Effect of socio-economic characteristics on productivity of pearlmillet

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ABSTRACT

Pearlmillet (*Pennisetum typhoids* L.) is one of the most important cereal crops in India. The productivity is influenced by the production methods as well as the socio-economic characteristics of pearlmillet grower. The data pertained to the year 2008-09 in order to study the effect of socio-economic characteristics of the grower on the productivity of pearlmillet crop. Linear function was fitted to the data. Results revealed that, regression coefficients of family size (0.212), livestock (0.301) and capital investment on bullock pair (0.003) were positive and significant. Thus, it inferred that if one added person to family size, one added unit of livestock and one added rupee to investment on bullock pair could lead to increase the productivity of pearlmillet by 0.212, 0.301 and 0.003 quintal, respectively.

INTRODUCTION

India is the largest producer of pearlmillet crop in the world. The total area under pearlmillet cultivation in the country is 9.81 million hectares. The production of pearlmillet is 9.24 million tonnes while its productivity is 942 kg per hectare. Productivity of perlmillet is affected due to production technology. In production, important inputs are like labour, fertilizers, manures and seed. Timely application of inputs can increase the productivity. But it is fact that, pearlmillet productivity can also be affected due to experience of farmer, his educational standard and family workers. It is also influenced by economic condition of farmer in which land holding, livestock and capital investment on farm can be considered. Patil (2006) revealed that the socio- economic characteristics of pearlmillet grower were like fifth standard of education family size of 5.63 persons and land holding with 2.34 hectares. Pearlmillet is stepple food of farm families in Beed district of Maharashtra. It is predominating cereal crop in cropping pattern with 16.20 per cent. Socio-economic factors are also rather considered than that of technical factors for increasing peralmillet productivity in the district. By managing such social as well as economic factors, pearlmillet productivity can be increased which can help to increase the profitability of the crop. By keeping in view the above aspects, the present study has been undertaken.

METHODOLOGY

Multistage sampling design was adopted for selection of the district, tehsil, villages and farmers. At the first stage, Beed district was purposively selected for present study because of higher area under pearlmillet. In the second stage, Georai tehsil was purposively selected from Beed district because of the highest area under *Kharif* pearlmillet crop. In the third stage, eight villages from Georai tehsil were selected on the basis of highest area under rainfed pearlmillet crop. At the fourth stage, the list of pearlmillet growers was obtained from each of eight villages. From each village, twelve farmers were randomly selected. In this way ninety six pearlmillet growers were selected for present study. The analytical technique was used to determine effect of socio-economic characteristics on productivity of pearlmillet by application of linear functional form as follows.

$$Y = f(X_1, X_2, X_3, \ldots \ldots, Xn)$$
$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \ldots + b_nX_n$$
$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8$$

where, Y=yield per hectare in quintals, a = Intercept of production function, bi= partial regression coefficients of the respective resource variable (i = 1, 2, 3, … , 8), X_1 = Age in year, X_2 = Education level in five quantum scores, X_3=Family size in persons, X_4 = Occupation level in three quantum scores, X_5=