



## Adoption Status of Masumbi (*Citrus Sinesis*) Cultivation Practices in Haryana

## KEYWORDS

Masumbi, adoption level, Corelation, cultivation practices

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CCS Haryana Agricultural University, Hisar**ABSTRACT**

The study focused on adoption of masumbi cultivation practices in the state. Fruit have great importance in human dietary system and it is generally stated that the living standard of people can be judged by the production as well as consumption of fruits. 70.84 per cent of the farmers had medium to high level of adoption category. Time of planting, recommended cultivators, fruit drop were highly adopted agronomic practices, whereas least adopted agronomic practices were packaging, disease and their control and insect pest and their control.

**INTRODUCTION**

Agriculture sector is the backbone of the Indian economy, as it remains mainly an agrarian inspire of the planning efforts to industrialize it. In the initial planning era, the Indian agriculture was cereal food oriented and it was only in the fourth five-year plan that horticultural crops started getting attention and investment support at the national. India is the second largest producer of Fruits after China, with a production of 7922.1 thousand million tones of fruits from an area of 915.1 thousand hectares (Anonymous, 2011-12). In Haryana, the citrus is grown on an area of 20.4 thousand ha with production of 204.6 thousand MT (Statistical abstract of Haryana, 2012). The Government has approved a Horticulture Mission to bring more area under Horticultural crops. The Haryana State has a very conducive situation for vegetable and fruit farming as a diversification. The orange (Sweet Orange) is the fruit of the citrus species *Citrus sinensis* in the family *Rutaceae*. The fruit of the *Citrus sinensis* is called sweet orange to distinguish it from that of the *Citrus aurantium*, the bitter Orange. The Orange is cultivated since ancient times. Probably originating in Southeast Asia, Oranges were already cultivated in China as far back as 2500 BC. In the end, we can say that fruits and vegetable have a great importance to generate employment round the year, supplement farm economy and to earn foreign exchange also by enhancing the export.

Keeping in view the above facts and importance of this fruit for country as a whole and Haryana in particular, the study was conducted to assess the adoption level of farmers about recommended masumbi crop production practices.

**MATERIALS AND METHODS**

The study was conducted in Bhiwani district of Haryana state during 2014-2015. Three blocks Dadri, Badhra and Loharu were selected purposively to sensitization of farmers. From each block, 40 farmers were selected randomly, who were growing masumbi, making a 120 respondents. The data were collected with the help of well-structured

interview schedule. The data were analyzed and tabulated after applying suitable statistical techniques like frequency, percentage, means, weighted mean, adoption index and rank orders.

**RESULT AND DISCUSSION****Overall adoption level of masumbi cultivation practices**

Results pertaining to overall adoption of masumbi cultivation practices presented in Table 1 clearly show that the majority of farmers (40.00 per cent) belonged to medium level of adoption category followed by (30.84 per cent) high adoption category and remaining (29.16 per cent) to low level of adoption. In nutshell, 70.84 per cent of the farmers had medium to high level of adoption means i.e. farmers had not adopted the full package of practices recommended by the university. It may be due to poor knowledge of recommended cultivation practices. The study gets support from Dass (1996) and Singh (1996) who pointed out that about 40.00 per cent farmers were having moderate level of adoption of recommended masumbi cultivation practices.

**Table 1. Overall adoption level of farmers about the recommended cultivation practices of masumbi (*Citrus Sinensis*) (n=120)**

S. No.	Category	Adoption level score	No. of Grower	Percentage
1	Low	18-30	35	29.16
2	Medium	31-35	48	40.00
3	high	36-43	37	30.84

**Farmers' Adoption level about the recommended cultivation practices of masumbi (*Citrus Sinensis*)**

It is evident from the result regarding farmer's adoption level of masumbi cultivation practices presented in Table 2 that 'time of planting' ranked 1<sup>st</sup> with weighted mean score 1.70 along with adoption index 85.41 %, 'recommended cultivators', 'fruit drop' and 'intercultural operation' ranked

2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> with weighted mean score 1.69, 1.55 and 1.45 along with adoption index 84.58%, 77.91% and 72.50, respectively, 'irrigation' and 'post-harvesting technology' ranked 5<sup>th</sup> with weighted mean score 1.36 along with adoption index 68.33%, 'inter-cropping' and 'manures and fertilizer' ranked 6<sup>th</sup> and 7<sup>th</sup> with weighted mean score 1.33 and 1.27 along with adoption index 66.67% and 63.75%, respectively, 'method of propagation' and 'packaging' ranked 8<sup>th</sup> with weighted mean score 1.21 along with adoption index 60.83, 'disease and their control' and 'insect pest and their control' ranked 9<sup>th</sup> and 10<sup>th</sup> with weighted mean score 1.06 and 0.98 along with adoption index 53.33 and 49.16.

Recommended time of planting and cultivars were highly adopted as per recommendation of CCS Haryana Agricultural University, Hisar because farmers were more aware and cultivars were easily available for planting. Knowledge of irrigation schedule is highly adopted because water is sufficient for irrigation so why fruit drop was not so serious problem in this area. Packaging was not fully adopted because produce was easily sold by farmers' in local market. Use of insecticides and fungicides were not fully adopted by farmers they have least knowledge about proper time and dose of application. The study gets support from findings of Singh 2004 who reported that adoption level of farmers was medium to high about recommendation of CCS HAU, Hisar of masumbi cultivation practices.

**Table 2. Farmer's adoption level about recommended cultivation practices of Masumbi**

(n=120)

Sr. no.	Practices	Adoption Level	Score Range	No. of Growers	Percent age	Mean Score	Adoption index	Rank Order
1	Time of planting	Low	0	9	7.50	1.70	85.41	I
		Medium	1	17	14.17			
		High	2	94	78.33			
2	Recommended Cultivars	Low	<2	1	0.83	1.69	84.58	II
		Medium	2-3	35	29.17			
		High	>3	84	70.00			
3	Fruit drop	Low	0	7	5.83	1.55	77.91	III
		Medium	1	39	32.50			
		High	2	74	61.67			
4	Intercultural operation	Low	<2	12	10.00	1.45	72.50	IV
		Medium	2-3	42	35.00			
		High	>3	66	55.00			
5	Irrigation	Low	<2	23	19.17	1.36	68.33	V
		Medium	2-3	30	25.00			
		High	>3	67	55.84			
6	Post harvest technology	Low	<3	22	18.33	1.36	68.33	V
		Medium	3-5	32	26.67			
		High	>5	66	55.00			
7	Inter-cropping	Low	0	13	10.83	1.33	66.67	VI
		Medium	1	54	45.00			
		High	2	53	44.17			
8	Manure & Fertilizer	Low	<2	10	8.33	1.27	64.16	VII
		Medium	2-3	67	55.84			
		High	>3	43	35.83			
9	Method of propagation	Low	<3	16	13.33	1.21	60.83	VIII
		Medium	3-5	62	51.67			
		High	>5	42	35.00			
10	Packaging	Low	<2	10	8.30	1.21	60.83	VIII
		Medium	2-3	74	61.67			
		High	>3	36	30.00			
11	Disease & their control	Low	0	27	22.50	1.06	53.33	IX
		Medium	1	58	48.33			
		High	2	35	29.17			
12	Insect pest & their control	Low	0	36	30.00	0.98	49.16	X
		Medium	1	50	41.67			
		High	2	34	28.33			

**Relationship of masumbi (Citrus Sinensis) grower's personality traits with their adoption level**

The data given in Table 3 reveals that personality traits like education (0.563), extension contact (0.233), mass media exposure (0.339), risk orientation (0.497), scienticism (0.395), and economic motivation (0.428) with adoption level had positive and significant correlation (at 0.05% level of probability ) with the adoption level of masumbi growers regarding masumbi cultivation practices. This means that masumbi growers having higher education, extension contact, mass media exposure, risk orientation, scienticism and economic motivation possessed higher level of adoption status of recommended masumbi cultivation.

**Table 3. Relationship between personality traits of the respondents and their Adoption level**

Sr. no.	Variables	Correlation Coefficient
1	Age	0.129 <sup>NS</sup>
2	Education	0.563*
3	Family Education	0.148 <sup>NS</sup>
4	Land holding	-0.083
5	Socio-economic status	0.007 <sup>NS</sup>
6	Extension Contact	0.233*
7	Mass media exposure	0.339*
8	Risk Orientation	0.497*
9	Scienticism	0.395*
10	Economic motivation	0.428*

Significant at 0.05 levels of probability

**CONCLUSION**

The overall adoption level of Masumbi practices was medium to high. The study revealed that time of planting, recommended cultivators, fruit drop were highly adopted agronomic practices, whereas least adopted agronomic practices were packaging, disease and their control and insect pest and their control. The state govt. /centre govt./ horticulture department look into the problems faced by farmers in adoption of masumbi cultivation practices and should be more number of skill development training for farmers for particular on masumbi cultivation practices.

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