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TRAINING NEEDS OF TRIBAL FARMERS IN AGRICULTURE

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ABSTRACT

*Training is an indispensible instrument for HRD at any level and cannot be ignored. Need assessment helps to identify the present problems and future challenges to meet through training and development so that the appropriate training is given to the right people, in the right form, at the right time so that the degree of productivity and profitability can be achieved. The present study was conducted in operational area of Tribal Research cum Training Center in Dahod district. Multistage random sampling techniques were used for selection of talukas, villages and respondents for the studies. Three talukas namely, Dhanpur, Zalod and Fatepura were selected for the study. Five villages were selected randomly from each Taluka and 10 tribal farmers were randomly selected from each village, thus making the total sample of 150 tribal farmers. It could be concluded from the study that majority of tribal farmers belong to middle age group, joint type of family with medium size of members in family. Majority of them farmers have secondary level of education, no membership any organization. Further, majority of the tribal farmers had marginal size of land holding, mix and kacha type of house and annual income between `50,000 to `75,000. Most of the tribal farmers had more than 8 years farming experience. Training on Fall Armyworm management in Maize, Girdle Beetle management in Soybean, Time, method and recommend dose of Fertilizer Application, Integrated nutrient management, On farm Bio-fertilizer production, On farm Bio-pesticides production, Knowledge and source of improved and high yielding varieties, Crop diversification, Marketing of farm products, Grading and storage Grains was the very most important training need of tribal farmers in Agriculture and were ranked first to tenth respectively. Plant protection, Soil health and fertility management and on farm production of inputs was the most important components of agriculture to be organize training program for the tribal farmers of Dahod district followed by Crop pro*duction and post harvest technology component.

Keywords*: training*, *tribal*, *grower*, *need*, *adoption*, *agriculture*

INTRODUCTION

India is home to about 700 tribal groups with a population of 104 million, as per 2011 census. This indigenous people constitute the second largest tribal population in the world after Africa. In the Gujarat, 14.8 per cent population of Scheduled Tribes (STs) among total population of the State. District wise, The Dang has recorded 93.8 per cent Scheduled Tribes (STs) population followed by Narmada 78.1 per cent, Dahod 72.3 per cent and Valsad 54.8 per cent have recorded more than half of the total population of the district as Scheduled Tribes (STs).

The average yield of crops in Tribal area is low as compare to research station. Probable reason might be that majority of the tribal farmers are not imparted with latest technologies due to inadequate communication facilities and lake of interest of the people's so it may be increase to imparting latest agricultural technology through training programs.

Training is an indispensible instrument for HRD at any level and cannot be ignored. First and foremost activity for planning a good training programme is to assess the training needs. Need assessment helps to identify the present problems and future challenges to meet through training and development so that the appropriate training is given to the right people, in the right form, at the right time so that the degree of productivity and profitability can be achieved (Prajapati *et al.,* 2020). On the basis the present study was conducted on "Training need of tribal farmers in agriculture"

OBJECTIVES

(1) To study personal, socio-economic characteristics of tribal farmers

(2) To assess training needs of tribal farmers in agriculture

METHODOLOGY

The present study was conducted in operational area of Tribal Research cum Training Center in Dahod district. Multistage random sampling techniques were used

for selection of talukas, villages and respondents for the studies. Three talukas namely, Dhanpur, Zalod and Fatepura were selected for the study. Five villages were selected randomly from each Taluka and 10 tribal farmers were randomly selected from each village, thus making the total sample of 150 tribal farmers. A well-structured pre tested Gujarati version interview schedule was prepared in light of the objectives. The data were collected through personal interview method.

Results deal with the presentation, analysis, interpretation and discussion of the data collected through interview schedule. The data were tabulated, classified, presented and interpreted in systematic manner as per objectives of the study:

The results of this study may be useful to the agriculture scientists and extension personnel, who are involved in the process of planning and dissemination of the technology through large number of demonstrations and mass publicity to the farmers.

RESULTS AND DISCUSSION

The facts and findings of the study are presented under following heads:

Profile of tribal farmers

With a view to analyzing the important characteristics in relation to socio economic status of the tribal farmers, various personal, socio-economic and situational characteristics of the respondents *viz*. age, family type and size, education, social participation, land holding, annual income, types of house, occupation and experience in farming contact were included in this study. In this investigation, these characteristics have been studied and results are presented as under.

Table 1 : Profile of Tribal farmers of Dahod district (n=150)

Sr. NO.	Socio-economic characteristics	Number	Percentage
A	**Age**		
a	Young (up to 25 year)	46	30.70
b	Middle (26 to 50 year)	78	52.00
c	Old (above 50 year)	26	17.30
B	**Type of family**		
a	Nuclear Family	54	36.00
b	Joint Family	96	64.00
C	**Size of the family**		
a	Small size (up to 4 members)	26	17.30
b	Medium size (5 to 8 members)	80	53.30
c	Large size (more than 9 members)	44	29.40
D	**Education**		
a	Illiterate	24	16.00
b	Primary	28	18.70
c	Secondary	78	52.00
d	Higher Secondary	20	13.30
e	Graduate or Post Graduate	00	00.00
E	**Social Participation**		
a	No Membership	96	64.00
b	Membership in one organization	32	21.30
c	Membership in more than on organization	22	14.70
d	Membership along with position holding	00	00.00

Sr. No.	Socio-economic characteristics	Number	Percentage
F	**Size of land holding**		
a	Marginal (up to 1.0 ha)	98	65.40
b	Small (1.01 ha to 2.0 ha)	52	34.60
c	Medium (2.01 ha to 4.0 ha)	00	00.00
d	Large (above 4.0 ha)	00	00.00
G	**Annual income**		
a	Up to ₹ 25,000/-	00	00.00
b	₹ 25,001/- to ₹ 50,000/-	43	28.60
c	₹ 50,001/- to Rs. 75,000/-	82	54.70
d	₹ 75,001/- to ₹ 1,00,000/-	25	16.70
e	Above ₹ 1,00,000/-	00	00.00
H	**Type of house**		
a	Kacha	57	38.00
b	Mix	65	43.30
c	Pakka	28	18.70
I	**Occupation**		
a	Only Agriculture	24	16.00
b	Agriculture + Animal husbandry	82	54.70
c	Agriculture + Labor work	20	13.30
d	Agriculture + Animal husbandry + Business	13	08.70
e	Agriculture + Labor work + Animal husbandry	11	07.30
J	**Farming Experience**		
a	Up to 2.0 year	00	00.00
b	2.01 to 4.0 year	16	10.60
c	4.01 to6.0 year	21	14.00
d	6.01 to 8.0 year	35	23.40
e	Above 8 year	78	52.00

The data presented in Table-1, revealed that, majority of the tribal farmers belonged to middle age group. Vast majority of the tribal farmers had joint family. More than half of the tribal farmers had medium size of family i.e. in between 5 to 8 member followed by large size i.e. above 8 members of family and small size i.e. up to four members. Nearly one third of tribal farmers had primary and secondary level school education. More than half of tribal farmers had no membership in any organization while 21.30 per cent of the tribal farmers had membership in one organization**.** Majority of the tribal farmers had marginal size of land holding while only 34.60 per cent tribal farmers have small size of land holding. More than half tribal farmers had annual income `50,001 To `75,000. As far as type of house has concerned 43.30 per cent tribal farmers had mix houses while 38.00 per cent of tribal farmers had kacha houses. Majority of the tribal farmers belonged to the agriculture with animal husbandry as main occupation. Majority of the tribal farmers had more than 8 years farming experience in agriculture

Training need of tribal farmers in agriculture

The major training needs components identified for the study were crop production, soil health and fertility management, crop protection, post harvest technology and on farm production of inputs etc. Training needs of the farmers are presented in the form of weighted scores in the Tables 2.1 to 2.6. Weighted Scores in the range of 1 – 3 were ranked within each discipline.

Table 2 : Training needs of tribal farmers about crop production (n=150)

Sr. No.	Crop production	Very Important	Important	Not Important	Weighted Scores	Rank	Avg. weighted scores
1	Knowledge and source of improved and high yielding varieties	69	45	36	2.22	I	1.97
2	Land preparation and management of problematic soils	48	33	69	1.86	VI	
3	Weed management	53	49	48	2.04	IV	
4	Water management	38	52	60	1.85	VII	
5	Integrated farming	57	51	42	2.10	III	
6	Seed production	34	46	70	1.76	IX	
7	Crop diversification	56	61	33	2.15	II	
8	Organic farming aspects	37	54	59	1.85	VIII	
9	Household food security by kitchen gardening	47	43	60	1.91	V	

Data presented in Table 2.1 revealed that training on knowledge and source of improved and high yielding varieties, crop diversification, integrated farming, weed Management and household food security by kitchen gardening was the most important training need of tribal farmers in crop production component and were ranked one to Fifth respectively followed by land Preparation and management of problematic soils, Organic farming aspects, Water management and Seed production was important training need of tribal farmers and were ranked sixth to ninth respectively.

Table 2.2 : Training needs of tribal farmers about soil health and fertility management (n=150)

Sr. No	Soil health and fertility management	Very Important	Important	Not Important	Weighted scores	Rank	Avg. Weighted scores
1	Soil fertility management	58	54	38	2.13	V	2.30
2	soil and water conservation	67	58	25	2.28	IV	
3	Soil and water testing	73	49	28	2.30	III	
4	Integrated nutrient management	76	52	22	2.36	II	
5	Time, method and recommended dose of fertilizer application	79	53	18	2.40	I	

Data presented in Table 2.2 revealed that training on Time, method and recommended dose of fertilizer application, integrated nutrient management and Soil and water testing was the most important training need of tribal farmers in Soil health and fertility management component and were ranked one to third respectively followed by soil and water conservation and soil fertility management was important training need of tribal farmers and were ranked fourth and fifth respectively.

Data presented in Table 2.3 shows that under plant protection component, Fall armyworm management in maize, Girdle Beetle management in Soybean, YMV (yellow Mosaic Virus) management in Soybean, Pod Borer management in Chickpea and Integrated pest and disease management in major crops was the most important training need of tribal farmers and were ranked one to fifth respectively followed by Wilt management in Maize and Chickpea, Termite control in wheat, use Bio control agents, Pink Boll worm management in cotton and Seed treatment was important training need of tribal farmers in plant protection component and were ranked sixth to tenth respectively.

Table 2.3 : Training needs of tribal farmers about plant protections (n=150)

Sr. No	Plant protection	Very Important	Important	Not Important	weighted scores	Rank	Avg. weighted scores
1	Fall armyworm management in maize	94	36	20	2.49	I	2.49
2	Girdle beetle management in soybean	88	43	19	2.46	II	
3	Pink Boll worm management in cotton	53	49	48	2.03	IX	
4	Termite control in wheat	52	53	60	2.14	VII	
5	Pod Borer management in chickpea	63	51	36	2.18	V	
6	YMV (yellow mosaic virus) management in Soybean	73	47	30	2.28	III	
7	Wilt management in maize and chickpea	56	61	33	2.15	VI	
8	Seed treatment	54	38	58	1.97	X	
9	Integrated pest and disease management in main crops	70	46	34	2.24	IV	
10	Bio control agents	52	59	39	2.08	VIII	

Table 2.4 : Training needs of tribal farmers about post harvest technology (n=150)

Sr. No.	Post harvest technology	Very Important	Important	Not Important	weighted scores	Rank	Avg. weighted scores
1	Grading and storage grains	58	37	55	2.02	II	1.93
2	Value addition of Soybean and maize	48	38	64	1.89	III	
3	Value addition of Aonla and mango	44	28	77	1.77	IV	
4	Marketing of farm products	63	28	59	2.03	I	

Data presented in Table 2.4 revealed that training on Marketing of farm products, Grading and storage of Grains was the most important training need of tribal farmers in post harvest technology component and were given to first and second ranked followed by Value addition of Soybean and Maize and Value addition of Aonla and Mango was important training need of tribal farmers were given to third and forth ranked respectively.

Table 2.5 : Training needs of tribal farmers about on farm production of inputs (n=150)

Sr. No.	On farm production of inputs	Very Important	Important	Not Important	weighted scores	Rank	Avg. weighted scores
1	On farm Bio-pesticides production	76	37	37	2.26	II	2.28
2	On farm Bio-fertilizer production	81	38	31	2.33	I	
3	Vermi-compost production	79	28	43	2.24	III	

Data presented in Table 2.5 shows that under on farm production of inputs component, on farm Bio-fertilizer production, on farm Bio-pesticides production and Vermi-compost production was the most important training need of tribal farmers in on farm production of inputs component and were ranked first to third respectively.

Table 2.6 : Overall Training needs of tribal farmers in agriculture (n=150)

Sr. No.	Training need in agriculture	Very Important	Important	Not Important	weighted scores	Rank
1	Fall armyworm management in maize	94	36	20	2.49	I
2	Girdle beetle management in soybean	88	43	19	2.46	II
3	Time, method and recommend dose of fertilizer application	79	53	18	2.40	III
4	Integrated nutrient management	76	52	22	2.36	IV
5	On farm bio-fertilizer production	81	38	31	2.33	V
6	On farm bio-pesticides production	76	37	37	2.26	VI
7	Knowledge and source of improved and high yielding varieties	69	45	36	2.22	VII
8	Crop diversification	56	61	33	2.15	VIII
9	Marketing of farm products	63	28	59	2.03	IX
10	Grading and storage grains	58	37	55	2.02	X

Data presented in Table 2.6 revealed that training on Fall Armyworm management in Maize, Girdle Beetle management in Soybean, Time, method and recommend dose of Fertilizer Application, Integrated nutrient management, On farm Bio-fertilizer production, On farm Bio-pesticides production, Knowledge and source of improved and high yielding varieties, Crop diversification, Marketing of farm products, Grading and storage Grains was the very most important training need of tribal farmers in Agriculture and were ranked first to tenth respectively.

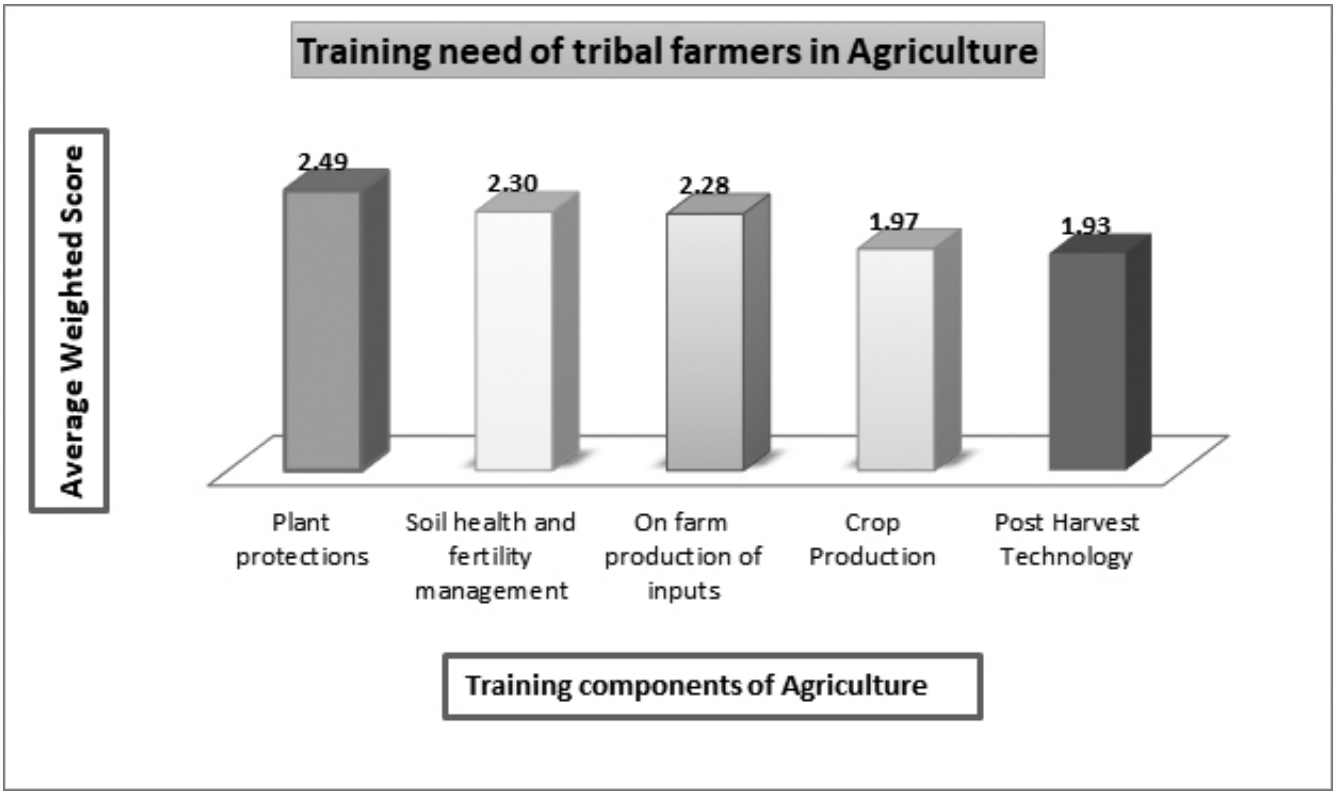

Fig. 1 : Training need of tribal farmers in agriculture

Data presented in Fig 1 revealed that Plant protection, Soil health and fertility management and on farm production of inputs was the most important components of agriculture to be organized training program for the tribal farmers of Dahod district followed by Crop production and post harvest technology component.

Probable reason might be that majority of tribal farmers didn't know about identification insect-pest and disease and their management at right time and right method also less use of well composed FYM and recommended dose of Fertilizer. Furthermore, Day by day increasing cost of cultivation in agriculture by using high rate of seeds, pesticide and fertilizer.

CONCLUSION

It could be concluded from the study that majority of tribal farmers belong to middle age group, joint type of family with medium size of members in family. Majority of them farmers have secondary level of education, no membership any organization. Further, majority of the tribal farmers had marginal size of land holding, mix and kacha type of house and annual income between `50,000 to `75,000. Most of the tribal farmers had more than 8 years farming experience.

Training on Fall Armyworm management in Maize, Girdle Beetle management in Soybean, Time, method and recommend dose of Fertilizer Application, Integrated nutrient management, On farm Bio-fertilizer production, On farm Bio-pesticides production, Knowledge and source of improved and high yielding varieties, Crop diversification, Marketing of farm products, Grading and storage Grains was the very most important training need of tribal farmers in Agriculture and were ranked first to tenth respectively.

Plant protection, Soil health and fertility management and on farm production of inputs was the most important components of agriculture to be organize training program for the tribal farmers of Dahod district followed by Crop production and post harvest technology component.

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