

TRAINING AREAS OF TRIBAL FARMERS IN AGRICULTURE IN BANASKANTHA DISTRICT

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ABSTRACT

The present study was conducted in purposively selected Danta and Amirgadh taluka of Banaskantha district of Gujarat state, as these talukas were most backward talukas identified in year 2006 by Gujarat state having highest tribal population. Five villages each in Amirgadh and Danta taluka were selected purposively for the study, on the basis of more area under cultivation of two major crops, wheat and maize, of tribal area. From each village, 10 respondents were selected at randomly making a total sample of 100 respondents for the study. From the present study, it can be concluded that majority of respondents were belonged to middle age group, illiterate and possessed land up to 1.0 hectare. As far as social relationship, majority of respondents have no membership. Majority of respondents possessed goat and bullock. Majority of respondents grow maize in kharif season and wheat in rabi season in up to 1.0 ha. of land and they used open well as the source of irrigation. Majority of tribal respondents earn annual income up to Rs. 50000.00. Majority of respondents got the yield of maize and wheat up to 2500 kg/ha. Majority of respondents had medium level knowledge recommended package of practice of major crops and also had medium level adoption. With respect to training areas concerned, they preferred to receive training on oil engine repairing followed by micro irrigation systems, seed production and control measures of pest and disease.

KEY WORDS: Respondents, technology, training, tribal

INTRODUCTION

Training is essential to induce motivation, create confidence and inculcate efficiency in an individual. Training is also inevitable for imparting new knowledge and updating the skills of the farmers. Training of farmers had assumed further importance and urgency in the context of the high yielding varieties and improved practices in agriculture and allied fields. Thus training plays a very important role for human resource development. In order to make any training

meaningful and effective, it is imperative on the part of the training organizers to identify the training needs of the farmers based on which a suitable training module can be developed so that the appropriate training is given to the right people, in the right form, at the right time so that higher degree of productivity and profitability can be achieved.

It is the experience of the extension workers that plant protection procedures in spite of their merits are not accepted widely by the farmers. Some technologies record very

slow rate of adoption. It is, therefore, a question as to why one practice is more readily adopted than the other. One of the possible answers is some innate characteristics of the practice, which may speed up or retard its rate of adoption. The differential rate of adoption of farm technologies by farmers is generally attributed to some of the personal and socio-economic characteristics of farmers, as reported by Chand and Gupta (1966).

Danta and Amirgadh taluka of Banaskantha district of Gujarat state, as these talukas were most backward talukas identified in year 2006 by Gujarat state having highest tribal population (Table 1). Several recommendations with latest high yielding varieties had been recommended for the farmers to get maximum output / return. But, it was observed that farmers were not following all the recommended technology of major crops of the area. Thus, it was felt necessary to know training areas of tribal farmers in agriculture in Banaskantha district.

METHODOLOGY

The present study was conducted in purposively selected Danta and Amirgadh taluka of Banaskantha district of Gujarat state, as these talukas were most backward talukas identified in year 2006 by Gujarat state having highest tribal population. Five villages each in Amirgadh and Danta taluka were selected purposively for the study (Table 2), on the basis of more area under cultivation of two major crops, wheat and maize, of tribal area. From each village, 10 respondents were selected at randomly making a total sample of 100 respondents for the study. The data were collected by personal interview. The interview schedule was developed through discussion with experts, scientists and extension officers working in the district. The data were analyzed with appropriate scale and statistical procedures.

RESULT AND DISCUSSION

The collected information from 100 respondents was analyzed to study the effect of socio-economic characteristics of farmers on their adoption of recommended practices and also the high yielding varieties. Specifically, the study described the socio demographic characteristics of the respondents and determined the level of adoption of modern agricultural technology among respondents.

Personal, Social and Economic Characteristics of the Respondents.

Age

The data on distribution of the respondents according to their age was presented in Table 3. The data revealed that majority of respondents (42.00 %) belonged to middle age group (36-50 years), whereas 21.00 and 37.00 per cent of them belonged to young age (up to 35 years) and old age (above 50 years), respectively. Usually, farmers of middle aged are enthusiastic having more responsibility and are more efficient than the younger and older ones. Further, middle age group respondents have more physical vigour and also more responsibility towards family than the younger ones. This might be the important reasons that majority of the respondents were in the age group of 36 to 50 years. The results are in line with the research findings reported by Vedomurthy (2002), Patel (2011) and Chaudhary *et al.* (2012).

Education

The data on distribution of the respondents according to their level of education was presented in Table 4. It is observed that 56.00 per cent of the respondents were illiterates, whereas 31.00 per cent of the respondents had received primary education (1-7 standard), followed by 10.00 per cent of respondents had received Secondary level (8-12 standard) and 3.00 per cent of respondents had received college level education. Non-

realization of the influence of formal education in one's life, illiteracy of the parents especially of tribal region might have come in the way of getting them better education. Another contributing reason could be the rural social environment might not have encouraged their parents to provide education to their children. As the tribal rural people have still traditional orientation they generally do not prefer to send their children to assist in farm and household activities. The distance of higher study centres from the villages and need for more investment also might have prevented the parents from providing higher education to their children. The above findings got support from the studies conducted by Babanna (2002), Vedomurthy (2002), Patel (2011) and Chaudhary *et al.* (2012).

Land holding

The data on distribution of the respondents according to their land holding was presented in Table 5. The data showed that majority (54.00 %) of the respondents possessed up to 1.0 ha. of land, followed by 1.1 to 2.0 ha, 2.1 to 3.0 ha. and above 3.0 ha. of land by 29.00, 12.00 and 5.00 per cent of respondents, respectively. Land holding is again an important aspect of tribal economy and most of the tribal farmers possessed less than 2.0 ha. of land. Gholve (1986) in his study on socio-cultural and psychological correlates of tribal development stated that majority of the respondents i.e. 62.10 per cent had small size land holding (up to 2 ha.) followed by 20.53 per cent and 17.37 per cent had medium and big size of land holdings (2.1 to 4.0 ha. and above 4.0 ha. respectively). Tanwar *et al.* (2008) also reported in his study in the tribal area of Udaipur, Rajasthan, that the percentage of marginal (owners up to 1.0 ha. land) and small (owners 1.1 to 2.0 ha. land) farmers were 54.16 and 40.83 per cent, respectively. Jha *et al.* (2012) in his study reported that majority (55.24 %) of the

respondents had medium size (2-4 ha) of land holding for farming practices.

Social participation

Tribal farmers participation in social organization might have an on their participation in tribal agricultural development programme. The data presented in Table 6 revealed that majority (53.00 %) of the respondents belong to no membership group, followed by membership in one organization (40.00 %) and membership in more than one organization (5.00 %)). It can be concluded that majority of the respondents were having No membership. Jasudkar (2000) in the socio-economic study of beneficiaries of tribal sub-plan programme with reference to agriculture in Ambegaon block of Pune district mentioned that most of tribal farmers beneficiary (84.80 %) did not participated in any social organization. Gaikwad (2000) in his study on tribal farmers with reference to their knowledge and benefits derived from different agricultural tribal development schemes reported that 70 per cent of the tribal farmers had not participated in any social organization. Similar to our results, Jha *et al.* (2012) in his study reported that majority (54.28 %) of the respondents had the membership of more than one organization.

Animals possessed by the respondents

The data on distribution of the respondents according to types of animal possessed by tribal farmers (Table 7) indicated that majority (85.00 %) of the respondents possessed goat followed by bullock (75.00 %), buffalo (62.00 %) and cow (53.00 %). However, in contrast to our results, Jadhav (2000) in the study on socio-economic status of tribal farmers reported that majority of the respondents possessed bullocks (83.33 %), cow (75 %) and poultry birds (64 %), while only 20 per cent possessed goat.

Source of irrigation

The data on distribution of the respondents according to their source of irrigation (Table 8) showed that source of irrigation for majority of the respondents (44.00 %) had open well followed by tube well (28.00 %), tube well + open well (14.00 %) and check dams (12.00 %). It can be concluded from this results that majority of the respondents had open well as source of irrigation. The present study was conducted in Danta and Amirgadh taluka of Banaskantha district, which is hilly area and it is very difficult to dug tube well for source of irrigation. Tribal people dug their open wells himself and at his own risk as a source of irrigation. However, Thippaiah (2006) reported some contradictory results that among the farmers having irrigation facilities, about 58 per cent had own bore-wells and open-wells. Out of this, 48 per cent were found using exclusively bore-well irrigation.

Major crops grown

The data on distribution of the respondents according to major crop (maize and wheat) sown (Table 9) revealed that majority of the respondents (64.00 %) grow the maize in *kharif* season in an area up to 1.0 ha. followed by 1.1 to 2.0 ha (26.00 %). It can be concluded that majority of the respondents grow the maize crop in *kharif* season up to 1.0 ha. The data on wheat crop as a main *rabi* season crop showed that majority of the respondents (74.00 %) grow wheat up to 1.0 ha. followed by 1.1 to 2.0 ha (22.00 %). It can be concluded that majority of the respondents grow the wheat crop in *rabi* season up to 1.0 ha. As reported earlier, the land holding of the tribal people is very small and majority of the farmers had up to 1.0 ha. of land. The maize and wheat are such crops that they emerged earlier, required less cultivation and weeding, produce grain faster and matured earlier and at the same and therefore, tribal people grow

these crops as major crops and as per the availability of land.

Annual income

The data on distribution of the respondents according to their annual income was presented in Table 10. The data showed that majority of the respondents (44.00 %) had an annual income of Rs. 25001 to Rs. 50000 and it was followed by up to Rs. 25000 (31.00 per cent). The results are in conformity with the results of Jha *et al.* (2012), as he reported in his study that majority (52.38 %) of the respondents had medium level (Rs 26,000- Rs 36,200) of annual income.

Yield

The data on distribution of the respondents according to the yield of major crop (maize and wheat) are given in Table 11. The data indicated that majority of the respondents (49.00 %) got the maize yield up to 2000 kg/ha. followed by 41.00 per cent up to 2001 to 2500 kg/ha. The data also showed that majority of the respondents (46.00 %) got wheat yield in between 2001 to 2500 kg/ha. followed by 38.00 per cent below 2000 kg/ha. In conformity to our findings, Hussain *et al.* (2012) also reported in his study that 55 per cent respondents had produced grain yields of wheat in the range of 2001-2500 kg ha⁻¹. Furthermore, 21 per cent farmers reported yields between 1501 and 2000 kg ha⁻¹, 10 per cent farmers stated in between 2501-3000 kg ha⁻¹, and 7 per cent told their yields as more than 3000 kg ha⁻¹.

Knowledge of Major Crops about Recommended Package of Practices

Distribution of the respondents according to the knowledge level of recommended package of practice of major crops (Table 12) revealed that majority of the respondents (62.00 %) had medium level knowledge, while 31.00 per cent of the respondents had low level knowledge of recommended package of practice of major

crops. Borua and Brahma (2012) reported in his study that majority of trained rural youth respondents (58.75 %) had medium level of knowledge on selected technology practices, while 23.75 per cent and 17.5 per cent of trained rural youth respondents had high and low level of knowledge, respectively.

Adoption of Recommended Package of Practices of Major crops Production technology by Tribal Farmers

Distribution of the respondents according to the adoption of package of practices of major crop production technology (Table 13) revealed that majority of the respondents (68.00 %) had medium level adoption; while 28.00 per cent of the respondents had low level adoption and only 4.00 per cent had high level adoption. Dubey and Srivastava (2007) also reported that most of the non-trainees farmers had medium level of adoption (64 %) followed by low level of adoption (32 %).

Training Areas of Tribal Farmers about Recommended Package of Practices of Major Crops

The respondents were asked to opine about training need of various aspects related to major crops cultivation at three points quantum i.e. mostly needed, some what needed and not needed with a score of 3, 2 and 1, respectively. Based on the total training need score of all the respondents mean score for each practice was worked out. The data presented in Table 14 revealed that majority of tribal farmers' preferred to receive training on oil engine repairing and micro irrigation systems (Rank I & II) followed by seed production and control measures of pest and disease. It can be concluded that major crops growers of selected villages don't have the knowledge and skill about the micro irrigation systems and oil engine repairing. Danta and Amirgadh taluka of Banaskantha district belongs to arid region of Gujarat state. The

water scarcity is there. The electricity supply is also not available to all the farmers and because of that they are using oil engine pumps to lift the water from open wells. Therefore, this was the reason that they demanded the training in the area of repairing of oil engine and also the micro irrigation system to save the water.

CONCLUSION

From the present study, it can be concluded that majority of respondents were belonged to middle age group, illiterate and possessed land up to 1.0 hectare. As far as social relationship, majority of respondents have no membership. Majority of respondents possessed goat and bullock. Majority of respondents grow maize in *kharif* season and wheat in *rabi* season in up to 1.0 ha. of land and they used open well as the source of irrigation. Majority of tribal respondents earn annual income up to Rs. 50000.00. Majority of respondents got the yield of maize and wheat up to 2500 kg/ha. Majority of respondents had medium level knowledge recommended package of practice of major crops and also had medium level adoption. With respect to training areas concerned, they preferred to receive training on oil engine repairing followed by micro irrigation systems, seed production and control measures of pest and disease.

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Table 1: Information regarding tribal villages

Sr. No.	Name of Taluka	Total Villages	Tribal Villages
1	Danta	186	123
2	Amirgadh	69	48

Table 2: Information regarding selected tribal villages

Sr. No.	Name of Taluka	Name of Selected Tribal Villages
1	Danta	Bordiyala, Kunvarsi, Kesharpura, Dalpura, Megvas
2	Amirgadh	Rabariya, Kuniya, Upalobandh, Nichlobandh, khapa

Table 3: Distribution of the respondents according to their age (n = 100)

Sr. No.	Categories	Frequency	Per Cent
1	Young (Up to 35 years)	21	21.00
2	Middle (36 to 50 years)	42	42.00
3	Old (above 50 years)	37	37.00
Total		100	100.00

Table 4: Distribution of the respondents according to their level of education (n = 100)

Sr. No.	Level of Education	Frequency	Per Cent
1	Illiterate	56	56.00
2	Primary education (Up to VIIth Standard)	31	31.00
3	Secondary education (VIIIth to XIIth standard)	10	10.00
4	College education	03	03.00
Total		100	100.00

Table 5: Distribution of the respondents according to their land holding (n = 100)

Sr. No.	Categories	Frequency	Per Cent
1	Up to 1.0 ha	54	54.00
2	1.1 to 2.0 ha	29	29.00
3	2.1 to 3.0 ha	12	12.00
4	above 3.0 ha	05	05.00
Total		100	100.00

Table 6: Distribution of the respondents according to their social participation (n = 100)

Sr. No.	Social Participation	Frequency	Per Cent
1	No membership	53	53.00
2	Membership in one organization	40	40.00
3	Membership in more than one organization	05	05.00
4	Membership with holding position	02	02.00
Total		100	100.00

Table 7: Distribution of the respondents according to types of animals possessed. (n = 100)

Sr. No.	Types of Animals Possessed	Frequency	Per Cent
1	Cow	53	53.00
2	Buffalo	62	62.00
3	Bullock	75	75.00
4	Goat	85	85.00

Table 8: Distribution of the respondents according to their source of irrigation (n = 100)

Sr. No.	Source of Irrigation	Frequency	Per Cent
1	Tube well	28	28.00
2	Open well	44	44.00
3	Tube well + Open well	14	14.00
4	Check dam	12	12.00
5	Other	02	02.00
Total		100	100.00

Table 9: Distribution of the respondents according to crop sown (Maize/Wheat) (n = 100)

Sr. No.	Name of Crop	Frequency	Per Cent
Maize			
1	Up to 1.0 ha.	64	64.00
2	1.1 to 2.0 ha	26	26.00
3	2.1 to 3.0 ha	09	09.00
4	above 3.0 ha	01	01.00
Total		100	100.00
Wheat			
1	Up to 1.0 ha.	74	74.00
2	1.1 to 2.0 ha	22	22.00
3	2.1 to 3.0 ha	04	04.00
4	above 3.0 ha	00	00.00
Total		100	100.00

Table 10: Distribution of the respondents according to their annual income (n =100)

Sr. No.	Annual Income	Frequency	Per Cent
1	Up to Rs.25000	31	31.00
2	Rs 25001 to Rs. 50000	44	44.00
3	Rs. 50001 Rs. 100000	13	13.00
4	Rs. 100001 Rs. 150000	08	08.00
5	Above Rs. 150001	04	04.00
Total		100	100.00

Table 11: Distribution of the respondents according to the yield (kg/ha) (n = 100)

Sr. No.	Yield (kg/ha)	Frequency	Per Cent
Maize			
1	Below 2000	49	49.00
2	2001 to 2500	41	41.00
3	2501 to 3000	08	08.00
4	Above 3001	02	02.00
Total		100	100.00
Wheat			
1	Below 2000	38	38.00
2	2001 to 2500	46	46.00
3	2501 to 3000	11	11.00
4	Above 3001	05	05.00
Total		100	100.00

Table 12: Distribution of the respondents according to the knowledge level of recommended package of practice of major crops (n = 100)

Sr. No.	Categories	Score Range	Number	Per Cent
1	Low level	Up to 24	31	31.00
2	Medium level	25 to 29	62	62.00
3	High level	30 and above	07	07.00
Total			100	100

Mean=26.47, S. D.= 2.30

Table 13: Distribution of the respondents according to the adoption of package of practices of major crops production technology (n = 100)

Sr. No.	Categories	Score Range	Number	Per Cent
1	Low level	Up to 12	28	28.00
2	Medium level	13 to 15	68	68.00
3	High level	16 and above	04	04.00
Total			100	100.00

Mean=13.45, S. D.= 1.22

Table 14: Distribution of the respondents according to their training needs

Sr. No.	Training Areas	Mean Score	Rank
1	Selection of variety	2.523	VIII
2	Sowing period and method	1.150	XV
3	Seed treatment	2.650	VII
4	Seed rate	1.523	VIII
5	Sowing distance	1.115	XVII
6	Fertilizer dose	2.125	X
7	Method of application	2.750	VI
8	Weed control	1.150	XVI
9	Irrigation	1.750	XIV
10	Diagnosis of pest and diseases	2.823	V
11	Control measures of pest and diseases	2.850	IV
12	Post harvest technology / storage	2.050	XI
13	Marketing	1.850	XII
14	Oil engine repairing	2.950	I
15	Micro irrigation systems	2.895	II
16	Value edition	2.150	IX
17	Seed production	2.850	III

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