

Attitude and Training Need Assessment of Farmers in Adoption of Dryland Agricultural Practices in Barmer District of Rajasthan

**H. R. Sain, Pradeep Pagaria,
Sonali Sharma**

Received 23 June 2018; Accepted 27 July 2018; Published on 18 August 2018

Abstract The present study was conducted in Bothiya Jagir village from Barmer district of Rajasthan during the year 2017-18. Objectives of study were assessing the socio-economic profile of the farmers, attitude of farmers towards adoption of dry land agricultural practices and assessing of their training need. The data were collected personally from respondents by using pre-tested and well structured interview and data were analyzed by using appropriate statistical tools i.e. frequency, percentage and mean score. The findings of the reveals that the 72.00% of the respondents were belonged to the middle age group, 38.00% of the respondents were educated up to high school level, 52.00% were be-

longed to Other Backward Caste and having small size of family (48.00%). As regards to attitude towards dry land agricultural practices. 60.00% of the respondents expressed more favorable attitude towards dry land agricultural practices.

Keywords Attitude, Training need assessment, Farmers, Adoption of dryland agricultured.

Introduction

Agriculture plays a vital role in India's economy. Over 58% of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product (GDP). However, Indian agriculture is facing serious challenges because of its ever increasing population, limited land and water availability and degradation of natural resources. It is desirable to increase agricultural productivity in a sustainable manner. The excessive use of agro chemicals over past decades has deteriorated soil health leading to declines of crop yields and produce quality (Yadav 2011).

H. R. Sain, Dr Pradeep Pagaria*, Dr Sonali Sharma
Krishi Vigyan Kendra Danta—Barmer, Rajasthan, India
e-mail : p_pagaria@yahoo.com

* Corresponing author

Attitude : It refers to an individual's predispositions to view their jobs, other people and the work and the farming environment in certain way. Attitudes reflect values which in turn are based on an individual's life experiences and the environment in which he has been brought up.

Training need assessment : Assessment/evaluation of training can be defined as a process by which the desired behavioral changes (in knowledge, skills and attitudes) due to training are measured against set of objectives/ standards. The assessment can be conducted by training institution, participants (trainees) and participating institution (sponsoring agency) (Deshmukh and Mane 1999, Jhondhale and Bhele 1998, Landge and Tripathi 2006, Raut et al. 1997, Singh 1976, Yadaw et al. 2018).

Adoption : It is a decision to make full use of a new idea as the best course of action available. The term in this study refers to the use of dryland agriculture practices by the respondents. (Jhanharia 2005).

Dryland farming : Dryland farming is dependent on natural rainfall, which can leave the ground vulnerable to dust storms, particularly if poor farming techniques are used or if the storms strike at a particularly vulnerable time. The fact that a fallow period must be included in the crop rotation means that fields cannot always be protected by a cover crop, which might otherwise offer protection against erosion (Adesope et al. 2012, Alzaidi et al. 2013, Bareth 1991, Dangi 1983).

Materials and Methods

The present study was conducted in Barmer district. From the district, Bothiya Jagir was selected purposively on the basis of availability group of farmers. From selected village, 50 farmers who are the farmer group were selected randomly, total sample of 50 farmers for the present study. Primary data from respondents were collected through personal interview with the help of pre-tested structured interview schedule. Collected data were tabulated and processed by using appropriated statistical tools i.e. frequency, percentage and mean score.

Table A. Scale of the respondents.

Categories	Score
Less favorable (Up to 22 score)	1
Moderately favorable (23 to 35 score)	2
Most favorable (36 to 45 score)	3

All aspects of farming systems are interlinked with each other, therefore it is very much necessary to know the attitude of farmers, and for the same purpose a scale has been developed comprising of 21 statements (11 positive and 7 negative) which can be used to measure the attitude of farmers towards dryland agriculture practices (Kumar 2016). The responses were obtained on a five point continuum viz. Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SDA) with a score of 5, 4, 3, 2 and 1 respectively for the positive statement and for the negative statement reverse scoring was adopted.

On the basis of maximum obtainable score, the respondents were categorized and are given Table A. The training need of respondents in dryland agricultural practices were obtained, in order to ascertain the extent of training need of respondents in dryland agriculture. The training need of respondents were recorded in four point continuum scale, namely most needed, somewhat needed and not needed by giving score 3, 2, 1 and 0 respectively. After calculating the scores and mean score of each item, the rank values were assigned and for preference of training in a particular area the below mentioned scale were adopted (Table B).

Observation and analysis

The results obtained from the present study as well

Table B.

Adopted scale	Mean score
Most needed (MN)	02.01—02.50
Needed (N)	01.01—02.00
Somewhat needed (SN)	00.51—01.00
Not needed (NN)	00.00—00.50

Table 1. Distribution of the respondents according to their socio-personal characteristics (n=50).

Characteristics	Frequency	Percentage
Age		
Young (up to 32 years)	6	12.00
Middle (32 to 51 years)	36	72.00
Old (above 51 years)	8	16.00
Education		
Illiterate	4	08.00
Primary School (Up to 5 th Class)	17	34.00
High School (Up to 10 th Class)	19	38.00
Higher Secondary School (Up to 12 th Class)	7	14.00
Above 12 th Class	3	06.00
Caste		
General	16	32.00
Other Backward Caste	26	52.00
Scheduled Caste	8	16.00
Size of family		
Small (up to 5 members)	24	48.00
Medium (6 to 10 members)	19	38.00
Large (above 10 members)	7	14.00

as discussions have been summarized under following heads—

Socio-personal characteristics

The findings on age of the respondents are presented in Table 1. The data reveal that the most of the respondents (72.00%) belonged to the middle age group (between 32 to 51 years). However, 16.00% of the respondents were of older age group (above 51 years). Whereas, in the young age group (up to the age of 32 years) the percentage of respondents were only 12.00%. The findings indicated that the maximum number of the respondents in the study area belonged to the middle to older age group. This

Table 2. Distribution of the respondents according to their size of land holding (n=50).

Size of land holding	Frequency	Percentage
Landless farmer	00	00.00
Marginal (up to 1 ha)	5	10.00
Small (> 1 to 2 ha)	11	22.00
Medium (> 2 to 4 ha)	25	50.00
Large (above 4 ha)	9	18.00

Table 3. Distribution of the respondents according to their annual income (n=50).

Annual income (in Rs)	Frequency	Percentage
Low (Up to Rs 70,000)	6	12.00
Medium (Rs 70,001 to Rs 1,00000)	19	38.00
High (Rs 1,00001 to Rs 2,00000)	22	44.00
Very high (> Rs 2,00000)	3	06.00

reflected that young age group were not much involved in the Dryland Agriculture Practices. Meena (2010), Dhruw (2008) and Naik et al. (2009) also found almost similar findings in his study.

About education, the data reveal that the, 38.00% of selected respondents were educated up to high school level. However, 34.00% of selected respondents had primary school level of education, 14.00% higher secondary school passed, followed by 08.00% illiterate and only 06.00% respondents had passed above higher secondary school level.

The data presented on caste of the respondents in Table 1 indicates that the majority of the respondents (52.00%) of the selected respondents belonged to other Backward Caste, followed by 32.00% of the respondents belonged to General and only 16.00% of the respondents belonged to scheduled Caste category.

The data regarding size of family indicate that the, 48.00% of the respondents were having small size of family (up to 5 members), followed by 38.00% of respondents had medium size of family (6 to 10 members) and only 14.00% of the respondents had big size of family (above 10 members).

Land holding of respondents

The distribution of the respondents according to their

Table 4. Distribution of respondents according to their attitude towards dryland agriculture practices (n=50).

Attitude	Frequency	Percentage
Less favorable (up to 22 score)	04	08.00
Moderately favorable (23-35 score)	16	32.00
More favorable (above 35 score)	30	60.00

Table 5. Training needs of respondents in the major areas of agronomy (n=50). MN = Most Needed, N = Needed, SN = Somewhat Needed, NN = Not Needed.

Sl. No.	Area of training	Training need							
		MN		N		SN		NN	
		f	%	f	%	f	%	f	%
1.	Cultivation practices of <i>kharif</i> pulse crops	42	84.00	5	10.00	3	06.00	0	00.00
2.	Mid season correction in <i>kharif</i> crops	34	68.00	9	18.00	5	10.00	2	04.00
3.	Grain and pulses storage	31	62.00	10	20.00	6	12.00	3	06.00

size of land holdings are presented in the Table 2. The data regarding land holdings indicates that of the total, 50.00% of the selected respondents were having 2.1 to 4 ha of land holdings (Medium farmers), followed by 22.00% of the respondents had small size of land holding (1.1 to 2 ha), 18.00% of the respondents had large size of land holding (above 4 ha) and only 10.00% of the respondents had up to 1 ha of land holding (Marginal farmers).

Annual income of respondents

The distribution of the respondents according to their annual income from agriculture is presented in Table 3. As regards to annual income, the majority of the respondents (44.00%) were having their income, in the range of Rs 1,00001 to Rs 2,00000 followed by 38.00 of respondents had their annual income in the range between Rs 70,001 to Rs 1,00000, 12.00% of respondents had their low annual income i.e. up to Rs 70,000, while, only 06.00% of the respondents had obtained income more than Rs 2,00000.

Attitude towards dryland agriculture Practices

The data regarding attitude towards Dryland Agriculture Practices that, 60.00% of the respondents expressed more favorable attitude towards Dryland Agriculture Practices, followed by 32.00% of the

Table 6. Training needs of respondents in the major areas of horticulture (n =50). MN = Most Needed, N=Needed, SN = Somewhat Needed, NN= Not Needed.

Sl. No.	Area of training	Training need							
		MN		N		SN		NN	
		f	%	f	%	f	%	f	%
1.	<i>In situ</i> budding techniques in Desi ber	37	74.00	10	20.00	3	06.00	0	00.00
2.	Establishment of kitchen garden	32	64.00	12	24.00	5	10.00	1	02.00
3.	Preservation of fruits and vegetables	36	72.00	5	10.00	7	14.00	2	04.00

respondents expressed moderately favorable attitude. While, 08.00% of the respondents expressed less favorable attitude towards Dryland Agriculture Practices (Table 4). Meena (2010) and Alzaidi et al. (2013) also found almost similar findings in their study.

Training needs of the respondents

As regards to training need of respondents the data are presented in Table 5. For cultivation practices

Table 7. Training needs of respondents in the major areas of animal husbandry (n=50). Mn = Most Needed, N= Needed, SN = Somewhat Needed, NN = Not needed

Sl. No.	Area of training	Training need							
		MN		N		SN		NN	
		f	%	f	%	f	%	f	%
1.	Disease management in cattle, sheep and goat	40	80.00	8	16.00	2	04.00	0	00.00
2.	Fodder production	30	60.00	9	18.00	7	14.00	4	08.00
3.	Balance feeding	29	58.00	14	28.00	7	14.00	0	00.00
4.	Fodder conservation	28	56.00	14	28.00	8	16.00	0	00.00
5.	Feed & Fodder enrichment	22	44.00	18	36.00	10	20.00	0	00.00

Table 8. Training needs of respondents in the major areas of home science (n=50). MN=Most Needed, N = Needed, SN = Somewhat Needed, NN = Not Needed.

Sl. No.	Area of training	Training need							
		MN		N		SN		NN	
		f	%	f	%	f	%	f	%
1.	Child care Practices	38	76.00	8	16.00	2	04.00	2	04.00
2.	Tailoring and stitching	35	70.00	10	20.00	3	06.00	2	04.00

of *kharif* pulse crops, most of the respondents (84.00%) most needed training, followed by 10.00% needed reported need for the training. For mid season correction in *kharif* crops 68.00% of respondents reported most needed training, in grain and pulse s storage 62.00% were falling in the category of most needed training.

As regards to horticulture, most needed training (74.00%) were found out for in situ budding techniques in Desi ber followed by 64.00% of the respondents recorded most needed training in establishment of kitchen garden training. For preservation of fruits and vegetables (72.00%) of respondents were in the category of most needed training.

Regarding animal husbandry areas, Disease management in cattle, sheep and goat was found to be most needed training category 80.00% of the respondents which was followed by fodder production, balance feeding, fodder conservation, feed and fodder enrichment with 60.00 58.00,56.00 and 44.00% of the respondents respectively.

In the home science area, child care practices, tailoring and stitching were the two most needed training aspects with 76.00 and 70.00 of the respondents respectively.

Conclusion

From the above findings it can be concluded that the most of the respondents are belonged to the middle age group, educated up to high school level, belonged to other Backward Caste and having small size of

family. As regards to size of land holding most of the respondents were having medium size of land holding having their income, in the range of Rs 100001 to Rs 200000 and most of the respondents expressed more favorable attitude towards dryland agriculture practices.

References

- Adesope OM, Matthews-Njoku EC, Oguzor NS, Ugwuja VC (2012) Effect of socio economic characteristics of farmers on their adoption of organic farming practices, crop production technologies, Dr. Peeyush Sharma (ed). In Tech.
- Alzaidi AA, Baig MB Elhag EA (2013) An investigation into the farmer's attitudes towards organic farming in Riyadh Region— Kingdom of Saudi Arabia. *Bulgarian J Agric Sci* 19 (3) : 426—431.
- Bareth LS (1991) Technological constraints in adoption of improved pulse production techniques in agro-climatic zone IIA and B of Rajasthan. PhD thesis, RAU Bikaner, Campus-Udaipur.
- Dangi KL (1983) Impact of training program in adoption of improved practices by the farmers in command area development program in Rajasthan canal project (RCA) area. MSc (Ag) thesis. Sukhadia University, Udaipur.
- Deshmukh S, Mane A (1999) Training needs of rural women in home science and agriculture. *Maharashtra J Educ* Vol-18.
- Dhruw KS (2008) A study on adoption of recommended maize production technology among the farmers of Kanker district of Chhattisgarh state. MSc (Ag) thesis. IGKV, Raipur (CG).
- Jhanharia P (2005) Knowledge and adoption of improved production technoogy of ber cultivation by the farmers in Chomu tehsil, Jaipur district of Rajasthan. MSc (Ag) thesis. RAU, Bikaner, Campus-Jobner.
- Jhondhale SG, Bhele WL (1998) Thaining needs of from women in krishi vighyan kendra. *Maharrastra J Extn Educ* 12 : 294—298.
- Kumar K (2016) A scale to measure attitude of farmers towards organic farming. *Ind Res J Extn Educ* 16 (1) : 148—150.
- Landge S, Tripathi H (2006) Training needs of kisan mitras in agriculture and allied areas. *Ind res J Extn Educ* 6 (3) : 54—58.
- Meena BS (2010) Socio-economic study of organic farming in irrigated North Western plain zone of Rajasthan. *Agric Sci Digest* 30 (2) : 94—97.
- Naik Hussain Munir, Srivastava SR, Godara AK, Yadav VPS (2009) Knowledge level about organic farming in Haryana. *Ind Res J Extn Edu* 9 (1) : 50—53.
- Raut RS, Nirban AJ, Kulkarni SY (1997) Training needs and expression of farm youth in cultivation of dryland horticultural crop. *Maharashtra J Extn Educ* 16 : 53—57.
- Singh AK (1976) Training needs of farmers. *Rural Ind* 401 : 78—79.
- Yadav AK (2011) Restoring soil health, fertility and sustainability in Indian Agricultural soils. In : Nat symp cum brainstorming workshop on organic agriculture, CSKHPKV, Palampur, India held on April 19-20, 2011. Souvenir and Abstracts, pp 8—11.
- Yadaw et al. (2018) Study of attitude, training need assessment and constraints faced by farmers in adoption of organic farming in Dantewada district of Chhattisgarh. *Agric Update* 13 (1) : 24—31.