Research Article

Constraints faced by sweet orange growers while adopting recommended package of practices

■ **C.L. BHANDARE, V.B. KAMBLE** AND **V.N. SIDAM**

SUMMARY : A study was conducted to determine the constraints being faced by farmers in adoption of recommended package of practices of sweet orange growers faced constraints in cultivation practices like soil, plantation, training and pruning, intercultural operation, irrigation, fertilizer, pesticides, withholding of water, harvesting and post harvesting and price for fruits. With help of following objective : to ascertain the constraints faced by sweet orange growers while adopting recommended package of practices. This study was carried out in Aurangabad district of Marathwada region of Maharashtra during 2011 in two selected blocks. 120 randomly selected farmers who ware practicing sweet orange cultivation.

How to cite this article : Bhandare, C.L., Kamble, V.B. and Sidam, V.N. (2014). Constraints faced by sweet orange growers while adopting recommended package of practices. *Agric. Update*, **9**(3): 403-406.

Author for correspondence :

C.L. BHANDARE
Department of
Extension Education,
Vasantrao Naik
Marathwada Krishi
Vidypeeth, PARBHANI
(M.S.) INDIA

See end of the article for
authors' affiliations

BACKGROUND AND OBJECTIVES

Fruits are of great importance in human diet. India is the second largest producer of fruits in the world, its share in the world's fruit production in 11 per cent. The major fruits grown in India are mango, banana, citrus, guava, pineapple, grape and papaya in tropics and subtropics and apple in the temperate region. Apart from these, sapota, aonla ber, pomegranate, litchi, peach, pear plum and walnut are grown on a sizable area. A number of other fruits such as jack-fruit, lasoda, phalsa, mulberry, beal, fig, datepalm etc., are also grown in different regions. The most important commercial citrus cultivars in India are the mandarin, followed by sweet orange and acid lime with a total production of 20.84, 38 and 26.29 lakh tones (Anonymous, 2008- 2009), respectively. *Citrus* (Linnaeus) is one of the most economically important fruit crops of India, belonging to the subtribe Citrinae, tribe Citreae, subfamily Aurantioideae of the family Rutaceae. It is widely distributed throughout the tropical and subtropical regions of the world and believed to be originated in Southeast Asia, particularly, in the regions extending from North-east India eastward through the Malay archipelago; North into China and Japan, and South to Australia (Swingle and Reece, 1967 and Moore, 2001).

At present state of affairs, the orange growers are facing a number of constraints in orange cultivation. The constraints areas when viewed by various government and non-Government organization have noticed that the orange growers are facing problems in number of areas of orange cultivations *viz.*, selection of soil, layout of garden, training and pruning of plants and recommended package of practices are not followed as per the advice of the extension workers.

It is also noticed that he intercultural operation, irrigation methods, manures and fertilizers, insect control are not followed according to the recommendations. It is also not worthy to observed that the orange growers are not facilitated with the better market arrangement and loan procedure.

At present no sufficient research is available

in respect of all these constraints areas efforts are, therefore, required to investigate into this problematic areas faced by orange growers, therefore, the present study is undertaken with an object to know the to ascertain the constraints faced by sweet orange growers while adopting recommended package of practices.

Objectives :

Constraints faced by the sweet orange growers in adoption of recommended package practices.

RESOURCES AND METHODS

The present study was undertaken in Marathwada region of Maharashtra state. The Marathwada region comprises of 8 districts. The total geographical area of the region is 645250 sq. km and the net sown area under various crops is 48.49 lakh hectares.

From Aurangabad district two talukas were selected randomly, from each taluka five villages were selected thereby making ten villages. From each village twelve sweet orange growers selected, thereby making sample of sixty sweet orange growers on Aurangabad taluka and sixty sweet orange growers from Paithan taluka making a sample one hundred twenty sweet orange growers. For the purpose of collection of data for present study 5 villages from each talukas were selected by random sampling method. A list of sweet orange growers from selected villages was obtained from concerned authority. From this, list of farmers from each village were selected randomly for collection of relevant information for the purpose of the present study, thus, the all 120 respondents were selected as a sample for the investigation. Ex-post factor research design was used for the present study. Kerlinger (1964) stated that ex-post facto research design is worthy to apply when the independent variables have already acted upon. The basic

Table 1: Constraints faced by the sweet orange growers in adoption of recommended package of practices

Sr. No.	Cultivation practices	Frequency	Percentage
Soil			
1.	Preparatory tillage more expensive	118	98.33
2.	Land leveling is expensive	116	96.67
Plantation			
1.	Digging of recommended pits are costly	120	100
2.	Non-availability good seedling in time	117	97.50
Training and pruning			
1.	Lack of skilled labour for training and pruning	119	99.16
2.	Wilting tree training and pruning	22	18.33
Intercultural operation			
1.	More labour wages	120	100.00
2.	Lack of labour on time	120	100.00
Irrigation			
1.	Non-availability of sufficient water for irrigation	36	30.00
2.	Load shading of electricity	120	100.00
Fertilizer			
1.	Non-availability of fertilizer on time	118	98.33
2.	Non-availability of adequate FYM	32	26.67
3.	Costly inorganic fertilizer	120	100.00
Pesticides			
1.	Costly insecticides and pesticides	120	100.00
2.	Non-availability of required insecticides and pesticides on time	119	99.16
Withholding of water			
1.	With holding of water in rainy season for bahar treatment	119	99.16
Harvesting and post harvesting			
1.	Unavailability of labours for harvesting of fruits	119	99.16
2.	Non-availability of regulated market	119	99.16
3.	Non-availability of cold storage facility	119	99.16
4.	Lack of fruit processing centre	119	99.16
5.	Transport facilities are expensive	119	99.16
Price for fruits			
1.	Lack of knowledge about auction of fruits	119	99.16

instrument used for the study was interview schedule. It was decided to collect the information through personal interview so as to get valid-and complete responses.

The statistical methods and tests used in present study for the analysis of the data were Mean , Standard deviation, Frequency and percentage etc. (Panse and Sukhatme, 1985).

OBSERVATIONS AND ANALYSIS

The result of present study as well as relevant discussion have been summarized under following constraints faced by the sweet orange in adoption of recommended package of practices from Table 1 seen that all a the sweet orange growers faced constraints like lack of labours, more labour wages, load shading of electricity, costly inorganic fertilizers, insecticides and pesticides, respectively, followed by 99.16 per cent of sweet orange growers faced the constraints of lack of skilled labour for training and pruning, non-availability of insecticides and pesticides in time, giving water stress in rainy season, non-availability of labour for harvesting the fruits, non-availability of proper market, cold storage facility, expensive transportation facility and lack of knowledge about auctioning the fruits in market. Urade *et al.* (1991) reported difficulties in successful plantation for want of technical guidence, untimely supply of information and difficulty in procurement of bank loan, non-availability of protective irrigation and trampling by stray cattle. Difficulty in selection of dry land fruit crop, lack of knowledge of pests and their control measure were also reported as problems by them. Pandey (1993) reported that in cultivation of mango, guava, pomegranate, aonla and other fruit plants, there was a great problem of unavailability of reliable plant material. Plants were purchased indiscriminately from nearby states, from private nurseries that have no pedigree records of their mother plants. He further added that many of the plants die during transit period. Rajput *et al.* (2002) reported that the major constraints felt by the most of the respondents includes non- availability of soil turning plough, lack of soil treatment, im-balanced use of fertilizer, infestation of several insect and diseases and lack of good quality of pesticides.

Followed by 98.33 per cent of sweet orange growers constraints faced like expensive preparatory tillage practices and non-availability of fertilizers on time, in adequate availability of FYM while majority 97.50 per cent sweet orange growers constraints faced non-availability good seedling on time and also 96.67 per cent of the sweet orange growers faced land leveling is expensive whereas 30.00 per cent of the respondents constraints faced non-availability of sufficient water for irrigation and nearly one fifth 18.33 per cent of sweet orange growers faced problem of wilting of tree due to training and pruning by unskilled labour. Handiganur *et al.* (1998) revealed that 90 per cent farmers expressed the problem of scarcity of water and non-availability of labour were the main problems viewed by 67.50 per cent of the farmers expressed the problems of severity of pests and diseases. Shrestha *et al.* (1998) found that the lack of technical know-how was the main constraint for trying the technology followed by low production and low economic status for cellar store in mandarin orange fruit. Gomase and Patil (1998) revealed that major constraints perceived by the kagzi lime growers that inadequacy of irrigation water, irregular power supply, non availability of labour, lack of knowledge of insect pest and disease and its control measures and high wages of labour. Devi and Monoharan (1999) revealed that low price obtained for the produce in the market, lack of quick transport facilities, lack of storage facilities, non-availability of middle men where the major constraints faced by the guava cultivators. Similar wark on the related topic was also done by Borse (2002); Deshmukh (1995) and Hagre (1991).

Extremely all sweet orange growers 100.00 per cent expressed, digging of recommended pit size for sweet orange crop, more labour wages, lack of labour on time, plant may die due to load shading electricity, costly inorganic fertilizer and pesticides as major constraints, respectively same constraints have been reported by Pataliya (1991), Sharma (1997), Rangari (1998), Narkar (1999) followed by 99.16 per cent of the respondents non-availability of skilled labour for training and pruning, non-availability pesticides on time, not understand withholding of water in rainy season, non-availability of storing facility, fruit processing centres, transport facilities are expensive, not fixed price, lack of knowledge about auction are constraints faced, respectively same constraints have been reported by Pataliya (1991) and Sharma (1997). Bhople *et al.* (1996) found that orange growers faced marketing constraints like costly packaging material (80.00%), non-availability of processing units (76.67%) and high transportation charges for transport of fruit from orchards to nearby market (54.90%).

Conclusion:

The constraints encountered by the respondents in adoption of recommended package of practices of sweet orange can be summarized as more expenditure on preparatory tillage, leveling of land, digging oil as recommendation and doesn't get good seedling on time, lack of stilled labour for training and pruning, tree may due to training and pruning, more labour wages, lack of labour on time, law quantity of water for irrigation, plant may die due to non-electricity on time, costly fertilizer, sweet orange growers also felt constraints in higher charges of transportation, non-availability of cold storage non-availability of regulated market, doesn't get fixed price, non-availability of fruit processing centers costly insecticides and pesticides.

Implications :

The present study was undertaken to investigate the

knowledge and adoption of recommended package of practices of sweet orange cultivation.

The findings of the study leads to following implications which may help the administrative, policy makers, extension workers and scientists for accelerating the knowledge and adoption of recommended package of practices of sweet orange cultivation by the farmers.

The respondents expressed the problem of high expenditure for land preparation, digging pit as per recommendation, plant may die due to training and pruning and non-availability of electricity on time is major problem, inadequate transport facility, higher charges of transportation, non-availability of storage facility, fruit processing centers are the problems, in order to overcome these difficulties it is suggested that extension agency and administration take responsibility to provide transport facilities for fruits in big market and also provide electricity by avoiding load shading for irrigation to the sweet orange orchard and also help to the unemployed for fruit processing centers so farmers will get good price also unemployment get the employment and reduce transport cost for getting more profit by sweet orange growers.

Authors' affiliations :

V.B. KAMBLE AND V.N. SIDAM, Department of Extension Education, Vasantrao Naik Marathwada Krishi Vidypeeth, PARBHANI (M.S.) INDIA

REFERENCES

Anonymous (2008-09). Vital Horticulture Statistics of Rajasthan. Directorate of Agriculture, Jaipur (RAJASTHAN) INDIA.

Borse, P.S. (2002). Constraints faced in adoption of integrated pest management (IPM) technology by hybrid cotton growers in Jalgaon district. M.Sc (Ag.) Thesis, Mahatma Phule Krishi Vidyapeeth, Rahuri, Ahmednagar, M.S. (INDIA).

Deshmukh, D.D. (1995). A study on adoption of recommended package of practices by sweet orange growers in Parbhani district. M.Sc (Ag.) Thesis, Marathwada Krishi Vidyapeeth, Parbhani, M.S. (INDIA).

Devi, M.N. and Manoharan, M. (1999). Strategies for enhanced guava production. *Agric. Extn. Rev.,* **2**(2):11-12.

Gomase, A.S. and Patil, R.L. (1998). Adoption behaviour of kagzi lime growers. *Thesis abstract,* **24**(1):201-202.

Hagre P.C. (1991). A study on adoption of improved orange cultivation practices by the orange growers and constraints faced by

them. M.Sc (Ag.) Thesis, Marathwada Krishi Vidyapeeth, Parbhani, M.S.(INDIA).

Handiganur, S. S., Sastry, K.N.R. and Vishweshwar, S.P. (1998). Problems conforting the procedure about production and processing grape. *Rural India,* **61**:137-139.

Kerlinger, F. N. (1964). Foundation of behavioural research. Hoff, Rinehart and Winsotn, Inc. NEW YORK, U.S.A.

Moore, G.A. (2001). Oranges and Lemons: Clues to the taxonomy of *Citrus* from molecular markers. *Trends Genet*., **17**:536-540.

Narkar, G.H. (1999). A study on the adoption of recommended package of practices of Kagzilime by growers in Prabhani district. M.Sc (Ag.) Thesis, Marathwada Krishi Vidyapeeth, Parbhani, M.S. (INDIA).

Pandey, R.R. (1993). Planting material. *Indian Horticulture*, 14-17 pp.

Panse, V.G. and Sukhatme, P.V. (1985). *Statistical methods for agricultural workers*, Indian Council of Agricultural Research, NEW DELHI, INDIA.

Pataliya,N.R.(1991).To study the extent of adoption of recommended mango cultivation by growers in Parbhani district. M.Sc. (Ag.) Thesis, Marathwada Krishi Vidyapeeth, Parbhani, M.S. (INDIA).

Rajput, A.M., Saxena, K.K. and Singh, R.L. (2002). Production performance of cotton varieties and economic constraints in adoption of cotton production practices on tribal farms in Madhya Pradesh. *Indian Res. J. Extn. Edu.,* **1**:72-75.

Rangari, P.V. (1998). A study on technological gap in pomegranate cultivation in Marathwada region. M.Sc (Ag.) Thesis, Marathwada Krishi Vidyapeeth, Parbhani, M.S. (INDIA).

Sharma, D.D. (1997). Constraints in adoption of recommended mango cultivation practices by the growers. *Maharashtra J. Extn. Edn.*, **16**:362-365.

Shrestha, B., Subedi, P.P. and Thapa, J.J. (1998). Socio-economic factors in adoption of cellar store as a post harvest technology for mandarin orange in western hills of Nepal. *Lumle Agric. Res. Cent*., **98** : 34-54.

Swingle, W.T. and Reece, P.C. (1967). The botany of *Citrus* and its wild relatives. *In*: The Citrus Industry, Vol. **1**. (eds Reuther, W., Webber, H. J. and Batchelor, L.D.), *Univ. Calif., Berkeley,* 190-430 pp.

Urade, P.N., Bhople, R.S. and Choudhary, D.P. (1991). Adoption of dry land horticulture technology. *Maharashtra J. Ext. Edu.,* **2**:108.

9th Year ★★★★★ of Excellence ★★★★★

Agric. Update, **9**(3) Aug, 2014 : 403-406
Hind Agricultural Research and Training Institute

406