

Resource use efficiency and resource allocation on medium farm in cash crop production

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ABSTRACT

The study of resource productivity; resource use efficiency and optimum resources used with respect to various explanatory variables in cash crops cotton and sugarcane was undertaken on medium farm during agriculture year 2005-06 in Marathwada region of Maharashtra. The data were taken from cost of cultivation scheme Marathwada Agricultural University, Parbhani, the sample of 100 medium farm size farmers throughout the zone was tabulated and analyzed by appropriate statistical tools. The result revealed that, cotton area was positive and significant at 1 per cent level. Coefficient of multiple determination was (R^2) 0.58 which indicate 58 per cent variation in independent variable, the sum of elasticity was 1.21 which was indicated that increasing return to scale. Sugarcane area was also positive and significant at 1 per cent level, the sum of elasticity was 0.61 per cent which indicate decreasing return to scale coefficient of multiple determination was 0.61 which indicated that 61 per cent variation in explanatory variable.

Key words : Cotton, Sugarcane, Resource productivity resource use efficiency

INTRODUCTION

The targeted growth rate of agriculture is fixed at 4 per cent to achieve projected requirement of foodgrain, oilseeds, sugarcane, livestock and fishery product to the tune to be double by the end of 2011-12. Sustaining a 4 per cent growth rate in next decade will require much larger use of inputs particularly land, irrigation, fertilizers, pesticides, high yielding varieties etc. Due to top impact of WTO the agriculture land use charge might be titled towards allocation of more areas to cash crops, fruits, floriculture and medicinal plants.

The net farm income is mainly a function of farm size and net profit per unit area. The net profits per holding, at point of times, depend upon several factors such as the type of farming practices, the quantum of use of various inputs, the prices of inputs and products and the overall management efficiency of the operators.

Level of awareness of farmers increases with increased education facilities and extension programme. To make full use of rapidly increasing new technology, the adoption process of agricultural practices need to be accelerated. Economic analysis makes the farmers learn more of alternative course of action. The scientific management process acts as a useful educational tool through gathering more information on new alternatives and testing each recommendations on economic standards.

Present scenario challenges the scientists to enhance land use efficiency in order to increase the per unit returns from agriculture. There is a great need to pay attention to increasing land utilization efficiency, net sown area, resource use efficiency of inputs, are governed by several

factors such as socio-economic characters of farmers, cropping pattern availability and quality of resources, types of resources like soil, water, varieties used etc. managers, workers labours, cost of resources, market prices, other enterprises like fishery, poultry, dairy etc. and market policies given by government.

The main aim of farmers to get more profit or returns from the inputs by using resources efficiently, the investigation on analysis of medium farm in Marathwada region of Maharashtra was carried out.

MATERIALS AND METHODS

Marathwada region of Maharashtra was purposively selected in order to study the farm business analysis. Multiple stage sampling design was used for selection of zone, tehsils, villages and farms. Twenty eight tehsils under the assured rainfall zone were selected from the eight districts of region because of their involvement in cost of cultivation scheme. From each cluster villages, the two farmers of medium categories were selected. Thus, total 100 sample farms were selected. Data pertains to the year 2006-07. Technique like tabular analysis, budgeting technique, non-linear and multiple regression analysis, frequency and percentage method were used to analyze the data.

Strong inter-correlations among independent variables were identified for solving problem of collinearity in estimating production function. The variables which had non-significant correlation significant with respect to cotton and sugarcane production were also dropped in estimating production function. Thus for cotton six and for sugarcane eight independent variables were included