International Journal of Home Science 2023; 9(3): 121-125

International Journal of Home Science

ISSN: 2395-7476
IJHS 2023; 9(3): 121-125

www.homesciencejournal.com
Received: 12-07-2023
Accepted: 18-08-2023

Kareena Dhabhai
M.Sc Scholars, Department of Extension Education and Communication Management, College of Home Science, SKRAU, Bikaner, Rajasthan, India

Prasanlata Arya
Assistant Professor, Department of Extension Education and Communication Management, College of Home Science, SKRAU, Bikaner, Rajasthan, India

Corresponding Author:
Kareena Dhabhai
M.Sc Scholars, Department of Extension Education and Communication Management, College of Home Science, SKRAU, Bikaner, Rajasthan, India

A study on the knowledge of farm women about organic farming in Bikaner District of Rajasthan

Kareena Dhabhai and Prasanlata Arya

Abstract
The present study entitled "Knowledge and Attitude of Farm Women about Organic Farming in Bikaner District of Rajasthan" was undertaken to study the knowledge, attitude, extent of adoption of organic farming practices among farm women and relationship between socio economic characteristics of farm women and their knowledge about organic farming. Nokha panchayat samiti was selected purposively because the prevalence of organic farming in this panchayat samiti and a government project Paramparagat Krishi Vikas Yojana (PKVY) is also running in this area. Six villages were selected from two gram panchayats to get the sample of 120 respondents which were selected randomly. Interview schedule was used to collect the data. The study revealed that majority of the respondents belonged to other backward caste, joint family and also most of the respondents were illiterate. Majority of the respondents had medium level of knowledge about organic farming whereas maximum number of the respondents knew that rearing livestock with crop production is essential in organic farming.

Keywords: Organic farming, knowledge, farm women, crop, livestock

Introduction
Organic farming is practiced in India seeing as thousands of years. The great Indian civilization thrived on organic farming and was one of the most affluent countries in the world, till the British ruled it. In traditional India, the whole agriculture was practiced using organic techniques, where the fertilizers, pesticides etc. were obtained from plant and animal products. There is a rising awareness about healthiness and environmental pollution, resulting into preference and demand for organic foods by consumers. Organic farming is now a promising option due to the low external input cost for cultivation such as low fertilizer and low pesticide amounts by increasing the efficient use of farm resources (Ramesh, Singh & Subba, 2005) [6]. Giving a boost to organic farming in Rajasthan, the state government will give one block each in 11 districts for organic agriculture in Rajasthan. At present, the organic farming is being practiced in about 60,000 hectares of land in the state. At present, efforts are being made to encourage more farmers to adopt organic farming (www.e-rajasthan.com).
In India, there is greater need to bring green revolution agricultural areas under the scheme of organic farming. Research and development is necessary to investigate the determinants as well as the problems faced by the farm women while adopting and practicing organic farming. These in turn help the government and organizations to take decisions towards promoting it. Knowledge has been found to be an important factor contributing to adoption of recommended practices by the farm women and farm women's attitude and skill also depend on knowledge. However, the empirical evidences on knowledge and attitude possessed on organic cultivation practices are much limited. Hence, assessment of farm women's knowledge level, attitude and practices towards organic farming has become an important issue which needs to be explored.

Review of Literature
Naik *et al*. (2009) [4] observed that farmers (46.25%) had high level of knowledge about organic farming practices, while 38.75 per cent and 15.00 per cent farmers had medium and low level of knowledge of organic farming practices.
Darandale (2010) [3] reported that about 51.66 per cent of the maize growers had medium level of knowledge, while 30.84 and 17.50 per cent of maize growers had high and low level of knowledge regarding organic farming practices in maize crop, correspondingly.

Pandya (2010) [5] studied that more than three fourth (77%) of the organic farming followers had medium level of knowledge, while 16 per cent and 7 per cent had high and low level of knowledge about organic farming practices, respectively.
Sahu *et al.* (2010) [8] found that farmers those adopted organic farming (46.70%) and had high knowledge level about organic farming practices, followed by 36.7 per cent of them had medium and 16.7 per cent had low knowledge level about organic farming practices
Chanpaneri (2012) [1] highlighted that 60.83 per cent of the tribal adopters of organic farming had medium level of knowledge about organic farming practices, while 25.83 per cent and 13.34 per cent of the tribal adopters had low and high level of knowledge about organic farming practices, respectively.
Shashidahra (2012) [9] reported that 66.66 per cent of the vegetable growers had medium level of awareness about eco-friendly cultivation of vegetables, followed by 21.66 and 11.68 per cent of the respondents had high and low level of knowledge about eco-friendly cultivation of vegetables, respectively.
Rayanagoudar *et al*. (2012) [7] found that majority of the respondents (73.00%) had high level of knowledge. About 26.00 per cent of the respondents possessed medium level of knowledge. Only one per cent of the respondents had low level of knowledge about organic farming.
Damor (2013) [14] reported that 44.16 per cent of the farmers had high level of knowledge about organic farming, followed by 33.33, 12.50, 8.34 and 1.67 per cent of the respondents had very high, medium, low and very low level of knowledge about organic farming, respectively.
Slathia *et al.* (2013) [10] concluded that the majority of the respondents (52%) had medium level of awareness regarding organic farming, followed by 28 and 20 per cent had high and low level of awareness regarding organic farming, respectively.

Methodology
The present study was confined to measure the knowledge of organic farming practices by farm women. One panchayat samiti of Bikaner district was selected purposively because the prevelance of organic farming in this panchayat samiti and a government project Paramparagat Krishi Vikas Yojana (PKVY) is also running in this area i.e. Nokha. Two gram panchayats were selected randomly by lottery method from rural areas of Nokha block of Bikaner district. From each gram panchayat three villages were selected by random sampling technique. Thus, six villages were selected for the present investigation. For selection of respondents, 20 farm women were selected randomly from each selected village. Thus, the final sample comprising 120 respondents.
Keeping in the view the objectives and the variables under study, interview schedule was framed. The interview schedule contained the background data of respondents, knowledge of the respondents by them. Interview schedule was used for collecting the information regarding organic farming. The data so collected were classified, tabulated and analyzed in light of the objectives by the application of statistical tools *viz*., frequency, percentage, mean score, standard deviation, rank and correlation coefficient.

Result and Discussion
The objectives wise result of the study has been presented in this chapter. The outcome of the present study obtained from analysis of data collected from farm women regarding knowledge and attitude about organic farming of Bikaner district. The results have been described and classified with various proportions under following sub heads in light of objectives of the study:

General information of the respondents
Knowledge of farm women about organic farming.
General information of the respondents
In this section, an attempt has been made to describe the respondents in term of their profile namely age, education, caste, type of family, land holding, occupation, family size, annual income, livestock, mass media exposure, social participation, extension contact of individual respondents.

Age
The data presented in Table 1 reveals that 48.33 per cent of the respondents had found in the middle age group, followed by upper age group (38.33%) and 13.33 per cent of the respondents had found in lower age group respectively.

Table 1: Distribution of the respondents according to age n=120

S. No.	Category	Frequency	Percentage
1.	Lower age group (35-44yr)	16	13.33
2.	Middle age group (45-54yr)	58	48.33
3.	Upper age group(55-64yr &above)	46	38.33

Education
It is evident from Table 2 that 35.83 per cent of the respondents had illiterate, followed by literate (27.5%), up to primary (17.5%), senior secondary (10%) level of education. Only 9.16 per cent of the respondents had having up to secondary level of education.

Table 2: Distribution of the respondents according to education n=120

S. No.	Category	Frequency	Percentage
1.	Illiterate	43	35.83
2.	Literate	33	27.5
3.	Up to Primary	21	17.5
4.	Up to Secondary	11	9.16
5.	Senior secondary	12	10
6.	Graduation & above	-	-

Type of family
It is observed from the Table 3 that majority of the respondents (67.5%) belonged to joint family followed by nuclear family (32.5%).

Table 3: Distribution of the respondents according to type of family n=120

S. No.	Category	Frequency	Percentage
1.	Nuclear family	39	32.5
2.	Joint family	81	67.5

Caste
The data in Table 4 predicts that majority of respondents (64.16%) had from other backward caste followed by general caste (24.16%) and 11.66 per cent of the respondents had from schedule caste/Schedule Tribe.

Table 4: Distribution of the respondents according to caste n=120

S. No.	Category	Frequency	Percentage
1.	Schedule Caste/Schedule Tribe	14	11.66
2.	Other Backward Caste	77	64.16
3.	General caste	29	24.16

Land holding

The data in Table 5 indicates that half (50%) of the respondents had 2-4 hectare land, followed by 1-2 hectare land (29.16%) and 20.83 per cent of the respondents had more than 4 hectare land.

Table 5: Distribution of the respondents according to land holding n=120

S. No.	Category	Frequency	Percentage
1.	Landless	-	-
2.	1-2 hectare	35	29.16
3.	2-4 hectare	60	50
4.	More than 4 hectare	25	20.83

Occupation

The data in Table 6 indicates that majority of respondents (72.5%) had agriculture as their main occupation followed by labour (10%), housewives (8.3%) and business (7.5%). Only 1.6 per cent of the respondents had service.

Table 6: Distribution of the respondents according to occupation n=120

S. No.	Category	Frequency	Percentage
1.	Housewife	10	8.3
2.	Labour	12	10
3.	Agriculture	87	72.5
4.	Service	2	1.6
5.	Business	9	7.5

Annual income

The data in Table 7 indicate that majority of respondents (77.5%) belonged to medium income group, followed by low income group (11.66%) and 10.83 per cent belonged to high income group.

Table 7: Distribution of the respondents according to annual income n=120

S. No.	Category	Frequency	Percentage
1.	Low (Below 2 lakh)	14	11.66
2.	Medium (2-3 lakh)	93	77.5
3.	High (above 3 lakh)	13	10.83

(Mean score=2.47, S.D.= 0.83)

Family size

The data in Table 8 indicate that 46.66 per cent of the respondents had belonged to medium size family, followed by large size family (30%) and 23.33 per cent had belonged to small size family.

Table 8: Distribution of the respondents according to family size n=120

S. No.	Category	Frequency	Percentage
1.	Small family (up to 4 members)	28	23.33
2.	Medium family (5 to 8 members)	56	46.66
3.	Large family (above 8 members)	36	30

Livestock

The data in Table 9 indicate that 49.16 per cent of the respondents had both animal (cow &buffalo), followed by other animals (sheep, camel, goat, bullock) (26.66%). Only 24.16 per cent of the respondents had cow.

Table 9: Distribution of the respondents according to livestock n=120

S. No.	Category	Frequency	Percentage
1.	Cow	29	24.16
2.	Both (cow & buffalo)	59	49.16
3.	Other (sheep, camel, goat, bullock)	32	26.66

Mass media exposure

The data in Table 10 indicate that majority of the respondents (67.5%) had medium level of mass media exposure, followed by low level of mass media exposure (21.66%) and 10.83 per cent had high level of mass media exposure.

Table 10: Distribution of the respondents according to their mass media exposure n=120

S. No.	Category	Frequency	Percentage
1.	Low (below 6)	26	21.66
2.	Medium (6 to 9)	81	67.5
3.	High (above 9)	13	10.83

(Mean score=7.09, S.D.=1.79)

Social participation

The data in Table 11 indicate that majority of respondents (55.83%) had member of one organization, followed by no member in any organization (35.83%). Only 8.3 per cent had member of two organizations.

Table 11: Distribution of the respondents according to social participation n=120

S. No.	Category	Frequency	Percentage
1.	No membership in any organization	43	35.83
2.	Member of one organization	67	55.83
3.	Member of two organization	10	8.3
4.	Post held in more than two organization	-	-

Extension contact

The data in Table 12 indicate that majority of the respondents (65%) had medium level of extension contact, followed by low level of extension contact (24.16%). Only 10.83 per cent of the respondents had high level of extension contact.

Table 12: Distribution of the respondents according to their extension contact n=120

S. No.	Category	Frequency	Percentage
1.	Low (below 6)	29	24.16
2.	Medium (6 to 8)	78	65
3.	High (above 8)	13	10.83

(Mean score=6.53, S.D.=1.42)

Hence, it may be deducted that in general information majority of the respondents were from middle age group (45-54yr), mostly were illiterate, belonged to joint family and other backward caste, had both (cow and buffalo) and 2-4 hectare land, had medium number of family size (4-8 members) and agriculture as their main occupation, were members of one organization, had 2 – 3 lakh annual income, had medium level of mass media exposure and medium level of extension contact.

Knowledge of farm women about organic farming

Knowledge about organic farming

This section described the existing level of knowledge of the respondents regarding selected aspects of organic farming.

The results in Table 13 indicates that the majority of the

respondents (95.83%) knew about rearing livestock with crop production is essential in organic farming and ranked first place with mean score 0.96, followed by Compost is a type of manure obtained from decomposition and recycling of organic matter i.e. like leaves, kitchen waste, livestock dung etc. (95%), Hand weeding is used for weed management in organic farming (94.16%) mixed cropping means cultivation of two or three crops simultaneously on the same land without definite row arrangement/with definite seed proportion (91.66%) and 90 per cent of the respondents knew that In organic farming, crops are produced without use of chemical fertilizers and pesticides. Hence these had ranked at second, third, fourth, fifth with the mean score 0.95, 0.94, 0.92, 0.9 respectively.

It can also be observed that equal number of the respondents(88.33%) knew that vermi-compost is prepared with the help of earthworms and farm yard manure is basically prepared by using livestock dung, urine, litter and other dairy waste and these had ranked at sixth with the mean score 0.88 respectively. It can also be noticed that most of the respondents (85%) knew that farm yard manure should be put in the field generally 3 to 4 weeks before sowing the crops ranked at seventh with mean score 0.85 respectively.

Further it can be seen that equal number of the respondents (83.33%) knew about organic farming is done by using natural fertilizers like organic waste, farm wastes, animal wastes, manure etc and decomposed Livestock dung used as manure in organic farming. Hence these had ranked at eighth with the mean score 0.83 respectively.

About (78.33%) of the respondents knew that crop rotation is a farming practice in which grow different crops on the same piece of land in successive seasons or years ranked at ninth with the mean score 0.78 respectively.

It can also be seen that 71.66 per cent of the respondents knew that legume plants are used as green manure in organic farming and ranked at tenth with the mean score 0.72 respectively. About (60.83%) of the respondents knew that the vermicompost is ecofriendly and harmless to the environment, ranked at eleventh with the mean score 0.61 respectively.

Further it can be seen that the 53.33 per cent of the respondents knew that the organic crops provide healthier food for human, ranked at twelfth with the mean score 0.53 respectively. it can also be seen that about (40.83%) of the respondents knew that neem leaves are used for insect pest & disease control in organic farming, ranked at thirteenth with the mean score 0.41 respectively.

Equal number of the respondents (38.33%) knew that mulching is a farming practice in which covering the ground by any loose material (like plastic, old leaves, small pieces of wood etc) which is put on the soil around the plants in order to reserve moisture and vermi-compost should be put in the field when moisture content available in soil, ranked at fourteenth with the mean score 0.38 respectively. it can also be seen that equal number of the respondents (35%) knew that green manure improve the fertility of soil and mulching control weed in the field. Hence these had ranked at fifteenth with the mean score 0.35 respectively.

Table 13: Distribution of the respondents according to knowledge about organic farming n=120

S. No.	Knowledge statements	Frequency	Percentage	Mean score	Rank
1.	In organic farming, crops are produced without use of chemical fertilizers and pesticides.	108	90	0.9	V
2.	Organic farming is done by Using natural fertilizers like organic waste, farm wastes, animal wastes, manure etc	100	83.33	0.83	VIII
3.	In organic farming, legume plants are used as green manure	86	71.66	0.72	X
4.	Green manure is used as fertilizer for improve the fertility and nutrient content of soil.	42	35	0.35	XV
5.	Compost is a type of manure obtained from decomposition and recycling of organic matter (like leaves, kitchen waste, livestock dung etc.)	114	95	0.95	II
6.	Vermi-compost is prepared with the help of earthworms	106	88.33	0.88	VI
7.	Vermicompost should be put in the field when moisture content available in soil.	46	38.33	0.38	XIV
8.	The vermicompost does not stink, and the fly does not grow, it is ecofriendly	73	60.83	0.61	XI
9.	Farm yard manure is basically prepared by using livestock dung, urine, litter and other dairy waste	106	88.33	0.88	VI
10.	Farm yard manure should be put in the field generally 3 to 4 weeks before sowing the crops	102	85	0.85	VII
11.	Hand weeding is used for weed management in organic farming	113	94.16	0.94	III
12.	Neem leaves are used for insect pest & disease control in organic farming.	49	40.83	0.41	XIII
13.	Organic crops provide healthier and nutritionally superior food for human and animal than those crops grown with chemical fertilizers	64	53.33	0.53	XII
14.	In intercropping, cultivation of two or more crops simultaneously on the same land with definite row arrangement.	23	19.16	0.19	XVIII
15.	In mixed cropping, cultivation of two or three crops simultaneously on the same land without definite row arrangement/with definite seed proportion	110	91.66	0.92	IV
16.	Rearing livestock with crop production is essential in organic farming	115	95.83	0.96	I
17.	Mulching is a farming practice in which covering the ground by any loose material (like plastic, old leaves, small pieces of wood etc) which is put on the soil round the plants in order to reserve moisture	46	38.33	0.38	XIV
18.	Mulching is useful for weed control	42	35	0.35	XV
19.	Mulching reduce loss of water through evaporation	28	23.33	0.23	XVII
20.	Crop rotation is a farming practice in which grow different crops on the same piece of land in successive seasons or years.	94	78.33	0.78	IX
21.	Decomposed Livestock dung used as manure in organic farming	100	83.33	0.83	VIII
22.	The water holding capacity of soil increases due to application of organic manure.	31	25.83	0.26	XVI

Further, it can also be observed that about (25.83%, 23.33%, 19.16%) knew that the organic manure increases the water holding capacity of soil, mulching reduce the loss of water and intercropping means cultivation of two or more crops simultaneously on the same land with definite row arrangement. Hence these had ranked at sixteenth, seventeenth, and eighteenth with the mean score 0.26, 0.23, 0.19 respectively.

It is evident from above data that the majority of the respondents (96%) knew that the rearing livestock with crop production is essential in organic farming. This might be dueto the reason that livestock is the basic requirement of agricultural activity in developing countries.

These findings are supported by Sihare, A. (2023) [11] reported that most of the respondents (75%) had knowledge about organic farming.

Overall knowledge of the respondents about organic farming: To get an overview of knowledge level the respondents had classified under low, medium and high knowledge level about organic farming on the basis of calculated mean score and standard deviation of the obtained knowledge score of the respondents.

Table 14 shows that 69.16 per cent of the respondents had medium knowledge level, while 23.33 and 7.5 per cent of the respondents had low and high level of knowledge about organic farming.

It is evident from above data that the majority of the respondents (69.16%) had medium level of knowledge about organic farming. It might be due to that majority of the respondents had good social participation in organization working on organic farming, medium mass media exposure, medium extension contact and thereby they were aware about organic farming.

These finding are supported by the findings of Jaganathan *et al*. (2009) [12], Pandya (2010) [5] and Sharma (2014) [13]. These findings revealed that majority of the respondents had medium level of knowledge about organic farming.

Table 14: Distribution of the respondents according to their overall knowledge about organic farming n-120

S. No.	Category	Frequency	Percentage
1.	Low level of knowledge (below 13)	28	23.33
2.	Medium level of knowledge (13 to 17)	83	69.16
3.	High level of knowledge (Above 17)	9	7.5

(Mean score=14.15, S.D. = 2.04)

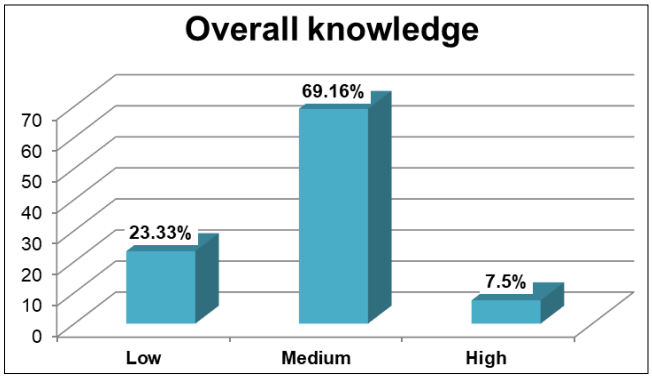

Fig 1: Distribution of the respondents according to their overall knowledge about organic farming

Conclusion

On the basis of results obtained from present study, it can be concluded that majority of the respondents knew that the rearing livestock with crop production is essential in organic farming and ranked first. Whereas maximum number of respondents had least knowledge about that intercropping means cultivation of two or more crops simultaneously on the same land with definite row arrangement and ranked eighteenth. Overall knowledge category majority of the respondents possessed medium level of knowledge about organic farming.

Recommendations

- The results of this study will facilitate in knowing the characteristics of the organic farming followers which would serve as a guideline for the planners, policy maker and implementing agencies related to promote organic farming.
- As it has been observed from the findings that majority of the respondents had medium level of knowledge towards organic farming so that training should be imparted to the farm women on organic farming and livestock maintenance, so that it is possible for them to utilize the scarce resources, save the environment and protect their health.

References

1. Chanpaneri HC. Adoption of organic farming practices by the tribal farmers of North Gujarat. M.Sc. (Agri.) Thesis (Unpublished), SDAU, Sardarkrushinagar, Gujarat; c2012.
2. Gupta P, Sharma VK. Organic farming in Himachal Himalaya: Learning lessons from past and present. Int. J. Agric. Nutr. 2021;3(1):14-18. DOI: 10.33545/26646064.2021.v3.i1a.40
3. Darandale AD. Attitude of tribal farmer towards organic farming practices in maize crop. M.Sc. (Agri.) Thesis (Unpublished), Anand Agricultural University, Anand; c2010.
4. Naik MH, Srivastava SR, Godara AK, Yadav VPS. Knowledge level about organic farming in Haryana. Indian Research Journal of Extension Education. 2009;9(1):50-53.
5. Pandya CD. A Critical Analysis of Soico-Economic Status of Organic Farming Followers of South Gujarat. Ph.D. (Agri.). Thesis (Unpublished), Navsari Agricultural University, Navsari; c2010.
6. Ramesh P, Singh MA, Subba R. Organic farming: Its relevance to the Indian context. Current Science. 2005;88:561-568.
7. Rayanagoudar R, Nagnur S, Badiger C. Knowledge level of farm women about organic farming and organic foods, Karnataka. Journal of Agriculture Science. 2012;25(2):298-300.
8. Sahu RP, Singh RJ, Singh K. Knowledge gap about organic farming practices of farmers of Bageshwar district of Uttarakhand. Indian Journal Extension. Education. 2010;45(1 & 2):135-136.
9. Shashidahra KK. Consumers awareness regarding utilization of eco-friendly grown vegetables. Indian Research. Journal. Extension. Education; c2012. p. 229-231.
10. Slathia PS, Kumar P, Paul N, Ali L. Problems faced by organic farmers in hilly areas of Udampur district in Jammu Region. Indian Research. Journal. Extension Education. & R.D. 2013;21:55-59. https://www.e-rajasthan.com/organic-farming-in-rajasthan/
11. Sihare S. Data Analytics in Electric Vehicles. In Artificial Intelligence Applications in Battery Management Systems and Routing Problems in Electric Vehicles. IGI Global; c2023. p. 209-232.
12. Jaganathan SK, Mandal MJ. Honey constituents and their apoptotic effect in colon cancer cells. Journal of Apiproduct and Apimedical Science. 2009 Apr 1;1(2):29-36.
13. Sharma S. In the meantime: Temporality and cultural politics. Duke University Press; c2014 Feb 7.
14. Damor KC. Attitude of farmers towards organic farming. M.Sc. (Agri.) Thesis (Unpublished), Anand Agricultural University, Anand; c2013.