Research
Paper

Effect of socio-economic characteristics on soybean productivity

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ABSTRACT

Soybean [*Glycine max* (L.) Merill.] is a major oilseed crop in Maharashtra. Productivity is influenced due to social and economic factors. Latur district was purposely selected for present study, because of higher area under soybean in Marathwada region of Maharashtra. The data pertained for the year 2007-08. Tabular analysis was used as well as linear multiple regression function was fitted to the data. In general, age of soybean grower was found to be 47.94 years. It was observed that farmer was giving more importance to education. On an average, family size was 6.36 members. In general, holding size was 5.29 hectares. The results revealed that, partial regression coefficients of land holding (0.2970), capital investment (0.00778) and livestock (0.3454) were positive and significant. It implied that, land holding, capital investment on commonly used assets and livestock were positively influencing the in soybean productivity.

INTRODUCTION

Maharashtra is one of the major soybean producing state in India. Soybean is rightly termed as 'miracle bean' because of its unique qualities. It is triple beneficiary crop, which contains 20 per cent edible oil, 40 per cent high quality protein and high level of essential amino acids. Soybean is an eco-friendly crop in the sense that, it fixes 25-30 kg nitrogen per hectare in the soil, which leads to reduce use of chemical fertilizers as a source of nitrogen for the next crop. Soybean crop gets prominence in the cropping pattern of the state because of its higher price as compared to other competing crops. The productivity of soybean can be influenced due to social and economic factors. Social factors like age, education, family size, land holding, livestock and capital investment on farm can be affecting soybean productivity and production. Rodge (2007) revealed that, age of soybean grower belonged to middle age group (25 to 50 years), with education upto primary school and family size ranged between 5 to 8 members. In consideration of above aspects, the present study has been undertaken with the specific objective, to know the effect of socio-economic characteristics on soybean productivity in Latur district of Maharashtra.

MATERIALS AND METHODS

Multistage sampling design was adopted for selection of the district, tehsils, villages and soybean growers. In first stage, Latur district was purposively selected on the basis of highest area under soybean crop from Marathwada region of Maharashtra. In the second stage, Latur and Renapur tehsils were purposely selected because of higher area under soybean crop. In the third stage, six villages from Latur tehsil and six villages from Renapur tehsil were selected on the basis of highest area under soybean crop. In the fourth stage, the fifteen soybean growers with area under soybean crop were selected from each of the selected villages of both the tehsils. In this way 180 soybean growers were selected for the present study. The data pertained for the year 2007-08. The analytical technique was used to study the effect of socio-economic characteristics on productivity of soybean by application of linear multiple regression function as fallows:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + \ldots + b_n X_n + U, \quad Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + U$$

where, Y = Estimated productivity of soybean in quintals, a = Intercept of production function, bi = Marginal