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RESEARCH ARTICLE

Assessment of the Knowledge Level of Farmers about Polyhouse Cultivation Technology in Jaipur Division of Rajasthan

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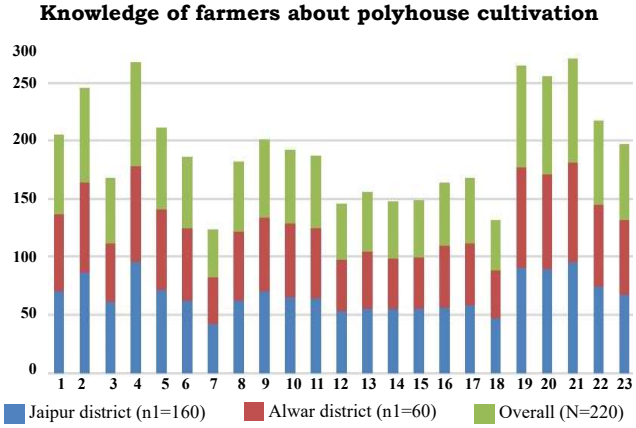
HIGHLIGHTS

- Majority (74.55%) of the farmers in selected districts had a medium level of knowledge about polyhouse cultivation,
- Most of the farmers of selected districts had high knowledge about the 'Durability of covers used in polyhouse' with an overall MPS 90.31 and was ranked first.
- It was observed that there was a significant difference between the farmers of Jaipur and Alwar districts regarding knowledge of different PCT activities. This means that farmers of both districts did not have similar knowledge about the use of PCT in the study area.

GRAPHICAL ABSTRACT



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ABSTRACT

*Context:*A polyhouse or greenhouse is a structure made up of translucent materials like polyethylene or shade nets, where the plants are grown under controlled climatic conditions. Both are considered identical, but India uses the greenhouse more commonly.

*Objective:*Assessment of the knowledge level of farmers about polyhouse cultivation technology.

*Methods:*The present study was conducted in the Jaipur division of Rajasthan. Jaipur and Alwar districts was selected because they havea maximum number of polyhouse farmers. Out of both districts, the first three tehsils having a maximum number of polyhouse farmers was selected purposely.This way, 160 respondents from the Jaipur district and 60 respondents from the Alwar district was selected. Thus, the total sample was comprised of 220 farmers.

*Results & Discussion:*The study results revealed that most farmers of selected districts had a medium level of knowledge about polyhouse cultivation technology Most of the farmers of selected districts had high knowledge about the 'Durability of covers used in polyhouse' with an overall MPS 90.31 and was ranked first and further examination of the farmers had less extent of knowledge about 'Type of crops grown in polyhouse' with overall MPS 41.18 and was ranked last.

Siginificance: It was observed that there was a significant difference between the farmers of Jaipur and Alwar districts interms of knowledge about different PCT activities. This means that farmers of both districts did not have similar knowledge of farmers about the use of PCT in the study area.

India is predominantly an agriculture-based country, and most people are engaged in agriculture. Agriculture is a livelihood for about 58 per cent of the Indian population. It plays a crucial role in transforming socio-economic conditions for people, especially those in rural areas, by addressing food and nutritional security (Panwar *et al.,* 2021).Protected cultivation is a promising technology of growing high value crops like vegetables (Noopur *et al.,* 2023)and, hence, is becoming popular worldwide. 115 countries in the world have undertaken greenhouse vegetable production commerciallyeven for long term food security

A polyhouse or greenhouse is a structure made up of translucent materials like polyethylene or shade nets, where the plants are grown under controlled climatic conditions. Both are considered identical, but India uses the greenhouse more commonly. The size of the structure can differ from small shacks to big-size buildings as needed. In India, farming and nurseries are highly dependent on open-field seed production for many reasons, such as the low economic status of farmers, lack of technical know-how, etc. Seedlings grown under natural conditions are susceptible to sudden changes in climatic conditions (Chauhan *et al.,* 2024) affecting both their quality and yieldbut in certain areas nematode problems are being reported (Chikkeri *et al.,* 2023). Protected cultivation involves protection from adverse environmental conditions and offers the growers distinct advantages of quality, productivity, and favourable market prices (Singh *et al.,* 2005). Protected cultivation can be defined as a cropping technique where the micro-climate surrounding the plant body is controlled partially / fully as per the requirement of the plant species grown during their period of growth (Chandra, 2001).

Polyhouse technology is a unique technique that provides favourable conditions for plants (Singh *et al.,* 2017). Despite many challenges, man has learned how to grow plants in a natural environment. Even in extreme adverse climatic conditions where no crops can grow, man has developed a method of growing high-value crops called Polyhouse Technology. Protected Cultivation technology is a relatively new technology for our country. Our country's total area covered under protected cultivation is approximately 70,000 hectares (Choudhary & Verma, 2018). This area has been excellent development during the last five years. The leading states in protected cultivation areas are Maharashtra, Karnataka, Rajasthan, Himachal Pradesh, North-eastern states, Uttarakhand, Tamil Nadu, and Punjab. The major crops grown in the protected cultivation are tomato, capsicum, cucumber, melons, rose, gerbera, carnation, and chrysanthemum. Considering the above facts, the present study was conducted with the following specific objective: - To assess the knowledge level of farmers about polyhouse cultivation technology.

METHODOLOGY

Locale of the study: The present study was conducted in the Jaipur division (26.9°N 75.8°E) of Rajasthan in 2023. *Population and sampling:* Jaipur division was purposively selected, as it stands first amongseveral beneficiaries under polyhouse cultivation technology. The second stage of the sampling process involved the selection of districts from the divisions. Jaipur (355) and Alwar (147) districts were selected purposely based onthe maximum number of farmers using polyhouse technology compared to other districts of the Jaipur division. Jaipur and Alwar districts comprised of 21 and 14 tehsils, respectively. Out of both districts, the first three tehsils with a maximum number of farmers with polyhouses were selected purposely. Thus, the total sample was comprised of 220 farmers.

The information was collected through a personal interview with the help of a structured schedule. The knowledge for the present study was operationalized as the level of knowledge about polyhouse cultivation technology. Each aspect was further divided into several sub-questions to find out farmers' existing knowledge

Study area Jaipur division of Rajasthan

level. This was measured by the investigator's schedule, as suggested by the experts. The farmers' knowledge of polyhouse cultivation was measured by asking various questions related to PCT. A set of 23 questions was finalized by referring to past research and consulting the experts and faculties. The total score of each farmer was obtained by adding all the scores about their responses to all the statements. To determine the statement-wise knowledge of farmers, the mean percent score was worked out to find the priority of the statement and ranked accordingly. In order to find out the significant difference between the farmers of Jaipur and Alwar districts, farmers' knowledge about PCT was calculated using the 'Z' value, and conclusions were drawn accordingly. An effort was made to determine the relationship between the ranks of knowledge statementsassigned by farmers of polyhouse cultivation of the Jaipur and Alwar districts by applying a rank order correlation test.

RESULTS

Knowledge level of farmers about polyhouse cultivation technology: An attempt has been made to assess farmers' knowledge of polyhouse cultivation. A teacher-made test was developed with twenty-three items to assess the knowledge level of the farmers. A score of 'maximum' was assigned to the 'obtainable' score for an answer. Based onthe score obtainable, the farmers were categorized into three categories, viz. low, medium, and high knowledge levels. The data collected from farmers were analyzed and presented in Table 1

Table 1 clearly shows that the majority (74.55 percent) of the farmers in selected districts had a medium level of knowledge about polyhouse cultivation, followed by 13.18 percent with a low level and 12.27 percent with a high level.

The data in Table 1 further indicated that in Jaipur district, the majority (76.87 percent) of farmers had a medium level of knowledge, followed by 13.75 percent with a high level and 9.38 percent with a low level of knowledge and in Alwar district majority (68.34 per cent) of farmers had medium level of knowledge, followed by 23.33 per cent with low level and 8.33 per cent with high level of knowledge regarding polyhouse cultivation.

Table 1. Distribution of farmers according to their knowledge level

Knowledge level	Jaipur District (n_1=160)		Alwar District (n_2=60)		Overall (N=220)	
	No.	%	No.	%	No.	%
Low (<29.33)	15	9.38	14	23.33	29	13.18
Medium (29.34 to 58.66)	123	76.87	41	68.34	164	74.55
High (>58.66)	22	13.75	5	8.33	27	12.27
Total	160	100	60	100	220	100.0

Statements wise knowledge level of farmers about polyhouse cultivation technology : To get a clear picture of the knowledge possessed by polyhouse farmers, statements of wise knowledge of polyhouse farmers were worked out. For this, mean and percent scores for each statement were calculated, and ranks were accorded. The farmers' knowledge was assessed under twenty-three significant statements related to polyhouse cultivation. The results of the same have been presented in Table 2.

Table 2 indicated that most of the farmers of selected districts had high knowledge about the 'Durability of covers used in polyhouse' with an overall of 90.31 MPS and was ranked first, followed by 'Estimated cost of establishment of polyhouse' withan overall of 89.17MPS and was ranked second, 'Subsidy given for polyhouse establishment' with overall 88.33 MPS and was ranked third, 'Agency/ department that gives subsidy for polyhouse establishment' with overall 85.21 MPS ranked fourth and 'Types of playhouses' with overall MPS 81.88 and was ranked fifth.

Further examination of the table showed that the farmers had less extent of knowledge about 'Control of insect – pests or diseases in polyhouse', which was assigned nineteenth rank with overall 49.63MPS, followed by 'Pests observed in crops grown in polyhouse' with overall 49.10 MPS and was ranked twentieth, 'Types of irrigation methods used in polyhouses' with overall 48.44 MPS and was ranked twenty-one, 'Knowledge about root media use' with overall 43.97 MPS and ranked twenty-two and 'Type of crops grown in polyhouse' with overall 41.18 MPS and was ranked twenty-three.

The data in Table 2 further revealed that in Jaipur district, most of the farmers had high knowledge about 'Durability of covers used in polyhouse' with 95.63 MPS and was ranked first, followed by 'Estimated cost of establishment of polyhouse' with 94.38 MPS and was ranked second, 'Subsidygiven for polyhouse establishment' with 90.00 MPS and was ranked third, 'Agency/ department that gives subsidy for polyhouse

Table 2. Statements wise knowledge level of farmers about polyhouse cultivation technology

Statements	Jaipur District (n_1=160)		Alwar District (n_2=60)		Overall (N=220)	
	MPS	Rank	MPS	Rank	MPS	Rank
Benefits of polyhouse technology	70.13	VIII	66.33	VIII	68.23	VIII
Types of polyhouses	86.25	V	77.50	V	81.88	V
Materials/ tools required for the construction of polyhouse	61.14	XV	50.76	XVII	55.95	XV
Estimated cost of establishment of polyhouse	95.00	II	83.33	III	89.17	II
Polyhouse construction related aspects	71.56	VII	69.17	VII	70.36	VII
Direction of polyhouse	62.50	XIII	61.67	XII	62.08	XIII
Types of crops grown in polyhouse	42.08	XXIII	40.28	XXIII	41.18	XXIII
Gas required for higher production in polyhouse	62.19	XIV	59.17	XIV	60.68	XIV
Factors that are responsible for higher production in polyhouse	69.69	IX	64.17	IX	66.93	IX
Importance of low-high thermometer	65.00	XI	63.33	XI	64.17	XI
Importance of hygrometer	64.38	XII	60.00	XIII	62.19	XII
Types of irrigation methods used in polyhouse	53.13	XXI	43.75	XX	48.44	XXI
Types of fertilizers used in polyhouse	55.13	XIX	49.00	XVIII	52.06	XVIII
Pests observed in crops grown in polyhouse	54.88	XX	43.33	XXI	49.10	XX
Control of insect – pests or diseases in polyhouse	55.25	XVIII	44.00	XIX	49.63	XIX
Root knot nematode control methods in polyhouse	56.09	XVII	53.33	XVI	54.71	XVII
Knowledge of polyhouse production technology	57.88	XVI	54.00	XV	55.94	XVI
Knowledge about root media use	47.11	XXII	40.83	XXII	43.97	XXII
Subsidy given for polyhouse establishment	90.00	III	86.67	I	88.33	III
Agency/ department that gives subsidy for polyhouse establishment	88.75	IV	81.67	IV	85.21	IV
Durability of covers used in polyhouse	95.63	I	85.00	II	90.31	I
Knowledge of harvesting techniques	73.91	VI	70.83	VI	72.37	VI
Knowledge of post-harvest techniques	67.50	X	63.75	X	65.63	X
Overall	67.18		61.39		64.28	
r_s = 0.99** t = 34.1						

rs= Rank order correlation, t = t calculated value ** = Significant at 1 per cent level of significance

establishment' with 88.75 MPS and was ranked fourth and 'Types of playhouses' with 86.25 MPS and was ranked fifth.

Table 2 also explained that in Jaipur district, the farmers had low knowledge about 'Types of fertilizers used in polyhouse' and were assigned nineteenth rank with 55.13 MPS, followed by 'Pests observed in crops grown in polyhouse' with 54.88 MPS and was ranked twentieth, 'Types of irrigation methods used in polyhouses' with 53.13 MPS and was ranked twenty-one, 'Knowledge about root media use' with 47.11 MPS and ranked twenty-two and 'Type of crops grown in polyhouse' with 42.08 MPS and was ranked twenty-three.

In Alwar district, most of the farmers had high knowledge about 'Subsidy given for polyhouse establishment' with 86.67 MPS and was ranked first, followed by 'Durability of covers used in polyhouse' with 85.00 MPS and was ranked second, 'Estimated cost of establishment of polyhouse' with 83.33 MPS and was ranked third, 'Agency/ department that gives subsidy for polyhouse establishment' with 81.67 MPS and was ranked fourth and 'Type of polyhouses' with 77.50 MPS and was ranked fifth.

Table also showed that in the Alwar district, the farmers had low knowledge about 'Control of insect – pests or diseases in polyhouse' and were assigned nineteenth rank with 44.00 MPS, followed by 'Types of irrigation methods used in polyhouse' with 43.75 MPS and was ranked twentieth, 'Pests observed in crops grown in polyhouse' with 43.33 MPS and was ranked twenty one, 'Knowledge about root media use' with 40.83 MPS and ranked twenty two and 'Types of crops grown in polyhouse' with 40.28 MPS and was ranked twenty three.

An effort was made to determine the relationship between the ranks of knowledge statements assigned by farmers of Jaipur and Alwar districts by applying a rank-order correlation test. The rank correlation value (0.99) was greater than the tabulated value, so the null

Table 3. Statements wise comparison of the knowledge level of farmers of districts Jaipur and Alwar about polyhouse cultivation technology (N=220)

Statements	Jaipur Distt. (n_1=160)		Alwar Distt. (n_2=60)		Z-value
	Mean	SD	Mean	SD	
Benefits of polyhouse technology	3.51	1.56	3.32	1.53	0.81
Types of playhouses	1.73	0.49	1.55	0.65	1.90
Materials/ tools required for the construction of polyhouse	6.73	2.97	5.58	2.85	2.62**
Estimated cost of establishment of polyhouse	0.95	0.22	0.83	0.38	2.27*
Polyhouse construction related aspects	2.86	1.07	2.77	1.06	0.59
Direction of polyhouse	0.63	0.49	0.62	0.49	0.11
Types of crops grown in polyhouse	2.53	1.18	2.42	1.09	0.64
Gas required for higher production in polyhouse	2.49	1.12	2.37	1.19	0.68
Factor that are responsible for the higher production in polyhouse	2.79	1.05	2.57	1.08	1.36
Importance of low-high thermometer	0.65	0.48	0.63	0.49	0.23
Importance of hygrometer	0.64	0.48	0.60	0.49	0.59
Types of irrigation methods used in polyhouse	2.13	1.10	1.75	0.77	2.83**
Types of fertilizers used in polyhouse	2.76	1.44	2.45	1.19	1.61
Pests observed in crops grown in polyhouse	2.74	1.42	2.17	1.01	3.35**
Control of insect – pests or diseases in polyhouse	2.76	1.44	2.20	1.27	2.81**
Root knot nematode control methods in polyhouse	2.24	1.07	2.13	1.10	0.67
Knowledge of polyhouse production technology	2.89	1.36	2.70	1.18	1.04
Knowledge about root media use	3.77	1.91	3.27	1.93	1.72
Subsidy given for polyhouse establishment	0.90	0.30	0.87	0.34	0.66
Agency/ department that gives subsidy for polyhouse establishment	0.89	0.32	0.82	0.39	1.26
Durability of covers used in polyhouse	0.96	0.21	0.85	0.36	2.16*
Knowledge of harvesting techniques	2.96	0.97	2.83	1.03	0.80
Knowledge of post-harvest techniques	2.70	1.19	2.55	1.23	0.81
Overall	53.18	11.78	47.83	11.75	3.00**

*Significant at 5% level of significance, **Significant at 1% level of significance

hypothesis (H02.1) 'There is no significant correlation between ranks of knowledge statements about PCT assigned by farmers of Jaipur and Alwar districts' was rejected, and the alternate hypothesis (H1) 'There is a significant correlation between ranks of knowledge statements about PCT assigned by farmers of Jaipur and Alwar districts' was accepted. This means that there was a significant relationship between the ranks of knowledge statements about PCT assigned by farmers in the Jaipur and Alwar districts.

Statements wise comparison ofthe knowledge level of farmers of district Jaipur and Alwar about polyhouse cultivation technology: To find out the difference in the statements-wise knowledge level of farmers of two districts, viz., Jaipur and Alwar, about PCT, the null and alternative hypotheses were formed and tested by employing the 'Z' test to find out the significance of the difference in the statements-wise knowledge level of both districts. The results are presented in Table 3

The comparative data incorporated in Table 3 showed that a non-significant difference was found in the knowledge level of farmers about PCT in Jaipur and Alwar districts statements suchas "Benefits of polyhouse technology, Types of polyhouses, Polyhouse construction related aspects, Direction of polyhouse, Types of crops grown in polyhouse, Gas required for higher production in polyhouse, Factors that are responsible for higher production in polyhouse, Importance of low-high thermometer, Importance of hygrometer, Types of fertilizersused in playhouses, Root-knot nematode control methods in polyhouse, Knowledge of polyhouse production technology, Knowledge about root media use, Subsidygiven for polyhouse establishment, Agency/ department that gives subsidy for polyhouse establishment, Knowledge of harvesting techniques and Knowledge of post-

harvest techniques" which showed that the farmers of both districts have similar knowledge about their statements. They had good extension contacts and sources of information utilization, which helped them to increase their knowledge.The calculated 'Z' values were found significant at 5 percent level of significance in statements like "Estimated cost of establishment of polyhouse and Durability of covers used in polyhouse" and remaining statements like "Materials/ tools required for the construction of polyhouse, Types of irrigation methods used in polyhouse and Pests observed in crops grown in polyhouse" were found significant at 1 % level of significance. This difference between farmers of the Jaipur and Alwar districts means they did not have similar knowledge about PCT in the study area.

DISCUSSION

The outcomes of the current study underscore the knowledge level of polyhouse farmers that the majority of the farmers in selected districts had a medium level of knowledge about polyhouse cultivation. Further indicated that in Jaipur district, the majority of farmers had a medium level of knowledge and in Alwar district majority of farmers had a medium level of knowledge about polyhouse cultivation. It might be due to frequent contacts of farmers with personnel working in horticulture and extension departments. Similar findings were obtained by Singh *et al.* (2013), Chauhan *et al.* (2017) the probable reason might be that they are directly connected with Krishi Vigyan, soil and water management unit of Navsari and getting the information from their scientist and Raghuwanshi *et al.* (2020) this might be due to the facts that there should be a proper repetitive educational campaign for popularizing the solar energy technology. An effective training package may definitely improve the knowledge level of the farmers. Similar findings were obtained, by Pramod *et al.* (2022) revealed that medium knowledge level of (41.66%)of respondent, followed by high knowledge level (33.34%) and low knowledge level of 25.00 per cent respondents regarding solar pump set scheme on vegetable growers , Amit *et al.*(2023) The findings reported that overall knowledge of farmers pertaining to pre and post-harvest management practices for onion production was moderate to high since about 85 per cent of the onion farmers belonged to these categories mainly due to correct knowledge of pre harvest management practices, Choudhary *et al.* (2019) and Nasrin *et al.* (2017).

Table 2 presented to the most of the farmers of selected districts had high knowledge about the 'Durability of covers used in polyhouse' was ranked first, followed by 'Estimated cost of establishment of polyhouse' was ranked second, 'Subsidy given for polyhouse establishment' was ranked third, 'Agency/ department that gives subsidy for polyhouse establishment' was ranked fourth and 'Types of playhouses' was ranked fifth. Further examination of the study that the farmers had less extent of knowledge about 'Control of insect – pests or diseases in polyhouse' was ranked nineteenth, followed by 'Pests observed in crops grown in polyhouse' was ranked twentieth, 'Types of irrigation methods used in polyhouses' was ranked twenty one, 'Knowledge about root media use' was rank twenty two and 'Type of crops grown in polyhouse' was ranked twenty three.The data in Table 2 further revealed that in Jaipur district, most of the farmers had high knowledge about 'Durability of covers used in polyhouse' was rank first, followed by 'Estimated cost of establishment of polyhouse' was ranked second, 'Subsidygiven for polyhouse establishment' was ranked third, 'Agency/ department that gives subsidy for polyhouse establishment' was ranked fourth and 'Types of playhouses' was ranked fifth.Table 2 also explained that in Jaipur district, the farmers had low knowledge about 'Types of fertilizers used in polyhouse' were assigned nineteenth rank, followed by 'Pests observed in crops grown in polyhouse' was ranked twentieth, 'Types of irrigation methods used in polyhouses' was ranked twenty-one, 'Knowledge about root media use' was ranked twenty-two and 'Type of crops grown in polyhouse' was ranked twenty-three. In Alwar district, most of the farmers had high knowledge about 'Subsidy given for polyhouse establishment' was ranked first, followed by 'Durability of covers used in polyhouse' was ranked second, 'Estimated cost of establishment of polyhouse' was ranked third, 'Agency/ department that gives subsidy for polyhouse establishment' was ranked fourth and 'Type of polyhouses' was ranked fifth.Table 2 also showed that in the Alwar district, the farmers had low knowledge about 'Control of insect – pests or diseases in polyhouse' and were assigned nineteenth rank, followed by 'Types of irrigation methods used in polyhouse' was ranked twentieth, 'Pests observed in crops grown in polyhouse' was ranked twenty one, 'Knowledge about root media use' was ranked twenty two and 'Types of crops grown

in polyhouse' was ranked twenty three.An effort was made to determine the relationship between the ranks of knowledge statements assigned by farmers of Jaipur and Alwar districts by applying a rank-order correlation test. The rank correlation value (0.99) was greater than the tabulated value, so the null hypothesis (H02.1) 'There is no significant correlation between ranks of knowledge statements about PCT assigned by farmers of Jaipur and Alwar districts' was rejected, and the alternate hypothesis (H1) 'There is a significant correlation between ranks of knowledge statements about PCT assigned by farmers of Jaipur and Alwar districts' was accepted. This means that there was a significant relationship between the ranks of knowledge statements about PCT assigned by farmers in the Jaipur and Alwar districts. It might be because both districts belonged to the same division, so farmers were getting almost the same benefits by PCT, and they have good extension contacts and sources of information utilization, so there was a significant relationship in the ranks of knowledge statements.Similar findings were obtained by Raghuwanshi *et al.* (2020) This might be due to the facts that there should be a proper repetitive educational campaign for popularizing the solar energy technology. An effective training package may definitely improve the knowledge level of the farmers, Ghanghas *et al.* (2018) the main reason was the majority of respondent famers had been practicing for the last 2-3 years and also flower growing farmers found the technology more profitable due to crop viability up to five years.

The comparative data incorporated in Table 3 showed that a non-significant difference was found in the knowledge level of farmers about PCT in Jaipur and Alwar districts statements such as "Benefits of polyhouse technology, Types of polyhouses, Polyhouse construction related aspects, Direction of polyhouse, Types of crops grown in polyhouse, Gas required for higher production in polyhouse, Factors that are responsible for higher production in polyhouse, Importance of low-high thermometer, Importance of hygrometer, Types of fertilizers used in playhouses, Root-knot nematode control methods in polyhouse, Knowledge of polyhouse production technology, Knowledge about root media use, Subsidy given for polyhouse establishment, Agency/ department that gives subsidy for polyhouse establishment, Knowledge of harvesting techniques and Knowledge of post-harvest techniques" which showed that the farmers of both districts have similar knowledge about their statements. They had good extension contacts and sources of information utilization, which helped them to increase their knowledge.The calculated 'Z' values were found significant at 5 percent level of significance in statements like "Estimated cost of establishment of polyhouse and Durability of covers used in polyhouse" and remaining statements like "Materials/ tools required for the construction of polyhouse, Types of irrigation methods used in polyhouse and Pests observed in crops grown in polyhouse" were found significant at 1 % level of significance. This difference between farmers of the Jaipur and Alwar districts means they did not have similar knowledge about PCT in the study area. This might be because the farmers of both districts might not have gained the same knowledge about PCT. This might be due to variations in their extension contacts and sources of information, which might have created differences in their knowledge about PCT. Rajasree *et al.,* (2019) also, showed that the degree of use of eco-friendly technology in vegetable farming was significantly correlated with the use of mass media, exposure to scientific orientation training and for cosmopolitan and Singh and Singh (2014) also confirmed that the majority of farmers who attended training in commercial vegetable cultivation perceived that knowledge and skills were enhanced as a result of training.

CONCLUSION

The overall majority (74.55 percent) of farmers in selected districts had a medium level of knowledge. In Jaipur and Alwar districts, the majority (76.87 percent and 68.34 percent) of farmers had a medium level of knowledge regarding polyhouse cultivation technology. Regarding statement-wise knowledge, most farmers had high knowledge about the 'Durability of covers used in polyhouse' with overall 90.31 MPS. They were ranked first, followed by 'Estimated cost of establishment of polyhouse' with 89.17 MPS ranked second overall. In the Jaipur district, most farmers knew about the 'Durability of covers used in polyhouse' with 95.63 MPS. They were ranked first, followed by 'Estimated cost of establishment of polyhouse' with 95.00 MPS and was ranked second. In Alwar district, most farmers had high knowledge about 'Subsidy is given for polyhouse establishment' with 86.67 MPS, ranked first, followed by 'Durability of covers used in polyhouse' with 85.00 MPS and ranked second. It

was also found that there was a significant correlation between ranks of knowledge statements about PCT assigned by farmers of both Jaipur and Alwar districts. It was observed that there was a significant difference between the farmers of Jaipur and Alwar districts regarding knowledge of different PCT activities. This means that farmers of both districts did not have similar knowledge about the use of PCT in the study area.

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Author's contribution: The first author conceptualized, designed, collected data and prepared the manuscript. The second author supervised the entire study process. The third, fourth, fifth and sixth authors contributed to writing and editing.

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