1. INTRODUCTION
I. INTRODUCTION

In India, where the majority of the people consumes cereals as the major items of its daily needs, agriculture has been the dominant land use for centuries. Many cereals, pulses, millets and vegetables are grown year after year in the same areas to meet the increasing demand for food.

Agriculture is important not only because it provides food for millions in the country but also for the employment, it gives to a very large section of the population. Approximately seventy per cent of the people are engaged in agriculture. About half of the National income is from agriculture.

The total geographical area of the country is 328 million hectares and cropped area is about 176 million hectares. Of this about 26 million hectares are sown more than once every year. About 31 million hectares of the cropped area are irrigated where a large variety of crops are grown. Among principal cereal crops rice and wheat are the most important.

Asia produces more than 90 per cent of the total world's rice production. Among the Asian countries,
India has major production and consumption of rice. Rice occupies about 40.99 million hectares of the crop land with a production of 56.77 million tonnes. Rice is the most important crop of the country covering about one third of the total cultivated area not only forms the mainstay of the diet of the majority of the people, but also influencing other socio-economic conditions.

Rice is grown in almost all the states of India, but its cultivation is mostly concentrated in the river, valleys, deltas and low lying coastal areas of North-Eastern and Southern India, which contributes about 97 per cent of the country rice production.

Out of 40 million hectares of rice area, almost 2/3 of the crop is being grown still under rainfed conditions and there is growing realization about increasing the intensity of cropping under these conditions. The rainfed rice is being grown mainly in the eastern and north-eastern states of India comprising Bihar, Orissa and West Bengal.

The financial allocations from 6th to 7th Plan have been increased from Rs.7,444 crores to Rs.10,474 crores for agriculture, from Rs.6,114 crores to Rs.8,944 crores for rural development, and from Rs.10,925 crores
Production of food grains has rocketed by 194%, oil seeds by over 50%. The cumulative impact of all these steps swept India through phases of vigorous agricultural growth, the green revolution being the most notable of them. The effect of the green revolution can be best seen in the fact that while between 1960-61 and 1980-81 the total area under cultivation rose by only 7%, production shot up by 40% and yield per ha by 27%.

These achievements were also made possible by the Government's efforts to develop a scientific temper among the villagers and in Indian agriculture as a whole. The figures speak: irrigated area 60 m hectares in 1982-83 up from 2.6 m hectares in 1950-51, consumption of fertilizers 64.2 lakh tonnes in 1982-83 taking off from 22.6 lakh tonnes in as late as 1970-71. An epoch-making technological breakthrough in spreading the coverage of HYV resulted in the growth of area under HYV to 46.5 m hectares by 1981-82.

While the achievements of the past are something to be proud of, the challenges of the future are overwhelming. India was able to achieve an incremental output of 100 m tonnes from 50 m tonnes in 1950-51 to 150 m
tonnes in 1984–85. The country has now to increase its output by 70 m tonnes over a period of only 15 years. India's population is expected to grow at the rate of around 2.8% over the next 15 years or so. Indian agriculture, therefore, like a lice in wonder-land will have to keep running just to stay in the same place.

Vast areas of Bihar, particularly the plateau region of Chotanagpur and Santhal parganas, lacks the planned and assured irrigation with the result that agriculture in this area is mainly rainfed. Area under cultivation in the plateau region is around 2.8 million ha of which 40% are lowlands. While the lowlands are committed exclusively to rice production, the medium and uplands sustain a multiple of crops like rice, ragi, gondali, kulthi, maize, jowar, bajra, niger, khesari etc. Rice covers about 60 per cent of total cropped area in the plateau region of Bihar.

A scientific study of the rice-based cropping system under rainfed situation is urgently needed for the better utilization of limiting resources and for improving the socio-economic conditions of farmers in the area.
Hence, the study of "Economics of rice-based cropping system under rainfed situation" would assume a great significance for providing the basic guidelines for formulating a sound agricultural policy particularly for rainfed area.

With the above points in consideration, the present study was undertaken with following objectives.

i) To estimate the cost of cultivation and cost of production for major crops grown in the study area.

ii) To work out farm income for different size of farms.

iii) To study the major determinants of rice output in the study area.

iv) To find out the optimum cropping pattern for different size of farms.

The major hypothesis were as follows.

i) Cost of cultivation decreases with increase in the size of farms.

ii) Cost of production gives a negative correlation with the size of farms.

iii) Gross income and various measures of farm profits gives a decreasing trend in relation to size of farms.