

Communication Behaviour of Kinnow Growers in Haryana

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ABSTRACT

The present study was conducted in Sirsa and Hisar districts of Haryana state with 80 farmers as a sample. The major thrust of the study was upon the communication behavior of the farmers to get information for scientific cultivation of kinnow crop. The District Horticulture Officer (DHO) and its officials were the most preferred source of information with maximum credibility and trustworthiness. The university scientists topped the list of information sources from the point of view of level of satisfaction derived by the kinnow growers. The farmers were having a large communication gap of 46.75 with the university scientists and a narrow communication gap of 18.50 and 17.75 with DHO/HDOs and the input dealers, respectively. However, the largest communication gap of 76.67 was found in case of radio. The higher caste and the well educated farmers considered university scientists a more reliable source and therefore seized to opt for input dealers.

Keywords: Communication behaviour, kinnow growers, district horticulture officer

India is the second largest producer of Fruits after China, with a production of 44.04 million tonnes of fruits from an area of 3.72 million hectares (Datta, 2013). A large variety of fruits are grown in India, of which mango, banana, citrus, guava, grape, pineapple and apple are the major ones. Citrus fruit was not a major crop prior to Kinnow introduction. The traditional orange (santra) varieties were scantily grown. Kinnow is refreshing, scented and mouth-watering because of its taste, ease of peeling and juice content unequalled by any other citrus fruit.

Citrus production in the country is 8.7 million tonnes at present with world ranking at sixth position after China, Brazil, USA, Spain and Mexico. It is expected that demand for citrus fruits would be to the tune of 12.6 million tonnes by 2030 with per capita citrus fruit availability of 8.5 kg per annum for anticipated population of 1500 million by that time. National Research Centre for Citrus has embarked upon much needed programme of distribution of disease free plating material to growers and nursery owners since more than a decade. Centre has been working for last 25 years on its agenda of developing and disseminating the required technologies for

enhanced productivity of quality fruits. (Ayyappan, 2011).

In Haryana, it is extensively grown in the districts of Sirsa, Hisar, Bhiwani, Mahendergarh and Ambala. Sirsa is the most famous district for producing the Kinnow crop and it has become the front runner in the production of Kinnow with the production of 40,000 metric tonnes. Kinnow is grown on over 7,000 hectares in the district. The state government has recently started a Kinnow grading and packing plant at Abubshahar in the district and would soon set up a food processing plant there. Enumerating various development works initiated by the government, krishi vyapaar kendras would be opened in all districts to give a boost to the export of horticulture crops. These centres would also disseminate information related to horticulture crops. Such centres had been set up at Hisar and Abubshahar.

Though improved technologies for maximizing Kinnow production are being made available to farmers through different types of extension agencies, yet the yield of Kinnow has not increased to a considerable extent. One of the important reasons for low yield of Kinnow may be communication gap

in transfer of technologies regarding recommended practices. It is well known fact that a wide gap exists in what the extension workers advocate and what the farmers adopt. Therefore, this calls for a thorough probing of the study for communication gap, which might be hindering the adoption of recommended operations to full possible extent. With this idea in mind, the present study was carried to study the communication behaviour of Kinnow growers.

METHODOLOGY

Sirsa and Hisar districts of Haryana state were selected purposively because of maximum number of Kinnow growers and the maximum area under Kinnow cultivation. Two blocks from each district were selected purposively i.e. Dabwali and Ellenabad from Sirsa district and Adampur and Uklana from Hisar district because of maximum area under Kinnow orchards which is due to the efforts made by DHO and its officials under National Horticulture Mission in the state. Further, two villages from each block were selected by using the simple random sampling technique. The villages selected were Daroli and Kuleri from Adampur block, Daulatpur and Uklana from Uklana block, Abubseher and Choutala from Dabwali and Bhurtwala and Dhani Jatan from Ellenabad block, respectively.

In each village a comprehensive list of Kinnow growers was prepared with the help of district horticulture office, sarpanch and key persons. The functional head of the farming families, who had developed Kinnow orchards were considered as the respondents of the study. Further, 10 farmers from each village were randomly selected. Thus, a total number of 80 farmers constituted the sample for the purpose of the study.

The major thrust of the study was on the communication behaviour of the farmers to get information for scientific cultivation of Kinnow. Farmers were asked about the sources from which they got information on different aspects of Kinnow cultivation. The respondents were also enquired whether they continued to utilise the same source subsequently or later shifted to other sources. These were measured on different continuum ranging from '0' to '5'.

The extent of the use of sources of information is the degree to which the farmers has actually used/

consulted a particular source of information. When the extent of use equals the idealised level, the use is recognised as maximum and full score are assigned to it, but when the extent is at the lowest level, the minimum scores are assigned to it as per the procedure.

Data thus collected were tabulated to draw meaning inferences. The frequency, percentage, range, mean, and coefficient of correlation were used in the analytical procedure.

RESULTS AND DISCUSSION

Information source credibility pattern

One of the major indicators of communication behaviour of the farmer is the pattern of utilization of different sources of information. This indirectly reflects on the credibility of different sources of information with the farmers. The credibility in information sources was also studied with regard to different operations of Kinnow cultivation along with the level of satisfaction and trustworthiness attributed to these sources.

Before attempting the information source preference pattern amongst the Kinnow growers it was relevant to know the information source preference pattern among farmers, in general.

Table 1 presented the source-wise preference pattern and the weighted source credibility score for each of the listed nine sources. A glance at the table revealed that District Horticulture Officer and its officials were most preferred source of information with a weighted source credibility score of 325, followed by fellow farmers/relatives/friends, university scientists and television with a score of 277, 247 and 133, respectively. Farm literature, cyber communication and input dealers were found popular at third level with 86, 53 and 27 weighted mean credibility score, respectively. It can be concluded that official change agents (DHO/HDO and University scientists), fellow farmers and television were the major sources preferred by the farmers for getting scientific information on farming in general.

The above situation appeared after the initiation of National Horticulture Mission (NHM) in Haryana and some other states by the ministry of horticulture, Govt. of India. Being initial stage or the first phase of NHM the personnel of the department worked

Table 1: Information Source Credibility among Respondents in General (n = 80)

Sl. No.	Information Source	Preference Pattern					Weighted source credibility score
		First	Second	Third	Fourth	Fifth	
1	DHO/HDO	38 (47.50)	31 (38.75)	3 (3.75)	1 (1.25)	—	325
2	University scientist	21 (26.25)	21 (26.25)	17 (21.25)	3 (3.75)	1 (1.25)	247
3	Radio	—	—	5 (6.25)	7 (8.75)	7 (8.75)	36
4	Television	3 (3.75)	3 (3.75)	7 (8.75)	39 (48.75)	7 (8.75)	133
5	Cyber communication	1 (1.25)	2 (2.50)	1 (1.25)	9 (11.25)	19 (23.75)	53
6	Fellow farmers/relatives/friends	9 (11.25)	19 (23.75)	45 (50.25)	7 (8.75)	7 (8.75)	277
7	Agricultural magazines/literature	7 (8.75)	3 (3.75)	2 (2.50)	7 (8.75)	19 (23.75)	86
8	Non-official change agents	—	1 (1.25)	—	2 (2.50)	8 (10.00)	16
9	Input dealers	1 (1.25)	—	—	5 (6.25)	12 (15.00)	27

Figures in parenthesis indicate percentage of respondents

with whole of their dedication and devotion and accordingly they became successful in motivating/convincing many of the farmers for diversification/change of their farming pattern and to convert their farms into Kinnow orchards. The above farmers who were on the adoption stage i.e. the last and final of the five stages of the adoption process and were already in contact of the DHO and its officials, started seeking for more and more information on Kinnow production practices from them. In addition to it, the horticulture department provided the incentives or the monetary benefits in the form of subsidy for various aspects of developing orchards.

This might be an important reason behind the farmers' first preference for DHO/HDO as a source of information. Similarly, Bhatia (2015) also reported that farmers seek information from agricultural scientists. This has brought farmers and scientists closer to understand the suitability of technology in farmer's perspective. Further he mentioned that acquisition of information has been regarded as a factor playing important role in moulding farmers behaviour leading to adoption. Ansari and Singh (2005) found that agriculture scientists, demonstration, television and village level workers were recognized as the most credible sources of information among televiewer farmers. Om-Prakash and Katiyar (2007) also concluded that major sources of communication utilized by the farmers in watershed areas were agricultural scientists (76%).

The low credibility of radio and cyber communication of this study is in conformity with Bhatia (2015) who also mentioned that least used sources were radio and internet. Whereas, Mishra (2008) found that

radio was most popular medium for agricultural information among farmers. Usman *et al.* (2008) found that lack of focus on citrus in television and radio broadcasts was perceived to be the topmost information related problem faced by citrus growers.

Manjunath and Balasubramanya (2002) observed that majority of the respondents reported that irregularity of the farm magazines and non-availability of farm magazines in rural areas as the most important reasons coming in the way of reading and better utilization of farm magazines.

Information source preference pattern for Kinnow cultivation

The thrust of the research was to study the communication behaviour of the farmers in relation to getting information for various Kinnow cultivation practices. This information was collected with regard to twelve major recommended practices of Kinnow cultivation. A perusal of table 2 revealed that farmers got information from different sources differently from aspect to aspect. The DHO/HDO, university scientists, fellow farmers and relatives were the major sources of information for almost all the aspects of Kinnow cultivation with a varying percentage of respondents. The farm magazines, television, cyber communication, input dealers and radio were the least preferred sources for various practices of Kinnow growing practices.

Practice wise DHO and its officials was the most preferred source of information for selection of site, land preparation, orchard planning, pit preparation, time of planting, planting material, application of fertilizers, agronomic practice, plant protection and

Table 2: Information Source Preference Pattern for Kinnow Cultivation (Practice-wise) n=80

Sl. No.	Information source	Selection of site	Land preparation	Orchard planning	Pit preparation for planting	Time of planting	Planting material	Inter cropping	Application of fertilizer	Irrigation	Agronomic practices	Plant protection	Training and pruning
1	DHO/HDO	45 (56.65)	43 (53.75)	63 (78.75)	67 (83.75)	46 (57.50)	51 (63.75)	5 (6.25)	47 (58.75)	33 (41.25)	51 (63.75)	61 (76.25)	63 (78.75)
2	University scientist	3 (3.75)	7 (8.75)	3 (3.75)	9 (11.25)	15 (18.75)	17 (21.25)	11 (13.75)	15 (18.75)	17 (21.25)	13 (16.25)	15 (18.75)	15 (18.75)
3	Radio	—	—	—	—	—	—	—	—	—	1 (1.25)	—	—
4	Television	—	—	—	—	—	—	—	1 (1.25)	—	2 (2.50)	—	—
5	Cyber communication	—	—	1 (1.25)	—	1 (1.25)	—	—	1 (1.25)	1 (1.25)	1 (1.25)	—	—
6	Fellow farmers/ relatives/ Friends	7 (8.75)	3 (3.75)	5 (6.25)	1 (1.25)	7 (8.75)	9 (11.25)	11 (13.75)	3 (3.75)	7 (8.75)	5 (6.25)	2 (2.50)	1 (1.25)
7	Agricultural magazines/ Literature	—	—	—	—	5 (6.25)	—	—	—	—	—	—	—
8	Non-official change agents	—	—	—	—	1 (1.25)	—	—	—	—	—	—	—
9	Input dealers	—	—	—	—	—	—	—	—	—	—	—	—
10	Self	25 (31.25)	27 (33.75)	8 (10.00)	3 (3.75)	4 (5.00)	3 (3.75)	53 (66.25)	13 (16.25)	22 (27.50)	7 (8.75)	—	—

Table 3: Level of Satisfaction Derived by Kinnow Growers from Different Information Sources Mean satisfaction score (practice-wise) n=80

Sl. No.	Information source	Selection of site	Land preparation	Orchard planning	Pit preparation for planting	Time of planting	Planting material	Inter-cropping	Application of fertilizer	Irrigation	Agronomic practices	Plant protection	Training and pruning
1	DHO/HDO	2.61	2.52	2.50	2.39	2.40	1.46	1.80	2.00	2.33	1.93	1.62	2.00
2	University scientist	2.40	2.51	2.75	2.25	2.67	2.11	2.16	2.57	2.50	2.21	2.11	2.5
3	Radio	—	—	—	—	—	—	—	1.5	—	1.5	2.00	—
4	Television	—	—	—	—	—	—	—	2.5	—	2.5	2.52	1.5
5	Cyber communication	—	—	—	—	3.00	—	1.5	2.5	—	—	1.55	—
6	Fellow farmers/relatives/friends	2.5	2.00	2.40	2.37	2.85	2.33	2.33	—	2.00	—	—	2.00
7	Agricultural magazines/literature	—	2.25	—	2.52	2.00	1.75	2.00	3.00	2.66	1.66	1.5	2.00
8	Non-official change agents	—	—	—	—	—	—	—	2.00	1.5	—	—	—
9	Input dealers	—	—	—	—	—	—	—	1.52	2.00	—	—	—

training and pruning with 56.65, 53.75, 78.75, 83.75, 57.50, 63.75, 58.75, 63.75, 76.25 and 78.75 per cent, respectively. However, for time of planting, planting material, application of fertilizers, irrigation, plant protection and training and pruning, about 19 per cent farmers in each case got information from the university scientists.

Almost 30 per cent of the Kinnow growers took decision on their own regarding selection of site, land preparation and irrigation and majority of Kinnow growers (66%) decided themselves for intercropping.

Level of satisfaction derived from different information sources

The situation obtained is that the farmer are being exposed to farm information through different media or we may say that the farmers are utilizing different sources for obtaining information on different aspects of Kinnow cultivation. In view of this it was considered relevant, to know the extent to which the farmers derived satisfaction from these sources in getting information on different operations of Kinnow cultivation. Table 3 clearly revealed that satisfaction derived by the farmers from different information media was above average level of satisfaction. Comparatively, university scientists topped the list of information sources with a weighted mean satisfaction score of 2.39 out of a maximum obtainable score of 3.00. The fellow farmers and relatives and television were the other source which offered high level of satisfaction to farmers, the weighted mean satisfaction score being 2.30 and 2.25, respectively. The DHO/HDO and farm literature and magazines, these two sources were placed at 4th rank with a weighted mean score of 2.13 as far as the level of satisfaction was concerned.

However the university scientists topped the list of information sources from the point of view of level of satisfaction derived by the Kinnow growers followed by fellow farmers/relatives/friends, television and the DHO/HDO on the 2nd, 3rd and 4th rank, respectively. Again, non official change agents and input dealers including radio were kept at bottom from point of view of level of satisfaction provided by these sources to the Kinnow growers. Radio, however provided the least satisfaction, the reason behind this might be that radio did not provide the facility of interpersonal communication and also there is no provision of feedback except in one programme

i.e. phone in karyakaram because the inter-personal communication provides the maximum satisfaction to the audience. There appeared a positive view point of the farmers towards the university scientists because the farmer now a days are very much aware and they knew the fact that the university scientists are more literate, more responsible and they provide the research based and logical information to the farmers. The Kinnow growers/farmers might have approached the university scientists only when the DHO/HDO recommended the Kinnow growers to the university scientists to seek certain specific information regarding the crop because within the discipline they have got crop-wise specialization after making a deep and continuous research. This may also be one reason that the farmers derived maximum satisfaction from university scientists. Secondly, the farmers might have visited the university simply for the sake of soil and water testing which is compulsory feature before raising an orchard and during their visit for the above mentioned simple reason, they might have contacted the scientists who have got specialization on this aspect and are capable of giving complete information to the best satisfaction of the farmers.

The cyber communication, input dealers and non official change agents were placed at 6th, 7th and 8th ranks with a weighted mean satisfaction score of 2.12, 1.76 and 1.75, respectively. However, the radio was kept at bottom with a weighted mean score of only 1.66 thereby providing least satisfaction to the Kinnow growers. This might be because of either the Radio programmers not broadcasting information related to Kinnow cultivation and if broadcasting might not be in an effective manner. The farmers drew maximum satisfaction from the university scientists perhaps due to the fact that they used to be the first source of information and provided first hand genuine information to the farmers without any ambiguity.

CONCLUSION

As far as the credibility use of information sources by the kinnow growers is concerned, the data revealed that the DHO and its officials were the most preferred source for the almost all the operations of kinnow cultivation with a maximum credibility, the input dealers and non official change agents were on the bottom as far as their credibility was concerned.

The DHO and its officials being the first preference of kinnow growers regarding information on the kinnow production practices was because of the fact that the farmers used to meet them frequently and were already in contact with them. The findings further revealed that 30 per cent of the kinnow growers took discussion on their own regarding selection of site, land preparation, irrigation and for intercropping. This might be because, the farmers considered these operations of kinnow growing, quite a easy task and the farmers were very much confident that the guidance/suggestion given by other sources of information cannot be better than their own decision.

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