

Economics of pesticide use in mango in Konkan region of Maharashtra

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ABSTRACT

The present study was conducted to access the impact of pesticides on productivity and profitability of mango. For this purpose, randomly selected sample of 150 mango growers were selected from Ratnagiri and Sindhudurg districts of Konkan region which includes 25 mango growers not using any pesticide as control unit. The data on production market prices, input utilization were collected which pertains to the mango production season of 2004. Results of the study indicated that on an average mango grower was having 1.20 hectares of mango orchard with 108 bearing trees. Productivity, increased from 18.40qts/ha in no spraying group to 37.80 qts/ha in a group who sprayed their mango orchard three times, thereafter the productivity decreases as increased no. of sprays. Same trend was observed in case of profitability also. This whole analysis of productivity and profitability in respect of plant protection measures, indicated that, spraying of mango trees more than three times is not economically beneficial, this may lead to increase in cost without increase in productivity and returns.

Key words : Pesticides, Mango, Konkan, Input utilization, Profitability.

INTRODUCTION

Mango succumbs to a number of pests and diseases which directly or indirectly hamper the production and quality of fruits. In the year 1982–83, mango hopper, the most destructive pest of mango inflorescence, posed an alarming threat to mango production in the Konkan region. So, mango growers realized the importance of plant protection in mango production. Since then, many pesticides are being marketed in the mango season every year in the local markets of the region. Realizing the importance of this situation, Dr. Balasaheb Sawant Konkan Krishi Vidyaapeeth has released plant protection schedule for control of pests and diseases of mango and also conducts mango blossom protection training classes throughout the region every year. Eventhough, farmers are advised to use recommended pesticides, many farmers do not follow the schedule critically and this may lead to pesticidal hazards in forthcoming years. In addition, resultant increase in the cost of production would loosen the price competitiveness. In view of this, the present study on “Economics of pesticide use in Mango in Konkan region of Maharashtra” was undertaken with following specific objectives.

1. To study the utilization pattern of pesticides.
2. To know the attitude of mango growers towards pesticide use.
3. To estimate costs incurred in utilization of pesticides.
4. To assess the impact of pesticide on productivity and profitability of mango.

MATERIALS AND METHODS

Selection of sample :

As the Alphonso mango cultivation is concentrated in Sindhudurg and Ratnagiri districts of Konkan region, these two districts were selected purposively for present study. In all 150 mango growers (75 from each district) were selected randomly and the data were collected as per the objectives with the help of specially designed schedule by interviewing the respondents in person. The data pertains to the mango production season of 2004. While selecting the sample, care was taken to select 25 mango growers as non sprayers of pesticides.

The selected mango growers were classified according to number of sprays they have applied.

Frequency distribution technique was used to classify the farmers using various pesticides, time of flowering, time of application of pesticides etc. Groupwise productivity was estimated by using following formula

$$\text{Productivity (Q/ha.)} = \frac{\text{Total production in the group (q.)}}{\text{Total area in the group (ha.)}}$$

For studying impact of pesticide use on productivity and profitability, a group of non sprayers is considered as a control group and with the help of partial budgeting technique, the impact was studied with the help of ratio of additional cost to additional returns. While calculating per hectare cost, only input costs and interest on input cost @ 13%) is considered. Whereas, returns per hectare is estimated net of marketing cost.

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