Chapter - 1

Introduction
INTRODUCTION

Agriculture, the main occupation for majority of the people in most of the developing countries is a source of livelihood and sustenance and its growth provides the greatest hope for improving their living standards. In India about 64 percent of the population mostly in poorer deprived rural areas are dependent on this sector for their livelihood. "The developing countries in which farm workers constitute two thirds of the labour force and 40 percent of its population lives in poverty have a more difficult task of balancing the producer’s and consumer’s interests".

Agriculture produces food stuff and raw materials, the demand for which in the aggregate is relatively stable in the short run. But the farmers who are the back bones of agriculture are put to lot of hardships due to the imbalance in the price of agricultural commodities. They cannot predict as when there will be a hike in price or when there will be a downfall. The fluctuation in agricultural prices is due to the fluctuations in the supply of agricultural products, which in turn varies due to (i) seasonal and weather conditions (ii) variations due to supplies being more abundant in certain months of the year (iii) deliberate variations attempted by the producers, and (iv) variations arising out of
conditions of marketing and the fluctuations in the price of agricultural products are the greatest hurdle in the way of agricultural development, for they bring ruin to many. According to Sir Roger Thomas, "next to rain, price changes have been the greatest enemy of the farmer".

Farming is a biological process and there is a greater time-lag between the changes in prices and adjustments in production. The entire cost structure in agriculture is relatively rigid and moves more slowly than the level of prices, especially in times of falling prices, and it is necessary to resort to corrective measures for arresting the fall in prices not only for securing stable price incomes to the farmers but also for securing some stability for the entire Indian economy of which agriculture forms the very base, as about 70 percent of the total population is still engaged in agriculture. The hike or fall in the price of agricultural commodities sometimes occur seasonally and cyclically also and an indepth study on price analysis of agricultural commodities will help both the farming group and the decision making group.

The Need

Price policy is an important instrument of planning. The government can influence the allocation of resources, distribution of

incomes and capital formation through price manipulation. Prices give signals to reallocate the resources between sectors and even within a sector (Mellor, 1968). Within the agricultural sector, prices of individual commodities determine the relative profitability of different crops and hence shape the cropping patterns. The uncertain trend in the movement of price of agricultural commodities has hindered the success of the agricultural development for want of stabilized agricultural prices. The famine enquiry commission observed, “Give price stability, much can be done by linking up credit, agricultural improvements and marketing so as to supply the facilities needed for agriculture, whether water or manure or seed or machinery or organization. Without it we are building on sand”.

Price stabilization aims at the prevention of violent fluctuation in the prices on both sides. It consists of measures that the government might take to prevent a fall or rise in prices if and when it occurs. Price stabilization is to be clearly distinguished from various forms of farm relief and legislative measures which are introduced with the ideas of

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raising domestic price levels. As pointed out by the Businessmen’s Commission of 1927 on Agriculture in U.S.A. “Real price stabilization would affect a mitigation in price fluctuation, but this would involve sealing down of the heights of prices as well as elimination of their depths. Though this would not make an incompetent producer rich, it would prevent the ruin of reasonably efficient farmers whose production is really needed and who tends to be replaced by newcomers liable to suffer from the same fate. Price stabilization of agriculture would thus enter into the wider field of stabilized income and stabilized wages of not only those engaged in the field of agriculture, but also the mass of non-agricultural workers as well. It would also further raise the productivity of the soil. To raise the standard of living of the masses it is important to fix fair prices for agricultural products. Time and again this fact has been recognized that, “When a general expansion of agricultural production is aimed at, a guarantee of minimum price is an effective measure to adopt and it forms, therefore an essential part of the agricultural development”. The famine enquiry Commission, 1945 observed that, a fair return to the cultivator is one of the foundations not only for agricultural prosperity but general prosperity also.
The price sub-committee on Agricultural Prices (under Shri Krishnamachari) recognized the need of stabilization of agricultural prices on the following grounds.

(1) In order to protect the farmer from heavy losses due to vagaries of the weather and damage by insect pests and price fluctuations, prices should be guaranteed with a view to securing comparative stability of agricultural incomes and prices so that a reasonable parity is established between the agricultural and industrial incomes.

(2) To safeguard the interest of the consumers, it is necessary that prices should be prevented from rising beyond a prescribed maximum. Such prices should be fixed within a range, which would be fair both to the producer and to the consumer and capable of being put into practice.

(3) The fair price should be such as would have to produce an income sufficient to maintain him and his family at a reasonable standard of living. This fair price should cover the cost of production.
(4) The minimum price for a commodity should be calculated for principal producing areas on the basis of Fair Average Quality (F.A.Q) of the product. The maximum price should not be lower than the parity price. It should be fixed at 25 percent above the minimum price or alternatively, at the fair parity price, whichever level is higher.

(5) The fixation of minimum price would require that the government should guarantee to purchase all supplies offered to it at that price at an adequate number of marketing centers within an easy access to cultivators in order to enforce prices at the minimum level. The state may regulate the foreign trade by means of quotas, tariffs and state trading.

(6) When prices move above the prescribed maximum the state should provide supplies to the market, forms its own stock at a price not exceeding in the maximum. In order to prevent the prices from rising above the maximum, the state should have power to requisite stocks to regulate the distribution of supplies and to enforce the control of prices by law in an emergency.
(7) The state should have special powers to regulate acreage under individual crop in a particular area on an all-India basis and to enforce adequate standard of land management.

(8) The minimum and maximum prices should be fixed up for principal foodgrains like wheat, bajra, jowar as their prices are likely to influence those of other food grains. The principles of price policy recommended for food crops should also apply to commercial crops and the mode of implementation would have to be modified to suit the special circumstance of each crop. For animal husbandry-products the State government on a regional basis should regulate the price. The five-year plans also have stressed the need for the stabilization of prices for agricultural commodities.

Price Forecasting, another important feature helps the farmers to choose the crop for cultivation that would fetch profit to him. It also helps the government to maintain a floor price for producers and the ceiling price for consumers much in excess of the normal marketing margin, which in turn helps to attain self-sufficiency in production. The present study deals with the necessity for price forecasting which would be useful to government policy makers and farmers.
Problem Focus

The farmers who are the backbones of agriculture are put to lot of hardships due to imbalance in the price of agricultural commodities. They cannot predict when there will be a hike in price or as when there will be a downfall. These hardships are due to either Government policies or due to the unexpected change in the weather conditions such as drought, flood etc. An in depth study on price analysis of agricultural commodities will help both the farming group and the decision making group.

The price analysis based on time series approach helps in price forecasting fluctuations in the price of agricultural products, which needs price stabilization. The fluctuations produce in turn drastic variation in prices, hurting the interests of producers when prices fall following good harvests and of consumers during poor crop years, for protecting the interests of producers.

Since the district is rich in the data on the prices of the commodities namely Arecanut, Coconut, Coir, Paddy, Palmjaggery, Rice, Tapioca, the present study concerned itself in the time series analysis of the prices of the above items and their byproducts viz: Coconut-Big, Coconut-Medium, Coconut-Small, Coir-Fine, Coir-Medium, Paddy-Ponni, Paddy-Samba,
Palmjaggery-Fine, Palmjaggery-Medium, Rice-Ponni, Rice-Samba, Tapioca-Chips, Tapioca-Flour.

**Hypothesis**

With the above problem focusing in mind the following hypothesis were set for the study.

(i) There is scope for selecting appropriate forecasting techniques for price of fourteen commodities with great accuracy of forecasting.

(ii) There exist seasonal and month effects on the prices of the above commodities.

**Objectives**

The objectives of a price policy in a country at any time are defined by the nature of the problems that the country is facing. In U.S.A. and other developed countries the chief object of the price policy is to prevent any drastic fall in agricultural incomes resulting from the surplus production and decline in prices. In developing countries like India, its concern is to increase agricultural
production. The objectives of the present study help to select the best model, which would suit the price policy.

The overall objective of the study is to provide a clear perspective of the time path of the fourteen products namely Arecanut, Coconut-Big, Coconut-Medium, Coconut-Small, Coir-Fine, Coir-Medium, Paddy-Ponni, Paddy-Samba, Palm-Fine, Palm-Medium, Rice-Ponni, Rice-Samba, Tapioca-Chips, Tapioca-Flour for successful planning. The specific objectives were

(i) Perfection of the method that suits relatively the best in forecasting the prices.

(ii) To compare the efficiency of the models used.

(iii) Using the best model to forecast the probable prices for a few forthcoming years.

Scope of Study

The study with the help of time series approach tries to predict the price for agricultural commodities. It further enhances the study of fluctuations of prices that occur sometimes cyclically and seasonally, which in turn stresses the need for stabilization of prices. It also tries to strike a balance between the
economic interests of producers and consumers and helps both the farming group and the decision making group.

Limitations of the study

The study has all the limitations of Time Series models based on time series data recorded for different food crops such as paddy, rice, coconut, palm jaggery etc. cultivated in Kanyakumari district. Price analysis by time series approach for different purposes is carefully done to arrive better results. The limited time liable for an individual researcher working on part-time basis has restricted the analysis to five major crops. The time-series ended with the crop year 1998-1999 because of the non-availability of data for more recent years. However these limitations are not serious as evidenced by the validity of the model and usefulness of the results of the analysis.

The methodology and specific models in this study can also be used to other district data with similar characters.

Organisation of the thesis

Chapter-I General introduction, problem setting, hypothesis, objectives, scope and limitation of the study are presented.
Chapter-II Concepts used in the present study along with a comprehensive review of the various time-series models and their comparisons and applications in the past are described.

Chapter-III Selection and description of study area and research methodology are presented.

Chapter-IV The results of the study are discussed with their implications.

Chapter-V The results are summarized and conclusions drawn with policy implications.