ADOPTION OF RECOMMENDED PEST AND DISEASE MANAGEMENT PRACTICES OF TOMATO CROP BY THE TOMATO GROWERS

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ABSTRACT

Mahatma Phule Krishi Vidyapeeth, Rahuri has made different recommendations for control of pest and disease management in tomato crop. The study was undertaken to find out the adoption of these recommended practices by the tomato growers. The data was collected from 120 tomato growers from Purandar tehsil in Pune district from Maharashtra state. In respect of disease management in tomato crop it was found that for Damping off disease 45.00 per cent and for powdery mildew 49.17 per cent of the respondents were using the recommended practices viz. good drainage of soil and spraying of wettable sulpher respectively while there is very less adoption of other recommended practices for both the diseases. About three- fith of the respondents had not followed the recommendations for control of leaf curl and early and late blight disease. Only 45.00 per cent of the respondents followed the practice of application of carbendindizm for contol of wilt disease with very less adoption of other practices. It was also observed that there is very less adoption of recommended practices for the control of thrips while 63.33 per cent of the respondents followed spraying as per recommendation for control of white flies. More than half of the respondents not followed the control measures as per recommendations for the attack of fruit borer and leaf monor.

Keywords: *tomato growers, adoption, recommended pest and disease management practices of tomato crop*

INTRODUCTION

Tomato (Lycopersicon esculentum Mill.) is the second most important vegetable crop grown in India next to potato. It is one of the vital protective food crops in the country. India ranks second in tomato production with the production of 18.23 million tonnes and 11.1 per cent share. Madhya Pradesh, Andhra Pradesh, Karnataka, Orissa, Gujarat, West Bengal, Maharashtra, Bihar and Telangana are the major states growing tomato in India. In Maharashtra Nasik, Pune, Ahmednagar, Nagpur, Thane and Dhule are the five major tomato growing districts. The productivity of tomato in India is only 20.72 tonnes per ha which is very less as compared to other countries.The seviour attack of pest and diseases affect the production of tomato crop leading to economic losses for the farmers. Mahatma Phule Krishi Vidyapeeth, Rahuri from Maharashtra has recommended various practices for control of diseases and pests of tomato crop. The adoption of these practices by the tomato growers is essential factor for raising the production of tomato crop. With this view the present study was undertaken to know the adoption of recommended practices for pest and diseases by the tomato growers.

OBJECTIVE

To know the adoption of recommended pest and disease management practices of tomato crop by the tomato growers

METHODOLOGY

The present study was conducted in Pune district from Maharashtra State. From Pune district, Purandar tehsil was selected since it has large scale cultivation of tomato crop in both Kharif and Rabi season. Eight villages from four mandals in Purandar tehsil were selected considering highest area under tomato cultivation and from each village 15 tomato growers were selected randomly to form the sample size of 120 respondents. Interview schedule was prepared in Marathi language for collection of data. Frequency and percentage were used to analyze the data regarding adoption of recommended practices for pest and disease control by the tomato growers.

RESULTS AND DISCUSSION

Adoption of recommendations for control of pests and diseases by the tomato growers

The data in relation to adoption of recommended control measures by the tomato growers was collected and the results obtained after analysis of data are presented in Table given below.

Table 1: Classification of respondents according to adoption of recommended practices for pest and disease management in tomato crop

Sr. No.	Recommended practice		No. (%)	No. (%)
A	**Disease management**			
1	Damping off	Selection of soil with good drainage	54 (45.00)	66 (55.00)
		Seed treatment with Captan @ 3 gm or Carbendizm @ 1 gm per kg of seed	52 (43.33)	68 (56.67)
		Drenching of 0.1% Carbendizm or 0.3 % Copper Oxychloride to the plants of 15 to 20 days in raised bed	41 (34.17)	79 (65.83)
2	Powdery mildew	Spraying of wettable Sulpher 80 % @ 25 gm, Tebuconazol @5 ml/ 10 lit. of water at an interval of 10 to 15 days	59 (49.17)	61 (50.83)
3	Leaf curl	Application of Phorate or Carbofuron on raised bed before sowing	34 (28.33)	86 (71.67)
		Timely control of white flies	38 (40.83)	82 (59.17)
		Destruction of infected plant	41 (34.17)	79 (65.83)
4	Early and late blight	Twice alternate spraying of Maancozeb @25 gm in 10 lit. of water or Tebuconazol @10 ml per 10 lit. of water at an interval of 15 days	43 (35.83)	77 (64.17)
5	Wilt disease	Crop rotation	37 (30.83)	83 (69.17)
		Destruction of infected plants	43 (35.83)	77 (64.17)
		Application of Carbendazim 10 gm or copper oxychloride 30 gm in 10 lit. of water at the base of plant	54 (45.00)	66 (55.00)
B	**Insect-pest management**			
1	Thrips	Spraying of Thiomethoxam @4gm or carbosulphan 10 ml or fipronil @15 ml per 10 lit. of water	42 (35.00)	78 (65.00)
2	White flies	Dimethoate @10 ml or Oxydimeton methyl @ 10 ml per 10 lit of water	76 (63.33)	44 (36.67)
3	Fruit borer	Spraying of 4% Neem seed extract	44 (36.67)	76 (63.33)
		Spraying of Quinolphos @ 20 ml or novhelpuron @10 ml per 10 lit. of water	52 (43.33)	68 (56.67)
4	Leaf minor	Spraying of Abamectin benzoate 4 ml in 10 lit. of water or 4% Neem seed extract	53 (44.17)	67 (55.83)

The results from Table 1 indicates that for the control of damping off 45.00 per cent, 43.33 per cent and 34.17 per cent of the respondents were practicing the good drainage of soil, seed treatment with captan or carbendizm and drenching with copper oxychloride respectively. Just less than half (49.17 per cent) of them followed spraying of wettable

sulpher for control of powdery mildew while 40.83 per cent, 34.17 per cent and 28.33 per cent followed the practice of timely control of white flies, destruction of infected plants, and application of phorate or carbofuron for control of leaf curl indicating less adoption of recommended practices. The data further shows that more than three-fifth (64.17 per cent) of the respondents tomato growers had no adoption of recommended control measure for early and late blight. 45.00 per of them followed the application of carbendizm or copper oxychloride for control of wilt disease and there is very less adoption of destruction of infected plants (35.83 per cent) and crop rotation (30.83 per cent).

The perusal of data in respect of pest management from Table reveals that 35.00 per cent of the respondents adopted the spraying of thiomethoxam or carbosulphan for the control of thrips and 63.33 per cent of them were using dimethoate or oxydimeton methyl for the control of white flies as per the recommendation. It was further observed that 43.33 per cent and 36.67 per cent of the respondents followed the practice of spraying of quinolphos and neem seed extract for the control of fruit borer respectively while less than half (44.17 per cent) of them had adopted spraying of abamectin benzoate for the control of leaf minor.

CONCLUSION

It was observed that more than half of the respondent tomato growers had no adoption of various recommended control measures for the contol of diseases in tomato crop. Similarly in respect of insect pest management, except control measures for white flies there is less adoption of recommended practices by the tomato growers. Hence it is necessary to create awareness among tomato growers for adoption of university recommendations by taking appropriate measures. Gramsevak, agricultural assistant and agriculture service centre from village can be effectively used for providing information related to disease and pest management. Thurst shall have to be given on electronic media such as mobile and internet to transfer immediate information related to control measures for different pests and diseases.

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