

Persuasion of Farmers Toward Kinnow Cultivation

Kuldeep Singh Brar¹ and K.L. Dangi²

ABSTRACT

The study was conducted in Sri Ganganagar and Sri Karanpur panchayat samities of Sri Ganganagar district. The majority of respondents had expressed favourable persuasion towards kinnow cultivation. It was noticed that farmers had highest degree of agreement with statement i.e. kinnow cultivation is good source of income in farmers' economy and least level of agreement with statement i.e. proper advice and training for its cultivation is easily available from department of horticulture.

Fruits are of great importance in human nutrition. At present, next to China, India is the second largest producer of fruits. Citrus is world's leading fruit crop. It is also known as fancy fruit. India occupies 0.488 million hectares area under citrus fruits with a production of 4.575 million tonnes (1.39 per cent of total production under fruits). Among the citrus fruits, mandarin is placed at the first position with respect to the area and production, which is followed by sweet oranges and limes. Commercially, kinnow mandarin is grown in the states like Punjab, Haryana, Himachal Pradesh, Western Rajasthan and Uttar Pradesh.

In general, kinnow is consumed as desert fruit. Its demand is increasing day by day because of its high nutritive value. In Rajasthan, kinnow is mainly grown in Sri Ganganagar and occupies 2027 hectares area with good production potential, which could be further developed in the form of kinnow bowl. Looking to the importance of kinnow fruit, it is essential that farmers of the state should be motivated for decision to adopt recommended cultivation on a large scale. Looking to the importance of kinnow fruit, it is essential that farmers of the state should be motivated for decision to adopt recommended cultivation on a large scale. Keeping this fact in view, the present investigation was undertaken with an objective to study the persuasion level of respondents towards kinnow cultivation in Rajasthan.

METHODOLOGY

The present study was under taken in Sri Ganganagar and Sri Karanpur panchayat samities of Sri Ganganagar district. District and panchayat samities were selected purposely due to having highest area and production of kinnow fruit as compared to other panchayat samities and districts in the state. From the selected panchayat samities, ten villages from each selected panchayat samities, which were having maximum area and production under the kinnow cultivation, were selected. From the selected villages, a sample of 150 respondents was selected by simple random sampling technique from the study purpose. Data were collected by the researcher with the help of well constructed interview schedule by the face to face method of interview technique. Thereafter, collected data were analyzed, tabulated and interpreted in the light of above objective.

RESULTS AND DISCUSSION

To get an overview of the farmers regarding their persuasion toward kinnow cultivation, they were classified into three categories *i.e.*, most favourable, favourable and least favourable on the basis of calculated mean and standard deviation of the persuasion score obtained by them.

Data given in Table 1 reveal that nearly three-

¹Ph.D. Scholar, Department of Extension Education, RCA, MPUAT, Udaipur

²Associate Professor, Department of Extension Education, RCA, MPUAT, Udaipur

fourth of the respondents (66.67 per cent) had favourable persuasion towards kinnow cultivation followed by 16.00 per cent of them who had expressed most favourable persuasion. However, only 17.33 per cent of farmers expressed least favourable persuasion toward kinnow cultivation.

Critical look at Table 1 brings to focus that 48

(64.00 per cent) small and 52 (69.33 per cent) big kinnow farmers had favourable persuasion toward kinnow cultivation. Besides, 10 (13.33 per cent) small and 14 (18.67 per cent) big kinnow farmers possessed most favourable persuasion toward kinnow cultivation.

However, 17 (22.67 per cent) small and 9 (12.00 per cent) big kinnow farmers showed least favourable persuasion toward kinnow cultivation.

Table: 1 Distribution of respondents according to their level of persuasion about recommended practices of kinnow cultivation N= 150

S. No.	Persuasion level	Small farmers		Big farmers		Total	
		f	%	f	%	f	%
1.	Most favourable(Up to 69.43)	17	22.67	9	12.00	26	17.33
2.	Favourable(69.44-90.42)	48	64.00	52	69.33	100	66.67
3.	Least favourable(Above 90.42)	10	13.33	14	18.67	24	16.00
TOTAL		75	100.00	75	100.00	150	100.00

f = Frequency, % = Per cent, Mean= 79.93 & Std. Deviation = 10.50

The findings of the present study are in line with the findings of Mohammad (2000) who observed that half of the orchard owners (50 per cent) and more than half of the non-orchard owners, 53.33 per cent possessed favourable attitude toward orchard development in the study area. The above findings are also supported by Mewara (2003) who reported that over three-fourth of farmers (78.70 per cent) had highly favourable attitude followed by medium (19 per cent) and low (2.30 per cent) attitude, respectively toward mango cultivation.

Statementwise persuasion of respondents toward kinnow production technology was also worked out. For this per cent level of agreements were calculated and statement wise persuasion of respondents measured on five point continuum scale has been presented in Table 2. It is obvious that the most important statements of highest degree of persuasion were “kinnow cultivation is good source of income in farmers’ economy”, “intercropping with the fruit plants provides additional income during initial years”, “kinnow cultivation is the right step of Directorate of Horticulture” and “there has been growing emphasis from government agencies for its promotion; therefore we prefer its cultivation” and “the soil and climate of our area is almost suitable for its cultivation therefore we prefer it” owing to the per cent score 97.33, 95.73, 92.27, 92.13 and 90.67, respectively. The reason is that respondents possessed complete knowledge about the fact that kinnow is world-leading

fruit and it gives good return in their economic. The statements which have high degree of persuasion were “there is demand of kinnow in preserve industries”, “kinnow cultivation creates desirable consequences on soils”, “recommendations are on the scientific lines and beneficial to all categories of farmers”, “the crop fetches remunerative prices against other staple/ pulse/oil seed crops”, “kinnow cultivation easily generates employment opportunities”, “cost is less in its cultivation compared to benefits” and “due to availability of suitable plant material kinnow cultivation can be taken up by the farmers” with score 87.47, 87.47, 83.33, 82.13, 81.73 and 80.80, respectively. The high agreement expressed by the respondents about these aspects may be due to the fact that the demand of propagated plants were less compared to its supply by the authentic nurseries and scientific guidelines are more beneficial for farmers to get good profit.

The table further indicates moderate persuasion toward the statements like “human nutrition problem is solved by its cultivation”, “value additions in fruits give very high return to the kinnow growers” and “proper and well established marketing channels are there in our area for its selling”, had scoring 78.27, 77.47 and 70.93 respectively. The reason behind such persuasion may be due to the reason that value added product’s market demand was currently known by the farmers and also

Table: 2 Statementwise persuasions of respondents toward kinnow cultivation

S. No.	Statements	Number of respondents					% level of agreement
		SA	A	UD	DA	SDA	
1.	Kinnow cultivation is good source of income in farmers' economy.	134	12	4	0	0	97.33
2.	Kinnow cultivation is less technical skill and knowledge intensive	4	7	5	87	47	37.87
3.	Intercropping with the fruit plants provides additional income during initial years.	122	24	4	0	0	95.73
4.	Proper advice and training for its cultivation is easily available from department of horticulture	3	5	4	91	47	36.80
5.	There is demand of kinnow in preserve industries.	90	38	22	0	0	89.07
6.	Credit and subsidy facilities are adequate for its cultivation.	2	23	5	68	52	40.67
7.	The soil and climate of our area is almost suitable for its cultivation therefore we prefer it.	103	35	4	5	3	90.67
8.	Kinnow cultivation easily generates employment opportunities.	25	116	9	0	0	82.13
9.	Cost is less in its cultivation compared to benefits.	25	113	12	0	0	81.73
10.	Human nutrition problem is solved by its cultivation.	25	99	14	12	0	78.27
11.	Kinnow cultivation is the right step of Directorate of Horticulture.	102	38	10	0	0	92.27
12.	Kinnow cultivation creates desirable consequences on soils.	106	10	20	12	2	87.47
13.	Proper and well established marketing channels are there in our area for its selling.	25	81	7	25	12	70.93
14.	Due to availability of suitable plant material kinnow cultivation can be taken up by the farmers.	23	117	3	7	0	80.80
15.	The crop fetches remunerative prices against other staple/ pulse/ oil seed crops.	97	12	19	13	9	83.33
16.	The extension agents working in our area are competent enough to educate us about its scientific cultivation.	1	22	7	96	24	44.00
17.	There has been growing emphasis from government agencies for its promotion; therefore we prefer its cultivation.	126	7	4	8	5	92.13

18.	Lack of proper training is not a barrier in its cultivation.	3	23	24	92	8	49.47
19.	Value additions in fruits give very high return to the kinnow growers.	25	97	12	16	0	77.47
20.	Fruits being a perishable commodity involve less risk.	24	10	12	94	10	52.53
21.	Recommendations are on the scientific lines and beneficial to all categories of farmers.	102	19	17	7	5	87.47
22.	Farmers can afford the higher initial cost for developing kinnow orchard.	19	8	17	94	12	50.40

SA = Strongly Agree, A = Agree, UD = Undecided, D = Disagree, SD = Strongly Disagree

they know that its nutritional value.

Respondents expressed good level of persuasion toward the statements *viz.*, “fruits being a perishable commodity involve less risk” and “farmers can afford the higher initial cost for developing kinnow orchard” owing to the per cent score 52.53 and 50.40, respectively. This might be due to the fact that horticulture department provide subsidies under NHM project to farmers.

The respondents expressed slightly favourable persuasion toward statement, “lack of proper training is not a barrier in its cultivation”, “credit and subsidy facilities are adequate for its cultivation” and “the extension agents working in our area are competent enough to educate us about its scientific cultivation” owing to the per cent score 49.47, 40.67 and 44.00, respectively. This might be due to the reason that initially cost was high to establishment of kinnow orchard and technical skills, knowledge and trainings were not timely provided to all kinnow growers by the extension agencies. However, the statement, “kinnow cultivation is less technical skill and knowledge intensive” and “proper advice and training for its cultivation is easily available from department of horticulture” these shows low level of persuasion because the training facilities are provided to some kinnow growers because training schedule are not timely communicated among the kinnow farmers, which provides the negative response of farmers.

The present findings are in agreement with the findings of Tiwari (1983), who found that as far as possible, the farmers like the trees that yield more than one of the principal produce. The study further reported a significant difference in the attitude of farmers of tribal and non-tribal villages. Similar findings are also reported by Meena

(2003) who found that the 60 per cent of the tribal respondents possessed moderate attitude followed by 16.25 per cent with more favourable attitude and 23.75 per cent respondents possessed less favourable attitude. Whereas, majority of non-tribal respondents (85 per cent) were found to have moderate attitude, followed by 15 per cent with more favourable attitude..

CONCLUSION

Based on findings, it could be concluded that majority of respondents (82.67 per cent) had medium to high level of persuasion of recommended practices of kinnow cultivation. This might be due to the fact that farmers are realizing the importance of kinnow from the point of view of economic values. As new technology *i.e.*, kinnow cultivation provided an opportunity to the farmers to fulfill their needs by getting more income. However, the least favourable persuasion of farmers might be due to higher initial cost for developing kinnow orchard, disease sensitive, late establishment of plants, and lack of processing facilities, training, technical skill & knowledge about kinnow cultivation. Hence, it may be inferred that majority of kinnow growers had positive persuasion toward kinnow cultivation. Therefore, it must be recommended that kinnow crop be introduced among the other area of state and elsewhere.

Further, it was concluded that farmers had highest degree of agreement with statement like, kinnow cultivation is good source of income in farmers' economy and least level of agreement with proper advice and training for its cultivation is easily available from department of horticulture. In depth view of persuasion of the farmers reveals that farmers cannot afford the higher initial cost for developing kinnow orchard and the

credit and subsidy facility are inadequate for kinnow cultivation, therefore there is need to increase the subsidy for its cultivation. Side by side credit facility must be streamlined. At the same time less favourable attitude is also reported by the farmers about “kinnow cultivation is less technical skill and knowledge intensive”, “proper advice and training for its cultivation is easily available from department of horticulture” and “lack of proper training is not a barrier in its cultivation” therefore more number of training programme and demonstrations should be timely conducted by the respective ARS, KVK and AD(horticulture) giving emphasizing on the following aspects of production technology be organized for kinnow growers (a) plant protection (b) nursery raising and plant propagation (c) cultural practices (d) storage and marketing.

REFERENCES

Meena, H.R. (2003). Cultivation of safed musli as medicinal plants by tribal and non-tribal farmers of Udaipur district of Rajasthan. M.Sc.

Agriculture. thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan.

Mewara, R.C. (2003). Knowledge and adoption of farmers about mango cultivation in Valsad district of South Gujarat. M.Sc. (Ag.) thesis submitted to Navsari Agricultural University, Navsari, Gujarat.

Mohammad, A. (2000). Problems and prospects of orchard development in Hadauti region of Rajasthan State. Ph.D. thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan.

Tiwari, K.M. (1983). Social forestry for rural development. *Indian Journal of Forestry* **109**: 66-67.