Bulletin of Environment, Pharmacology and Life Sciences
Bull. Env. Pharmacol. Life Sci., Vol 6 [7] June 2017 : 105-110

Online ISSN 2277-1808
Journal's URL:http://www.bepls.com
CODEN: BEPLAD
Global Impact Factor 0.876
Universal Impact Factor 0.9804
NAAS Rating 4.95

ORIGINAL ARTICLE **OPEN ACCESS**

Constraints Faced by Okra Growers in Adoption of Improved Okra Cultivation Technology

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ABSTRACT
The purpose of this study is to find out the training needs of okra growers on different aspects. The present study was carried out in Meerut and Saharanpur district of Western Uttar Pradesh. The Meerut and Saharanpur district consists of twelve & eleven blocks respectively. Out of which each two blocks were selected. Out of which sixteen villages were selected from the selected blocks by using simple random sampling technique and a sample of 160 respondents was selected from these villages by using simple random sampling with proportion to the size of sample in the selected villages. The aspects viz. input constraints, technical constraints, socio-psychological constraints, general constraints, and marketing constraints. Results are discussed in terms of their implication for enhance the constraints as faced by the okra growers in use of improved okra cultivation technology.
Keywords: Okra, Cultivation Technology, input constraints

Received 19.03.2017 Revised 20.04.2017 Accepted 09.05. 2017

INTRODUCTION

Okra (*Abelmoschus esculentus*) is an annual vegetable crop grown in the tropical and sub-tropical regions of the world. It is the sixth important vegetable crop cultivated throughout India. It is a member of the Malvaceae family and can be found as an annual or as a perennial crop in the country. The fruits are rich in fibre content and are gummy, slimy and mucilaginous. Okra also has a high iodine content which helps to control goitre.

Despite the enormous potentials of okra fruits production, its level of production and crop yield per hectare has been greatly hampered by the low fertility status of most soils in the growing areas and low organic matter contents of the soils which translate into low productivity and consequently reduced income for the famer. The low return to farmers is further enhanced by the exorbitant nature of inorganic fertilizer, which most farmers depend upon as source of nutrient for their crops, considering it's negative environmental impact and the fact that the issue of inorganic fertilizer has been highly politicize, there is then, the need to find an alternative source of nutrient which is affordable and less harmful to the environment. Poultry manure has been reported to be a good source of plant nutrients since it contains a substantial amount of N.P.K and other micronutrients that are essential for crop growth and development.

In Uttar Pradesh area under vegetable crops 1400.13 thousand hectare, production 26407.34 thousand metric tons and productivity was of 21.6 metric tons per hectare. Uttar Pradesh accounts for 2.0% of total production of okra in the country. State produces about 301208 metric tons of okra from an area of 22500 hectare having productivity of 13.3 metric ton per hectare. The production of okra is concentrated in the Agra, Meerut, Lucknow, Unnao, Mainpuri, Jalaun, Raebareilly, Hardoi, Sitapur, Sultanpur, Kushinagar, Aligarh, Kanpur, Ghaziabad, Farukhabad, Gonda, Varanasi and Bulandshahr. Recommended varieties of okra in the state are Pusa-sawani, A-4, Perkins long Green, Arka Anamika, Kashi Karanti, Varsha Uphar, Hissar Unnat, Hissar Naveen, HBH-142 and Azad Bhindi-1,3. During 2013-14, 0.14 lakhs million tons. of okra have been traded in organized markets with average price of Rs. 11.11/ Kg. [1].

MATERIAL AND METHODS

The present study was carried out in Meerut and Saharanpur district of Western Uttar Pradesh. The Meerut and Saharanpur district consists of twelve & eleven blocks respectively. Out of which each two blocks were selected. Out of which sixteen villages were selected from the selected blocks by using simple random sampling technique and a sample of 160 respondents was selected from these villages by using simple random sampling with proportion to the size of sample in the selected villages. An interview schedule was developed consisting of identify constraints. The constraints faced by the respondents were categorized into five categories namely input constraints, technical constraints, socio-psychological constraints, general constraints, and marketing constraints. For measuring these constraints, a schedule was developed by the investigator and further discussed with advisor and advisory committee member of Sardar Vallabhbhai Patel University of agriculture and technology as well as the Agriculture Department of State Government. The responses obtained from respondents were recorded on yes or no. Statistical procedures like frequency, percentages & mean were employed to analyze and interpret the data. The constraints were then ranked in descending order on the basis of these percentage scores. For getting the constraint score of a particular farmer, the scores of all the constraints, which that particular farmer faced, were summed up.

RESULTS AND DISCUSSION

In this part an attempt was made to identify and analyse the constraints responsible for the non adoption of improved okra cultivation technology under the agro-climatic conditions where the okra growers were living. For this purpose, a schedule was prepared by the investigator and suggestions were gathered from the experts on three point continuum response categories namely yes or no. The percentage of individual constraints were computed and ranked in descending order. The constraints encountered by the respondents were categorised into five categories namely input constraints, technical constraints, socio-psychological constraints, general constraints, and marketing constraints. The findings regarding these constraints have been presented in Table 1 & 2.

Among the overall constraints it is evident from the Table 1 that the constraint "lack of knowledge about application of balance fertilizers in okra" (75.00 percent) was the most perceived constraint among all the constraints faced by the okra growers which was responsible for the non-adoption of improved okra cultivation technology. The second most perceived constraint faced by the okra growers was "lack of coordination between scientist, extension worker & farmers" (74.37 percent) and third most perceived constant faced by okra growers was "storage facilities are not available at rural areas" (73.75 percent) followed by "lack of knowledge regarding seed and soil treatment" (70.00 percent). Supported finding of the study are conformity with the finding [2-10].

Input constraints and Discussion

Table 1 indicated finding of input constraints explained that on the whole "unavailability of require fertilizers from government sale centre at proper time" (68.12 percent) was as most perceived constraint and hence it was ranked first. The second most perceived constraint was "unavailability of quality & chemical at the time of sowing" (56.25 percent) followed by "high prices of hybrid seeds and chemicals" (54.37 percent) and "Reduction of soil fertility with use of higher dose of chemical fertilizers" (48.12 percent) were perceived as third and fourth most perceived constraints, respectively. The constraints "Unavailability of quality chemicals from govt. sale centre" (36.25 percent) were perceived as fifth position in input constraints.

The important constraints reported above by majority of okra growers might be due to fact that the co-operative societies in the study area were all most defunct resultantly the respondents could not receive/ obtain the required inputs and equipments as per their needs.

Technical constraints and Discussion

Table 1 also shows findings of technical constraints explained that "Lack of knowledge about application of balance fertilizers in okra" (75.00 percent) was as most perceived constraint and hence it was ranked first. The second most perceived constraint was "Lack of knowledge regarding seed & soil treatment" (70.00 percent) followed by "Lack of knowledge about application of plant growth regulators" (69.37 percent), " Lack of knowledge about application of bio-pesticides in okra cultivation" (61.25 percent), "Application of plant protection measures is risky due to lack of knowledge" (46.25 percent), and " Unavailability of technically skilled labour" (27.50 percent) were perceived as third, fourth, fifth and sixth most perceived constraints, respectively.

The important constraints reported by majority of the okra growers might be due to the fact that the number of VEWs for vegetable crops were still less. The jurisdictional area of a VEW was large. Therefore, it was impossible to cover the entire farm families in their constraints were reported.

Socio-psychological constraints and Discussion

Table 1 also depicts the findings of Socio-psychological constraints explained that "lack of coordination between scientist, extension worker & farmers" and "field functionaries do not perform your responsibility in right way" were reported with (74.37 percent) and (68.12 percent) and as such these were ranked at first and second places, respectively. The other constraints like "lack of motivation and education by research & extension organisation", "inadequate extension activities follow up the Govt. Department & extension worker", "local leader is not innovative" and "vegetable enterprise is very risky" were reported with (56.25 percent), (51.87 percent), (27.50 percent) and (23.12 percent) as such these were ranked at 3rd ,4th, 5th and 6th places, respectively.

The important constraints reported by majority of the okra growers might be due to the reasons that socio-psychological plays an important role to eradicate the social prejudices and beliefs hampering the acceptability of the technology. Okra growers were not in touch of exact scientific knowledge or the officer some time did not cooperate the okra growers due to less socio-psychological.

General constraints and Discussion

Table 1 incorporates the findings of general constraints explained that "storage facilities are not available at rural areas", "insufficient training programme are organized by the Govt. Department on okra cultivation" were reported with (73.75 percent) and (54.37 percent) and as such these were ranked at first and second places, respectively. The other constraints like "vegetable cultivation related information is not available at proper time" and "insufficient demonstrations are conducted at farmer's field" were reported with (52.50 percent) and (50.00 percent) as such these were ranked at 3rd and 4th places, respectively. And remaining constraints like "credit facilities are not available for vegetable cultivation" and "unavailability of labour at peak season" were reported with (45.00 percent) and (24.37 percent) as such these were ranked at 5th and 6th places, respectively. From the above results, it may be concluded that "insufficient training programme are organized by the Govt. Department on okra cultivation" was perceived by the okra growers as important general constraints.

Marketing constraints and Discussion

Table 1 depicts the findings of marketing constraints explained that on the whole "iinterference of middleman in vegetable marketing system" and "no fixed price of vegetable like wheat & rice" were reported with (70.00 percent) and (60.62 percent) and as such these were ranked at first and second places, respectively. The other constraints like "day by day fluctuation of vegetable prices", "lack of knowledge about regulated market, short self-life of vegetable create problem in marketing" and "mmarketing information is not available at proper time were reported with (56.87 percent), (48.12 percent), (45.00 percent) and (39.37 percent) and as such these were ranked at 3rd, 4th, 5th and 6th places, respectively. And also constraints like "poor marketing channel" were reported with (27.50 percent) with ranked 7th.

The important constraints reported by majority of the okra growers might be due to lack of unawareness of okra growers and no proper contact of okra growers with govt. agencies, institutions for preservation and storage facility, less knowledge of okra growers about preservation and storage facility.

Table-1. Constraints faced by the okra growers in use of improved okra cultivation technology. N=160

S.No.	Constraints	No. of respondents	Percentage	Rank
1.	**Input constraints**			
1.	Unavailability of quality seeds & chemical at the time of sowing	90	56.25	**II**
2.	High price of Hybrid seeds, and chemicals	87	54.37	**III**
3.	Unavailability of required fertilizers from govt. sale centre at sowing time	109	68.12	**I**
4.	Reduction of soil health with use of higher dose of nitrogen fertilizers	77	48.12	**IV**
5.	Unavailability of quality chemicals from govt. sale centre	58	36.25	**V**
2.	**Technical constraints**			
1.	Lack of knowledge about application of bio-pesticides in okra cultivation	98	61.25	**IV**
2.	Lack of knowledge about application of balance fertilizers in okra	120	75.00	**I**
3.	Lack of knowledge about application of plant growth regulators in okra	111	69.37	**III**
4.	Lack of knowledge regarding seed & soil treatment	112	70.00	**II**
5.	Lack of knowledge about application of plant protection measurements	74	46.25	**V**

6.	Unavailability of skilled labour	44	27.50	**VI**
3.	**Socio-Psychological constraints**			
1.	Lack of motivation and education by research & extension organisation	90	56.25	**III**
2.	Lack of coordination between scientist, extension worker & farmers	119	74.37	**I**
3.	Field functionaries do not perform your responsibility in right way	109	68.12	**II**
4.	Inadequate extension activities follow up the Govt. Department & extension worker.	83	51.87	**IV**
5.	Local leader is not innovative	44	27.50	**V**
6.	Vegetable enterprise is very risky.	37	23.12	**VI**
4.	**General constraints**			
1.	Insufficient training programme are organized by the Govt. Department on okra cultivation.	87	54.37	**II**
2.	Insufficient demonstrations are conducted at farmers field.	80	50.00	**IV**
3.	Credit facilities are not available for vegetable cultivation.	72	45.00	**V**
4.	Vegetable cultivation related information is not available at proper time.	84	52.50	**III**
5.	Storage facilities are not available at rural areas.	118	73.75	**I**
6.	Unavailability of labour at peak season	39	24.37	**VI**
5.	**Marketing constraints**			
1.	Poor marketing channel	44	27.50	**VII**
2.	No fixed price of vegetable like wheat & rice	97	60.62	**II**
3.	Day by day fluctuation of vegetable prices	91	56.87	**III**
4.	Lack of knowledge about regulated market	77	48.12	**IV**
5.	Interference of middleman in vegetable marketing system	112	70.00	**I**
6.	Marketing information is not available at proper time	63	39.37	**VI**
7.	Short self-life of vegetable create problem in marketing	72	45.00	**V**

Table 2. Relative position of different categories of constraints as perceived by the okra growers of okra cultivation.

S. No.	Constraints	Mean Score	Rank
1.	Input constraints	84.20	II
2.	Technical constraints	93.16	I
3.	Socio-Psychological constraints	80.33	III
4.	General constraints	80.00	IV
5.	Marketing constraints	79.42	V

Relative position of different constraints in training needs of improved okra cultivation technology by the okra growers.

Table 2 the relative position of the five categories of constraints responsible for non adoption of improved okra cultivation technology.

A critical examination of the data presented in table revealed that technical constraints possessed the first position as perceived with (93.16 MS) by the respondents. Similarly, input constraints got second position (82.40 MS) and third position and fourth position awarded to socio-psychological constraints (80.33 MS), general constraints (80.00 MS), respectively. Marketing constraints (79.42 MS) were perceived at last position.

CONCLUSION

The major constraints in improved okra cultivation technology as perceived by the okra growers were "lack of knowledge about application of balance fertilizers in okra", "lack of coordination between scientist, extension worker & farmers", "storage facilities are not available at rural areas", "lack of knowledge regarding seed & soil treatment", "Lack of knowledge about application of plant growth regulators", "field functionaries do not perform your responsibility in right way", "unavailability of require fertilizers from govt. sale centre at proper time", "poor confidence in adoption of recommended newly technology" and "no fixed price of vegetable like wheat & rice ". The "technical constraints" were most perceived by the okra growers followed by "input constraints" and "socio-psychological constraints". Whereas the "general constraints" and " marketing constraints" were perceived least by the okra growers.

REFERENCES

1. Chauhan Nikulsinh M. (2015). Constraints faced by Tribal farmers in Adoption of Export oriented Okra Production Expertise in Tapi District of South Gujarat. IJARIIE-ISSN(O)-2395-4396, Vol-1 Issue-5 2015.
2. Gupta Vishal, Singh Dan, Mishra Amit Kumar, Singh Brajendra Pratap, Kumar Roop and Pandey Ravindra Kr. (2017). A Study on Constraints Faced by Cauliflower Growers in Cauliflower Cultivation in Western Uttar Pradesh, India Int. J. Curr. Microbiol. App. Sci (2017) 6(7): 2646-2651.
3. Jana Hiralal, Kole R. K. and Basu D. (2014). Problems Faced by Vegetable Growers in Using Pesticides. Guj. J. Ext. Edu. Vol. 25 : Issue 2 : 130-133.
4. Jat Jeewan Ram, Singh Sangram, Lal Hanuman and Choudhary L.R. (2012). constraints faced by tomato growers in use of improved tomato production technology. Raj. J. Extn. Edu. 20 : 159-163.
5. Krishnamurthy, A. T., Kumar, V. B. S., Basavaraju, H. K. and Ahamed, B. Z. (2008). Adoption level and constraints in adoption of improved practices among vegetable growers of Chikmagalur district, Karnataka. *Environment and Ecology* 26 (2A) : 888-891.
6. Kumar R and Singh H (2002). problems in vegetable production in Bharatpur district of Rajasthan. Rural India 65: 48-50.
7. Lad, A.S., Bedre, V.S. and Wangikar, S.D. (2010). Extent of adoption of recommended cultivation practices of okra by the okra growers. International Journal of Agricultural Sciences 6 (1): 322-324.
8. Nikulsinh M. Chauhan (2015). Constraints faced by Tribal farmers in Adoption of Export oriented Okra Production Expertise in Tapi District of South Gujarat, Principal, Polytechnic in Agriculture. Navsari Agricultural University.Vyara-394 650. Dist-tapi. Gujarat.India. IJARIIE-ISSN(O)-2395-439.
9. Samantaray, S.K., Prusty, S. and Raj, R.K. 2009. Constraints in vegetable production experiences of tribal vegetable growers. Indian Research Journal of Extension Education, 9 (3): 32-34.
10. Singh, J.P. (2002). Technological gap and constraints in adoption of recommended production of tomato cultivation in Jhotwara panchayat samiti of Jaipur district, Rajasthan. M.Sc. (Ag.) Thesis (Unpub.) RAU, Bikaner, campus- Jobner.

CITATION OF THIS ARTICLE

R Kumar, R.N. Yadav, D.K. Singh, D Singh and M K Singh. Constraints Faced by Okra Growers in Adoption of Improved Okra Cultivation Technology. . Bull. Env. Pharmacol. Life Sci., Vol 6 [7] June 2017: 105-110