level of employment and income of workers with land and without land. It was found that the difference in the level of employment and income is found to be significant with respect to farmers and agricultural labourers with land as well as without land in both the irrigated and non irrigated selected sample villages. This may largely be due to the fact the agricultural labourers without land work for a large number of days than the farmers and agricultural labourers with land but earn less income as compared to the agricultural labourers with land. This is true in both types of villages with and without irrigation facilities.

The farmers and agricultural labourers with land have a higher level of income though they work for a less number of days. Therefore only increasing the number of days of employment is not going to improve the income of the rural farmers and agricultural labourers. There is a case for redistribution of land in favour of
landless agricultural labourers. This will substantially increase their per capita income and thereby improve the living conditions of the farmers and landless agricultural labourers in the area under study.

8. There is no surplus land to distribute among the landless agricultural labourers and farmers whose land holdings are not economic. The ceiling of surplus land is also too little to satisfy the land hunger of the farmers and agricultural labourers in the study area, state and countryside. Except in Kerala, West Bengal, land reforms are implemented effectively. There is no political will to implement the land ceiling law. According to the draft tenth five year plan of Maharashtra state, 4493.92 hectares of ceiling surplus land was distributed among the landless agricultural labourers up to 2006-07. This might have benefited only 6.18 percent of the landless agricultural labour families in the Maharashtra State. If one hectare of land is given to each family there will be an increase in the number of non-viable small farms. The provision of regular employment at least at the subsistence wage is the most meaningful way of increasing the income of farmers and agricultural labourers in the sample villages.

9. It was revealed by the present study that the average wages paid to agricultural labourers are quite low. The wage paid to female
agricultural labourers is lower than the wage paid to male agricultural labourers. The wages in non irrigated villages are lower than the wages in the irrigated villages. In irrigated villages on an average Rs. 70 to 80 per day wage is paid to male agricultural labour while female agricultural labourers are paid Rs. 50 to 60 per day but in the non irrigated villages male agricultural labourers are paid Rs. 50 to 60 and female labourer is paid Rs. 30 to 40 only.

The minimum wages of agricultural labourers were revised in 1995 by Government of Maharashtra. The wage revision has been made several times in Karnataka State. The agricultural wage rate recommended during 1999 and onwards was ranged between Rs. 100 to 125 per day. There is no effective implementation of the policy of minimum wages in Maharashtra State because of non unionization of agricultural labourers. There is no machinery to implement minimum wages to agricultural labourers in rural areas.

The minimum wages of agricultural labourers should be subject to revision with increase in the cost of living. Then only it can strengthen the bargaining power of the farmers and agricultural labourers with the employer. The outcome of such bargaining power will be determined by factors like aggregate demand for agricultural labour, strength of the organization of agricultural labourers and the extent of
intervention by the state government through its employment programme and policies.

10. The minimum agricultural wages fixed should be implemented effectively. The task of enforcing Minimum Wages Act through legislation in thousands of villages is a gigantic problem. The cooperation of the employers and agricultural labourers is essential. The agricultural labour market is complicated by its heterogeneity of both labourers and their employers and the local nature of the market. There are farmers similar in socio economic status compared to the agricultural labourers. They also need to be covered by the Minimum Wages Act.

The effective implementation of the Minimum Wages Act needs some degree of selectivity in the choice of the area of enforcement. Those low wage areas or the backward non irrigated area where farmers and agricultural labourers suffer from low socio economic status must receive top priority. The state Government should set up a squad group at the state level for consistent vigilance and supervision over the implementation of the Minimum Wages Act. The implementation of the Minimum Wages Act may work through the committee of villages Panchayats. The objective of the Committee would be to persuade the employers to enter into a broad
understanding regarding the level of wages. The functioning of this Village Panchyat Committee needs to be supervised and guided by a Watch Dog Committee at the state level. The State Committee should lay down the working procedures and function as an appellate body to look into the grievances arising out of the non implementation of Minimum Wages Act. It is also necessary to strengthen the official machinery for inspection, conciliation and enforcement. The recent Amendments to the Minimum Wages Act in Kerala and Maharashtra are model to other states for implementation.

11. The long term solution to the problem of rural farmers and agricultural labourers will depend upon their effective unionization. This is primarily the field for local leaders, voluntary agencies and the left parties. In Kerala and West Bengal, the Communist Party of India (M) and its Kisan Sabha are responsible for the unionization of farmers and agricultural labourers. The State Government can play the supporting role in the organization of farmers and agricultural labourers. The process of unionization will support policies relating to programmes for social rehabilitation of farmers and agricultural labourers and prevention of premature and unregulated farm mechanization for enforcement of regulated wages.
12. No doubt the public sector programmes like N.R.E.P., R.L.E.G.P. and IRDP are important but are not enough. There is a great scope for greater employment generation in the agricultural sector. The studies on large scale irrigation have shown that the present use of irrigation water is not generating the maximum income per unit of water. Appropriate policies must be prepared for increasing cropping intensity which can greatly increase the employment and the income of farmers and agricultural labourers. The policies and the measures to bring about consolidation of land holdings improve the prospect of greater employment in agriculture.

13. The provision of house sites and the improvements for houses of farmers and agricultural labourers should also include provision of sheds for subsidiary occupations. The mass construction of houses would act as catalytic agent in generating more employment and income for farmers and agricultural labourers. The construction of houses and provision of house sites to farmers and agricultural labourers should be taken up on top priority basis. The houses constructed under the scheme of Indira Awas Yojana, Dr. Ambedkar Housing Yojana and the construction of houses under the Janata Housing Scheme for the poor should not be entrusted to the
contractors. The beneficiaries must be directly given the materials and finance to construct their houses. The money for house construction can be released in installments directly to the beneficiaries so that the misuse of funds can be prevented.

On the one hand the Government has initiated a number of special employment programmes for creating greater wage employment for the rural farmers and agricultural labour. But on the other hand, policies leading to drastic reduction in employment in the farm sector are being promoted. For example the National Bank for Agricultural and Rural Development has decided to permit refinancing of loans for combine harvesters at concessional rate of interest. The using of combine harvester and mechanical thereshares will reduce employment considerably in harvesting operations which provide the largest number of man days of employment to farmers and agricultural labourers. This is not the right time to introduce combine harvesters and mechanical thereshares in the country. Only the selective mechanization namely tractorisation, which replaces bullock power can be advocated.

14. The rural labour problem is a great problem. It is a genetic task. A multi purposed strategy should be adopted to solve the problems of poverty, unemployment disguised unemployment, health housing and
standard of living of farmers and agricultural labourers. The strategy includes the Guarantee of Employment under the policy of National Rural Employment Guarantee Programme or Rural Landless Labour Employment Guarantee Programme. The basic minimum wage linked to cost of living index, unionization of the rural farmers and agricultural labourers has the provision of low cost housing and strengthening the public distribution system to enable the farmers and agricultural labourers as to procure the essential commodities at reasonable prices in the village itself. Unless guaranteed employment is provided, there is no point in fixing and implementing the Minimum Wages Act to agricultural labourers. The employment programmes should be planned realistically and should be taken up on a continuous basis without affecting the normal agricultural work. The Idle farmers and agricultural labour should be mobilized for bunding works, canal construction, making roads minor irrigation and social forestry etc. The farmers the agricultural labourers who are enterprising and skilled can take to subsidiary occupations like dairy, poultry and other agro business for their rapid economic development.

15. It was observed that the number of farmers and agricultural labourers is increasing rapidly. There are 219381 farmers and agricultural labourers in 1991. The number increased to 366259 in 2001. The
Government and District administration has look into the problems of farmers and agricultural labourers so that their number can not further increased. If the government can not control it carefully. It will create a class of farmers and agricultural labourers, which class has to face many social, economic and political problems in future.

16. The education of farmers and agricultural labourers increased to some extent in study areas. There are some farmers and agricultural labourers who are H.S.C. passed. They also educated their sons and daughters. Now at present many sons and daughters of farmers and agricultural labourers are working in state Government and Central Government Departments. This is because of wide spread of education and new education policy of Government of India and Govt. of Maharashtra.

17. The rapid development of transport and communication has changed the life style of farmers and agricultural labourers in Kavathe Mahankal taluka. The some farmers and agricultural labourers have BSNL landline phone connections, still some have mobile phones. In irrigated villages farmers and agricultural labourers have two wheelers. In irrigated villages the agricultural wages are high so the agricultural labour economic condition is satisfactory. It helps them to
increase their income and standard of living. They are enjoying with all necessaries of life.

18. In study area the minimum wages act is not implemented by the government and district administration. Till today agro-based industrial workers are getting the payment below minimum wages act and norms. The Government of India and State Government should check the wages and salaries of agro-based industrial workers in the study area of Kavathamahankal Taluka. The owners and management of agro-based industries should be penalized as per the provision of the minimum wages act.

19. The Government of Maharashtra should stop the orders of Zone Bandi and area bandi regarding supply of raw materials such as sugarcane coming from near by villages of Karanatak State. Due to shortage of raw material the Mahankali Sugur factory is not functioning throughout the season. The recovery and production of sugar falls down as a result the income and expenditure of the factory automatically comes down and leads to strikes.
20. There is an acute shortage of market places / centers and proper transportation and storage service to store the production of Agro based industrial products. In case of Agalgaon grape processing units. All farmers in Agalgaon and surrounding villages not having their own storage facilities. They are supposed to store their resign product in the cold storages of others with hire charges. So the Government should provide them finance to cold storage at a subsidised rate of interest. The market are also not available to get fair prices the product so proper fair price markets should be developed at taluka and village level.

21. Implementation of Bonus act the is not observed by all Agro-based industrial units owners. Sugur Factory only gives bonus to all its workers as per Bonus Act. The other agro-based industries are not giving Bonus regularly to workers even though earns prof it regularly. The Government should order the agro-based industrial units to distribute bonus to its all workers.

22. The working hours in all agro-based industries are more than 12 Hours. The overtime payment is not given to workers. Holidays are not allowed in some industrial units in the study area. They always insist all no work no pay norms. So all factories and industrial units
are forced to give bonus and holidays to workers and overtime payment for the excess work.

23. Lack of health and hygiene facilities on the campus of the factory site. Except the Mahankali Sugar Factory all other agro-based industries are not providing health and hygiene facilities to workers at the factory site. In other words none of the agro-based industrial units in the study area have their own hospitals for workers health. The factory should be compelled to provide medical and hygienic facilities to the workers.

24. Pensions are not given to retired workers. The retired workers of Mahankali Sugar Factory are only given pension to retired workers. All other agro-based industries are not giving pensions to retired workers. The State Government should insist all the agro-based industries to provide pension to retired workers of the factory.

25. Educational facility to workers and their children should be provided by the agro-based industrial workers. All agro-based industries in the study area should start their educational institutions for the education to workers and their children’s. Education is the fundamental right of the every children. The Government should provided to some finance to agro-based industries units to start schools on the factory site or in the near by villages.
26. Development of roads for transportation of goods and services of the industrial units. None of the industrial units has its own roads for the transportation of raw materials and finished goods and services. Still today all the agro-based industries in the study area are using the Government Roads for transportation. They should develop their own roads for transportation of roads and services at least from factory to main road.

27. All factories should appoint social welfare officers for the welfare of the workers.

28. The provision of residential facilities to workers. None of the factory in the study area provides housing facilities at the factory site. The most of the workers are living outside factory area and they are coming to factory on their own vehicles. The agro-based industries should provide residential and transportation facilities to workers to come to factory for work in time and regular.