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“FORECASTING OF AREA AND PRODUCTION OF COTTON AND FARMER’S EXPECTATION ABOUT NEW VARIETY OF BT COTTON”

ABSTRACT

*Keywords*: ARIMA model, Bt cotton, Satisfaction level, Constraints

India is one of the largest producers of cotton in the world accounting for about 25 per cent of the world cotton production and having the largest area under cotton cultivation, around 25 per cent of the total world area under cotton and occupies an important position in the Indian economy. Cotton is cultivated in India in both tropical and subtropical region of the world. The study was carried out to assess the market of Bt cotton of Ankur Seeds Company at Amravati and Wardha district of Maharashtra state in the year 2018. Multi-stage sampling was used to select the samples for the study 20 dealers and 120 farmers were selected from the study area. The data were collected by personal interview method, analyzed through various appropriate statistical tools. To forecast the area and production of cotton, ARIMA model was used and it was found that next three year area and production was increases. To identify the farmer’s expectation about new variety of Bt cotton, simple tabular method was used and study illustrates that a maximum number of farmers were expecting the medium range of price, good packing quality, short duration of crop, disease resistance, sucking pest resistance, less irrigation requirement, bollworm resistance variety of new variety of Bt cotton. To identify the factors affecting the purchase Bt cotton seeds, linear multiple regression was used and coefficient of multiple determination ($R^2$) was found to be 0.92. The coefficient of yield and farming experience found positive and highly significant at 5 per cent level of significance and hence these variable found as the most determining factors for the buying behaviour of the sample farmers. The satisfaction level of respondent for Bt cotton was due to price and availability and for pest and disease resistant respondent were highly dissatisfied. Garrett’s ranking technique was used to find out the order in which the dealers and farmers facing the problems either to sell or purchase the seeds. Major problem for dealers to sell the 3028 variety was competition among dealers and delay in payment by the farmers. Major problem faced by the farmers of the company was insect pest and disease attack on hybrids seeds and high charges for labor work.