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Impact of Vocational Agricultural Training Programs on the Promotion of Date Palm Cultivation in Ghayathi, United Arab Emirates

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Abstract:

This study was performed to evaluate the perception level of the farmers and labor related to date palm cultivation. A complete list of two fifty respondents was randomly selected who have undergone capacity building programs through training and demonstration on date's production technologies at Ghayathi city from 2017-18 to 2019-20. The data collected revealed that an overwhelming majority (98%) suggested that their working efficiency could be enhanced by offering them training courses in date palm cultivation. The highest change in perception level of 79.15% and 99.21% was observed in the method of composting and bagging and netting, respectively. Imparting training and literature to the farmers engaged with date palm cultivation by the agriculture extension department were the common suggestions presented by the respondents.



INTRODUCTION

Date palm cultivation can directly enhance the source of revenue through economic and nutritional contributions. Date cultivation is the most important section of a farming community in Arabian countries (Ahmed *et al.*, 2019). Therefore, farmers associated with dates farming are more energetic, vigorous, enthusiastic and receptive to a change. Despite all this, it has become very difficult for them to keep pace with the modern farming world changing every moment (Arulampalam *et al.*, 2010). With technology advancement, farming has become considerably easier. So lack of insufficient information on the part of young farmers is limiting productivity (Jennifer *et al.*, 2018). Nowadays radio, television, and internet is the most effective media to transfer the usage of agricultural technology, benefits, and techniques to the growers almost all over the world (Kaur, 2016). The improvement scheme aimed at presenting to the farmers and labors that use of proper technology and trainings could significantly increase their crop yield (Khatun *et al.*, 2012).

Al-Gharbia is one of the toughest deserts in Gulf region. The world looks at it as one of the biggest challenges of the state of Abu Dhabi. Therefore, to develop this desert, farmers mainly grow dates to give it a greener look. The date tree is the biggest crop today in UAE as it's the only tree that feels here comfortable in this desert. UAE is the fourth largest producer of dates worldwide with the annual average production of 900,000 tons (FAO, 2020). In UAE the date fruit is well known for its deliciousness. Date Palms have always played an essential role in the Gulf countries particularly before oil discovery. Gulf farmers counted on these trees for almost all their daily requirements for instance good quality dates were eaten by families while lower quality dates were fed to animals. The palm tree stumps, fronds, fibers and dried fronds were used to make handicrafts therefore, it is considered one of the few trees from which all parts can be utilized (El-Juhany, 2010).

By considering the importance of date fruits, Abu Dhabi agriculture department has conducted different types of training programs in which farmers and labors were trained. The trained people after getting proper knowledge and skills based on the better date palms production strategies started its cultivation (Kielhofner *et al.*, 2004). The new initiatives adopted by farmers have improved the yields and quality of the fruit (Rachna *et al.*, 2013). The present study was, therefore, undertaken to assess the impact of vocational training programs on date palm cultivation in promotion of its production as self-employment venture.

MATERIALS AND METHODS

The study was confined to Ghayathi city of the Emirate of Abu Dhabi, UAE. A complete list of respondents was prepared who have undergone trainings on date's production technique from 2017-18 to 2019-20. A questionnaire was framed covering background information and all aspects of date cultivation. Out of total 450 farms, 250 respondents were selected at random (Taylor *et al.*, 2001). In order to evaluate the knowledge gained by the trainees and effectiveness of training, a pre-test and post evaluation before and after training was conducted to know the level of knowledge of participants about different varieties of date's, pest and disease infestation in date palms as well as their storage process and value addition (Sharma, 2018). Furthermore, the respondents were interviewed personally and the data collected were statistically analyzed and interpreted in percentages respectively.

RESULTS AND DISCUSSION

Vocational training courses aim at enhancing adoption and transmission of modernization. Some of the outcomes envisaged for any training program were gain in knowledge, gain in skill acquired and ultimately in more adoption and integration among farming community. An important indicator of the impact of training program is the extent to which they have

adopted the package of practices of date palm cultivation technology. The study showed that about an overwhelming majority (98%) of the respondents acknowledged that supply of agriculture information would inspire them to adopt improved production technology (Table 1). Only (2%) of the respondents gave a negative response in this regard. This might be due to their farming ignorance about the role of agricultural education in farming development. Similar, findings were reported by Arshad et al. (2019) and Zimmermann et al. (2013) when they

give trainings to the local farmers and labors of Punjab, Pakistan for the cotton crop.

Table 1. Usefulness of vocational training in date palm cultivation for improved working at their farms.

Responses	Respondents	
	Frequency	Percentage
Yes	245	98.00
No	5	2.00
Total	250	100.00

Table 2. Change in perception level of respondents (n=250) for date's production.

Parameters	Percentage (%)		
	Pre-test Knowledge before training (%)	Post-test Knowledge after training (%)	Change in perception level (%)
Knowledge of varieties of Dates	27.61	91.67	64.06
Materials and techniques used for dates palm and fruit cultivation	9.96	75.28	65.32
Method of composting	12.60	79.15	66.55
Pest and disease infestation in Dates cultivation	17.60	85.62	68.02
Irrigation and Fertilization	27.20	82.03	54.83
Offshoots separation	21.90	89.25	67.35
Flowering and sprouting	11.87	91.35	79.49
Pollination and thinning	26.99	89.25	62.27
Bagging and netting	29.16	99.21	70.05
Harvesting and drying	17.88	91.75	73.87
Grading, sorting, and storage	24.89	88.53	63.65

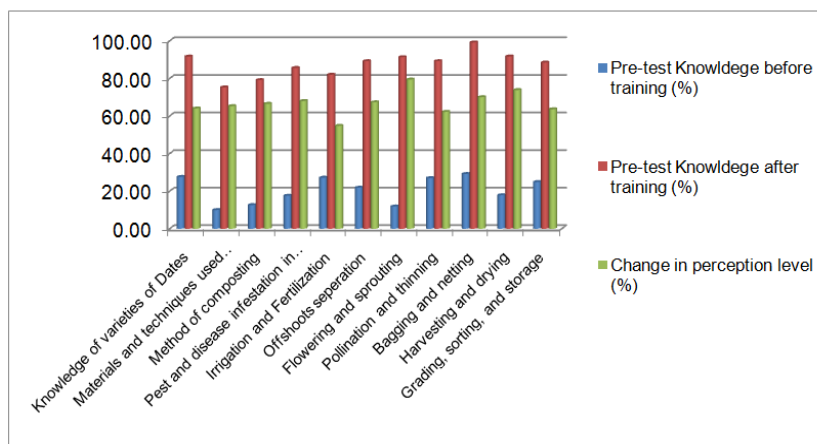


Fig. 1. Change in perception level of respondents (n=250)for date's production.

Likewise, the change in perception level of respondents before and after training is shown in Table 2. They develop a favorable attitude

towards date's production after trainings. In pretest before training, the knowledge of respondents about different date palm

production particulars was found less. The overall minimum percentage (9.96%) was observed for materials and techniques used for dates palm and fruit cultivation followed by flowering and sprouting and method of composting with (11.87%) and (12.60%) respectively. However, the post training score of various practices ranged from (79.15%) in case of method of composting to (99.21%) in case of bagging and netting as elaborated in figure 1. The average rate of change in perception level from the year 2017-18 to 2019-20 was found (66.86%). These results are according to the findings of (Rajkala *et al.*, 2019) when they give trainings to the local farmers and women Ariyalur district, for mushroom cultivation technology.

It was thus noticed that pre-training knowledge score was not much satisfactory for all the aspects of date's production. However, the knowledge score gained by respondents after training was more satisfactory in all aspects. The reason behind the satisfactory change in perception level might be due to well educational background, keen interest of participants and effective teaching and demonstration methods followed by the agricultural extension experts while training programs. Furthermore, the continuous follow up mentoring and facilitation support rendered by agricultural extension experts resulted in high level of change in perception. From the study it could be seen that continuous follow up of trainees are essential to change the perception level of the respondents.

CONCLUSION

The perception levels of the respondents about date palm production after the training have changed. The reason behind the satisfactory change in perception level is due to well educational background, keen interest of participants and methods followed for technology transfer to the trainees. Hence, it can be concluded that the arrangements must be made by the agriculture extension department to demonstrate modern farm practices especially in the remote areas so as to motivate the farmers

for their adoption. They also organize the necessary arrangements for the supply of reading material for the young farmers at village level.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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