

Resource-use efficiency of sugarcane cultivation in U.S. Nagar district of Uttarakhand : An economic analysis

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ABSTRACT : This study undertaken in the U.S. Nagar district of Uttarakhand state, has examined the resource productivity of sugarcane production. The study has used the primary data collected from 100 sugarcane growers using the stratified random sampling. Since only variable cost was important in the short-run in influencing the decision-making of the farmers, only these were considered for deriving the profit. On an average, cost of cultivation of sugarcane amounted to Rs. 62633.54 per hectare resulting in a total per hectare income of Rs. 178039.42 with giving a benefit-cost ratio of 2.84. Cobb-Douglas production function approach was applied to find out the productivity of resources used in sugarcane cultivation. Study revealed that coefficient of multiple determinations (R^2) were found to be quite high in all size groups of farm (83 to 98%) which indicated that the selected form of the production function was best fitted. The value of co-efficient of human labour and irrigation in small farms and human labour and seed in marginal farm were observed positive and significant at 1 per cent level, while fertilizers in medium farm, plant protection chemical in marginal farm, and irrigation in all size group of farm except small farm were significant at 5 per cent level of significance. Returns to scale was found less than unity in all size group of farms. It indicated that production of sugarcane is characterising decreasing return to scale on the each size groups of farm. Marginal value productivity (MVP) to factor cost of all variables in all size groups of farms were found positive and more than unity indicating further scope for increasing the investment on resources used for enhancing sugarcane productivity.

Key Words : Variable cost, production function, co-efficient, significant, MVP.