

Integrated pest management knowledge of sugarcane growers towards sustainability

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ABSTRACT

The research study was conducted in Belgaum and Bagalkot Districts of Karnataka during 2005-2006, with the sample size of 180 respondents. The ex-post-facto research design was used for the study. The findings revealed that, higher knowledge was observed in cultural tool, chemical tool, mechanical tool, steeping setts in 0.1% corbandazim, frequently irrigating the crop to manage termite, root grubs and also the use of disease free seed material. The meager per cent of respondents were found to have the knowledge of biological tool (Meterhizium), hand picking, mass trapping of adults, wider row spacing, judicious use of nitrogen and irrigation. Education, farming experience, risk orientation, attitude towards IMP practices, management orientation, achievement motivation, innovative proneness and extension contact of respondents had positive and significant relationship with the knowledge level of IPM practices. Multiple regression analysis indicated that the seventeen independent variables put together had contributed to 39.42 per cent ($R^2=0.3942$) variation in knowledge level of IPM practices.

Key words : Farmers knowledge, Relationship with IPM tools and sustainable practices, Sugarcane.

Sugarcane is one of the important commercial crops in the tropics and sub-tropics and serves as the main source of sugar in the world. Globally, it is cultivated over an area of 19.37 million ha, with an annual production of 1252.91 million tonnes and productivity of 64.69 tonnes per ha. India is one of the leading countries in sugarcane cultivation with an area of 4.41 million ha and annual production of 265 million tonnes and average recovery of 10.30 per cent (Anonymous, 2002). In India, area under sugarcane during 2000-01 was 4.32 million ha as against 4.41 million ha in 2003-04 with slightly higher average productivity than world average (66.92 t/ha) and good recovery of period. Indian sugar industry, second largest after the textiles industry, has been playing a vital role in the socio-economic transformation of the country. About 50 million sugarcane farmers and their dependants have been involved in sugarcane cultivation. There is an urgent need to develop techniques, which are sustainable from environmental, production and socio-economic points of view. With this background, the present study was undertaken to know the knowledge level of sugarcane growers about IPM practices in Karnataka particularly in Belgaum and Bagalkot districts.

METHODOLOGY

The present study was conducted in 2004-05 in Belgaum and Bagalkot districts of Karnataka. These two districts were purposively selected which stand first and

second in sugarcane area in Karnataka state. The ex-post-facto research design was used for the study. Two Taluks having maximum area under sugarcane were selected from each district. The selected Taluks were Athani and Chikodi from Belgaum district and similarly, Mudhol and Jamakhandi from Bagalkot district. Three villages from each Taluk were selected randomly for the investigation, fifteen were from each village and thus total sample size contributed 180 respondents. There were seventeen independent variables used directly to find out correlation with the knowledge level of sugarcane growers about IPM practices. The required data from the respondents were collected with help of pre-tested interview schedule. The extent of correlation and multiple regression between the independent variables were ascertained by using suitable statistical tool.

OBSERVATION AND DISCUSSION

Knowledge level of sugarcane growers about integrated pest management (IPM) practices:

It was evident from Table 1 that cent per cent of the respondents had knowledge about cultural weed management practices, while 63.89 per cent of the respondents had partial knowledge regarding use of weedicides in integrated weed management. With regard to integrated insect management practices, cent per cent of the respondents had knowledge about use of chemicals/pesticides while 87.77 per cent were aware about cultural methods of pest management. Regarding management of woolly aphid, termites and root grubs, more than half of the respondents (76.66, 56.67 and 52.77%) had