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SOCIO-ECONOMIC FACTORS AFFECTING ORANGE CULTIVATION IN NARKHED TAHSIL OF NAGPUR DISTRICT

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ABSTRACT

Study of socio-economic factors affecting orange cultivation was conducted in Narkhed tahsil of Nagpur district of Maharashtra state. Findings regarding socio-economic factors affecting orange growers revealed that among the reasons, delayed transplanting of budding plants because of delayed rain, lack of budding varieties, lack of storage facilities, lack of money at the time of purchasing fertilizers and insecticides, lack of money at the time of purchasing budding plants, policies of government towards orange, lack of knowledge about the fertilizers doses, Lack of labour during transplanting of budding plants to orchards and vagaries in monsoon were the major factors.

In India, in terms of area under cultivation, citrus is the third largest fruit industry after Banana and Mango. Over the last 30 years, the area and production under citrus cultivation has increased at the rate of 11 and 9 per cent, respectively, which shows that the expansion of citrus industry was quite sustainable. The average yield of citrus fruits in India is alarmingly low (10.1 t/ha) compared to other developed countries like Brazil, USA, China, Mexico and Spain (30-40 t/ha). Among mandarins, Nagpur mandarin (Central India), Kinnow mandarin (North-West India), Coorg mandarin (South India) and Khasi mandarin (North-East India) are the commercial cultivars of India. Whereas, Mosambi (Maharashtra), Sathgudi (Andhra Pradesh) and Malta and Jaffa (Punjab) are the sweet orange cultivars traditionally grown. Citrus cultivation in India is plagued with various problems due to limiting growing conditions, limiting water resources and high incidence of pests and diseases warranting great care from planting till the plants come to bearing in order to sustain a productive life of a minimum of 15-20 years. There is growing interest/ awareness among the citrus growers for adoption of latest technologies for commercial cultivation of citrus (Rai et. Al 2012).

The National Research Centre (NRC) for Citrus (ICAR), Nagpur has come out with the package of practices for citrus cultivation in different regions of the country. In the present bankable project on citrus, recommendations of the NRC for citrus and the views of the citrus growers and their experience has been taken into consideration. Among citrus fruits orange is grown across

the world in 41.96 lakh hectares with 107678 thousand 13ateg production (FAO 2016). It is the most commonly grown tree fruit in the world. China is the world leader in orange production (35700 thousand 13ateg) contributing to 33.2 percent of world tonnage followed by Brazil contributing (18386 thousand 13ateg) i.e. 17.1 percent, and leading by India at 8.7 percent (9385 thousand 13ateg). India is the third largest producer of orange in the world. Although, India is second in area and third in production of

orange in the world, the productivity/hectare is very low as compared to the US, Indonesia, Turkey and other countries where the crop is grown commercially. In terms of productivity, India ranks 64th with only 9.23 tonnes a hectare. Total export of orange from India during 2014-15 was 25.06 thousand 13ateg (Rs 25.39 crore in value).

KEY WORDS-Area, structure, sustainable, cultivation, effects

INTRODUCTION

Despite a considerable increase in the area under orange orchard, the production and quality of fruits have been found dwindling because of various problems in adoption of recommendations. Comparative analysis of yield of orange fruit production shows that our orange fruit production per hectare is very low (9-10 tonnes/ha), with that of developed countries. The unit area production of orange depends mainly on the technical know-how possessed and the extent of its use in production by the orange growers. Also extension programme on various technologies to be transfer with the help of different department but there are gaps in production by the farmer on his farm. So as to boost up the orange production; latest technology is being continuously developed and recommended for use by the orange grower's. It is assumed that the adoption 13ategori of the farmers is influenced be various factors and if they are identified they can be tackled effectively by the change agents. Hence it was thought worthwhile to ascertain the factors which are associated for declining of orange cultivation. Keeping in view above facts the study was conducted with an objective to study the effect of various socio-economic factors on the decline of orange cultivation.

METHODOLOGY

The present study was conducted in Nagpur district of Maharashtra state. The district consists of thirteen talukas form which Narkhed taluka was selected purposively, as it covers more area under orange cultivation. The lists of orange cultivators

from the selected villages were prepared and from them 150 orange cultivators were selected by adopting the procedure of proportionate random sampling. Each farm was treated as a single operational unit and the orange cultivator responsible for

decision-making was interviewed. Farmers were selected solely based upon their farming practices, irrespective of farm size, soil type, education, income or any other demographic factors. An interview schedule was prepared in view of the objective of the study and data were collected by personal interview of the selected orange cultivators. In order to identify the social and economic factors affecting orange cultivation, the survey questionnaire included a number of statements relating to views on farming practices being adopted by the farmers. Upon careful consideration of each of such statements, they were grouped into thematically relevant categories.

RESULT AND DISCUSSION

➤ Socio-Economic factors affects orange cultivation:

The socio-economic factors affecting orange cultivation in the study area were identified and 13ategorized into seven heads viz. Factors related to input supply, technical aspects, economic aspects, information sources, labours and climatic condition and irrigation facilities. The response of the orange cultivators was tabulated and have been presented in table 1.

Table1: Socio-Economic factors affecting orange cultivation (N = 150).

Sr. No.	Factors associated for decline in orange area	f	%
I	Factors related to input supply		
1	Non – availability of improved seed at proper time	76	50.7
2	Non – availability of budding plants at proper time	62	41.3
3	Non – availability of chemical fertilizer at proper time	58	38.7
4	Non – availability of insecticides at proper time	67	44.7
5	Non – availability of plant protection measures	91	60.7
6	Delayed transplanting of budding plants because of no rainfall	138	92.0
II	Factors related to Technical aspects		
1	Lack of budding varieties	131	87.3
2	Ineffectiveness of insecticides	111	74.0
3	Load shedding of electricity	90	60.0
4	Lack of storage facilities	139	92.7
5	Lack of transport facilities	98	65.3
III	Factors related to Economical aspects		
1	High cost of improved varieties of seed	68	45.3
2	High cost of budding plant varieties of seed	59	39.3
3	High cost of insecticides and fertilizers	67	44.7
4	Lack of money at the time of purchasing fertilizers and insecticides	126	84.0
5	Lack of money at the time of purchasing budding plants	135	90.0
6	Obtain low prices by brokers	101	67.3
7	Obtain low prices in market	49	32.7
8	Government do not provide sufficient compensation of natural calamities	95	63.2
9	Inadequate credit facilities	86	57.3
10	High cost of FYM	53	35.3
11	Policies of government towards orange	142	94.7
IV	Factors related to information sources		
1	Lack of knowledge about seed treatment	96	64.0
2	Lack of knowledge about nursery plant development	53	35.3

3	Lack of knowledge about dipping the seedling in insecticides solution	61	40.7
4	Lack of knowledge about the fertilizers doses	121	80.7
5	Lack of knowledge about the appropriate stage of transplanting budding plants to farms	87	58.0
6	Lack of contact with extension personnel	111	74.0
7	Lack of knowledge about the control measures of oranges to particular age of trees	119	79.3
8	Inadequate guidance from the dealers	96	64.0
V	Factors related to labours		
1	Lack of labour during transplanting of budding plants to orchards	134	89.3
2	Inadequate guidance to the labours while removing oranges from the trees	75	50.0
3	Lack of knowledge of handling fruits while transportation	75	50.0
4	Lack of knowledge while keeping in the storage	19	12.7
5	High wages rates for cultivating farms	88	58.7
6	High wages rates while removing oranges from the trees	102	68.0
7	High wages rates for transporting oranges to market	116	77.3
VI	Factors related to climatic conditions		
1	Vagaries in monsoon	142	94.7
2	Long dry spell	87	58.0
3	High Temperature	91	60.7
4	Low water table	84	56.0
VII	Factors related to irrigation facilities		
1	Lack of Wells / tube wells	62	41.3
2	Lack of River / pond / lake water	97	64.7
3	Lack of government facilities for irrigation facilities like digging up well/borewell	98	65.3

- Factors related to input supply:** Under this category, delayed transplanting of budding plants because of no rain was the major factor affecting orange cultivation as reported by 92% of the respondents. 60.7% respondent reported non-availability of plant protection measures and 50.7% respondents reported non-availability of improved seeds at proper time as the major factors

associated. Non – availability of insecticides at proper time (44.7%), non – availability of budding plants at proper time (41.3%) and non – availability of chemical fertilizer at proper time (38.7%) were the other factors affecting orange cultivation.

- Factors related to Technical aspects:** Among the technical aspects, lack of storage facilities was the major factor affecting

orange cultivation as reported by 92.7% respondents followed by lack of budding varieties (87.3%) and ineffectiveness of insecticides (74%). Other associated technical aspects were lack of transport facilities (65.3%) and load shedding of electricity (60%).

- Factors related to Economical aspects:** Among the economic aspects, policies of government towards orange, lack of money at the time of purchasing budding plants and lack of money at the time of purchasing fertilizers and insecticides were the major factors affecting orange cultivation as reported by 94.7%, 90% and 84% of the respondents respectively. Other associated factors were obtain low prices by brokers (67.3%), government do not provide sufficient compensation of natural calamities (63.2), inadequate credit facilities (57.3%), high cost of improved varieties of seed (45.3%), high cost of insecticides and fertilizers (44.7%), high cost of budding plant varieties of seed (39.3%), High cost of FYM (35.3%) and obtain low prices in market (32.7%).
- Factors related to information sources:** It is revealed that lack of knowledge about the fertilizers doses was one of the major factors encountered by 80.7% respondents followed by 79.3% of respondents who reported that lack of knowledge about the control measures of oranges to particular age of trees as a major factor that affect orange cultivation. 74% respondents reported lack of contact with extension personnel while 64% respondents reported inadequate guidance from the dealers as a major factor. Lack of knowledge about the appropriate stage of transplanting budding plants to farms (58%), lack of knowledge about dipping the seedling in insecticides solution (40.7%) and lack of knowledge about nursery plant development (35.3%) were the other factors related to information sources.
- Factors related to labours:** 89.3% respondents reported lack of labour during transplanting of budding plants to orchards as major factor that affects orange cultivation followed by high wages rates for transporting oranges to market as reported by 77.3% of the respondents. Other labour related factors were high wages rates while removing oranges from the trees (68%), high wages rates for cultivating farms (58.7%), inadequate guidance to the labours while removing oranges from the trees (50%), lack of knowledge of handling fruits while transportation (50%) and lack of knowledge while keeping in the storage (12.7%).

- Factors related to climatic conditions:** Among the various factors related to climatic conditions, vagaries in monsoon (94.7) was reported as the major factor followed by high temperature which was reported by 60.7% of the respondents. 58% respondents reported long dry spell as a major factor whereas 56% respondent reported low water table as a major factors that affects orange cultivation.
- Factors related to irrigation facilities:** The major factor in this category is lack of government facilities for irrigation like digging up well/borewell as reported by 65.3% of the respondents followed by lack of river / pond / lake water and lack of wells / tube wells as reported by 64.7% and 41.3% respectively.

Thus, it is revealed that the factors delayed transplanting of budding plants because of no rain, lack of storage facilities, policies of government towards orange, lack of knowledge about the fertilizers doses, lack of labour during transplanting of budding plants to orchards, vagaries in monsoon and lack of government facilities for irrigation are the major factors that affect orange cultivation to a large extent.

CONCLUSION

The present study attempts to identify the various socio-economic factors that affect the cultivation of oranges in Narkhed taluka of Nagpur district. Findings revealed that delayed transplanting of budding plants because of no rain and vagaries in monsoon are major factors. Since the rainfall is uncertain, enhanced irrigation facilities can improve the orange cultivation in this region. The government agencies should provide assistance for digging well in the farms so that dependency on rainfall for orange cultivation will reduce. The orange cultivators need to be well informed about water conservation and water harvesting techniques. Therefore the extension agency should organize awareness campaigns and demonstrations on water conservation and water harvesting techniques. In addition the orange cultivators of the region should be educated about the seeds, fertilizers, insecticides and best practices of orange cultivation in order to improve productivity. The findings also revealed that non availability of funds at different stages of cultivation is also one of the major factors. Government should take appropriate measures so that funds should be made available at the right time to the orange cultivators through banks, credit societies and other financial institutions. The orange cultivators should be provided assistance to develop storage facilities near their farms. Study also revealed that high cost of improved variety of seed, fertilizer and insecticide and low market price of orange are area of concern. Emphasis should therefore be given on developing high yielding varieties and judicious use of inputs to

improve the productivity of oranges in the region. Government should also develop an effective pricing policy for orange so that more farmers are motivated to cultivate orange.

REFERENCES

1. Gore, M.S. *The Social Context of an Ideology: The Social and Political Thoughts of Babasaheb Ambedkar*, Sage, New Delhi, 1993.
2. Gupta, Dipankar. *Social Stratification*, OUP, New Delhi, 1991.
3. Jogdand, P.G. *New Economic Policy and Dalits* (Jaipur: Rawat)2000.
4. Jogdand, P.G. *Dalit Movement in Maharashtra*, Kanak Publications, New Delhi, 1991.
5. Mane Suresh. *Glimpses of Socio-Cultural Revolts in India*, Samrudh Bharat, Mumbai, 2006.
6. Omvedt, Gail. *Dalit Visions: The anti-caste movement and the construction of an Indian identity*, Orient longman, New Delhi, 1995.
7. Bryce F. Ryan. *Social and Cultural Change*, The Ronald Press Company, New York, 1969.
8. Wood Charles, Roberts Bryan (ed), 2005, *Rethinking Development in Latin America*, Peen State Press.
9. Preston P.W., 1982, *The Theories of Development*, London Routledge, Kegan Paul.
10. Abraham, M.F., 1990, *Modern Sociological Theory: An Introduction*, New Delhi, OUP.
11. Agarwal, B., 1994, *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge, Cambridge University Press.
12. Appadurai, Arjun, 1997, *Modernity at Large: Cultural Dimensions of Globalization*, New Delhi, OUP.