CHAPTER VII

SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

7.1 INTRODUCTION

Mango is a perennial horticultural crop. Since mango is perishable in nature, they are mostly harvested when they are fully mature and unripe. The taste of mango depends on various factors such as the stage of maturity of the fruit at the time of harvest, method of harvesting, care in handling during transportation and other associated activities. On the basis of different qualities, the mango are graded before marketing and processing. Bamboo baskets are commonly used for packing mango. Packing is also done in boxes while individual fruits may be wrapped with tissue paper for various destinations. Orchardists, usually, despatch their produce by cart, van or lorry in metric tonnes to the food processing firms and local markets. Some fruit processing firms are located in Maharashtra, Gujarat, Rajasthan and Madhya Pradesh.

An attempt has been made in this study to analyse socio economic characteristic cost and returns structure of mango in Dindigul district, resource use efficiency, marketing factors like marketing channels, marketing cost, price spread and marketing efficiency, influencing input variables of gross returns on mango cultivation and problem faced by the both farmers in the study area.
7.2 SUMMARY OF FINDINGS

It is found that more than (78 per cent), has been in the age group of 26 to 55 years. The age group of 46 to 55 years has been found to be relatively higher in the case of the small farmers (42 per cent), as compared to the large farmers (34 per cent).

More than three-fourths of the farmers (89.00 per cent), belong to the Hindu religions. 10 per cent of the sample farmers are Muslims and the Christians who are engaged in mango cultivation has formed only 1.00 per cent. The implication is that a very large number of the mango cultivators of this study area have belonged to the Hindu religion.

A very large proportion of the cultivators (59.33 per cent), have cultivated more than 50 trees per acre in their fields and (22.33 per cent), of the cultivators 67 out of 300 has cultivated between 30 to 40 trees. Only (18.34 per cent), of them 55 out of 300 farmers have been grown between 41 to 50 trees.

It is found that most of the farmers, 179 respondents (59.67 percent) out of 300 cultivators have cultivated the Bangalara mango variety in their fields; as many as 6.33 per cent, 7.33 per cent and 11 per cent of the total number of farmers respectively has cultivates Palamani, other varieties and Banganapalli respectively. The remaining 47 respondents (15.67 per cent) of them cultivate the
Neelum variety of mango. Both the small as well as the large farmers have been cultivating the Bangalara variety of the mango to a very large extent.

It is clear from the study that in the total annual operation and maintenance cost per acre is \( \text{₹}13025.78 \). Among the various costs, the costs of labour has constituted the highest share 20.69 per cent followed by the cost of manures 17.15 per cent. The average cost of labour is \( \text{₹}2,694.93 \) per acre, which has contributed to 20.69 per cent of the annual operational and maintenance costs per acre.

It could be observed that the total cost of production of mango per acre has worked out to \( \text{₹}29,718.01 \). The total variable costs per acre have worked out to \( \text{₹}13,025.78 \) and its share is 43.83 per cent of the total costs of production. It is found that the total fixed costs have worked out to \( \text{₹}16,692.23 \) per acre, constituting 56.17 per cent of the total costs of production. The second important component of the total fixed cost is the annual share of net establishment costs. On an average, the annual share of the net establishment costs has worked out to \( \text{₹}1475.30 \) per acre accounting for 4.96 per cent of the total costs of production. The amount of the other fixed costs worked out to \( \text{₹}10,466.93 \) per acre and its contribution to the total costs of production are 35.23 per cent.

Cobb-Douglas production function has been used to compute the relation between various input factors and gross income from mango. Chow’s test has been carried out to test the structural differences between two farms.
The result of Chow’s test revealed that there existed a structural difference in production relation between the two farms in the study area. It has been observed that there existed structural difference at slope level between the small and large farms from the analysis. This is due to the variable number of bearing trees that caused difference at the slope level. The marginal value productivities of all the factor inputs were found to be positive in both the farms indicating a further increase in input with profit.

The log linear regression model has been computed to find the input variables that influenced the gross return of mango cultivation and thereby resource productivity with respect to both the farms.

In order to study the structural differences in production relation between small and large farms of Dindigul district regression model has been computed by using the principle of least squares.

The capital productivity has been measured by using net present value, benefit-cost ratio, internal rate of return and pay back period.

The results of regression co-efficient of small and large farms revealed that among five input variables, three variables namely, human labour, plant protection and number of bearing trees have influence on the gross income of the mango groves in small orchards, whereas in large farms only two variables namely, plant protection and number of bearing trees had influence on the gross
income of the orchardists. Compared to other factor inputs, the influence of the number of bearing trees has been observed to be greater in both the farms.

It has been found out with regard to the benefit cost ratio the mango orchards have been profitable in both the farm in the study area. The internal rate of returns has been higher in both the farms indicating the high pay-off nature of investment in mango orchards in these farms. Further, it has been also observed that the small mango orchardists pay back the investment earlier than that of large grove orchardists in Dindigul district.

Further, with regard to the return on the investment of capital the net present value indicated the soundness of investment on mango orchards in both the farms. The investment on mango orchard in small farm has been economically more feasible than in large farm.

The resource use efficiency the ratio of marginal value products to their respective cost, it has been found out that the variables human labour and cost of tillage practices are underutilised, whereas in the case of plant protection, orchardists in both in the farms have been found to be rational in its use in the study area.

It has been found that 23.67 per cent or 71 of the mango growers has sold their produce soon after the harvest due to the non-availability of storage facilities in the study area followed by 20.34 per cent or 61 of them who has anticipated a
price fall and 17.66 per cent or 53 of them for clearing their debts. The result has also indicated that the maximum number of 50 among the large growers (32.67 per cent), has sold their produce due to the non-availability of proper storage facilities. In case of the small growers the percentage in this category is only 14 per cent or 21 out of 150 of them.

It is clearly pointed out that the study is 48.67 per cent or 146 out of 300 of them has chosen tractors, tempos and lorries for transporting the mango to the market. It would be quite interesting to note that 28.67 per cent or 86 out of 300 of the cultivators have chosen all the various modes of transport to market their produce. It might also be noted that only 15 per cent of the cultivators has chosen bullock carts, horses, bicycles and two wheelers to market their mango.

The study reveals that through various intermediaries such as commission agents cum wholesaler, retailer and others have observed to be ₹3090.42 and ₹2801.89 per metric tonne in small and large farms respectively. The net share of the producers in the consumers’ price has been 53.92 per cent in small farms and 55.37 per cent in large farms. Among the market intermediaries, the retailers were found to have the highest share. The gross marketing margin was 46.08 per cent and 44.63 per cent in the consumer price in small and large farms respectively. The price spread was higher in small farms compared to large farms in Dindigul district.
It has been pointed out that there has been no difference between two farms as per the ratios. From the result of the estimated regression co-efficient, shares of the producer and the retailer were significantly affected by the variation in consumer’s price. The share of producers has found to be inversely related to the consumer’s price while retailers share has been positively related to the consumer’s price in the study area.

It reveals that clearly brings out that 95 respondents (31.67 per cent) out of 300 sample farmers have to face the problem of high initial investment in starting the orchard. It will also be clear that 62 respondents (20.67 per cent) out of 300 farmers have considered long juvenile period of plants to commence to yield as the problem, in mango cultivation nearly 50 respondents (16.66 per cent) out of 300 have felt the problem of getting high quality fruit plants. It can also be noted from the study that a 83 large size farmers (55.33 per cent) out of 150 have complained about the lack of technical know how as one of the major problems in mango cultivation, whereas it is felt by 10 (6.67 per cent) small size farmers out of 150 of the sample farmers.

The study brings out that 182 out of the 300 sample respondents who has accounted for (60.67 per cent), of the farmers has reported that there are no storage facilities in their orchards and about 31.66 per cent or 95 out of 300 has stated that they has storage facilities which are found to be inadequate.
It has been referred that the total respondent, 94 respondents (31.24 per cent) reported the problem of the high cost of transport followed by 88 out of 300 accounting for (29.33 per cent), of the respondents has reported about the problem of the inadequate transport facility. Among the small sized farmers 27.34 per cent of the small sized farms or 41 out of 150 of them has reported that the vehicles which are not enough to carry their produce during the mango season and the same problem has also been experienced by 31.3 per cent or 47 out of 150 of the large sized farmers.

The major problem for their produce and they has accounted for (42.33 per cent), of the total number of cultivation followed by the reporting of unreasonable prices for the mango fruits by 99 out of 300 which has accounted for (33 per cent) of growers. It could also be noted that the problem of low demand for the mango fruits is found to be higher in the case of the small sized growers accounting for 45.33 per cent, of the cultivators whereas in the case of large sized growers it is found to the only 39.33 per cent of the cultivators who has faced the same problem.

It is found that 33.67 per cent of the growers has complained about the higher charges levied by the commission agents. It would also be very clear that the large sized as well as the small sized growers has expressed the opinion that the amounts charged by the middlemen has been very much higher than the usual charges lived by others for performed the same services.
It is clear from the study that the maximum of 113 (37.67 per cent) mango growers borrowed money from wholesale merchants followed by 111 (37 per cent) sample growers who have got money from local moneylenders who charge maximum interest rate. It is also noted that the growers who got loans from bank were only 40 (13.33 per cent) respondents and 36 (12 per cent) sample growers secured money from their friends and relatives.

The analysis shows that (41.67 per cent), of the respondents have paid at an interest rate varying between 24 to 36 per cent to the moneylenders. It would also be clear that (12.66 per cent), of the mango growers 38 out of 300 has been charged at a very high interest rate, which is above 36 per cent and only 11 per cent or 33 out of 300 of the growers has paid at a rate which is below 12 per cent rate of interest. In the case of the small sized growers 74 out of 150 or 49.33 per cent has paid at a rate varying from 24 percent to 36 per cent rate of the interest for their dues. 41 out of 150 or 27.34 per cent of the small sized growers has paid a rate of interest varying between 12 to 24 per cent rate of interest. It would be clear that a vast majority of 63 out of 150 of the large sized growers accounting for (42 per cent), has paid at an interest rate varying between 12 to 24 per cent.

The study shows the 53.33 per cent of the respondents has expressed the view that the main purpose of getting a loan advance is to meet the both purchase of fertilizers and for other cultivation requirements. 74 out of 300 or 24.67 percent of the respondents has got loan advances to meet other requirements of cultivation
and 66 out of 300 or 22 percent of the respondents has raised loan advances to buy fertilizers for their cultivation.

The analysis shows that 109 respondents (36.33 per cent) out of 300 respondents have repaid their dues in two installments followed by 104 respondents (34.67 per cent) out of 300 respondents who have paid their dues in more than two installments. The remaining 87 respondents (29 per cent) out of 300 respondents have paid their dues in one installment.

It has been pointed out that the problem of procedural delay has occupied the first rank 51 respondents among the small sized growers whereas in the case of the large sized growers, it has occupied the third rank only 20 respondents. The procedural complexity is the main constraint and is placed in the first rank by the large sized growers by 54 out of 150 large sized former respondents whereas in the case of the small sized growers it has been placed in the second rank by 46 respondents. By both the types of growers no problems has been placed in the sixth rank and for the small sized growers there are 3 respondents and there are 5 respondents among the large sized growers in this category.

7.3 SUGGESTIONS

It is observed by the researcher that the cultivation of mango in the study region is economically viable. However, the removal of certain constraints faced by the orchardists both at the stages of production and marketing can also help to
increase the yield and get better price for their produce. A well planned and co-ordinate programmes of action to encourage the orchardist to concentrate on this highly economic occupation are required. The following are relevant implications of the present study.

At every stage of raising the plant, the orchardist must be given proper instructions to increase the productivity. Agriculture department must depute officers to visit the farm to instruct the farmers. Cold storage facility must be established in the production centers, so that the growers can stock their produce to sell it’s at attractive price at the appropriate time. Open action system can be introduced which will open up an organised marketing system for mango.

Information on marketing should be passed on to growers and traders through mass media and other means of communication. The scientific knowledge about the cultivation of modern varieties of mango must be extended to the traditional mango cultivators. Liberal financial assistance may be made available to the growers as loans through commercial banks and co-operative societies. Since, mango is a perennial crop and the gestation period is long, mango cultivators must be encouraged by the grant of subsidies by the Government.

There is a need to promote mango processing units. This will enhance the demand for mango products, besides creating more income to mango growers. The plants and fertilizers should be provided to orchardists on easy credit terms.
by the Government. Since mango is an export earning item, more importance must be given to the export promotion of mango. There is a vast scope for increasing exports of mango as only a very negligible per cent of the total production is exported at present. Most of the orchardists relied upon the local money lenders and contractors to meet their financial requirements paying exorbitant rate of interest. So steps should be devised to ensure adequate credit for cultivation of mango in the study area. Adequate transport facilities at low cost must be arranged for proper marketing. Most of the orchardists sell their produce only through commission agents cum wholesalers who charge high rate of commission. Thus to improve the marketing of mango, it is necessary to create alternative marketing channels and also fix reasonable commission charges.

Mango cultivation could increase if recommended package of practices of mango based on scientific data are readily available to the farmers. Role of agricultural extension department should be strengthened to boost up mango cultivation and production in the study area. There is a lack of research in mango industry. Prospects of mango cultivation require increased research facilities, research personnel, training to researchers and improved communication between researchers and mango growers. Especially small growers need more attention of the researchers.
7.4 CONCLUSION

It is a gratifying experience to study at close quarters the harrowing experience of some of the mango cultivators in Dindigul district. The highly volatile price pattern, lack of storage facilities, non-availability of agricultural labourers at times, the primitive methods of mango cultivation and stranglehold of middlemen are some of the crippling roadblocks faced by the mango entrepreneurs desirous of a study progress. Mango has remained the topmost fruit in India ever since ancient days. It is highly tasty and luscious table fruit for Indians. To meet the ever-growing demand of the mango, a portion of land of should be used for mango cultivation. The mango cultivation provides employment opportunities to many people and also helps the mango growers for improving their economic status. In this context, the present study is highly unique in nature and the findings of the study.