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Knowledge and Adoption of Plant Protection Measures among Chilli Growers

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Abstract

The present study was conducted mainly with the objective to study knowledge and adoption of plant protection measures of the chilli by the grower. For the study, Latur district was selected purposely as from Marathwada region. Three talukas viz., Nilanga, Latur and Ahmadpur were selected from district purposely and four villages from each talukas were selected purposely on the basis area and production. Thus constituting the total sample size 120 respondents. Ex-post Facto research design was used for the study. The present study was conducted mainly with the objective to study knowledge and adoption of plant protection measures of the chilli by the grower. For the study, Latur district was selected purposely as from Marathwada region. Three talukas viz., Nilanga, Latur and Ahmadpur were selected from district purposely and four villages from each talukas were selected purposely on the basis area and production. Thus constituting the total sample size 120 respondents. Ex-post Facto research design was used for the study. It was observed that most of the chilli growers 53.33 per cent had adopted the plant protection measures to the medium extent while, 25.83 per cent and 20.84 per cent of them had adopted plant protection measures to high and low extent, respectively.

Keywords: Knowledge, Adoption, Plant Protection Measures, Chilli

Introduction

Agriculture occupies an important position in India. It contributes nearly 20 per cent to the Gross Domestic Product (GDP) and provides an employment to around two-thirds of nation's population. Chillies are known from pre-historic times in Peru. They are believed to have originated in the tropical America. India has varying climatic conditions and provides an opportunity for growing a large number of horticulture crops including vegetables. Chilli (*Capsicum annum*), which is also known as 'Mirchi', is one of the important vegetable crop of India. The total area and production under chilli is reported to be 792 million ha and 1376 million tons respectively in year 2013-14 (Anonymous 2014 2nd advance estimation of department of Horticulture). The research study would be useful in understanding the of the chilli growers, their knowledge and adoption level them in plant protection measures of chilli. Moreover, the results in this study would provide guidance to village level workers, extension officials, other development agencies and scientists associated with chilli production, in performing their function more effectively by accelerating the adoption of plant protection measures of chilli by the growers.

Specific objectives

1. To study the knowledge of plant protection measures among chilli growers.
2. To study the adoption of plant protection measures among chilli growers.

Methodology

The present study was carried out in the Latur district of Marathwada region of Maharashtra state. Latur district of Maharashtra was selected purposively as it has maximum area under chilli growing district in Marathwada region. From the selected district three talukas was selected purposively based on the maximum area under chilli growers. i.e Latur, Ahmadpur and Nilanga. From the selected talukas four villages was selected purposively from each talukas based on the maximum area under chilli making a total of twelve villages from Latur district for the study. From each of the selected village, ten chilli growers were selected randomly as respondents by nth number method for the study comprising the total sample of 120 respondents. The data were collected through personal interview method with the help of pre - tested structured schedule consisting of various items concern with the objective of study. The grower was contacted personally at their home during their leisure time. Keeping in the view of the objective of study a structured interview schedule was prepared.

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The data were carefully examined before tabulation; all the entries in the schedule were checked for its accuracy and completeness. The data were tabulated and subjected to statistical analysis and interpretation.

Results & Discussion

To study the knowledge of plant protection measures among chilli growers.

Table 1: Distribution of chilli growers according to their level of knowledge about plant protection measures.

Sn. No	Items / practices	Frequency	Per cent
1	Selection of soil	102	85.00
2	Land preparation	114	95.00
3	Seed selection	112	93.33
4	Use of varieties	89	74.16
5	Difference between local and hybrid variety (tolerance to biotic and a biotic stresses, yield etc.)	115	95.83
6	Sowing time in monsoon season	95	75.83
7	Row to row spacing	99	82.50
8	Hybrid varieties - plant to plant spacing	91	75.86
9	Major pests of chilli	107	89.16
10	Major diseases of chilli	101	84.16
11	Precautions to avoid pest attack	83	69.16
12	Precautions to avoid disease attack	84	70.00
13	For controlling fruit dropping use thiram + captan seed treatment	79	65.83
14	For controlling aphids spraying dimethoate/acephate/imidacloprid	71	59.16
15	For controlling leaf curl disease insecticidal seed treatment	74	61.66
16	Control of insect vector of leaf curl disease	36	30
17	For controlling thrips spraying dimethoate/acephate/imidacloprid	76	63.33

N=120

It was revealed from Table 1 show that, the chilli growers were having least knowledge of few plant protection measures. The practice known by chilli growers were knowledge about selection of soil 85.00 per cent, land preparation 95 per cent, seed selection 93.33 per cent, use of varieties about 74.16 per cent, difference between local and hybrid variety, yield of improved or local variety and tolerance of hybrid variety was about 95.83 per cent, 75.83 per cent of chilli growers know sowing period in monsoon season, row to row spacing 82.50 per cent, in hybrid seed plant to pant distance 75.86 per cent, major pests of chilli

89.16 per cent, major diseases 84.16 per cent, precautions for avoid pest attack 69.16 per cent, precautions for avoid disease attack 70.00 per cent, for controlling fruit dropping seed treatment with thiram and captan 65.83 per cent, for control aphid spray with dimethoate/ acephate / imidacloprid 71 per cent, to control leaf curl disease use of carbendasim seed treatment 61.66 per cent, and for controlling thrips spray with dimethoate / acephate / imidacloprid 63.33 per cent of the chilli growers. Very few i.e. only 30 per cent of the chill growers know about the vector of leaf curl disease.

Table 2: Distribution of chilli growers according to their level of knowledge about plant protection measures.

Sn No	Knowledge level	Frequency	Per cent
1	Low	7	05.83
2	Medium	103	85.83
3	High	10	08.34

N=120

It is reported from Table.2 that, majority 85.83 per cent of the chilli growers had medium level of knowledge while, 8.33 per cent of them had high level and 08.34 per cent of the chilli

growers had low level of knowledge.

To study the adoption plant protection measures among chilli growers.

Table 3: Distribution of chilli growers according to their practice wise adoption about plant protection measures

Sn No	Recommended practice	Full Adoption		Partial Adoption		No Adoption	
		F	%	F	%	F	%
1	Selection of soil	70	58.33	24	20.00	26	21.67
2	Land preparation	104	86.67	16	13.33	---	---
3	Seed selection	18	15.00	40	33.33	62	51.67
4	Use of varieties	108	90.00	12	10.00	---	---
5	Use of improved varieties	49	40.83	---	---	71	59.17
6	Sowing period	54	45.00	22	18.33	44	36.67
7	Row to row spacing	61	50.83	---	---	59	49.17
8	Hybrid seed-plant to plant distance	44	36.67	---	---	76	63.33
9	Precaution for avoid pest attack	39	32.50	40	33.33	41	34.17
10	Precaution for avoid disease attack	42	35.00	32	26.67	46	38.83
11	For controlling fruit dropping use thiram + captan seed treatment	109	90.83	8	6.67	3	2.50
12	For controlling aphids spraying dimethoate/acephate/imidacloprid	76	63.33	6	5.00	38	31.67
13	For controlling leaf curl disease insecticidal seed treatment	31	25.84	---	---	89	74.16
14	For controlling thrips spraying of dimethoate/acephate /imidacloprid	25	20.83	---	---	95	79.17
15	Control of white fly	36	30	---	---	84	70

N=120

It was observed from table 3 that, 58.33 per cent were fully and 20.00 per cent were partially and non-adoption 21.67 per cent selected proper soil for chilli cultivation. Land preparation was adopted fully by only 15.00 per cent, partially by 33.33 per cent and non-adoption by 51.67 per cent chilli growers. As regards with the seeds, 40.83 per cent of chilli growers used improved seeds. And 59.17 per cent chilli growers used local seed. Recommended period of sowing was adopted fully by 45.00 per cent of chilli growers and 18.33 and 36.67 was partial and no adoption respectively. Row to row spacing was fully adopted by 50.83 per cent of chilli growers as compared to 49.17 per cent chilli growers are not adopted. Hybrid seed plant to plant distance also was fully adopted by 36.67 per cent chilli growers. It was also observed that precaution for avoid pest attack was completed by 32.50 per cent fully and 33.33 per cent partially. The precaution for avoid disease attack was adopted fully by 35.00 per cent chilli growers were as 26.67 per cent them adopted partially. It is also revealed that 90.83 per cent chilli growers were fully adopted the seed treatment operation for controlling fruit dropping by using thirum + captan. The data indicate that 63.33 per cent of the chilli growers were adopted fully recommended spraying of dimethoate / acephate / imidacloprid for control of aphids whereas 5.00 per cent were partially adopted. As regard the controlling leaf curl diseases, majority 90.83 per cent of chilli growers not adopted seed treatment with carbendasim only 25.84 per cent chilli growers adopt fully. Also for controlling white fly spraying with dimethoate / acephate / imidacloprid only 20.83 per cent of chilli growers follow fully adoption and no adoption by 79.17 per cent of the chilli growers. The data indicate that 63 30.00 per cent of the chilli growers were adopted fully control measures of white fly whereas 90.00 per cent were not adopted.

Table 4: Distribution of chilli growers according to their level of adoption about plant protection measures

Sr. No	Adoption level	Frequency	Per cent
1	Low	25	20.84
2	Medium	64	53.33
3	High	31	25.83

N=120

It is revealed from table.4 that the majority 53.33 per cent of the chilli growers were in the medium level of adoption of plant protection measures. While, 25.83 per cent and 20.84 Per cent of them were in the high and low level of adoption, respectively.

Conclusions

The study indicated that, the appraisal of results regarding knowledge about plant protection measures clearly indicates that majority 85.83 per cent of the chilli growers had medium level of knowledge about plant protection measures while, 08.34 per cent of them had high level of knowledge. Only, 05.83 per cent of the chilli growers had low level of knowledge about plant protection measures. Adoption about plant protection measures of chilli. It was observed that most of the chilli growers 53.33 per cent had adopted the plant protection measures to the medium extent while, 25.83 per cent and 20.84 per cent of them had adopted plant protection measures to high and low extent, respectively.

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