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Training Need of Farmers in Horticultural Crops in Haryana

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ABSTRACT

Value addition in agriculture predominantly offers a means to increase, rejuvenate and stabilize farm income. Value-added agriculture is fundamentally market-driven. It needs trained and skilled manpower to cope with the demand of rapidly changing markets. The present study was conducted in Haryana state and two districts Hisar from southwest and Sonipat from northeast were selected, purposively. From each district, three blocks were selected randomly. Further, three villages were selected from each block making a total of 18 villages. From each village, ten farmers were selected randomly, making a total sample of 180 farmers. It was found that majority of the respondents were interested in taking training of 'Farm level packaging and storage', 'Development of commercial horticultural nursery for fruit trees and vegetables crops', 'Processing and value addition' and 'Packaging of nursery plants'. DAE (Directorate of Agriculture Extension) should arrange training programmes based on the necessity of the farmers. Otherwise, it will not bring any positive outcome in the crop production systems of Haryana.

INTRODUCTION

Training is a process of acquisition of new skills, attitude and knowledge in the context of preparing for entry in a vocation or improving one's productivity in an organization or enterprise. Effective training requires a clear picture of the trainees need to use information after training in place of local practices they have adopted previously. Training is acquisition of the best way of utilizing knowledge and skill (Sajeev and Singha, 2010; Ajayi, 1995). Training of farmers essentially contributes to human resource development in agriculture. The basic needs of farmers are crop wise information viz., improved seed, intercultural operation, fertilizers, soil testing, irrigation, new implements, plant protection measures, mushroom cultivation, poultry, animal husbandry and credit information (Babu and Singh, 1986; Kumar et al., 2007; Kumar and Nain, 2013). Majority of the farmers had low extension contact, poor credit orientation and medium farming knowledge and had high need for training in agronomical practices (Chauhan and Kokate, 1986). Knowledge and skills of the farmers in agricultural technologies are important factors for increased agricultural production. However, in spite of high social values prevailing in these communities, they have remained backward, underdeveloped or neglected due to the factor like lack of ambition, lack of initiative, inadequate land holding, limited needs and orthodox behavior (Barman et al., 2013; Raina et al., 2017). Most of the farmers often become frustrated with new practices in agriculture due to lack of proper understanding of the relevant factors. As a result, they are often skeptical towards new ideas and practices in agriculture.

Value addition is the process of changing or transforming a product from its original state to a more valuable and durable state. Many raw commodities have intrinsic value in their original state. For example, field corn is grown, harvested and stored on farm and then fed to livestock on that farm has value. Today fruits and vegetable farming are diversified farming to generate employment round the year, supplement farm economy and earn foreign exchange also by enhancing the export. Fruits play an important role in human nutrition offering indirect diversity, ecological sustainability and fight against hunger. They are sources of essential minerals, vitamins, dietary fibre, carbohydrates and proteins along with, calcium, phosphorus, iron, magnesium. It is generally stated

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that the living standard of people can be judged by the production as well as consumption of fruits. Wakholi et al., (2015) found that many small-scale farmers employed relative simple and inexpensive techniques in handling their limited volumes of produce. Several factors could be addressed to reduce post-harvest losses, including weak policies, inferior infrastructure, and poor market strategies. However, the lack of basic knowledge (including demographic, scientific and economic) among the stakeholders (e.g., researchers, farmers, governments, non-government organizations and merchants) on development, implementation, use and sustaining the recommended handling technologies was probably the most problematic. The global efforts to achieve sustainable growth and access in the supply of safe and healthy food are based on food processing technology, rural entrepreneurs training needs hip development, and the supply chains and markets (FAO, 2015).

METHODOLOGY

The present study was conducted in Haryana state in two districts namely Hisar from south West and Sonipat from north East. From each district, three blocks were selected randomly. Further, three villages were selected from each block making a total of 18 villages. From each village, 10 farmers were selected randomly, making a total sample of one hundred eighteen farmers. Hence, 180 farmers were interviewed for the study. Three blocks from each district i.e. Hisar and Sonipat were selected, purposively. From Hisar, three blocks namely, Hisar I, Hisar II and Adampur were selected whereas from Sonipat; Ganaur, Gohana and Murthal were selected, randomly. Out of the six selected blocks, two villages from each block were selected randomly. Thus, a total number of 18 villages, namely, Dobhi, Dhiranwas and Ladwa from block Hisar I, Saharwa, Chiraud and Talwandi Rukka from block Hisar II and Kherampur, Kohli and Siswal from block Adampur, while Bain, Chirsmi and Mohamadpur Majra from Ganaur, Jagsi, Riwara and Baroda Thuthan from Gohana block and Makimpur, Dipalpur and Paldi from Murthal block were selected randomly also.

For assessing the knowledge, constraints, prospects, training need and perception data were collected by personal interview with the respondent at their home/working center. The interview of every individual was taken separately so that the others did not influence the answers. In order to measure the knowledge level of farmers they were asked to reply a set of questions on selected dimensions of value addition in horticultural and vegetable crops. The scores so obtained were placed under three categories on the basis of knowledge they possessed i.e. 'full', 'partial' and 'no knowledge', weightage given to these response categories was 3, 2 and 1 respectively. Aggregate total was calculated for each separately and on the basis of calculated scores, mean scores and weighted mean score percentage were obtained which were ranked according to their maximum to minimum mean score percentage. The maximum weighted mean score percentage so obtained was given the rank 1st and the next subsequent one was given the rank 2nd and so on the descending order. The information collected through the responses of the respondents, was suitably coded, tabulated and analyzed to draw meaningful inferences by using statistical tools such as frequency distribution, percentages, weighted mean scores, and rank order.

RESULT AND DISCUSSION

Training is one of the key inputs for adoption of good agricultural practices in the production of horticultural and vegetable crops produce and value addition of their produce as well. Training is required for both potential and existing farming to enhance their farming spirit, skills and managerial competence for generating change leading to rapid growth in value addition of horticultural and vegetable produce. The data pertaining to training needs related to fruit crops given in Table 1, provides a clear picture of choice of training preferred by the farmers. It was found from that majority of the respondents were interested in taking training of 'Farm level packaging and storage' and 'Development of commercial horticultural nursery for fruit trees and vegetables crops' with mean score of 2.26 and 2.22 respectively. 'Techniques for reducing post harvest losses' and 'Harvesting and packing of fruit crops were ranked III with mean score of 2.20. 'Processing and value addition', 'Cultivation of fruits', 'Production and management technology', 'Layout and management of orchards', 'Training and pruning', 'Plant propagation techniques', 'Micro irrigation systems of orchards', 'Management of young plants/orchards' and 'Rejuvenation of old orchards' with mean score of 2.18, 2.07, 1.97, 1.95, 1.90, 1.87, 1.83, 1.75 and 1.74 respectively followed. Farmers were found least interested in taking training on 'Export potential of fruits' and 'Fruit trees canopy management' with mean score of 1.73. Similar results were reported by Nain and Chandel (2010).

The data give a clear picture of choice of training on vegetable crops preferred by the farmers. It was found that majority of the respondents were interested in taking training on 'Processing and value addition', 'Packaging of nursery plants' and 'Off seasonal vegetable production in polyhouse and net house by using precision farming' with mean score of 2.65, 2.61, 2.54 and 2.22 respectively, 'Production of low volume and high value crops off-season vegetables', 'Layout of modern nursery' and 'Sorting and grading of vegetables' with mean score of 2.46, 2.43 and 2.41 respectively. 'Exotic vegetables like broccoli, baby corn, bell peppers, cherry tomato, red cabbage, Chinese cabbage, celery, Thai ginger', 'Packaging and storage' and 'Marketing of vegetables' were ranked VII, VIII and IX with mean score of 2.39, 2.36 and 2.35 respectively. 'Use of plastic low tunnels for early production of bottle gourd', 'Production and management technology' and 'Raising of vegetable seedlings in polyhouse for early production' ranked X, XI and XII with mean score of 2.33, 2.32 and 2.25, respectively. It was found that there was least interest in taking training in 'Grading and standardization', 'Export potential processed vegetables' and 'Use of micro sprinkler irrigation' with mean score of 2.20, 2.12 and 1.97 respectively.

CONCLUSION

All the sampled respondents of the present study opined that training is very essential for making their crop production more efficient and profitable. But inadequacy of training is very common even in most crop intensive districts of Haryana. Farmers emphasized to get training on Farm level packaging and storage and Processing and value addition. Farm level packaging attained the top most priority followed by development of commercial

Table 1. Training need related to fruits and vegetable crops

S. No.	Items	Weighted mean score	Rank Order
	Fruit crops		
1.	Farm level packaging and storage	2.26	I
2.	Development of commercial horticultural nursery for fruit trees and vegetables crops	2.22	II
3.	Techniques for reducing post-harvest losses	2.20	III
4.	Harvesting and packing of fruit crops	2.20	III
5.	Processing and value addition	2.18	IV
6.	Cultivation of fruits	2.07	V
7.	Production and management technology	1.97	VI
8.	Layout and management of orchards	1.95	VII
9.	Training and pruning	1.90	VIII
10.	Plant propagation techniques	1.87	IX
11.	Micro irrigation systems of orchards	1.83	X
12.	Management of young plants/orchards	1.75	XI
13.	Rejuvenation of old orchards	1.74	XII
14.	Export potential fruits	1.73	XIII
15.	Fruit trees canopy management	1.73	XIII
	Vegetable crops		
1.	Processing and value addition	2.65	I
2.	Packaging of nursery plants	2.61	II
3.	Off seasonal vegetable production in poly house and net house by precision farming	2.54	III
4.	Production of low volume and high value crops off-season vegetables	2.46	IV
5.	Layout of modern nursery	2.43	V
6.	Sorting and grading of vegetables	2.41	VI
7.	Exotic vegetables like broccoli, baby corn, bell peppers, cherry tomato, red cabbage, Chinese cabbage, celery, Thai ginger	2.39	VII
8.	Packaging and storage	2.36	VIII
9.	Marketing of vegetables	2.35	IX
10.	Use of plastic low tunnels for early production of bottle gourd	2.33	X
11.	Production and management technology	2.32	XI
12.	Raising of vegetable seedlings in polyhouse for early production	2.25	XII
13.	Grading and standardization	2.20	XIII
14.	Export potential processed vegetables	2.12	XIV
15.	Use of micro sprinkler irrigation	1.97	XV

horticultural nursery for fruit trees and vegetables crops, techniques for reducing post harvest losses and harvesting and packing of fruit crops under training on value addition of horticultural and vegetable crops. A number of training areas were identified as very useful for the farmer. It indicates a gap in farmer's knowhow and actual information which needs to be addressed through designing and developing a training module. The DAE (Directorate of Agriculture Extension) can reorient their training schedule and subject matter based on these findings to enrich farmer's knowledge on improved crop production techniques by value addition of horticultural and vegetable crops. Based on the findings of the study it can be recommended that an extensive research programme should be conducted covering all the intensive crop growing in areas to identify the appropriate crop production needs of farmers. Much emphasis should be paid on integrated farming systems, integrated pest and disease management and technologies for soil and water conservation while planning and designing training programmes for farmers. Both extensive and intensive hand on-training programmes should be emphasized for farmers through proper assessment of their training needs. The concerned different centers and divisions should pay relatively higher emphasis and care on those specific most important needs, as identified.

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