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Short Communication

Adoption of Almond (*Prunus amygdalus L.)* Production Technologies in district Pulwama of Jammu and Kashmir

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ABSTRACT

The present study highlights the adoption levels of farmers of almond production technologies in Pulwama district of Jammu and Kashmir state. A sample of 75 farmers from five different adopted villages was selected for the study which includes 50 adopters and 25 non-adopters of recommended production technologies for quality almond production. Considerably high extent of adoption (48%) of recommended almond production technologies was observed among the KVK adopted farmers as compared to the non adopted farmers.

Key Words: Adoption, Farmers, Almond, Production technologies.

INTRODUCTION

The full scale application of technologies is considered as adoption. A farmer has to understand, analyze and satisfy before implementing any technology. Technology adoption is a graded process in which a farmer has to pass through different stages like awareness, interest, evaluation, training and adoption. Adoption is a holistic process wherein he has to understand the intrinsic as well as extrinsic factors affecting the technology. The physiography of Pulwama district is highly uneven and is famous for the cultivation of saffron, apple and almond. However, farmers in the district are practicing faulty horticultural practices in almond cultivation due to lack of technical knowhow of almond production technologies and unable to harvest the production potential of almond cultivars. KVK Pulwama has been constantly making efforts for boosting the almond production in the area and save the crop from threat of dwindling in area and production as there has been continuous shift from almond to apple cultivation in the area from the last few years. The scientists of KVK have been in constant touch with almond farmers of the district for popularizing the almond production technologies. They have conducted many training programs exclusively for farmers practicing almond production with the objective to make them competent in performing various activities related to almond production as per recommended production technologies. Hence, the present study was undertaken to know the adoption level of almond production technologies by the farmers in KVK adopted villages.

MATERIALS AND METHODS

The present investigation was based on experimental design of ex-post facto research combined with exploratory type of research as the selected phenomena have already occurred and the researcher had no control over the same. The study was conducted in district Pulwama of Jammu and Kashmir state selected farmers from five adopted villages viz., Malangpora, Renzipora, Sunarigund, Shaltokun and Wakharwan who have remained in constant touch with the KVK scientists. During the selection of respondents a sample of 50 beneficiary almond farmers were selected randomly from the list of beneficiaries, who were adopting recommended technologies and 25 farmers who did not adopt the recommended production technologies of almond.

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Table 1. Extent of adoption level of almond production technologies by KVK adopted farmers in district Pulwama.

Category	KVK adopted farmers(n=50)			Non-adopted farmers (n=25)		
	Low (33-55)	Medium (56-78)	High (79-100)	Low (33-55)	Medium (56-78)	High (79-100)
Frequency	12	14	24	14	7	4
Percentage	24	28	48	56.00	28.00	16.00

Accordingly the respondents were grouped on the basis of percentage. A schedule was also developed to know the adoption level of almond production technologies which was measured on 3 point continuum *i.e.,* fully adopted, partially adopted and non-adopted with the scores of 3, 2, 1 respectively. Ranks were also assigned to all the technologies based on the total score obtained on each technology (Rao *et al,* 2017).

RESULTS AND DISCUSSION

The results (Table 1) revealed that majority of the KVK adopted farmers (48%) have high extent of adoption whereas majority (56%) of the KVK non-adopted farmers have low extent of adoption. The data (Table 2) revealed the ranks assigned to all the technologies based on the total scores obtained on each technology. The technologies on which the respondents have shown high extent of adoption were observed as orchard sanitation followed by INM (Integrated Nutrient Management) as per package of practices, IPM (integrated pest management) and IDM (integrated disease management) as per spray schedule, scientific training and pruning and popularization of mid/ late bloomer cultivars. The reason for high extent of adoption on the above technologies was that KVK scientists envisaged the almond farmers by conducting series of trainings, demonstrations and exposure visits by practically involving the KVK adopted farmers. KVK scientists also conducted farmer-scientist interactions field days and group discussions which facilitated high extent of adoption of these technologies. Moreover the KVK has assessed the different almond production technologies for 3 yr at farmer's fields and then popularized in different adopted villages for wide scale adoption. Similar results were observed by Rao *et al* (2017) for adoption of maize production technologies. The significant results obtained in quality almond production helped the farmers for high extent of adoption in these technologies. The results (Table 3) revealed low level of adoption of almond production technologies in non-adopted

Table 2. Extent of adoption of almond production technologies by KVK adopted farmers in district Pulwama.

Sr. No.	Production Technology	Extent of Adoption (%)			Mean Score	Rank
		Fully adopted	Partially adopted	Not adopted		
1.	Orchard Sanitation	95.50	2.50	2.00	2.86	I
2.	INM as per Package of practices	85.60	10.40	4.00	2.57	II
3.	IPM and IDM as per Spray schedule	75.50	17.50	7.00	2.26	III
4.	Scientific training and pruning	45.50	50.70	3.8	1.36	IV
5.	Popularization of mid and late bloomer cultivars	36.00	45.50	20.50	1.08	V

Table 3. Extent of adoption of almond production technologies by non-adopted farmers in district Pulwama.

Sr No.	Production Technology	Extent of Adoption (%)			Mean Score	Rank
		Fully adopted	Partially adopted	Not adopted		
1.	Orchard Sanitation	50.50	45.50	4.00	1.51	I
2.	INM as per Package of practices	45.60	40.40	14.00	1.37	II
3.	IPM and IDM as per Spray schedule	35.50	24.40	40.10	1.06	III
4.	Scientific training and pruning	25.50	62.70	13.80	0.76	IV
5.	Popularization of mid and late bloomer cultivars	15.30	34.70	20.00	0.45	V

KVK farmers and the lowest score was observed in popularization of mid bloomer cultivars followed by scientific training and pruning, IPM and IDM as per spray schedule, INM as per package of practices, and orchard sanitation. Most of the non-adopted farmers had high extent of adoption in orchard sanitation and INM which has been attributed to adoption of the practice by fellow adopted farmers which has motivated the non-adpted farmers to follow the practice (Soumya and Podikunju, 2017). The wide publicity of the technologies like orchard sanitation INM as per package of practice and IPM and IDM as per spray schedule, by the KVK scientists has resulted in increased adoption among non-adopters in these adopted villages.

CONCLUSION

High extent of adoption of most of the almond production technologies was seen among the farmers adopted by the KVK Pulwama as compared to non-adopted farmers. This has been attributed to the multiplicity of the transfer of technology mechanisms followed by KVK scientists in the adopted villages especially for the benefit of farmers adopted by the KVK. However, the cultivation of almonds during the last few years in this area has been severely affected due to low production which has been mostly attributed to spring frost during blooming period, incidence of diseases and insect pests, drought and improper nutrient management. Moreover, the farmers have been shifting to apple cultivation due to the high benefit cost ratio in case of apple production system compared to almonds. But adoption of recommended production technologies can play a major role in increasing production and productivity of the crop and maintain the area under this niche crop and the farmers can fetch a better price for their produce

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