INTRODUCTION
CHAPTER-I
INTRODUCTION

Agriculture sector continues to be a vital and dominant sector of the Indian economy. It accounts for 28 per cent of the country's gross national product. The livelihood of more than two-thirds of the country's population is dependant on this sector. It is also a major source of raw material to a number of agro-based industries in the country.

Soon after independence, the country faced the problem of feeding its large and rapidly growing population. In 1951 the population of the country was 361 millions, growing at the rate of over 2.2 per cent per annum. The food production was only 52 million tonnes. Recognising the vital role played by agriculture in Indian economy, the Government of India accorded high priority to the development of agriculture in successive five year plans. The earlier plans focussed on production of food grains in favourable and potential areas using bio-chemical technology with irrigation. This enabled to attain the goal of self-sufficiency in food grain production. Thus, green revolution has richly contributed towards food security diversification of agriculture. Further, the success of the new farm technology has enabled the country to increase the production of food grain at an average rate of 2.6 per cent per annum, exceeding the rate of growth of population, contributing to a considerable degree of self sufficiency.

The overall performance of Indian Agriculture in the last five decades has no doubt, been remarkable. However, the progress shown in the production of different crops and regions has not been symmetrical. Some crops have performed better compared to others. Thus, the new farm technology has
also brought in regional disparities. For instance regions like Punjab plains witnessed a tremendous surge in production, other regions, especially the dry tracts do not bear comparison. These imbalances have led to regional socio-economic conflicts. Structurally too, the impact of the green revolution has also not been uniform. Rice, Wheat and a few annual crops registered good production performance while in the case of coarse grains, pulses and oilseeds, such results were not forthcoming. Above all there has been a stagnation in Agricultural production, since the eighties, casting doubts as to whether the new farm technology could sustain its momentum, in the years to come, in the face of increasing population. The problem of large-scale variation in agricultural production, therefore warrants for greater attention as it is influenced not only by natural forces but also man made factors. Of late, there is an increasing apprehension that the rapid growth attained from the Green Revolution is declining. Disturbingly this phenomenon has been observed more or less throughout the country. The key inputs like fertilizer, irrigation, electricity, that are supplied to agriculture by the State have been devouring a large amount of subsidy when such State investment should be channelled into productivity enhancing investments such as research. Lower returns in Agriculture have inevitably resulted in lower public investments in agriculture and private investment has not been able to fill this gap. Consequently the annual increments in agriculture and thereby the annual increment to gross capital formation in the recent past has been lower compared to the early 80s (Praduman Kumar et al., 1995).
Agriculture being a State subject, the Central expenditure in this sector would be an insignificant part of the total public investment. Sompal (1988) Union Minister of State for Agriculture has stated that the agriculture sector has been discriminated against, over the years and the fatalism had gripped the farmers. This had been manifesting itself in large scale tensions in the rural economy. Therefore, he opined that any policy that does not address the problems related to the critical inputs of land, capital, water and human resources would fail to optimise output levels and sharpen the contradictions between the rural and urban economies.

Irrigation is the best way to achieve substantial increments in agricultural products on drylands. Therefore, development of irrigation infrastructure and its exploitation to the fullest extent is the need of the hour. Otherwise in a country of 960 million people, with no signs of decline in population growth, it would be very difficult to achieve food security. Even though there seems to be a self sufficiency in food production, the problems are far from over as revealed by the drought of 1987-88. The food production dropped below 140 million tonnes and as a consequence the country had to resort to imports. The adoption of new farm technology which is based upon on a high-input and high-output equation, has not been a totally viable option for the rainfed farmer. Considering the risk entailed in the event of failure of monsoon, the farmer in such cases has to bear the brunt of expensive inputs which form an invariable part of new farm technology. Even in condition of favourable environment in rainfed or irrigated cultivation, there is a wide range of man-made forces which dictate the viability
and prospects of farming. A crop receiving quality inputs and favourable marketing conditions would perpetuate itself in area in the coming years while those crops which don't, would yield way to other proving crops like Sugarcane, Wheat and Paddy.

Thus, the approaches to the problem of agricultural production needs to be comprehensive and should be taken into consideration a wide range of factors in order to analyse the growth in production and compositional changes in agriculture.

Karnataka is a moderately resource endowed State, mostly rainfed with a modest capacity to innate itself. The State's economy is primarily agro-based. Therefore, the developments of the State is greatly dependent on the performance of its agricultural sector. Agriculture is a major source of raw material for a number of industries in the State.

The State is endowed with diverse of agro-climatic conditions enabling it to cultivate a wide range of crops. The food production in the State was only 3.80 million tonnes during 1955-56. By 1966-67 i.e., during the onset of green revolution it had shown a modest growth and reached 4.39 million tonnes. During the next decade the food production exhibited a tremendous growth enabling to attain around 7.3 million tonnes by 1977-78. The average growth rate of food production was however practically stagnant during 1980-81 to 1984-85. The growth rate of food production in the State during 1985-86 to 1989-90 was again below par and about half of the country's growth rate of 3.64 per cent. Production has also witnessed year to year fluctuations as revealed by
the fall in production to 6.03 million tonnes in 1982-83 after peak production in previous year.

The production of food grains in 1986-87 and 1987-88 was 7.53 and 6.35 million tonnes respectively. In terms of growth rate the period between 1969-70 to 1973-74 the State exhibited an average annual production growth rate of 6.27 per cent and it increased to 7.18 per cent during 1974-75 to 1977-78. However, growth slumped to 0.08 per cent during 1980-81 to 1984-85 and thereafter 1985-86 to 1989-90 showed a marginal recovery of 1.94 per cent. However, barring the period 1974-75 to 1977-78 the annual production growth of the State has been considerably lower than the similar national growth rates. Thus, on the output side there has been a gradual decline or stagnancy in Cereal production. The area under crops, specially for Cereals, Pulses, Oil seeds and Commercial crops are also declining. Besides, the growth in productivity of Cereals has declined significantly from 3 per cent in the 70’s to 0.29 per cent in the 80’s. The productivity of Maize, Ragi and Bajra recorded marginal increases during the 80’s when compared to 70’s. The growth in productivity of Rice and Jowar, the major Cereal crops which accounted for about 65 per cent of the total area under Cereals in the State recorded negative growth rates during the 80’s. Thus, the production of Cereals in Karnataka has come down (Nachappa, 1993). The Government of Karnataka was much concerned in the stagnation in production of major crops in the State. Consequently the Government appointed the Expert Committee on Stagnation in Agricultural Productivity (ECOSAP) in 1993 to look into the reasons for stagnation of agricultural productivity and suggest measures
for its correction. While variations in climate may contribute to some extent in explaining regional anomalies, the problem of the consistent poor performance of the State vis-a-vis the national performance remains to be investigated. Agricultural production being highly season-oriented and dependant on vagaries of nature, it is difficult to anticipate an uniform level and distribution of production. The consumption of agricultural commodities is evenly spread over the year, while production is not. The planners and policy makers in the field of agriculture are thus confronted with a formidable challenge to formulate a suitable agricultural strategy. Thus, the need for a sound empirical knowledge on various agricultural factor productivities is quite crucial.

One of the approaches to assess the performance of agricultural sector usually, in practice, would be by way of examining the growth patterns of certain related physical indicators. Such an approach not only helps in dissecting the past performance but also helps in future planning. In the current phase of agricultural scenario in the State, measurement of production performance vis-a-vis scarcity of production resources assumes great importance. In this context, it is necessary to understand the patterns of resource use, productivity of different inputs and efficiency in production. In the light of the above discussions, there is a need to evaluate the performance of agriculture in Karnataka. In this endeavour, this study has an overall objective of analysing the factors responsible for the inconsistent performance of agriculture in the State. This has been examined with reference to the following specific objectives:
OBJECTIVES

1) To measure the growth in productivity of major crops;
2) To analyse the sources of instability in the production of major crops;
3) To estimate the contribution of various inputs to the growth in crop productivity;
4) To assess the level of technical efficiency in crop production and to study the pattern of input use in the State;
5) To suggest appropriate policy measures for improving agricultural performance in the State.

The study is organised into nine chapters - Chapter-I deals with the significance of the study and the performance of agriculture in Karnataka. A brief review of literature relating to the problems under investigation is presented in Chapter-II. A detailed account of the study area is presented in Chapter-III. The Methodology adopted including the nature and sources of data and the analytical techniques used for the study are presented in Chapter-IV. The analysis of growth in the productivity of major crops of the State is presented in Chapter-V. An attempt has been made in Chapter-VI to analyse the sources of instability in production of major crops in the State. The factors contributing to the growth of crop productivity have been analysed and presented in Chapter-VII. The efficiency of production performance of various crops in the State and the pattern of input use have been presented in Chapter-VIII. Major policy implications are drawn based on the broad indicators of the study and presented in Chapter-IX.