1. INTRODUCTION

"With a gradual decline in the size of farm holdings, the efficiency of small farm management holds the key to progress of agriculture. Yield is the product of interaction between the genetic engineering of rice plant and the management efficiency of small farmers".

M.S. Swaminathan (1989)¹

Agriculture plays a vital role in the economic development of our nation, with the farmer being the linchpin of the social chariot. Rapid growth of population makes it necessary for the country to increase agricultural production. da Costa (1995)² has shown that the food grain production in India may not be enough to feed the ever increasing population. The growth rate of food production in 1994-95 was only 1.59 per cent, while the population growth rate was 2.1 per cent. Hence, it has been argued that the physical targets of production have to be raised upwards. However, the question arises as to how far they are economical from the stand point of absolute benefits to


farmers. Many of the technological developments in agriculture aim at increasing physical production potential with little regard to cost of production. The marginal cost of production has been rising from year to year in most of the regions in our country. Hence, Indian agricultural economy is becoming a high-cost economy. Therefore, the tendency towards achieving higher production by the financially better off farmers persists. The limited resource supplies also face acute mal distribution from society's point of view. However, this should not dilute the attention from the production focus, which has to be ensured to meet the requirements of the population. The point to be considered is that higher crop production should not be at the cost of high cost of production, but should result from optimum cost leading to increased returns for farmers.

Management plays a vital role in determining the cost of production and achieving higher level of returns. Chowdhary et al (1968) reported that management exerts decisive influence on the level of income of farmers. A variation of 12 to 13 per cent in gross income and 19 to 36 per cent in net income was found to be explained

by management input. Bora (1989)\(^4\) opined that agricultural technologies are quick maturing, high yielding and profitable, provided they are properly managed. The challenge before a farmer is how well he can manage to enhance his returns on a sustained basis. To meet this challenge effectively, it is imperative to develop the managerial ability of farmers. According to Singh (1993),\(^5\) given the same level of inputs and technology, efficient management can make two to three fold difference in crop yield. He also indicated that management is acknowledged as the most critical input in agricultural development.

There is a false belief among many people that our cultivated holdings are small, capital investment is low and farming is a way of life and that management does not have any application in agriculture. However, Gupta and Gupta (1992)\(^6\) stated that management is not only

\[\begin{align*}
4. & \quad \text{S.P. Bora, } \textit{Studies in Agricultural Extension and Management}, \text{ Mittal Publications, New Delhi, 1989, pp. 131-156.} \\
6. & \quad \text{M.S. Gupta and A. Gupta, } \textit{Management Principles, Practices and Techniques}, \text{ Atlantic Publishers and Distributors, New Delhi, 1992, pp. 650-663.}
\end{align*}\]
relevant to the business concern, but it has universal applicability including agriculture. Belshaw (1974)\(^7\) mentioned that farming today is becoming more complex and complicated and therefore, management is a key to face these problems. All these factors necessitate efficient management by farmers to survive and succeed in the present day world.

However, the applications of management in the field of agriculture have not gained enough recognition so far. Pathak (1992)\(^8\) pointed out that management, though widely used in economic studies, has not been efficiently used in extension researches. He was also of the opinion that since every farmer differs considerably with respect to his socio-economic background and personal characteristics, it is important to understand how these factors influence his management behaviour.

From the above discussions, it is very clear that management input of farmers assumes a significant role in the farming sector to attain the goal of farm families and the nation as a whole. This applies to all crops and rice is no exception to it.

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Rice is an important crop in our country since it is the major staple food for about 65 per cent of the population. India has the largest rice cultivated area of 39.6 million hectares. The country’s share in total rice production of the world works out to about 22 per cent. Besides its importance as food, rice cultivation provides employment to the largest sector of rural population in most of Asia (De Datta, 1981).  

Obaidur Rahman (1996) reports that the scope for bringing more area under rice farming in India is limited. The only alternative is to improve yield of rice at no less than 3.0 to 3.5 per cent annual growth. Use of high yielding varieties and modern production technologies have helped to increase rice production by about four times during the period 1950 to 1995. However, the total rice production in the country has remained static with an average yield of 3.1 tonnes/ha, which is far below the world average. The author calls for more attention and effective management in rice farming.

As far as Kerala is concerned, rice forms the primary diet for both lunch and dinner for majority of the population. The crop is


cultivated in all the districts of the state under varied agro-climatic conditions. It is cultivated in three distinct seasons viz. autumn or virippu (April to August), winter or mundakan (September to December) and summer or punja (January to April). Punja is the main season when rice is cultivated under irrigated conditions in the state since sufficient rainfall is not available during this period.

Irrigated rice farming has special relevance due to its capability of achieving high crop yield under proper management of irrigation water, supplemented by adoption of adequate quantities of other inputs such as high yielding seeds, fertilizers, plant protection chemicals etc. Asian countries where land constraint was encountered in the early part of the twentieth century have been exploiting potential for better farm productivity through development of irrigation facilities and application of science based agricultural technologies (De Datta, 1981).\textsuperscript{11} Rao and Thamarajakshi (1978)\textsuperscript{12} have computed that the relative difference between irrigated and un-irrigated crop yield in India works out to 50 to 100 per cent for rice, wheat and other cereals.


However, the average productivity of rice under irrigated conditions (punja season) in Kerala state is found to be only 2515 Kg/ha (Department of Economics & Statistics, Govt. of Kerala, 2001), when compared to a yield potential of 5000 Kg/ha for irrigated high yielding varieties (CWRDM, 1994).

The major constraints faced by rice farmers in the state relate to high cost of cultivation without a corresponding increase in yield of the crop, making it non-remunerative. Mohandas (1994) reported a very low input-output ratio of 1.05 to 1.12 for rice farmers in Kole lands of Kerala, indicating that farmers are operating on a 'break even' condition in rice cultivation. Labour cost was found to range from 32 to 37.5 per cent of total cultivation cost for different land holding categories of farmers.


Vijesh (2001) also found a low benefit-cost ratio of 0.87 in Kuttanad and 0.64 in Pokkali lands of Ernakulam district in the case of rice farmers. Increasing cost of cultivation and decline in profitability have been attributed as the major reasons for the shift in cultivation from paddy to other more remunerative crops like coconut, banana etc. in Kerala.

All these factors convincingly reveal the fact that the possible way out to realize higher returns from irrigated rice farming, especially for farmers with a meager resource – base, befall largely on improving their managerial efficiency. The extension education efforts of departments such as Agriculture, Irrigation etc. in improving managerial efficiency of irrigated rice farmers attain their purpose and objective only when they are backed with adequate information on various aspects of managerial efficiency of farmers. In addition, knowledge on the relationship of socio-economic and situational factors of farmers with managerial efficiency and managerial constraints will be of use to the department officials in formulating strategies for the development of farmers.


Past research on management in relation to farming have mainly concentrated on economic aspects of input-output relationships without emphasis on management in terms of farmer's behaviour.

In view of the above, the present study is formulated for analyzing managerial efficiency of farmers undertaking irrigated rice cultivation from a sociological perspective.

**LIMITATIONS OF THE STUDY**

The study formed a part of the doctorate degree programme. Hence, it has all the limitations of time, money and other resources. These limitations restricted selection of one command (irrigated) area of an irrigation project as the location of study and forced to restrict the sample size. However, careful procedure has been adopted to carry out the research systematically.

The study covered only irrigated rice farmers and hence, generalization of the findings would be restricted to this group of farmers. Further, the research was based on the expressed responses of the farmers, which may not be free from their individual biases and prejudices. There could be some distortion in the interpretation of the responses of farmers, though every care was taken to collect the information without any loss.

In spite of these, it is believed that the findings of the study and the conclusions drawn will be useful for improving managerial efficiency of farmers cultivating irrigated rice.