PSM
Biological Research

Research Article 2022 | Volume 7 | Issue 3 | 95-99

Open Access

Article Information

Received: August 26, 2022
Accepted: September 3, 2022
Published: September 30, 2022

Keywords
Perception Level,
Respondents,
Agricultural Training,
Alfalfa Cultivation,
Ghayathi.

Authors' Contribution
IA designed the study; performed experiments; analyzed data; wrote and revised the paper; gave the final approval for publication.

How to cite
Arshad, I., Khan, Z.A., Ali, W., 2022. Impact of Farmer's Training Programs on the Promotion of Alfalfa Cultivation in Ghayathi, United Arab Emirates. PSM Biol. Res., 7(3): 95-99.

***Correspondence**
Imran Arshad
Email:
engr_imran1985@yahoo.com

Impact of Farmer's Training Programs on the Promotion of Alfalfa Cultivation in Ghayathi, United Arab Emirates

Imran Arshad[1]*, Zaheer Ahmed Khan[2], Wajiha Ali[3]

[1]Agriculture Engineer, SAA Technical & Specialized Services Establishment, Abu Dhabi, United Arab Emirates.
[2]Department of Farm Structures, Faculty of Agricultural Engineering, SAU, Tandojam, Pakistan.
[3]Assistant Manager, Agriculture Food and Life Department, SGS Pakistan Pvt. Ltd, Karachi, Sindh – Pakistan.

Abstract:
In this research work the impact of farmers training programs on the promotion of alfalfa cultivation in Ghayathi, UAE was studied. This study was undertaken with a view on 100 participants selected by random sampling technique. The respondents attended trainings and pre-test and post-test knowledge before and after training was conduction to check the perception level of the farmers. The results of the study revealed that majority (92%) of the respondents recommended that the efficiency of their work could be improved by offering them such kind of training courses related to alfalfa cultivation. The maximum change in perception level of 79.47% and 76.31% was found in flowering and sprouting and seed collection respectively. Providing information, technical training sessions and local support from the concern authorities will be of enormous use in the proper adaption of technology was the most common recommendation came from the participants.

INTRODUCTION

Alfalfa, with their high protein content, plays an important role in a country like United Arab Emirates as a healthy fodder for livestock consumption (Ahmed *et al.,* 2019). Alfalfa has twice the protein content of grasses and other legumes. Apart from their high protein content, Alfalfa have a number of other advantages, including improved soil quality and physical structure, compatibility with mixed/intercropping systems, crop rotations, and dry farming (Arshad *et al.,* 2019). Alfalfa is an essential part of the livestock diet since they are a major protein source. Alfalfa crops are a form of green manure that helps to improve soil quality (Arulampalam *et al.,* 2010). As a result of their nitrogen-fixing properties, Alfalfa helps to improve animal health while still conserving soil. Sale and purchase of Alfalfa plays such an important role in the agricultural system and in improving people's financial condition (Etikan *et al.,* 2017).

In almost all farms of Ghayathi district in Abu Dhabi, alfalfa is cultivated and currently cultivated on 3,000 donum, with a harvest of 28 thousand tons and a yield of 770 kilograms per donum per cut (Gohain *et al.,* 2018). However, due to a high demand of alfalfa in this region this quantity is still not enough to feed the livestock (Jennifer *et al.,* 2018). The significant alfalfa varieties grown in Ghayathi are Omani, Saudi and American respectively (Khatun *et al.,* 2012). However, due to a shortage of water and salinity the production level of alfalfa drops to 35% (Loutfy, 2010). In general, farmers apply many macro and micronutrients to attain a good yield as most of the soil is sandy in nature and the level of natural available nutrients are very low (Nagaratna *et al.,* 2020). Since the crops are grown in residual soil moisture, they are often subjected to water stress (Rajkala *et al.,* 2018). Alfalfa, in comparison to other legumes, is weak competitors to other cash crops due to yield volatility, high storage losses, hot climatic conditions and a shortage of post-harvest control facilities (Rachna *et al.,* 2013).

Alfalfa is often subjected to water stress conditions when grown in abandoned lands with residual soil moisture and inadequate management practices, resulting in a decline in production and viability (Sharma, 2018). The increasing cattle population, sudden climate change, complex disease–pest syndrome, socioeconomic policies, and input constraints have all been due to the demand-supply gap alfalfa marked and shortage in alfalfa (Parmar *et al.,* 2019). Alfalfa are perfect crops for achieving the sustainable development goals of reducing poverty and malnutrition, improving animal health and nutrition, and strengthening environmental sustainability because of their complex and essential positions in agricultural systems and animal diets (Pradhan *et al.,* 2012).

Furthermore, certain alfalfa varieties have properties that increase soil quality and productivity (Verma, 2017). Farmers lack knowledge of and access to sowing technology that aid seed germination. Most of the small-scale farmers are in dire straits (Zalkuwi *et al.,* 2015). They don't have enough money to buy essential inputs like seed, fertilizer, and pesticides. The lack of these inputs, especially seed, also limits the production of crops (Zimmermann *et al.,* 2013). The public extension scheme is ineffective at getting infrastructure, supplies, and knowledge to farmers (Ahmed et al., 2019). The major objective of this study was to provide a farmer agricultural training programs related to alfalfa cultivation to increase the production level of alfalfa in the Ghayathi district of Abu Dhabi, United Arab Emirates.

MATERIAL AND METHODS

The research work was conducted in You Al Nazrah village, which is one of the major producers of alfalfa in Ghayathi - Abu Dhabi, United Arab Emirate respectively. A total of 100 (one hundred) number of respondents were

selected for the purpose of the investigation during 2021 - 2022. The study was carried out in terms of survey for which questionnaire and trainings was prepared and performed in a group of farmers to conduct survey in a refine and simple technique (Kaur, 2016). For the evaluation of change in perception level of the participants a test before and after training was conducted about alfalfa cultivation for various parameters (Sahu *et al.,* 2013). The participants also interviewed, and all the data interpreted in percentages respectively.

RESULTS AND DISCUSSION

During training sessions, there were many reasons due to which the recommended alfalfa production technologies can be adopted on the farms as expressed by the farmers. The change in perception level of farmers after training session about flowering and sprouting was increased up to 79.47% and attain the first position in high rank. Similarly, the change in perception level of farmers regarding seeds collection and pest and disease infestation in alfalfa cultivation was recorded 76.31% and 69.92% respectively. After that the perception level of farmers related to harvesting and drying, Fertilization, Knowledge of varieties of Alfalfa, Method of composting, Irrigation, Materials, and techniques used for Alfalfa cultivation, and Safe storage obtained 68.77%, 68.46%, 68.44%, 67.65%, 66.76%, 65.97% and 65.71% respectively. However, cutting of alfalfa are in low ranked which is find 60.29% respectively. The results of Change in perception level of respondents (n=100) for Alfalfa production are elaborated in Table 1.

Table 1. Change in perception level of respondents (n=100) for Alfalfa production.

Parameters	Percentage (%)		
	Pre-test Knowledge before training (%)	Post-test Knowledge after training (%)	Change in perception level (%)
Knowledge of varieties of Alfalfa	24.12	92.56	68.44
Materials and techniques used for Alfalfa cultivation	11.25	77.22	65.97
Method of composting	13.5	81.15	67.65
Pest and disease infestation in Alfalfa cultivation	18.2	88.12	69.92
Irrigation	28.4	95.16	66.76
Fertilization	22.1	90.56	68.46
Flowering and sprouting	12.75	92.22	79.47
Cutting	27.88	88.17	60.29
Harvesting and drying	30.15	98.92	68.77
Seed's collection	16.22	92.53	76.31
Safe storage	23.51	89.22	65.71

The results shows that the farmers well adopted the training sessions conducted on alfalfa cultivation as a majority (92%) of the respondents appreciates the supply of agriculture information and only (8%) of the participants gave a low-grade remark respectively. This may be due to the unawareness of agricultural farm trainings in farming development. These findings were found in agreement with (Arshad *et al.,* 2021) in which they conducted a training session on a dates production for a local farmers and labors of Ghayathi, UAE. The results of usefulness of vocational training about alfalfa production are elaborated in Table 2.

Table 2. Usefulness of vocational training about Alfalfa production for improved working at their farms.

Responses	Respondents	
	Frequency	Percentage
Yes	92	92.00
No	08	8.00
Total	100	100.00

Through this study it was observed that the pre-training awareness score was not up to the mark for all the aspects of alfalfa cultivation. However, after the training sessions the score was found satisfactory in all aspects (Sulekha *et al.,* 2020). The main reason for a remarkable change in perception level may be due to a fine educational background, respondent's interest and efficient demonstration methods followed by the trainers while conducting a session. In addition to this the uninterrupted facilitation and support provided by the agricultural trainers resulted in high level of change in perception.

CONCLUSION

Providing information, technical training sessions and local support from the concern authorities will be of enormous use in the proper adaption of technology as most of the farmers had medium to low level of awareness about the modern techniques used to grow alfalfa before the training sessions. However, the perception level of the farmers was increased up to 92% after the training sessions. Suitable policies and strategies should be taken to deal with non-adaptation of modern techniques used in alfalfa production in the villages which helps the small land holders to adapt to modern techniques without any obstructions.

ACKNOWLEDGMENT

The authors highly acknowledge and appreciate the efforts of all the participants who engage in this research directly or indirectly.

Funding

No funding was received for this project.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

REFERENCES

Arshad, I., Rabbani, M. U., Khan, Z. A., and Ali, W., (2021). Impact of Vocational Agricultural Training Programs on the Promotion of Date Palm Cultivation in Ghayathi, United Arab Emirates. Int. J. Altern. Fuels. Energy., 5(2): 16-20.

Ahmed, A., Steve, Green., Wasel,A., Dahr, A., Kennedy, L., Kemp, P., Dawoud, M., Clothier, B. (2019). Water use and irrigation requirements for Sweet corns on commercial farmsin the hyper-arid United Arab Emirates. J. Agric. Water Manag., 223: 1-6.

Arshad, I., Khan, Z.A., Vallejera, C.A.E., Shah, N.H. (2019). The role of Punjab agricultural extension services in promoting cotton cultivation: Case Study. PSM Bio. Res. J., 4(3): 100-107.

Arulampalam, W., Booth, A. L., & Bryan, M. L. (2010). Are there asymmetries in the effects of training on the conditional male wage distribution? J. Popul. Econ., 23(1), 251-272.

Etikan, I., Bala, K., (2017). Sampling and sampling methods. Biomet. & Biostat. Int. J., 5(6):215-217.

Gohain, N., Singh, S., (2018). An analysis of problems and constraints faced by farmers in marketing of agricultural produce in Punjab. J. of Eco. Affairs., 63(3):671- 678.

Jennifer, C., George, F., and Seruya, M. (2018) The evaluation of vocational programming in secondary school settings: A suggested protocol. J. Occup. Ther. Schools, Early Interven., 11(1): 49-59.

Kaur, K. (2016). Impact of Training course on knowledge gain of mushroom trainees. J. Krishi Vigyan., 4(2): 54-57.

Khatun, S., Islam, A., Cakilcioglu, U., and Chatterjee, N. C. (2012). Mushroom as a potential source of nutraceuticals. Am. J. Exper. Agric., 2(1): 47-73.

Loutfy I.J. (2010) Degradation of Sweet corn Trees and Date Production in Arab Countries: Causes and Potential Rehabilitation. Austr. J. Basic Appl. Sci., 4(8): 3998-4010.

Nagaratna, C., Kurbetta, G. T., and Gadekar, G., (2020). The Level of Rice Farmers' Adoption of Smart Climate Agriculture. Cur. J. of App. Sci. and Tech., 39(26): 1-8.

Rajkala, A., Shobana, S., Kumar, M.A., and Alagukannan, G. (2018). Impact of trainings and demonstrations on promotion of mushroom cultivation. J. Krishi Vigyan., 8(1): 162-165.

Rachna, G. R., and Sodhi, G. P. S. (2013). Evaluation of vocational training programmes organized on mushroom farming by Krishi Vigyan Kendra Patiala. J. Krishi Vigyan, 2(1): 26-29

Sulekha, A. K., Prakash, C., Dileep, G., Manoj, K., Prem, N., and Kamlesh, K. Y., (2020). Impact of Training Programmes of KVKs in Terms of Adoption of Technologies: A Gender Analysis. Cur. J. App. Sci. and Tech., 39(26):113-120.

Sharma, A. (2018). Market linked technology of mushroom production for subsidiary income and nutritional security of farm families of Uttar Dinajpur District of West Bengal. J. Krishi Vigyan, 7, 97-100

Sahu, N. C., and Mishra, D., (2013). Analysis of perception and adaptability strategies of the farmers to climate change in Odisha, India. Elsevier 5(1):123–127.

Parmar, V. S., Joshi, N. S., Prajapati, P. J., Hadiya, N. J., (2019). Constraints Faced by the Farmers in Adoption of Improved Cultivation Practices of Gram. Int. J. Curr. Microbiol. App. Sci. 8(11):2071-2075.

Pradhan, K., Mukherjee, K., (2012). Revamping the Technology Dissemination Process through Farm Science Centre. Indian Res. J. of Ext. Edu., 12(1):48-52.

Verma, S. K., (2017). A study on awareness and adaptation strategies of climate smart agriculture in Sultanpur district of Uttar Pradesh. M.Sc (Agri.) Thesis, Department of Extn. Edun., BHU, Varanasi, Uttar Pradesh.

Zalkuwi, J., Singh, R., Bhattarai, M., Singh, O. P., Rao, D., (2015). Analysis of constraints influencing sorghum farmers using Garrett's Ranking Technique; A comparative study of India and Nigeria. Int. J. of Sci. Res. and Manage. (IJSRM)., 3(3):2435-2440.

Zimmermann, K.F., Biavaschi, C., Eichhorst, W., Giulietti, C., Kendzia, M. J., Muravyev, A., Pieters, J., Rodríguez-Planas, N., Schmidl, R., 2013. Youth Unemployment and Vocational Training. Found. Trends in Microecon., 9 (2): 144-157.