INTRODUCTION:
Agriculture has been playing a predominant role in the economic development of all developed and developing countries. Ever since India’s independence agriculture in India has taken strides owing to the varietal and agronomic interventions of agricultural research and the resourcefulness of the farming community. The Green Revolution of the 1960’s ushered in rapid increases in food crop production such as wheat, rice and other cereals. Efforts were also taken to achieve similar increases in nonfood crop production viz: coconut, groundnut, sugarcane, cotton etc. In recent years a large number of national programmes for coconut development have been launched in many Asian and Pacific countries, particularly in India because coconut occupies a unique position in commercial agriculture as a fibre, food, oilseed and beverage crop.1 The high oil content of the endosperm of the coconut (copra) is widely used in both food and non-food industries like margarine and soaps. The coconut palm and its products are a major source of livelihood to a sizeable section of the rural folk in the tropics and also contribute substantially to the total export earnings of some of the Asian and Pacific countries. It is unique among horticulture crops of India because of the diverse uses of coconut products. Therefore, coconut production, productivity and marketing have become an attractive field for multidisciplinary research.

REVIEW OF LITERATURE:
The review of the earlier studies and the experience of the researchers help one in evaluating the strength and weakness of the concepts used earlier. An attempt is made here to review several such studies and specify appropriate concepts as applicable to the present study. Jose Mathew advocates the advantages of Drip Fertigation as a successful technology for integrating irrigation and fertilization. According to him irrigation and fertilization are the two most critical management factors that influence growth, yield and
quality of agricultural crops. The use efficiency of these inputs is very low in India i.e 30 to 40 percent. This leads to low crop productivity, degradation of soil health, and increased environmental pollution apart from the wastage of substantial quantity of these costly and scarce inputs. Adoption of Drip Fertigation technology has opened up new possibilities to optimize and integrate the use of water and fertilizer enabling to harness high crop yield and ensuring a healthy soil and environment. (Jose Mathew, “Drip Irrigation – A Successful Technology with Multiple Benefits”, *Kisan World*, Vol. 30, No. 1, January, 2003),

R. Veeraputhiran suggests the following strategies to implement drip irrigation which will improve irrigation efficiency to 80 to 90 percent (1) Allocation of government subsidy for drip irrigation (2) simplified procedure for the disbursement of subsidy (3) reduction of gestation period to avail subsidy. Veeraputhiran recommends fertigation for applying fertilizers under drip irrigation and herbigation as a new method of weed management. He concludes that drip irrigation system is highly suitable for adoption in growing trees and fruit trees, wide-spaced and commercial crops and that there is great prospect for rapid expansion of area under drip irrigation in the 21st century. (Veeraputhiran R. “Drip Irrigation for Sustainable Water Management”, *Kisan World*, Vol. 32, No. 1, January 2005,)

Outlining the water saving irrigation methods followed to supplement the age old surface irrigation method such as Sprinkler/Overhead Irrigation Method and Micro or Drip Irrigation, R.K. Sivanappan concludes that in view of the scarcity of water, it is essential to manage water efficiently for all crops and he recommends the use of drip irrigation for all crops in all soils, particularly for wide spaced high value commercial crops like coconut, grapes, vegetables and fruit crops.. (Sivanappan R. K. “An Overview of Irrigation Methods”, *Kisan World*, Vol. 32, No. 7, July 2005,)

E.A. Parameswara Gupta holds the view that coconut occupies a unique place in the socio-economic life of the people of the Indian sub-continent. According to him India would emerge as the second largest producer of coconut in the world before the close of the twentieth century. (Parameswara Gupta E.A. “Processing and Consumption of Coconut in India”, *Southern Economist*, Vol. 35, No. 19, February 1, 1997),

R. K. Sivanappan points out the wastage of scarce water in surface irrigation of coconut fields. In surface irrigation the entire field is flooded to a depth of 5 to 7 cm once in 5 to 10 days depending upon the type of soil. The quantity of water applied works out to more than 200 litres/day or about 1000-1400 litres in 5-7 days. The conveyance loss is about 20-25%. In contrast to this method is the Drip/Micro Sprinkler Method which has increased water use efficiency and water saving is up to 40 to 60% and labour saving up to 90%. Further Drip Method increases the yield by 30%. This method successfully meets the problem of irrigating sandy tracts. Many progressive farmers of Tamilnadu and Karnataka have adopted this advanced method of irrigation. Sivanappan feels that the time is not far away when the entire coconut farm in the country will be irrigated by Drip System for its sustainability and to increase yield. 1818. (Sivanappan R.K. “Drip Irrigation for Coconut for Increased Yield”, *Kisan World*, Vol. 31, No. 10, October, 2004).

**STATEMENT OF THE PROBLEM:**

Coconut is an important tropical oil seed crop, which gives coconut water, kernel, oilcake for cattle etc. Since, it is one of the leading commodities in agricultural
exports, the production programme of the crop is of critical importance in improving the efficient use of resources. The cost of production and net return obtained per unit, would determine the profitability of the crop. The profitability of an enterprise depends upon the efficient use of the resources in production. Though production is the initiation of the developmental process, it could bring less gain to the producers unless there exists an efficient marketing system. The producers depend upon the market conditions to fulfill their hopes and expectations. But forced sales, multiplicity of market charges, malpractices in unregulated markets and superfluous middlemen are the problems faced by the cultivators. The market imperfection and the consequent loss in marketing efficiency are more pronounced in markets for perishable commodities which require quick transportation and better storage facilities. Though coconut has a pride, not only for its diverse uses but also for its special preference to consumers, both rich and poor, it is subjected to the above stated production and marketing problems. The Tumkur District of Karnataka is one of the rich coconut producing regions and hence the present study is an attempt to analyze the production and marketing of coconut in the district.

SCOPE OF THE STUDY:
The present study covers only production and marketing of coconuts and does not go into the industrial activities involving coconuts. The study has been undertaken from the point of view of the farmers, and market functionaries.

OBJECTIVES OF THE STUDY:
The following are the specific objectives of the present study.

1. To analyse the trend, growth and magnitude of variability of coconut production.
2. To analyse the cost and returns of coconut production.
3. To study the resource use efficiency and to compute returns to scale.
4. To evaluate the capital productivity of coconut cultivation.
5. To study the temporal variations in the price of coconut.
6. To evaluate marketing cost, marketing margin, price-spread and marketing efficiency of different channels.
7. To analyse the problems encountered in the cultivation and marketing of coconut by the growers and to suggest suitable solutions to solve them.

COLLECTION OF DATA: The primary data were collected from growers, through personal interview method. Based on physical, cultural and socio economic environment of farming in the region, interview schedule was designed, pre-tested and finalized. Detailed information were collected from the coconut growers on cropping pattern, labour utilization, age of the coconut trees, variety and number of coconut trees. The data required for the study of marketing were also gathered by interviewing the different market functionaries using another well-structured pre-tested schedule. Information were collected from the intermediaries on marketing cost, marketing margin, price-spread and problems in marketing. Data regarding price of coconut, area, production and other secondary data were collected from various journals, books, coconut statistics, published by Coconut Board, Cochin, Statistical Year Book and the Reports of Director of Economics and Statistics, Ministry of Agriculture, New Delhi and Director of Economics and Statistics.
Area, production and productivity of coconut in Tumkur district 2009-10

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Year</th>
<th>Area (Ha)</th>
<th>Production (Lakh nuts)</th>
<th>Productivity (Nuts/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2000-2001</td>
<td>100810.00</td>
<td>6632.83</td>
<td>6580</td>
</tr>
<tr>
<td>2</td>
<td>2001-2002</td>
<td>110993.00</td>
<td>5477.67</td>
<td>4936</td>
</tr>
<tr>
<td>3</td>
<td>2002-2003</td>
<td>111248.00</td>
<td>5490.26</td>
<td>4936</td>
</tr>
<tr>
<td>4</td>
<td>2004-2005</td>
<td>109443.00</td>
<td>5401.18</td>
<td>4936</td>
</tr>
<tr>
<td>5</td>
<td>2005-2006</td>
<td>110937.00</td>
<td>5474.91</td>
<td>4936</td>
</tr>
<tr>
<td>6</td>
<td>2006-2007</td>
<td>122690.00</td>
<td>6054.94</td>
<td>4936</td>
</tr>
<tr>
<td>7</td>
<td>2007-2008</td>
<td>125511.00</td>
<td>6194.16</td>
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</tr>
<tr>
<td>8</td>
<td>2008-2009</td>
<td>124110.00</td>
<td>6837.65</td>
<td>5510</td>
</tr>
<tr>
<td>9</td>
<td>2009-2010</td>
<td>132587.00</td>
<td>9945.66</td>
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<tr>
<td>10</td>
<td>2010-2011</td>
<td>4021140.00</td>
<td>285910.42</td>
<td>7111</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>506946.90</td>
<td>34341.97</td>
<td>6774</td>
</tr>
</tbody>
</table>

Results and discussion
The coconut producers sells coconut to preharvest or post-harvest contractor and then it reaches the street-vendors and then to consumers in case of tender coconut. However, in case of coconut it would reaches to wholesaler and then to retailer and consumer. In another channel some of the processing industries would have contract with the coconut producers and through them it would reaches to wholesaler and then retailer and consumer. The important channel is the producer to village trader would sell at handy or in regulated markets to commission agents and then to whole seller to retailer and consumer. As an alternative marketing channel the street vender would have the direct contact with the producer and they sell at streets in small quantities. As perusal observation many intermediaries are playing important role in marketing of coconut in Tumkur district. Intermediaries are playing a major role in marketing of coconut in the study area. Instead of that the coconut board/government should think to establish their own collection and marketing centers in the study area.

CONCLUSION:

As coconut is also a significant foreign exchange earner and a source of income and employment to millions of people this study has been undertaken. Another aim is, mainly, to help the Government to take up policy decisions and formulate suitable schemes and programmes to ameliorate socio-economic conditions of the coconut cultivators. The present study has brought into focus, various issues relating to production and marketing of coconut. The policy implications suggested, if properly implemented, may result in increased revenue for the nation and the people concerned. Based on the experience of the researcher, the following issues have been identified for further research:

i) Economics of Coconut Cultivation- A Cost Effect Analysis
ii) Production and Marketing of Coconut in Tumkur districts- A Comparative Analysis
iii) Economics of Coconut By products - A Cost Effect Analysis
iv) Coconut Cultivation in Two taluks of a District – A Study.
v) Socio-Economic conditions of Coconut farmers in Tumkur District – A study.

The researcher will feel amply rewarded, if the present study paves the way for the above and many more similar studies in
future and those studies will definitely contribute a lot to improve the well being of the coconut growers in the country.

BIBLIOGRAPHY