

## Issues and Preferences of Horticulture Farmers

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### ABSTRACT

*A National Farmers Meet (NFM) was organized by Indian Council of Agricultural Research (ICAR) and Tamil Nadu Agricultural University (TNAU) at Regional Research Station (RRS), Paiyur, Tamil Nadu on 14.3.2015. The purpose was to sensitize the farmers about improved horticultural production technologies and obtain first-hand information about issues of horticulture farmers of Karnataka, Tamil Nadu, Andhra Pradesh and Kerala. A brief survey was conducted at NFM with horticulture farmers as respondents (60) through a structured questionnaire. Analysis of the survey data indicated that Mango, Tomato and Marigold are the major fruit, vegetable and ornamental crops cultivated respectively. Non-availability of critical inputs such as fertilizers, seeds/ planting material and lack of remunerative market price are the major issues in contemporary horticulture, apart from unawareness towards improved horticulture production technologies. Field demonstrations and off-campus training programmes are the two major extension interventions preferred by the horticulture farmers; whereas mass media channels are preferred as information sources apart from institutional sources such as development departments and research institutes. Appropriate extension strategies are suggested based on the findings of the survey.*

The diverse agro-climatic scenario in India enables production of a variety of tropical, sub-tropical and temperate horticultural crops, thereby facilitating crop-diversification, employment generation and livelihood security. The horticulture sector in India is a sunrise sector. The growth of this sector is faster than other sectors in the overall agricultural situation. One of the reasons is the increasing demand for fresh and processed horticultural produce from both rural and urban consumers. Horticulture sector in India encompasses production of fruits (32%), vegetables including tubers (60%), plantation crops (5%), spices (2%), flowers and medicinal plants and aromatic plants (1%). The export earnings through horticultural products

revolve around Rs.8761 crores (IIHR Annual Report, 2013-14).

Though India leads in production of many fruits and vegetables, the productivity of fruits (about 11 tonnes/ha) and vegetables (about 17 tonnes/ ha) is less compared to leading countries in the world. Amidst such circumstances, India aims to double its production of horticultural crops by 2030 to meet the ever growing demand. Hence, there is an indispensable need for enhancing production and productivity of horticultural products. Enhancing horticultural production is a factor of transfer of improved horticultural production technologies from research organizations to the horticultural farmers and other stakeholders. The transfer of improved

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horticultural production technology should be need-based, aimed at solving the contemporary issues faced by the horticulture farmers and match their preferences towards information sources and extension interventions. To augment such transfer of technology efforts, frequent assessment of issues faced by horticulture farmers and their preferences etc., is essential.

### **National Farmers Meet 2015**

With the above-mentioned background, Indian Council of Agricultural Research (ICAR) in collaboration with Tamil Nadu Agricultural University (TNAU), Coimbatore, organized a National Farmers Meet (NFM) at Regional Research Station (RRS), Paiyur, Tamil Nadu on March 13, 2015. It was an unique programme and first of its kind because about 1000 horticulture farmers from Karnataka, Tamil Nadu, Andhra Pradesh and Kerala participated in the programme. The immediate purpose was to create awareness about improved horticultural production technologies among the horticulture farmers and to understand the issues faced by them in horticulture production.

The NFM employed different extension methods such as exhibition of improved production technology of horticulture crops exhibited by various institutes of ICAR and TNAU, who mandated to work on horticulture crops; visits to demonstrations and experimental plots; method demonstrations of horticulture machinery and implements and farmers-scientists interface meeting. During the interface meeting, solutions were

suggested by the scientists towards the queries/ doubts raised by farmers. The scientists too obtained first-hand feedback about the contemporary issues in horticulture prevailing in Karnataka, Tamil Nadu, Andhra Pradesh and Kerala. In a nutshell, this programme was a complete one that catered to the information needs of farmers and scientists. This programme was also used as a platform to assess and prioritize the issues and preferences of horticulture farmers as reported earlier (Narayaswamy *et al.*, 2005). This paper discusses the salient findings that emanated from such assessment.

### **METHODOLOGY**

It was proposed during the NFM to conduct a survey in order to identify the major crops grown by horticulture farmers in Karnataka, Tamil Nadu and Andhra Pradesh; to assess the contemporary issues in horticulture faced by them; their information seeking behaviour and their preferences towards extension interventions. The purpose was to utilize such information for arriving at strategies towards pragmatic designing of extension programmes (Venkattakumar and Padmaiah, 2012).

To this effect, a structured interview schedule was designed and employed to collect the data from farmers, who participated in NFM. The interview schedule was distributed to the farmers, who visited the exhibition stall of ICAR-Indian Institute of Horticultural Research (IIHR), established at NFM site. Approximately 600 farmers (N-population) from Karnataka, Tamil Nadu and Andhra Pradesh visited the exhibition stall of ICAR-

IIHR. Out of the 600 farmers, 60 farmers (10%), filled-in the schedule and returned back, thus constituted the sample (n) of the study. The collected data were tabulated and analyzed.

The data pertaining to crops grown by the horticulture farmers was analyzed through percentage analysis, whereas the data pertaining to issues in horticulture as perceived by the farmers, their information seeking behaviour and their preferences towards extension interventions were analyzed through Rank-Based Quotient (RBQ) analysis.

The RBQ value was arrived through the following formula (Shenoy *et al.*, 2006):

$$RBQ = \frac{i^1_n \cdot f_i (n+1-i) \times 100}{N \times n}$$

where, i= rank concerned; N= total number of respondents responded for a critical success

factor; n= number of ranks; f<sub>i</sub>= number of farmers ranked a particular critical success factor under i<sup>th</sup> rank.

## FINDINGS AND DISCUSSION

### Major horticulture crops

Mango is the major fruit crop grown by nearly two-third of the participants (61.66%) of NFM, followed by Banana, which is grown by more than two-fifth of the respondents (43.33%) (Table 1). The horticulture farmers, who participated in the NFM also grow fruit crops such as Papaya and Guava. Among the vegetable crops, Tomato is the major one cultivated by three-fifth of the farmers (60.0%), followed by Hot Pepper, which is cultivated by nearly half of the farmers (48.33%). Egg-plant and Ladies Finger are the

**Table 1.**  
**Major Horticulture Crops Grown by Farmers (n=60)**

Sl.No.	Crop	percent (%)
1.	Mango	61.66
2.	Tomato	60.00
3.	Chilli	48.33
4.	Banana	43.33
5.	Jasmine	35.00
6.	Brinjal	26.66
7.	Papaya	21.66
8.	Rose	20.00
9.	Chrysanthemum	15.00
10.	Marigold	13.30
11.	Guava	11.66
12.	Okra	11.66

other major vegetable crops cultivated by the respondents.

Similarly, among the ornamental crops, Jasmine is the major crop cultivated by more than one-third of the farmers (35%), whereas Rose, Chrysanthemum and marigold are the other ornamental crops cultivated. Though, meaningful interpretations cannot be arrived-at about the crops cultivated by the respondents, the information given in Table 1 gives the profile of horticulture crops in terms of predominant crops grown and such information provides implications towards research and extension priority setting in Karnataka, Tamil Nadu and Andhra Pradesh.

### Issues in horticulture

Non-availability of critical inputs such as fertilizers, seeds/ planting material (rank 1 & 4) and lack of remunerative market price (rank 3) are the major issues in contemporary horticulture, apart from unawareness towards improved horticulture production technologies (Table 2). Such information implies the ineffectiveness of existing extension mechanism of the state level development departments. Hence, there is a need for promoting innovative extension models such as Horticultural Producers' Co-operative Marketing and Processing Society Ltd.

**Table 2.**  
**Issues in Production of Horticulture Crops** (n=60)

Sl.No.	Problems	RBQ Value	Rank
1.	Non-availability of fertilizers	70.7	1
2.	Unawareness towards improved production technologies	65.7	2
3.	Lack of remunerative market price	65.4	3
4.	Non-availability of planting materials /seeds	62.6	4
5.	Severe pest incidence	51.1	5
6.	Non-availability of timely market information	48.5	6
7.	Severe disease incidence	40.7	7
8.	Non-availability of insecticides/chemicals	38.1	8
9.	Lack of irrigation source/ facilities	30.0	9
	<b>Average</b>	<b>52.5</b>	

(HOPCOMS), National Dairy Development Board (NDDB) Safal, Farmers' Producer Organizations (FPOs), Contract Farming, Agri-clinics and Agribusiness Centres (ACABC) etc.,

who can cater to the broad-based needs of horticulture farmers. Severe pest incidence, non-availability of timely market information, severe disease incidence, non-availability of

insecticides/chemicals and lack of irrigation source/ facilities are the other issues in growing horticulture crops.

### **Information seeking behaviour of horticulture farmers**

It is interesting to note that the horticulture farmers seek information pertaining to horticulture production technology primarily

from Department of Horticulture (Rank 1) and Research Stations/ Institutes (Rank 3), apart from Television programmes (Rank 2) (Table 3). Radio (Rank 4) and newspapers (rank 5) are the other important mass media sources from which the horticulture farmers seek information. This information implies that there is a need to effectively utilize the mass media channels to disseminate improved

**Table 3.**  
**Information Seeking Behaviour of Horticulture Farmers**

**(n=60)**

<b>Sl.No.</b>	<b>Information Source</b>	<b>RBQ Value</b>	<b>Rank</b>
1.	Department of Horticulture	70.7	1
2.	Television	66.4	2
3.	Research Stations/Institutes	48.3	3
4.	Radio	45.2	4
5.	Newspaper	43.7	5
6.	Input dealers	38.1	6
7.	KVKs	36.3	7
8.	Progressive farmer / contact farmer	31.9	8
9.	NGOs	31.5	9
	<b>Average</b>	<b>45.8</b>	

horticulture production technologies to farmers. The development departments and research organizations need to formulate special strategies to utilize the mass media channels such as sponsoring radio serials, trying innovative television formats and writing success stories in news papers.

### **Preferences of horticulture farmers towards extension interventions**

Field demonstrations and off-campus training programmes are the two major extension interventions preferred by the horticulture farmers (Table 4). The

**Table 4.**  
**Preferences of Horticulture Farmers Towards Extension Interventions (n=60)**

Sl.No.	Intervention	RBQ Value	Rank
1.	Field demonstration	67.1	1
2.	Off-campus training	50.2	2
3.	Krishi mela	46.0	3
4.	Exposure visits	45.0	4
5.	Exhibition	45.0	4
6.	Interaction meeting	42.9	6
7.	On-campus training	38.1	7
	<b>Average</b>	<b>47.8</b>	

development departments/KVKs and extension wings of research institutes need to employ these interventions in order to effectively disseminate the improved horticulture production technologies. Here, the important point to remember is that, wherever, the field demonstrations are organized, corresponding field days are to be organized at the peak period of the crop.

Krishi melas, exposure visits, exhibitions, interaction meetings and on-campus training programmes are the other extension interventions expressed by horticulture farmers and their respective order of preference has been given in Table 4.

## CONCLUSION

The NFM organized by ICAR and TNAU at RRS, Paiyur, Tamil Nadu was a complete platform to analyse the issues and preferences in contemporary horticulture production. The

analysis of the response of farmers from Karnataka, Tamil Nadu and Andhra Pradesh implied meaningful suggestions towards effective extension strategies for dissemination of improved horticulture production technologies as follows:

- ❖ Non-availability of critical inputs is the major issue in horticulture production; hence, there is a need for promoting innovative extension models in horticulture to cater to broad-based needs of horticulture farmers.
- ❖ Mass media channels are the major sources of information for horticulture farmers in seeking information pertaining to improved horticulture production technologies; hence, the extension personnel need to effectively employ radio, television and newspapers for dissemination horticulture information.

- ❖ Field demonstrations coupled with field days and off-campus training programmes are the preferred extension interventions by horticulture framers; hence extension personnel need to effectively employ these methods effectively.

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