CHAPTER VII

SUMMARY AND CONCLUSION

INTRODUCTION

Banana is a major fruit crop of India. At the world level it occupies the first place in the production of banana. Tamilnadu is one of the major banana growing states of India. The present study aims at analysing the growth, instability and supply response of banana in a agricultural district of Tamilnadu viz Kanyakumari district.

Agriculture growth with stability and sustainability have been matters of concern in the strategy of agricultural development in India. During seventies and eighties there were high rates of growth agricultural production but they were alleged to be accompanied by considerable year to year fluctuation giving rise to increasing instability in agricultural production. Growth, instability and supply response are three related aspects of agricultural developments. A comparison of growth rates of agricultural production with growth rates of population is of importance in the context of food security. Growth with substantial fluctuations may have impact on the economic growth of the country and may create severe fluctuations in agricultural prices which will have serious repercussions on the economy. Study of supply responsiveness desires special attention while planning for agricultural development. In a country like India study of supply responsiveness is important
inorder to implement policies for raising the agricultural output to a level which can provide for adequate human nutrition to the increasing population and to promote general economic development. The present study tries to analyse the three useful inter linked aspects of growth, instability and supply responsiveness of banana in Kanayakumari district. While there are many studies on these aspects at all India state levels, there is a dearth of studies in the above aspects in fruits crops especially banana. This study tries to make a contribution in filling this research gap.

Objectives:

Following are the specified objectives of this study

(a) To study the growth trends in the production, area and yield of banana crop in Kanyakumari District.

(b) To examine the extent of sources of instability in the production of the banana in the study area.

(c) To examine the acreage response of farmers in the study area and

(d) To suggest the measures to increase and stabilise the production of banana crop in the study area.

Hypotheses:

This study is based on the following hypotheses and attempt is made to test the hypotheses using appropriate statistical techniques.
(i) There is substantial growth in the production of banana in Kanyakumari district during the period 1970-71 to 1999-2000.

(ii) There are considerable fluctuations in the production and yield of banana.

(iii) Variation in area and yield are mainly responsible for the production of banana and

(iv) The farmers in Kanyakumari district are responsive to price changes.

This study covers the long period of 30 years 1970-71 to 1999-2000. For the analysis state this has been divided into three periods, namely 1970-71 to 1984-85 and 1985-86 to 1999-2000, each sub-period consisting of 15 years. The study relies fully on secondary data only. The data needed for the study have been by and large published. They have been collected from the following sources. 1. Season and crop Reports of Tamilnadu, 2. Published by Department of Statistics, Government of Tamilnadu 3. Tamilnadu an economic appraisal published by evaluation and applied research department of the government of Tamilnadu and 4. Statistical handbooks (state and district levels, directorate of statistics, government of Tamilnadu.

For the analysis of data statistical tools of linear semi-log model, semilog quadratic model, Mann Whitney's variability test, coefficient of variation coppock's instability index, Hazell's decomposition model based on co-variance analysis, supply response equations in linear and log linear forms covering price and non-price
factors based upon Marc Nerlove's partial adjustment model and Granger Causal by test have been used.

Findings of the Study

The periodwise analysis of estimated growth rates of production, area and yield of banana in Kanyakumari district enables the researcher to reach the following conclusion.

(a) the unadjusted and rainfall adjusted growth rates of banana are observed to be due to growth in area during the first sub-period of the study.

(b) The unadjusted growth of banana during the second sub-period has been found to be due to the area banana is found to rainfall adjusted yield in this period.

(c) While for the whole period the unadjusted growth analyse leads to yield growth to be the connotative factor to unadjusted growth of banana, the rainfall adjusted growth of banana has been found to be due to both area and yield growth

The instability analysis carried out in this study leads to the following major findings.

(i) There is no significant variability in the time series of production of banana in Kanyakumari district during seen the two sub-periods of this study.

(ii) The instability of production and yield have declined during the second period while the area of instability increased during the second sub-period compared to the first sub-period.
(iii) The residual factors other than area and yield are the contributory factors to the variation in the variance of change in production.

(iv) Of the two factors area and yield, area have contributed to the variability of banana production in the second sub-period compared to the first sub-period. These inferences make the researcher to suggest that the future researchers in the field of instability in banana production must try to bring the residual factors such as rainfall, irrigation, profitability, climate and other environmental circumstances into their studies.

The acreage response analysis of this study indicated the following observations.

i) The lagged area, relative price, lagged yield risk variable, profitability from banana are the variables influencing acreage under banana in Kanyakumari district.

ii) Price of banana does not influence area under banana significantly.

iii) Non-price variable like yield influences banana acreage in the study area.

iv) Banana growers of Kanyakumari district are almost conservative and price changes of banana do not influence acreage under banana since farmers of this district face a lot of constraints, physical, financial and institutional.
v) Annual rainfall has not significantly influenced the banana acreage. Irrigation is an important non-price variable which may be expected to influence the acreage. But unfortunately the data of irrigated land under banana is not available. So these variable could not be included in this study.

vi) Supply of banana in Kanyakumari is found to be price inelastic in both the short run and long run.

vii) The causality test applied in this study revealed that area under banana is significantly influenced by yield of banana while yield is not significantly influenced by area.

**Policy Implication**

This empirical study leads to the following policy implications.

a) Yield growth of banana is found to the factor causing increasing production during the first 15 years of the study. But the entire 15 year-yield growth has not played any significant role in increasing banana production in Kanyakumari district. This inference leads us to recommend that efforts must be taken to augment the yield of banana. This may require intensive effort towards research and development activities in banana cultivation by agricultural university of Tamilnadu and to introduce new high yielding varieties of banana.
b) Price policy is found to be ineffective in influencing banana production in Kanyakumari district. So non-price factor must be given importance. In this direction mention may be made of improving the irrigation facilities, advising farmers to apply more green manures, introduction and encouragement of crop insurance scheme and provision of more agricultural credit etc.