

Raising Knowledge: Farmers in Southern Rajasthan Adopted Polyhouse Vegetable Cultivation by utilizing Diverse Information Sources and Channels

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(Received: 23 July 2023; Revised: 18 August 2023; Accepted: 19 September 2023; Published: 15 October 2023)

(Published by Research Trend)

ABSTRACT: Information has received a wide range of acceptance as an essential resource of this century. It has been described as a stimulating creativity, resulting in new outcomes and processes. All human societies depend very much on information for existence that is information is life. Polyhouse vegetable cultivation has emerged as a promising practice to enhance crop production and income for farmers in many regions. However, its successful adoption depends on farmers' access to accurate and timely agricultural information. The study explores the various agricultural information sources used by farmers and their influence on the adoption of polyhouse vegetable cultivation practices. The key challenges in this study are assessing the accessibility of diverse information sources and channels by farmers. Understanding which sources are readily available and commonly used can be complex, as it may vary among regions and communities. The study was conducted in two districts of Rajasthan namely Bhilwara and Chittorgarh. Data was collected through surveys and interviews conducted with farmers in the region. To identify various sources of information the respondents were asked to respond to various sources of information used by them on three continuums viz., regular, occasional and never. Each source of information was assigned 3, 2 and 1, respectively and the recorded response was counted and converted into mean per cent score for each statement and then ranked accordingly. The study clearly show that out of all the selected respondents, majority of respondents (66.00 %) seeking information from various sources regarding vegetable cultivation in polyhouse whereas, 19.00 per cent respondents were more active in seeking information and remaining 15.00 per cent was less in contact with information sources. The study also shows that the respondents were utilizing mass contact to the greatest extent with MPS 87.33. These were followed by individual contact with MPS 85.55 however, the extent of group contact with MPS 82 and institutional sources with MPS 80.94 by respondents in the study area. Further studies also indicate that in mass contact methods "Television" ranked first with overall MPS 99.33.

Keywords: Information, Polyhouse, Mass contact, Group contact.

INTRODUCTION

Information is wealth. Agricultural communication refers to the process of conveying information from a source to a recipient (typically from extension services to farmers) through specific channels, aiming to influence and alter farmers' attitudes. The availability of precise, up-to-date, and pertinent information equips individuals with the knowledge required to make informed decision regarding their daily agricultural activities, processing methods, and the general welfare of farmers. (Judamat *et al.*, 2010; Lwoga, 2010).

In the adoption process, access to various information transfer sources and their perceived value by farmers influences adoption of new technology a lot. Sanyang *et*

al. (2009) in their study examining technology transfer to farmers in the areas of production and marketing of vegetables found public extension system and farmer groups as sources of technology dissemination to farmers. Farmers with access to sources of technical knowledge and information such as extension officers and industry related media are likely to have more accurate expectations of the distribution of the profitability of the innovation (Ghadim and Pannell 1999).

An information source is an individual or institution that generates or brings about a message (Starasts, 2004). It is a channel that contains and stores knowledge and/or information (Bitso, 2012). Koyenikan (2011) grouped information sources as

informal and formal sources. The formal sources are radio stations, international and local print media (such as newsletters, newspapers and journals) and workshop/seminars, while the informal sources include family friends and fellow farmers. Before the introduction of modern medium of agricultural information transfer, town crier, folk songs, relation and association were some mediums of communication used for connection and networking in agricultural circles in Nigeria (Daudu *et al.*, 2009). The information sources available and utilized by vegetable farmers are of paramount importance for effective adoption of polyhouse technology for vegetable production. Hence, the present study was conducted to study sources of information used by farmer in adoption of polyhouse vegetable cultivation practice

MATERIALS AND METHODS

The study was conducted in two districts of Rajasthan namely, Bhilwara and Chittorgarh in 2022. These districts were purposively selected since these are leading districts in area under polyhouse vegetable cultivation. Two tehsils from each district were selected on basis of maximum number of farmers having polyhouses for protected vegetable cultivation, thus total four tehsils were selected for this study, Therefore, for this study namely Chittorgarh & Bhopal Sagar tehsils from Chittorgarh district and Bhilwara & Mandalgarh tehsils from Bhilwara district was selected purposely for this study. In total 100 farmers (25 farmers from each districts) who had adopted polyhouse technology were selected by simple random sampling technique. To identify various sources of information the respondents were asked to respond to various sources of information used by them on three continuums *viz.*, regular, occasional and never. Each source of information was assigned 3, 2 and 1, respectively to measure the frequent of source with which they seek information. The recorded response was counted and converted into mean per cent score for each statement and then ranked accordingly and to get an overview of the sources and channel available the respondents were group into three category low, medium and high on basis of mean and standard deviation of scores obtained by respondents

RESULT AND DISCUSSION

Distribution of respondents according to according to sources of information used by farmer for seeking

Table 1: Distribution of respondents on basis of sources of information used by polyhouse farmers about vegetable cultivation practices.

Sr. No.	Sources of information	Bhilwara (n ₁ =50)		Chittorgarh (n ₂ = 50)		Total (n=100)	
		f	%	f	%	f	%
1.	High (Above 83.83 score)	13	26.00	6	12.00	19	19.00
2.	Medium (73.74-83.83 score)	26	52.00	40	80.00	66	66.00
3.	Low (up to 73.74 score)	11	22.00	4	8.00	15	15.00
	Total	50	100.00	50	100.00	100	100.00

f = frequency, % = per cent, mean= 78.79, S.D.= 5.04

information about polyhouse vegetable cultivation practices

The data in Table 1 out of 100 respondents, majority of respondents (66.00 %) fell in medium level of sources and channels utilized whereas, 19.00 per cent respondents were observed in the high level of sources utilized and remaining 15.00 per cent respondents were under low level of sources utilized for adopting polyhouse vegetable cultivation practices. The similar findings are supported by finding of Kumar *et.al.* (2012). The same item when further examined at districts level it show that majority (52.00 % respondents of Bhilwara district and 80.00 % respondents of Chittorgarh district) were utilizing various sources of information on polyhouse vegetable cultivation practices.

Likewise, 26.00 per cent respondents of Bhilwara and 12.00 per cent respondents of Chittorgarh districts were more active in utilizing information sources about polyhouse vegetable cultivation practices and remaining 11 (22.00 %) and 4 (8.00 %) respondents of Bhilwara and Chittorgarh districts were less assessing information sources about polyhouse vegetable cultivation practices.

Overall sources used by respondents

The information displayed in Table 2 highlights that, among the chosen information sources, respondents predominantly utilized mass contact, scoring the highest at 87.33 MPS. Following closely behind was individual contact, securing the second position with an MPS of 85.55. In contrast, group contact scored 82.00 MPS, placing it in the third position, while institutional sources ranked fourth with an MPS of 80.94.

Category-wise use of information source by farmers

In present investigation major four sources of information *viz.*, individual contact, group contact, mass contact and institutional sources were identified for use of practices by respondents about polyhouse vegetable cultivation practices. The results are displayed in the subsequent tables.

Individual contact used by respondents

This section deals with different individual contact information sources used by the farmers in getting information about agriculture and polyhouse vegetable cultivation practices all the possible sources were included in table 3 and the sources were accorded rank based on mean per cent score.

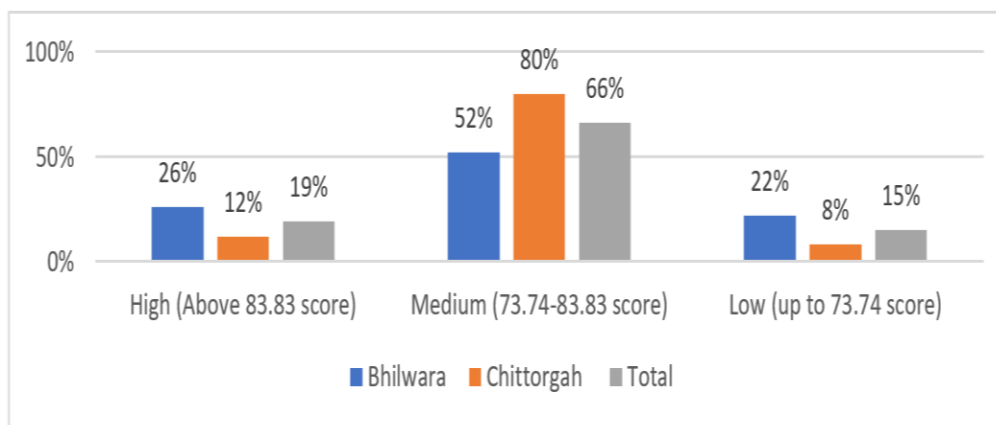


Fig. 1. Distribution of respondents on basis of sources of information used by polyhouse farmers about vegetable cultivation practices.

A close observation of data reveals that from all the twelve sources of information gram sevak considered as important sources with MPS 98.66 and was utilized most for seeking information pertaining to polyhouse technology by the respondents and was ranked first. These were followed by progressive farmers with MPS 97.00 ranked second by polyhouse farmers. Other sources of information were local leader with MPS 96.00, friends with MPS 95.33, Ag. Supervisor with

MPS 94.66, Neighbour with MPS 93.33, relative with MPS 92.33, Assistant Ag. officer (AAO) with MPS 81.33, Agriculture officer with MPS 76.00, Agriculture university scientists with MPS 70.00, Subject matter specialist with MPS 69.00 and Village development officer with MPS 63.00 and were ranked third, fourth, fifth, sixth, seventh, eighth, ninth, tenth, eleventh and twelfth.

Table 2: Sources used by polyhouse farmers about vegetable cultivation practices.

Sr. No.	Sources of information	Bhilwara (n ₁ =50)		Chittorgarh (n ₂ = 50)		Total (n=100)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Individual contact	85.00	II	86.11	II	85.55	II
2	Group contact	83.16	III	80.83	III	82.00	III
3	Mass contact	87.77	I	86.88	I	87.33	I
4	Institutional sources	82.55	IV	79.33	IV	80.94	IV

MPS = mean per cent score

Table 3: Individual contact methods used by polyhouse farmers about vegetable cultivation practices.

Sr. No.	Individual contact	Bhilwara (n ₁ =50)		Chittorgarh (n ₂ = 50)		Total(n=100)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Local leaders	92.66	IV	99.33	I	96.00	III
2	Progressive farmers	94.66	III	98.33	III	97.00	II
3	Relative	90.66	VI	94.00	VI	92.33	VII
4	Friends	92.01	V	97.66	IV	95.33	IV
5	Neighbour	90.00	VII	96.66	V	93.33	VI
6	Agriculture officer	76.66	IX	75.33	IX	76.00	IX
7	Agriculture university scientists	71.33	X	68.66	XI	70.00	X
8	Assistant Ag. officer (AAO)	86.00	VIII	76.66	VIII	81.33	VIII
9	Ag. Supervisor	98.00	II	91.33	VII	94.66	V
10	Gram Sevak	98.66	I	98.66	II	98.66	I
11	Subject matter specialist (SMS)	68.66	XI	69.33	X	69.00	XI
12	Village development officer	60.66	XII	65.33	XII	63.00	XII

MPS = mean per cent score

Group contact used by respondents

This section deals with different group contact information sources used by the farmers in getting information about agriculture and polyhouse vegetable cultivation practices all the possible sources were included in table 4 and the sources were accorded rank based on mean per cent score.

A close observation of data reveals that from all the four sources of information Demonstration considered as important sources with MPS 87.33 and was utilized most for seeking information pertaining to polyhouse technology by the respondents and was ranked first. This were followed by Farmers education tour/visit with MPS 83.00 ranked second by polyhouse farmers. Other sources like group discussion with 82.00 and

meeting with 75.66 and ranked at third and fourth position respectively by polyhouse farmers

Mass contact used by respondents

This section deals with different mass contact information sources used by the farmers in getting

information about agriculture and polyhouse vegetable cultivation practices all the possible sources were included in Table 5 and the sources were accorded rank based on mean per cent score.

Table 4: Group contact method used by polyhouse farmers about vegetable cultivation practices.

Sr. No.	Group contact	Bhilwara (n ₁ =50)		Chittorgarh (n ₂ = 50)		Total (n=100)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Meeting	72.00	IV	79.33	III	75.66	IV
2	Group discussion	80.66	III	83.33	II	82.00	III
3	Demonstration	90.66	I	84.00	I	87.33	I
4	Farmers education tour/visit	89.33	II	76.66	IV	83.00	II

MPS = mean per cent score

Upon close scrutiny of the data, it becomes evident that among the nine sources of information, television holds a prominent position, earning an impressive MPS of 99.33. It is the primary source employed by respondents when seeking information related to polyhouse technology, and thus, it takes the first rank. Following closely behind, radio secures the second position among polyhouse farmers, with an MPS of 98.66. Other information sources, such as Doordarshan, newspapers, social media, Kisan Melas (farmer fairs), exhibitions, farm magazines, and farmers' rallies, maintain the third to ninth ranks, with corresponding MPS scores of 97.00, 96.66, 95.33, 86.66, 74.33, 70.33 and 67.66, respectively.

Institutional sources used by respondents

This section deals with different mass contact information sources used by the farmers in getting information about agriculture and polyhouse vegetable cultivation practices all the possible sources were

included in Table 6 and the sources were accorded rank based on mean per cent score.

Upon a thorough examination of the data, it becomes evident that among all twelve information sources, Krishi Mandi stands out as the most crucial source, boasting a remarkable MPS of 97.33. It is the primary source favored by respondents when seeking information related to polyhouse technology, earning the top rank.

Following closely behind, the Agriculture department secures the second position among polyhouse farmers, with an MPS of 92.66. Other significant sources of information include banks with an MPS of 84.33, Krishi Vigyan Kendra (KVK) with an MPS of 73.33, and Cooperative societies with an MPS of 72.33. The Agriculture University is also notable in this context, ranking sixth with an MPS of 65.66, according to polyhouse owners.

Table 5: Mass contact method used by polyhouse farmer about vegetable cultivation practices.

Sr. No.	Mass contact	Bhilwara (n ₁ =50)		Chittorgarh (n ₂ = 50)		Total (n=100)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Television	100	I	98.66	II	99.33	I
2	Radio	98.00	II	99.33	I	98.66	II
3	Durdarshan	96.00	IV	98.00	III	97.00	III
4	Newspaper	96.66	III	97.63	IV	96.66	IV
5	Farm magazines	73.33	VIII	67.33	VIII	70.33	VIII
6	Farmer rally	68.00	IX	67.00	IX	67.66	IX
7	Exhibition	75.33	VII	73.33	VII	74.33	VII
8	Social Media	93.33	V	97.33	V	95.33	V
9	Kisan mela	90.00	VI	83.33	VI	86.66	VI

MPS= mean per cent score

Table 6: Institutional sources used by polyhouse farmer about vegetable cultivation practices.

Sr. No.	Institutional sources	Bhilwara (n ₁ =50)		Chittorgarh (n ₂ = 50)		Total (n=100)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Bank	87.33	III	81.33	III	84.33	III
2	Cooperative societies	74.66	V	70.00	V	72.33	V
3	Agriculture department	94.00	II	91.33	II	92.66	II
4	Krishi mandi	98.00	I	96.66	I	97.33	I
5	Krishi Vigyan Kendra (KVK)	76.00	IV	70.66	IV	73.33	IV
6	Agriculture University	65.33	VI	66.00	VI	65.66	VI

MPS= mean per cent score

CONCLUSION

The study shows that out of all the selected respondents, majority of respondents (66.00 %) seeking information from various sources regarding vegetable cultivation in polyhouse whereas, 19.00 per cent respondents were more active in seeking information and remaining 15.00 per cent was less in contact with information sources. Findings highlights that, among the chosen information sources, respondents predominantly utilized mass contact, scoring the highest at 87.33 MPS. Following closely behind was individual contact, securing the second position with an MPS of 85.55. In contrast, group contact scored 82.00 MPS, placing it in the third position, while institutional sources ranked fourth with an MPS of 80.94. the finding also revealed that majority of farmers are seeking information from gram sevak, progressive farmers, Demonstration, Farmers education tour/visit, television, radio, krishi mandi and Agriculture department for adopting polyhouse cultivation practices.

Acknowledgement. The authors are grateful to the Head, Department of Extension Education and Dean Rajasthan College of Agriculture, MPUAT, Udaipur, Rajasthan, India, for valuable guidance, support and facilities provided to conduct this research successfully.

Conflict of interest. None.

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How to cite this article: Vishal Dadheech, Shubham Mishra, Abhilasha Gehlot, Abhinav Gupta and Hitesh Salvi (2023). Nurturing Knowledge: Farmers in Southern Rajasthan Adopted Polyhouse Vegetable Cultivation by utilizing Diverse Information Sources and Channels. *Biological Forum – An International Journal*, 15(10): 304-308.