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Training Needs of Vegetable Growers in Nutrient Management Practices of Cabbage-Potato Cropping System

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Abstract

Farmers training on various aspects of nutrient management practices in cabbage-potato cropping system helps to increase the productivity. For the effective training it must be planned on the basis of their perceived training needs. A study was conducted to identify the training needs of vegetable growers in nutrient management practices of cabbage-potato cropping system. Ten vegetable growers practicing cabbage-potato cropping system were selected randomly. Thus making a total sample of 120. Procedure on importance of soil testing, calculation of nutrients following recommendations from fertilizers, application of bio-fertilizers, secondary nutrients, micro-nutrients, potash, phosphorus and nitrogenous fertilizers were identified as most priority areas for training. Out of 15 characteristics credit orientation and risk orientation had significant relationship. Similarly land holding, extension participation and extension contact had negative significance. Hence, the training organizers should plan and conduct the trainings based on their needs and related characterstics.

Key words : Training needs, Nutrient management practices, Cabbage-potato cropping system.

Vegetables are one of the most important components of horticulture and have major contribution in meeting the nutritional requirements of human beings. In ever increasing population in India, we need to produce about 95 million tonnes of vegetables every year. Since there is a little possibility for increasing the land area, but possible to increase the productivity per unit area by adopting recommended nutrient management practices. Since cabbage and potato are relatively more profitable among the vegetable crops, farmers grow them intensively. But the reduction in productivity has to be observed in some patches which has been attributed to partial or non-adoption of nutrient management practices, which resulted in loss of soil fertility. Hence, it is essential to impart training to the farmers on various aspects of nutrient management practices in cabbage-potato cropping system which enable them to increase the productivity. However, for the training to be effective, it must be planned on the basis of their perceived training needs. Keeping these in view the study was undertaken with the following objectives : To identify the training needs of vegetable growers in nutrient management practices of cabbage-potato cropping system, and to determine the relationship between characteristics of vegetable growers and training needs in nutrient management practices of cabbage-potato cropping system.

Methods

The study was conducted in purposively selected Kolar district having maximum area under vegetable cultivation and popularity of cropping system. Three taluks namely Kolar, Malur and Srinivasapura were selected based on the maximum area under cropping system. Four village from each taluks having maximum area under selected cropping system were selected randomly. Ten farmers from each village were selected by random sampling techniques. Thus making a total samples of 120.

To ascertain the training needs of farmers in nutrient management practices of cabbage-potato cropping system 14 aspects were prepared in consultation with horticultural specialists and progressive farmers. A three point rating scale containing 'most essential' 'essential' and 'not essential' with the score of 3,2 and 1 respectively was employed to assess the training needs of vegetable growers in nutrient management practices of cabbage-potato cropping system.

The respondents were interviewed to indicate

Table 1. Training needs of vegetable growers in nutrient management practices in cabbage-potato cropping system. N=120.

	Practices/aspects of nutrient management practices in cabbage-potato cropping system	Level of training			Total score	Mean score	Rank value	Category of preferences
		Most essntial	Essential	Not essential				
1.	Soil type	12	28	80	172	1.43	XIII	III
2.	Procedure of soil sampling	106	14	–	346	2.88	I	I
3.	Application of FYM/ compost	10	24	86	164	1.37	XIV	III
4.	Recommended quantity of N fertilizers	60	52	8	290	2.42	VIII	I
5.	Recommended quantity of P fertilizers	64	92	10	294	2.45	VII	I
6.	Recommended quantity of K fertilizers	73	42	5	308	2.57	VI	I
7.	Application of split dose of fertilizers	36	48	36	240	2.00	X	II
8.	Application of mixed fertilizers	57	31	32	265	2.21	IX	II
9.	Calculation of recommended nutrients in fertilizers	104	16	–	314	2.87	II	I
10.	Time of fertilizers application	42	33	45	237	1.98	XI	II
11.	Method of fertilizers application	38	35	47	196	1.63	XII	II
12.	Application of secondary nutrients	78	42	–	318	2.65	IV	I
13.	Application of micro-nutrients	77	38	–	317	2.64	V	I
14.	Application of bio-fertilizers	82	38	–	322	2.68	III	I

any one of the three alternative responses against each item depending upon their level of training needs, first of all total training needs score of a particular aspect/item was calculated considering the responses expressed by all the respondents.The mean score of a particular item was worked out by dividing the total score of that particular item with a total number of respondents (120). Finally, based on the mean score the rank order of preference for training in a particular aspects/items was found by adopting the following scale : Most essential = 2.25—3.00; Essential = 1.50—2.25 ; Not-essential = 0.75—1.49.

Results and Discussion

Table 1 shows that the ranking of different aspects/items in which the vegetable growers needs training. The procedure and importance of soil sampling and calculation of nutrients following recommendation from fertilizers has got top priorities. Because, the farmers did not have complete knowledge about the procedure of soil testing and calculation of nutrients based on recommendation from the fertilizers. The other most important aspects on which the vegetable growers needed training were application of bio-fertilizers, secondary nutrients, micronutrients, potash, phosphorus and nitrogenous fertilizers. By and large the vegetable growers need to know more about the balanced application of all the recommended nutrients along with bio-fertilizers which minimizes the cost and eco-friendly. Probably this might be the reason the respondents have given first ranks of training need in order of their preference. The findings are in conformity with the findings of Nikam and Rajmane (1) and Nikhade and Patki (2).

The vegetable growers were given least ranks to the practices viz. time of fertilizers application, method of fertilizers application, soil type and application of FYM/compost. The reason might be that the respondents considered these practices as simple based on their experience. Moreover, these practices performed by fore-fathers. These findings are in accordance with the observations of Sharma and Riyazuddin (3) and Nikhade and Patki (2).

The results of correlation co-efficient analysis presented in Table 2 revealed that credit orientation and risk orientation were found to have significant relationship with training needs of vegetable growers in nutrient management practices of cabbage-potato cropping system. The possible reason could be that majority of the farmers having more credit and risk orientation were much interested in vegetable cultivation, they realized the importance of nutrient management practices in cabbage-potato cropping system as profitable. The negatively significant relationship between land holding, extension participation and extension contact with training needs could be explained by the reason that majority of the re-

Table 2. Relationship between characteristics of vegetable growers with their training needs about nutrient management practices in cabbage-potato cropping system. * Significant at 0.01 level.

	Personal, social-psychological characteristics	*r* value
1.	Age	0.0714
2.	Education	0.0651
3.	Family size	0.0513
4.	Farming experience	0.0702
5.	Land holding	–0.2312*
6.	Annual income	0.0159
7.	Credit orientation	0.2114*
8.	Mass media exposure	0.0639
9.	Extension contact	–0.2120*
10.	Extension participation	–0.2275*
11.	Innovation proneness	0.0591
12.	Source of information consulted	0.0663
13.	Risk orientation	0.2324*
14.	Management orientation	0.1253
15.	Scientific orientation	0.0561

spondents who had less landholding, low extension contact and less extension participation needed training in nutrient management practices of cabbage-potato cropping system. It means that training is essential for farmers have less size of land, less extension contact and less extension participation. Their efficiency can be increased by arranging special training programs.

Conclusion

The findings of the study revealed that the vegetable growers expressed their need to enrich their knowledge and skills in procedure and importance of soil testing, calculation of nutrients based on recommendation in fertilizers, application of bio-fertilizers, secondary nutrients, micro-nutrients, potash, phosphorus and nitrogen as per recommendation. Out of 15 independent variables only credit orientation and risk orientation had significant relationship. similarly landholding, extension contact and extension participation had negative significant relationship. Hence, the training organizers could do well in reorienting the training programs for vegetable growers focusing attention on these aspects.

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