

Original Research Article

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Study about Technical Intervention Adopted by the Tuber Growers

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ABSTRACT

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Present study was conducted during the year 2015-16 in Bastar district of the Chhattisgarh state. Chhattisgarh state has 27 districts out of which Bastar district was selected for the study. Bastar district have 7 blocks out of which two blocks namely Bastar and Bakawand block was selected for the study. Tuber crops are growing in the limited area and wider gap between the current production and potential productivity. The data were collected through pre-tested structured interview schedule and appropriate statistical tools were employed for analysis of data. All the tuber growers were asked about the procedure for applying the technologies and found that they were utilizing the technology more than 70 % in the line of recommended technology. Out of all technological practices used in tuber crops, only 3 technologies were selected purposively that is water management, nutritional management and plant protection measures were taken. Result also depicted that in case of the sweet potato, yam, colocasia, cassava and discorea the average yield of tuber crops are increasing among the adopters after technical interventions and the yield of the non-adopting are remaining constant since three last years.

Introduction

Tuber crops are one of the most important staple crops in the world. It is consumed as raw or cooked; all over the world. It is the major staple foods in many parts of the tropics, being the source of most of the daily carbohydrate intake for large populations. On a global basis, approximately 55 percent of roots and tuber production is consumed as food; the remainder is used as planting material, as animal feed or in the production of starch, distilled spirits, alcohol and a range

of other minor products. In the developing countries, with the exception of China, Vietnam, Brazil and Paraguay, only small quantities (less than 20 percent) are fed to livestock and production is largely for on-farm food consumption.

The relatively high costs of transport, processing and storage and the not inconsiderable time needed in preparation as food, frequently make roots and tuber crops less attractive to urban consumers. Bastar district is the full of surprises and have a huge

cultural differences in this area. Rural people partake in a number of strategies, including agricultural intensification, migration and livelihood diversification, which enable them to attain a sustainable livelihood. Sustainable Livelihood approaches provide a framework for addressing poverty and vulnerability in both development and humanitarian contexts. They have emerged from the growing realization of the need to put the poor and all aspects of their lives and means of living at the centre of development and humanitarian work, while maintaining the sustainability of natural resources for present and future generations. Tuber crops are cultivated by the most of the farmers and they are facing various troubles whereas they are also economically poor and their production and productivity was also low.

Materials and Methods

The study was undertaken in the Bastar District of Chhattisgarh state. Out of seven blocks of Bastar division there are two blocks namely Bastar and Bakawand was selected purposively for the present study because the maximum area covers under the tuber crops in this area. From the each selected blocks there are 4 villages are selected randomly and fifteen respondents from each selected villages were selected. In this way total 120 respondents are considered as respondents. The data are collected through pre-tested structured interview schedule the data were analyzed by the appropriate statistical tools.

Results and Discussion

All the tuber growers were asked about the procedure for applying the technologies and found that they were utilizing the technology more than 70 % in the line of recommended technology. Selected respondents were asked question regarding the production of tuber crops for last three years after opting the

improved technology of tuber crops. This data were obtained from the respondents on the memory based.

Out of all technological practices used in tuber crops, only 3 technologies were selected purposively that is water management, nutritional management and plant protection measures were taken. After applying the three technologies production of tuber crops increasing in incremental order which is depicted in the Tables.

Table-1.1 reveals that the respondents are using above given set of interventions. Results shows that yields of the yam were increasing every year than who didn't adopt the technical interventions. Yield of both categories is increasing but higher in case of adopters.

In case of the Cassava the results in table-1.2 shows that the average yield of Cassava crops is higher than the non- adopters. Collectively it is said that yield of the Cassava is increasing after adopting the given set of interventions every year.

The table-1.3 shows that the in case of the sweet potato results shows that the average yield of Sweet potato crop is increasing among the adopters after technical interventions and the yield of the non-adopting are remaining constant since three last years.

Table-1.4 reveals that the average yield of the colocasia is increasing after the technical interventions and rest of the respondents are using traditional method of cultivation colocasia; so the yield of those respondents are remaining constant since last three years. The table-1.5 reveals that the average yield of the respondents is increasing every year since last three years. And yield of the non-adopters are remaining constant (Fig. 1).

Table.1 Distribution of the respondents according to adopter/ non adopters of technical interventions

Table1.1 Distribution of the adopters and non- adopters in yield of Yam crop (n=14)

Year	Average Yield of adopters of technical interventions (qtl/hac.)	Average Yield of non-adopters of technical interventions (qtl/hac.)	Interventions in Yam Production
2013	180	160	1. Water management,
2014	200	162	2. Nutritional management
2015	250	165	3. Insect pest and Weed management

Table.1.2 Distribution of the adopters and non- adopters in yield of Cassava crop (n=36)

Year	Average Yield of adopters of technical interventions (qtl/hac.)	Average Yield of non-adopters of technical interventions (qtl/hac.)	Interventions in Cassava production
2013	70	50	1. Water management,
2014	80	56	2. nutritional management
2015	95	64	3. Insect pest and Weed management

Table.1.3 Distribution of the adopters and non- adopters in yield of Sweet potato crop (n=20)

Year	Average Yield of adopters of technical interventions (qtl/hac.)	Average Yield of non-adopters of technical interventions (qtl/hac.)	Interventions in Sweet potato production
2013	80	60	1. Water management,
2014	100	60	2. nutritional management
2015	120	62	3. Insect pest and Weed management

Table.1.4 Distribution of the adopters and non- adopters in yield of Colocasia Crop (n=74)

Year	Average Yield of adopters of technical interventions (qtl/hac.)	Average Yield of non-adopters of technical interventions (qtl/hac.)	Interventions in Colocasia production
2013	100	82	1. Water management,
2014	105	83	2. nutritional management
2015	120	85	3. Insect pest and Weed management

Table.1.5 Distribution of the adopters and non- adopters in yield of *Discorea* crop (n=23)

Year	Average Yield of adopters of technical interventions (qtl/hac.)	Average Yield of non-adopters of technical interventions (qtl/hac.)	Interventions in <i>Discorea</i> production
2013	80	63	1. Water management,
2014	90	64	2. nutritional management
2015	1100	65	3. Insect pest and Weed management

Table.2 Distribution of respondents according to their Selection of tuber crops (n=120)

Particulars	Farmers Category*				
	Marginal	Small	Medium	Big	Total
Tuber crops					
Yam (<i>Amorphophall-us campanulatus</i>)	02 (14.28)	08 (57.16)	02 (14.28)	02 (14.28)	14 (11.66)
Cassava (<i>Manihot esculenta</i>)	09 (25.00)	14 (38.89)	13 (36.11)	00 (00)	36 (30.00)
Sweet potato (<i>Ipomea batatas</i>)	04 (20.00)	08 (40.00)	06 (30.00)	02 (10.00)	20 (16.66)
Colocasia (<i>Colocasia esculenta</i>)	13 (17.57)	38 (51.35)	16 (21.62)	07 (09.4)	74 (61.66)
Discorea (<i>Discorea spp.</i>)	03 (13.04)	13 (56.53)	07 (30.43)	00 (00)	23 (19.16)
Total	31	81	44	11	

*Data based on multiple responses

Figures in parentheses are percentage and data above in parentheses are frequency

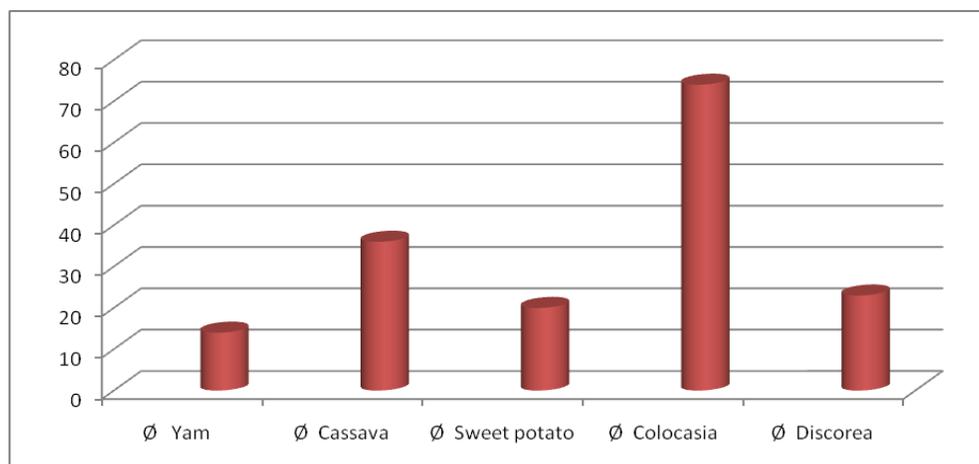


Fig.1

Selection of tuber crops of the respondents

Table no.2 reveals that Maximum no. of respondents (61.66 per cent) choosed Colocasia as a tuber crops followed by 30.00, 19.16, 16.66 and 11.66 per cent respondents had chosen Cassava, Discorea, Sweet Potato, Yam respectively. Thus it may be concluded that most of the respondents (61.66 per cent) were growing Colocasia as a main tuber crops. Out of total respondents of Colocasia 51.35 per cent farmers were small followed by 21.62 per cent farmers are medium while 17.57 percent were marginal and 9.46 per cent of the farmers were big. It may be concluded that maximum farmers are small who cultivated the Colocasia as a tuber crops.

In case of Cassava Maximum numbers of the farmers (38.11 per cent) were small followed by 36.11 percent, 25.00 percent famers are medium and marginal category respectively. None of the farmers is big in this category. In case of Discorea most of the famers were small (56.35 percent) while 30.43 percent of the farmers were medium and only 13.04 per cent of the farmers were marginal respectively. None of the farmers belongs to big farmers. Table also reveals that in case of Sweet potato 38.89 per cent of the respondents were small followed by 30.00 per cent of the respondents were medium while 20.00 per cent of the of respondents were marginal and only 10.00 per cent of the farmers were big farmers. Findings also supported that in case of Yam producers most of the respondents 57.16 per cent were small farmers followed by 14.28, 14.28 and 14.28 per cent of the respondents were marginal,

medium and big farmers respectively. It may be concluded that most of the farmers are small farmers (57.16 per cent) who cultivate the yam as the tuber crops. Research result reveals that the average yield of the respondents is increasing every year since last three years. And yield of the non-adopters are remaining constant.

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