

## ADOPTION OF OKRA CROP PRODUCTION TECHNOLOGIES IN TRIBAL WOMEN PROMOTED UNDER NAIP

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### ABSTRACT

The study was conducted in two panchayat samities of Banswara district of Rajasthan with the aim to find out the adoption of Okra crop production technologies promoted under NAIP by the tribal farm women. From each panchayat samiti five villages and from each village 8 to 9 tribal farm women were selected randomly to form sample of 90 tribal women. Personal interview technique was used to collect the data. Although 70 percent of the participants were illiterate and belonged to low socio economic status. The study revealed that majority of the participants of NAIP operational area followed the cultivation practices of Okra crop. Participants had medium to high level of adoption in production technologies of Okra crop.

### INTRODUCTION

Agriculture is and will continue to be the main driver of country's economic growth with social justice. Horticulture crops play a unique role in India's economy by improving the income of the rural people. Cultivation of these crops is labour intensive & as such they generate lot of employment opportunities for the rural population.

Women in tribal areas are generally less responsive to improved technologies as they are not exposed to these techniques. So to have the adequate contribution of tribal women in development of the country, it is imperative that the tribal women are trained in agriculture and its allied technology.

#### Objectives

- To study the adoption of Okra cultivation technologies by the tribal women promoted under NAIP.

### RESEARCH METHODOLOGY

The study was conducted in Garhi and Talwara panchayat samities of Banswara district in Rajasthan. Five villages from each panchayat samiti were selected from operational area of National Agricultural Innovation Project, MPUAT, Udaipur.

The sample consisted of 90 tribal women from 10 selected villages of NAIP. Interview techniques was used for data collection. Frequency distribution was used for data analysis.

### RESULTS AND DISCUSSION

#### (a) Componentwise in depth adoption by the participants

(i) **Climate and soil:** The respondents had good knowledge that sandy loam is the best soil for okra cultivation but only 43 percent of the participants grow okra in sandy loam and the rest of the participants grows in black cotton and red soil. The reason might be that the major area covered with black cotton and red soil. Further data also depicts that nearly 70 percent of the participants took okra crop in zaid season whereas 86.6 percent participants grow in the kharif season. During data collection it was observed that due to dependency on canal irrigation most of the participants grow okra in kharif season.

(ii) **Improved seed variety:** Due to the suitable climate as reported by the participants that Bhindi no 10 is one of the improved variety of okra was found very popular among the participants as adopted by 63 percent participants. The another improved variety Selender was adopted by 42.22

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percent participants where as Anokhi was used by 21.11 percent participants. The reason for less adoption of Anokhi as reported by the participants was not suitable to the climate of that area because of less production.

**Table 1. Distribution of respondents on the basis of their adoption of suitable climate and soil for okra crop**

n=90			
S.No.	Particulars	f	%
1	Soil type	39	43.33
2	Season		
	(a) Zaid	60	66.6
	(b) Kharif	78	86.6

**Table 2. Distribution of respondents on the basis of their adoption of improved seed variety of okra**

n=90			
S. No.	Particulars	f	%
1.	Improved variety		
	(a) Bhindi no 10	57	63.33
	(b) Anokhi	19	21.11
	(c) Selender	38	42.22

**(iii) Cultivation Practices:** Table 3 presents information about use of cultivation practices for okra production it was found that sowing of the seed was most common method used by all the participants. Data presented in the table demonstrate that okra was cultivated in both the seasons. In depth study of the table depicts that 80-90 percent participants were growing okra in kharif season, (June- July), maintained spacing of 60x30 cm and did weeding twice. More than half of the participants taking care of recommended seed rate, farm yard manure (FYM) and irrigation practices (18-20 kg/ ha, 22 -25 /ha, 10-12 times) further it can also be observed that adoption of weedicides and quantity of fertilizer was found very poor and they reported that manual weeding is better. NPK is already available in the recommended quantity of mixture of Nitrogen, Phosphorus and Potash. Very few respondents used weedicides and knew about the recommended quantity of fertilizers. Reasons for such findings may be due to their preferences towards manual weeding and readymade fertilizer

available in the market with proper ratio of Nitrogen, Phosphorus and Potash.

**Table 3. Distribution of respondents on the basis of their adoption of cultivation practices of okra crop**

n=90			
S. No.	Particulars	f	%
1.	Sowing method	90	100
2.	Sowing time in Zaid	64	71.11
3.	Sowing time in Kharif	76	84.44
4.	Seed rate of Zaid okra	53	58.88
5.	Seed rate of Kharif okra	69	76.66
6.	Spacing for Zaid	63	70
7.	Spacing for Kharif	79	87.77
8.	Suitable time for weed control	72	80
9.	No of weeding required	79	87.77
10.	Weedicide used	17	18.88
11.	Recommended quantity of Weedicide	09	10
12.	No of irrigations	56	62.22
13.	Fertilizer used	68	75.55
14.	Recommended quantity of fertilizer	02	2.22
15.	Quantity of FYM	58	64.44

**(iv) Plant protection practices-** Information pertaining to the plant protection practices adopted by the participant is presented in Table 4.31-

**Soil treatment-** Data in the table depict that more than half of the participant were using Phorate but the quantity was insufficient.

**Seed treatment-** Data presented in the table shows that none of the participants used seed treatment technology because vegetable seed provided by NAIP were already treated there is no need to treat them again.

**Disease control-** As the participants are using improved varieties of seeds therefore it reduces the problem of plant disease. Data in the table shows that 18.8 per cent respondents had problem of Yellow Vien Mosaic disease in their crop out of which 13.3 percent had cured the disease by using 0.52- 1 lit./ ha of Rogor pesticides, other disease was not found in their area.

**Insect and pest control-** Regarding the component of insect and pest control it was found

that participants were facing the problem of White fly insect and they were using Rogor along with its recommended quantity for protection of plant from insects.

**Table 4. Distribution of respondents on the basis of their adoption of cultivation practices of okra crop**

n=90			
S. No.	Particulars	f	%
1.	<b>Soil treatment</b>		
	• <b>Name of pesticide (Phorate)</b>	58	64.4
	Recommended Quantity (10kg/ha)	22	24.4
	• <b>Name of pesticide (Carbofuron)</b>	4	4.4
	Recommended Quantity (25kg/ha)	3	3.3
2.	<b>Seed treatment</b>		
	• <b>Name of Fungicides (Thiram)</b>	0	0
	Recommended Quantity (2 gm/kg/ha)	0	0
	• <b>Name of Insecticides (Chloropyrifos)</b>	0	0
	Recommended Quantity (4 ml/lit/ha)	0	0
	• <b>Name of Bio-fertilizer</b>	0	0
	Recommended Quantity (0.5 kg/ha)	0	0
4.	<b>Disease control</b>		
	• <b>Name of disease (Powdery Mildew)</b>	0	0
	Name of pesticide (Sulphur/Kerathan)	0	0
	Recommended Quantity (20-25kg/ha)	0	0
	• <b>Name of disease (Yellow vein mosaic)</b>	17	18.8
	Name of pesticide (Rogor/Metasystox)	12	13.3
	Recommended Quantity (0.5-1lit/ha)	12	13.3
5.	<b>Insect pest control</b>		
	• <b>Name of insect (Stem &amp; fruit borer)</b>	0	0
	Name of insecticide (Endosulphan 35 EC)	0	0
	Recommended Quantity (1-1.5 lit/ha)	0	0
	• <b>Name of insect (White fly)</b>	15	16.6
	Name of insecticide (Rogor/Metasystox)	12	13.3
	Recommended Quantity (0.5-1lit/ha)	12	13.3
	• <b>Name of pest (Red Mite)</b>	0	0
	Name of pesticide (Soluble sulphur)	0	0
	Recommended Quantity (1.25-1.5 kg/ha)	0	0
3.	<b>Equipment for seed treatment</b>	0	0

**Use of seed dresser-** The project had provided seed dresser for promoting seed treatment activity which was placed at Rural Technology Centre. None of the participants used the seed dresser as already treated seed were provided to them.

**(v) Harvesting and postharvest management-**

Adoption of harvesting and post harvest management technology were found to be good

among participants. Data in the table 5 demonstrate that majority of the participants start plucking after 40-45 days and it was done 8-10 times and got good yield i.e. 152-200 q/ha all participants are using okra for vegetable purpose as direct cooking and 78 percent participant the dried okra to be consumed as off season vegetable. Most of the participants reported that zaid season crop was sold by them where as in kharif season they could not get better

prices so they dried it and consumed as off season vegetable.

**Table 5. Distribution of respondents on the basis of their adoption of harvesting and postharvest management of okra crop**

n=90			
S. No.	Particulars	f	%
1.	Harvest time	88	97.70
2.	First picking	80	88.8
3.	Plucking	86	95.50
4.	Yield	62	68.88
5.	Storage	0	0
6.	Duration of storage	0	0
7.	Uses of plucked okra		
	(a) Direct cooking	90	100
	(b) Drying	70	77.7

**Overall adoption of Okra crop production technologies-**

To know the overall adoption of the respondents in Okra cultivation technologies, they were grouped into three levels viz. Low Medium and High. The results are presented below.

**Distribution of respondents by their overall adoption in Okra cultivation technologies**

n=90		
Levels	f	%
Low	2	2.2
Medium	84	93.3
High	4	4.4

Data presented in table demonstrate that in Okra crop majority of the participants had medium to high level of adoption in okra crop production technologies i.e. 93.3 percent and 4.4 percent participants respectively. Only 2.2 percent

participants had low adoption. Similar findings was also reported by Venkatesh (2002) on knowledge level and adoption behavior of vegetable grower with respect to pest management of tomato crop reported that majority of the vegetable growers belong to medium adoption level categories

**CONCLUSION**

It can be concluded from the above tables that respondents adoption regarding horticultural technologies was found from medium to high level.

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