

Strategy for capacity building of the potential growers of export-oriented cutflowers

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Abstract : A study was conducted with a sample of 150 potential growers of export-oriented cutflowers identified through snowball sampling technique from Nilgiris district. The training needs of the respondents on knowledge and skill aspects of cutflowers and their preference to various dimensions of training were studied. Results indicate that farmers needed training in 12 major subject matter areas of cutflower cultivation for knowledge level and packaging technology of cutflowers for skill level training. Based on the felt needs of the respondents, appropriate capacity building strategies were formulated. (*Key Words :* Cutflowers, Training needs, Knowledge, Skill Preference, Strategy)

Investment in Human Resource Development in general and training in particular is widely accepted as a means of development strategy with high returns on investment. Capacity building refers to all those activities which essentially aim at providing the skills, knowledge and attitude required for employment in a particular occupation or for exercising a function in any field of economic activity. India has several advantages in floriculture and has excellent opportunities for export of cutflowers. In floriculture scenario, though Tamil Nadu is marked by cultivation of flowers, few farmers have already started export-oriented cutflower production. This condition necessitates to determine the farmers' preference to cultivation of cutflowers. Capacity building efforts by the extension personnel would be effective only when they are based on felt needs besides helping in framing of training curriculum and evolution of training strategies. Keeping these facts, a study was conducted with the following objectives: to identify the training needs of potential growers of export-cutflowers and to develop strategy to build the capacity of the potential cutflower growers.

Methodology

A sample of 150 potential growers of export-oriented cutflowers (those farmers who are interested to grow cutflowers on commercial scale, intending to target their produce for export market) were identified from the intensive floriculture areas suited for production of cutflowers, viz., Coonoor, Kotagiri and Udhamandalam taluks of Nilgiris district through Snowball sampling technique. A list of 15 major subject matter areas on knowledge aspects and 9 major subject matter areas on skill aspects of cutflowers were identified from the floriculture experts and progressive florists. The knowledge and skill level training needs of the respondents on

these major subject matter areas were assessed by using a three point rating scale, namely much needed, somewhat needed and not needed. It was quantified by assigning the scores of 3, 2 and 1 respectively. Mean scores were calculated to rank the subject matter areas. Per cent analysis was done to find out the respondents' preference on various dimensions of capacity building on cutflowers.

Results and Discussion

Training needs of potential growers of cutflowers

The training needs on major subject matter areas relating to knowledge aspects of cutflowers as preferred by the respondents are presented in Table 1. The overall average mean score was 2.81. Keeping this as a basis, the major subject matter areas were categorised as most important and least important for training. All the respondents needed training on 12 major subject matter areas, which almost represent the entire cultivation, protection and post harvest aspects of cutflowers. Cutflower has been a newly introduced enterprise in the study area since two years. The farmers in Nilgiris were not aware of the detailed technological and marketing aspects of cutflowers. Moreover export-oriented cutflower producers are required to maintain quality standards of the produce for which sound technical knowledge is a pre-requisite. Such a condition would have prompted the respondents to express 12 areas as the most preferred areas for training.

Skill level training needs on nine subject matter areas were assessed and the results are furnished in Table 1. All the respondents needed skill level training to varying degrees on all the areas except for irrigation technology. Moreover,

packaging technology of cutflowers was preferred by all the respondents. The sophistication involved in packaging and unawareness about the practice among the respondents might be the reasons for the perceived skill level training.

Strategy to build the capacity of potential grower of cutflowers

In order to formulate appropriate strategy to organize training for the farmers on cutflowers their preference on various dimensions of training such as the trainer, type, method, venue, month and duration of the training programme were analysed and the results are presented in Table 2.

It is evident that almost an equal per cent of the respondents preferred the training programme on cutflowers to be conducted by floriculture scientist (45.33 per cent) and progressive florist/farmer (44.67 per cent) who has more experience in cutflower

cultivation. Regarding the type of training, a majority of the trainees preferred institutional training (67.33 per cent). Nearly one-third of them preferred peripatetic training. The need for technical knowledge regarding cutflowers was felt to a greater extent by the respondents. Such a condition coupled with the lack of any extension efforts on cutflowers in the study area would have made majority of the respondents to prefer institutional training. This finding contradicts with that of Sekar *et al.* (1990), Adhiguru *et al.* (1993) and Mallika (1995) who reported that farmers favoured peripatetic training.

With regard to the methods of training nearly one-third of the respondents (30 per cent) and one-fifth of them preferred 'lecture with teaching aids' and 'demonstration' respectively. An equal percentage of respondents (11.33 per cent) preferred 'discussion forum' and 'panel discussion'. It was a proven fact that involvement of more number of

Table 1. Training needs of the respondents in major subject matter areas related to Cutflowers (knowledge level)

S.No.	Subject matter areas	Mean score	Rank (n=150)
<i>A. Knowledge level</i>			
1.	Soil and climate	3.0	
2.	Varieties	3.0	
3.	Planting material	3.0	
4.	Planting and spacing	3.0	
5.	Manures and fertilizers	3.0	I
6.	Cultural practices	3.0	
7.	Crop protection	3.0	
8.	Harvesting	3.0	
9.	Storage	3.0	
10.	Packaging	3.0	
11.	Supporting institutions	3.0	
12.	Marketing	3.0	
13.	Green house requirements	2.50	
14.	Grading	2.50	II
15.	Irrigation	1.26	II
<i>B. Skill level</i>			
1.	Planting	2.90	
2.	Fertilizer application	2.90	II
3.	Cultural operations	2.93	II
4.	Irrigation	1.26	V
5.	Crop protection	2.93	II
6.	Harvesting	2.90	II
7.	Grading	2.85	
8.	Storage	2.85	IV
9.	Packaging	3.00	I

senses would contribute for effective learning. Moreover the production of cutflowers involves more of specialised skills. Such conditions might have formed the basis for expressing lecture with teaching aids and skill demonstration methods as the preferred methods by most of the respondents.

With respect to the venue of the training, nearly one-third of the respondents (32.67 per cent) preferred florists fields in Nilgiris. A majority of them (67.33 per cent) preferred the institutional premises like IIHR (25.33 per cent), TNAU (24.67 per cent), State department of Horticulture (10.67

per cent) and KVK of UPASI, Coonoor (6.66 per cent) in that order. The existence of floriculture scientists, experimental plots, literature and other infrastructural facilities in the institutions might have prompted to prefer institutional training by majority of the respondents. This finding contradicts with that of Alagesan (1990).

With regard to the month of training exactly half of them preferred April as the convenient month for training. About one fourth of them (25.33 per cent) preferred March followed by May (14 per cent). Prevalence of congenial climatic conditions

Table 2. Dimensions of training on cutflowers as preferred by the respondents

(n=150)

S.No.	Training dimensions	Items	Number	Per cent
A. Trainer				
1.		Floriculture scientist	68	45.33
2.		Progressive florist (farmer)	67	44.67
3.		Horticulture Officer	15	10.00
B. Type				
1.		Institutional training	101	67.33
2.		Peripatetic training	49	32.67
3.		Correspondence course	0	0.00
4.		Farm School on AIR	0	0.00
C. Method				
1.		Lecture with teaching aids	45	30.00
2.		Demonstration	30	20.00
3.		Discussion forum	17	11.33
4.		Panel discussion	17	11.33
5.		Field trip/visit	15	10.00
6.		Study tour	15	10.00
7.		Seminar	5	3.34
8.		Group discussion	4	2.67
9.		Symposium	2	1.33
10.		Lecture	0	0.00
D. Venue				
1.		Florists' field (Nilgiris)	49	32.67
2.		IIHR	38	25.33
3.		TNAU	37	24.67
4.		SDH	16	10.67
5.		UPASI-KVK	10	6.66
E. Month				
1.		April	75	50.00
2.		March	38	25.33
3.		May	21	14.00
4.		Any month	16	10.67
F. Duration				
1.		One day	11	7.33
2.		Two days	62	41.33
3.		Three to five days	65	43.34
4.		More than five days	12	8.00

and lean season during the months of March and April might be the reasons for this.

Regarding the duration of training, more than one third (43.33 per cent) preferred three to five days training followed by two days training (41.33 per cent). This finding is in agreement with that of Rajagopal (1986).

Conclusions

It was found that 12 major subject matter areas were most important to be considered for knowledge level training. All the respondents needed skill level training on packaging technology of cutflowers. The appropriate capacity building strategy for the potential export-oriented cutflower growers would be to organise an institutional type of training, offered by floriculture scientist using lecture with teaching aids preferably in one of the florists' field during April for a period of three to five days considering the identified major subject matter areas of knowledge and skill aspects of cutflowers. The study implies that it is essential to organise training programmes on cutflowers production for the potential growers in Nilgiris.

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Relative abundance of rice stem borer species in Tamil Nadu

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Abstract : Three species of rice stem borers occurred in Tamil Nadu, of which yellow stem borer (YSB), *Scirpophaga incertulas* (Walker) was more predominant than pink stem borer (PSB), *Sesamia inferens*, (Walker) dark-headed borer (DSB), *Chilo polychrysus* (Meyrick) in both Kar (June-September) and Pishanum (Oct-Jan) seasons. The PSB was second most numerous (35.21%) in Kar and was relatively as abundant as YSB in Pishanum (48.43%). The DSB was less common during either season (4.29-7.18%). Varieties had variable composition of stem borer infestation. The YSB infestation was more from early tillering to maximum tillering stage, decreasing gradually with increasing PSB infestation from flowering stage. YSB was the most common species in all districts. PSB was more abundant than DSB in Coimbatore, Tanjore, Tuticorin, Madurai and Dharmapuri districts, whereas DSB was more numerous in Tirunelveli, Kanyakumari and Vellore districts. (**Key Words :** Stem borer, Rice, Species composition, Relative abundance).

Stem borers are most serious pests of rice in the tropical Asia (Pathak and Khan, 1994). They could not be controlled effectively despite the development of several management systems against them. Occurrence of diversified species at different

growth stages of rice is one of the factors that vitiate man's efforts to manage them. Though several species of stem borers are known to occur in Asia, the yellow stem borer (YSB), *Scirpophaga incertulas* (Walker) (Pyralidae: Pyraustinae : Lepidoptera)