Adoption of orange growers about practices of orange crop in Amravati District

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ABSTRACT

Amravati district was selected for the present study. The general objective was to study the adoption about cultivation practices of orange growers. It was found that on an average, 40.50 per cent of orange growers belonged to middle age group (36 to 50 years), 32.75 per cent orange growers were having secondary education level and 35 per cent were from semi medium land holding (2.01 to 4.00 ha). The average area under orange growers was 26.50 per cent, 62.75 per cent and 10.75 per cent per ha of orange growers in case of small, medium high herd size, respectively. The annual income of the orange growers an average was 28.25 per cent (Rs. 50,001 to Rs. 1, 00,000) and medium (9.34 to 18.66) socio economic status 55.00 per cent than medium (9 to 16) scientific orientation was 49.50 per cent economic motivation of the orange growers was 52.75 per cent in medium category and only 51.75 per cent orange growers having high (Above 16) risk preference. The knowledge level of the orange growers according to their practice wise knowledge in this respondents had knowledge about recommended per cent of lime concentration (30.00%), Recommended hormone use for fruit dropping (46.25%), Recommended percentage of hormone for control of fruit dropping (48.75%), Pit depth (55.50%), Pruning method (56.25%), Fertilizers recommendation (57.00%), Recommended tillage operation at the time of fruiting stage (57.75%) that majority of the respondents (47.50%) had moderate (ranges from 33.34 to 66.66) adoption about orange cultivation. Followed by nearly one fourth respondents (45.50%) had high (range from above 66.67) adoption about orange cultivation. While only 7.00 per cent of the respondents had low (ranges from up to 33) adoption about orange cultivation.

KEY WORDS : Adoption, Orange, Amravati

INTRODUCTION

Nagpur Mandarin orange is one of the most important fruits of Maharashtra state. The area production and yield per hectare of orange in Maharashtra during the year 2000-01 were 78.503 hectares, 7,64,533 tones and 9.731 tones/ ha, respectively. The important orange growing districts in Maharashtra are Nagpur, Amravati, Wardha, Yavatmal and Akola.

In Amravati district orange cultivation covers an area of 67057.00 hectares with production of 288000 tones and productivity of 9000 tones/ha during 2006-07. This shows that the average yield of orange in Amravati district is 8.0512 tones/ ha. Which is obviously that average yield of Maharashtra state (9.731 tones/ha) Inspite of the high genetic potential in the crop and availability of latest technology the productivity of orange remained at 8.0512 tones/ha probably, it may be because of various production constraints like non availability of inputs and their exorbitant prices (Chikhale, 1993 and Bhople *et al.*, 1996) lack of knowledge and skill (Gomase, 1997) and irrigation constraints (Kadam, 1999). In this context the present study was undertaken to identify the constraints encountered by orange growers during use of various reasons for decline of orange cultivation.

MATERIALS AND METHODS

The present research investigation was carried out in Amravati district of Vidarbha region of Maharashtra State. The complete Amravati district comprising of fourteen Panchayat samiti was considered as universe for the present research. A list of orange growers of orange cultivators obtained from taluka Agriculture officers of each Panchayat Samiti. In all, there were 100 orange growers were selected from each panchayat samiti total 400 orange growers were selected for the present investigation. Amravati district was having 14 talukas. Amongst those, Worud (15025 ha), Morshi (1, 0996 ha), Chandur Bazar (7436 ha) and Achalpur (6729 ha.) talukas

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have highest area under orange cultivation. So these four talukas was purposively selected. 10 villages from each taluka having highest area under orange cultivation were purposively selected. 400 respondents from 40 villages in four talukas were selected and equal number of random sampling method was used. The data were gathered through personal interview with the selected orange growers with the help of an interview schedules in the orange orchards. The independent variables were selected age, education, family size, landholding, annual income, size of orchard, socio-economic status, innovativeness, risk preference etc. The statistical tools namely mean, standard deviation, co-efficient of correlation and co-efficient of regression were adapted to test the significantly of the results.

RESULTS AND DISCUSSION

Distribution of the respondents according to practice wise adoption about recommended orange cultivation practices Table 1 revealed that respondents had adoption

Table 1: Distribution of respondents according to their practice wise adoption

Sr. No.	Practices	Adoption	
		Freq.	%
1.	Soil type (medium to Black)	320	80.00
2.	Depth of soil (1 mt)	152	38.00
3.	% of calcium carbonate in soil (12%)	118	29.50
4.	Season of plantation (Rainy season)	270	67.50
5.	Method of Propagation during plantation (Eye bedding)	199	49.75
6.	Rootstock during plantation (Jamberi)	303	75.75
7.	Method of Plantation (Square)	345	86.25
8.	Spacing (6 x 6 mt)	345	86.25
9.	Plant in ha (277 plant)	331	82.75
10.	Size of Pits (75x75x75)	253	63.25
11.	Material for filling of pits (FYM + sand)	250	62.50
12.	Variety (Nagpur Mandarin)	276	69.00
13.	Fertilizer management (organic and inorganic)	254	63.50
14.	Irrigation in every year (20Years)	288	72.00
15.	Method of irrigation (Double ring)	301	75.25
16.	Cotton as a intercrop in orange (No.)	284	71.00
17.	Type of training (Single Stem)	257	64.25
18.	Years taking a intercrop (5 year)	193	48.25
19.	Done the training (After 1 year)	198	49.50
20.	Recommended method used for pruning (light pruning)	189	47.25
21.	Done the pruning (After harvesting of fruit)	202	50.50
22.	Type of bahar taken (2 types)	308	77.00
23.	Stress management for bahar treatment (climatic, conditional and water stress)	256	64.00
24.	Days of water stress in medium soil (30 to 35 days)	286	71.50
25.	Paste for orange crop	277	69.25
26.	Month of pusting to trunks (may to Oct)	281	70.25
27.	Height of trunk the pasting (3 feet)	293	73.25
28.	Time of fruit setting	296	74.00
29.	Recommended plant hormones to minimize the fruit drop in Ambia bahar (2-4-Divisional, NAA)	207	51.75
30.	Quantity of recommended plant hormones used in spraying (20 and 50 ppm)	216	54.00
31.	No. Of fruits on plant after thinning (800 to 1000)	216	54.00
32.	Days before harvesting fruit stopped irrigation (25 days)	246	61.50
33.	Economical year (35 years)	228	57.00
34.	Pests control (spraying)	247	61.75
35.	Disease control (Spraying)	249	62.25
36.	Bahar treatment (2 type)	344	86.00
37.	Harvesting of mrig bahar (Feb – march)	337	84.25
38.	Harvesting of Ambia bahar (Nov- Dec)	362	90.50

about recommended per cent of calcium carbonate in soil (29.50%), Depth of soil (38.00%), Recommended method used for pruning (47.25%), Years taking a intercrop (48.25%), Done the training (49.50%), Method of Propagation during plantation (49.75%), Done the pruning (50.50%), Recommended plant hormones to minimize the fruit drop in Ambia bahar (51.75%), Quantity of recommended plant hormones used in spraying (54.00%), No. of fruits on plant after thinning (54.00%), Economical year (57.00%), Days before harvesting fruit stopped irrigation (61.50%), Pests control (61.75%), Disease control (62.25%), Material for filling of pits (62.50%), Size of Pits (63.25%), Fertilizer management (63.50%), Stress management for bahar treatment (64.00%), Type of training, (64.25%), Season of plantation (67.50%), Variety (69.00%), Paste for orange crop (69.25%), Month of punting to trunks (70.25%), Cotton as a intercrop in orange (71.00%), Days of water stress in medium soil (71.50%), Irrigation in every year (72.00%), Height of trunk the pasting (73.25%), Time of fruit setting (74.00%), Method of irrigation (75.25%), Rootstock during plantation (75.25%), Type of bahar taken (77.00%), Soil type (80.00%), Plant in ha (82.25%), Harvesting of mrig bahar (84.25%), Bahar treatment (86.00%), Method of Plantation (86.25%), Spacing (86.25%),harvesting of Ambia bahar (90.50%).Distribution of the respondents according to their practice wise knowledge about recommended orange cultivation practices has been furnished in Table 1.

Distribution of the respondents according to their adoption (Table 2) revealed that majority of the respondents (47.50%) had moderate (ranges from 33.34 to 66.66)

Table 2: Distribution of the respondents according to their adoption

Sr. No.	Adoption	Respondents (N=400)	
		Frequency	**Percentage**
1.	Low (Up to 33)	28	7
2.	Medium (33.34 to 66.66)	190	47.50
3.	High (Above 66.67)	182	45.50
	Total	400	100

adoption about orange cultivation. Followed by nearly one fourth respondents (45.50%) had high (ranges from above 66.67) adoption about orange cultivation. While only 7.00 per cent of the respondents had low (ranges from up to 33) adoption about orange cultivation.

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