

Short Communication

Technological needs of farm women in post-harvest practices of kinnow (Citrus Deliciosa)

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Abstract

The present study was carried out in Sri Ganganagar district of Rajasthan to find out technological needs of farm women in post-harvest practices of kinnow. Two panchayat samities Sri Ganganagar and Sri Karanpur were selected purposively. Two villages from each panchayat samiti were selected on the basis of highest production of kinnow. The total sample consisted of 100 farm women selected from four villages of selected panchayat samities. Personal interview technique was used for data collection. Frequency, percentage and mean per cent scores were used for analysis of data. The findings revealed that respondents had poor knowledge and adoption in post-harvest practices of kinnow with over all mean per cent score of 28.69 and 28.80. The over-all gap in knowledge and adoption of post-harvest practices was found high. Wide knowledge gap was existed in storage (78.5%), marketing (76.84%), grading (65%), packaging (59.08%). Similarly high adoption gap was observed in the components viz-waxing (100%), processing (100%), transportation (91%).

Keywords: Technological needs Post-harvest technologies, Knowledge, Adoption.

Introduction

Horticulture is one of the fastest growing sectors of agriculture. The growth of this sector was about 5.5% during last two and half decades¹. Among all fruits citrus is world's leading fruit crop. Among the citrus fruits Mandarin is placed at the first position with respect to the area and production. In India, Kinnow is being grown in Punjab, Rajasthan, Haryana, Himachal Pradesh, Jammu and Kashmir and Utter Pradesh². Rajasthan is considered to be potential area of fruit growing. The area under kinnow cultivation in Rajasthan is 8,290 hectare and production is 157,460 metric tonnes with 19.0 metric tonnes productivity³. Kinnow production is highly remunerative but requires proper handling with respect to post-harvest treatments like plucking, grading, washing, waxing storage, packaging, transportation, marketing etc. Use of appropriate post-harvest technologies reduces the post-harvest storage losses, adds value to product and generate employment in village and re-establish agro-industries in rural sector⁴. The condition of women is rather more alarming as they hardly have any access to new post-harvest practices. It has been observed that due to lack of knowledge farm women are still using traditional post-harvest practices of kinnow which adversely affecting the shelf-life of kinnow as this fruit is highly perishable in nature which cannot be retained without technological arrangement for sorting and processing to achieve better market price and nutrition at household level. Asides from this due to farmers cash need and seasonal glut they are compelled to sell their produce at low price during harvest. On the other side, during the lean period they have nothing to sell when price is very high. So they are

deprived of getting the share of high price paid by the consumers. More over it is very regrettable that post-harvest losses of fruits and vegetables are about 30% due to lack of proper post-harvest management and marketing system. In fact it means that 30% of land output and labour used to produce fruits and vegetables go to misuse⁵. Post-harvest activities are an integral part of the food production system in which women plays a dominant role. An estimated average of 80 percent of the handling work is done by women. Since, Women are the major contributor in post-harvest handling of kinnow and due to their wide technological gap in knowledge and adoption these losses are very high. A number of improved post-harvest technologies are recommended to get maximum benefits out of kinnow cultivation. Yet the growers are not following all the recommended technologies To minimize these losses it is important to equip them with latest post-harvest technologies by providing adequate access to information. So in order to formulate need based programme for rural women it is necessary to find out the specific areas in which technology needs are higher knowledge of rural women is lacking.

Materials and methods

The present study was conducted in Sri Ganganagar district of Rajasthan sate. Out of seven panchayat samities two panchayat samiti viz Sri Ganganagar and Sri Karanpur were selected purposively on the basis of highest production of kinnow. From each panchayat samiti, two villages were selected on the basis of highest production of kinnow. From Sri Ganganagar panchayat samiti 10Q and 8A Chhoti and from Sri Karanpur

panchayat samiti 4T and 18H villages were selected. For sample selection village wise list of farm women involved in kinnow cultivation was prepared with the help of Patwari, out of which 25 women were randomly selected from each village constituting the sample of 100 farm women for the study. Interview schedule was used to collect the data through personal interview method. The data collected were then tabulated and analyzed by using suitable statistical measures. For practice wise technological gap in post harvest practices of kinnow were ascertained by using the following formula and expressed in percentage.

Frequency and percentage: Frequency and percentage were used to analyze background information, knowledge of respondents in post-harvest practices of kinnow.

Mean percent score: To measure knowledge and adoption of the respondents regarding post-harvest practices of kinnow mean percent scores were calculated by using following formula-

$$MPS = \frac{\text{Sum of scores obtained by the respondents in an item}}{\text{Maximum obtainable score}} \times 100$$

Technological gap in each practices= Calculated Mps in each practices -100

Results and discussion

Technological gaps in harvest practices of kinnow (Citrus Deliciosa): Aspects in which knowledge and adoption of the farm women was lacking, technological needs or gaps were identified on the basis of MPS calculated for both knowledge and adoption of the respondents in different aspects of post-harvest practices of kinnow. Technological needs of the respondents in different aspects of post-harvest is depicted in Table-1. Cursory of the table divulges that the overall knowledge gap in post-harvest practices was 71.31 percent which shows the poor knowledge of the respondents in all the

post-harvest activities. Component wise knowledge gap focuses that highest gap was observed in the components processing (100%), waxing (93.1%) and transportation (84.38%) which were ranked I, II, III respectively. This indicates the need for strengthening of extension efforts by the concerned extension agency to increase the knowledge and participation of women in these activities. Similarly a wide knowledge gap was found in the components-storage (78.5%), marketing (76.84%), grading (65%) and packaging (59.08). Medium technological gap was found in the components washing and cleaning (48.17%), plucking (43.5%). This was due to the reason that women were participating in these activities either independently or with male members so they had knowledge regarding these aspects.

Data in Table-1 further show that overall adoption gap of post-harvest practices was 71.20 percent. Highest gap was observed in the components waxing (100%), processing (100%), transportation (91%) and marketing (88.86%). There was wide adoption gap in different components viz-storage (80.29%), packaging (77.28%), washing and cleaning (74%). This was due to their low knowledge regarding these aspects. In grading technological gap was found medium because respondents possessed average knowledge and participation in this aspect. The findings of the study are in agreement with the findings of Dubey⁶.

Based on the findings it can be concluded that wide knowledge gap exists in almost all the aspects of post-harvest practices of kinnow. This was due to the non-participation of women in post-harvest practices of kinnow as the activities are highly technical in nature and were mostly performed by male members of the family. Besides this the women did not have any access to the information related to post-harvest practices of kinnow and none of them attended any training programme related to the aspect. Finding of the study also reflects that there exists a wide adoption gap in those aspects in which knowledge of the women was found to be poor which means knowledge is prerequisite for adoption of practice.

Table-1: Knowledge and Adoption gap of the respondents in post-harvest practices of kinnow.

S.No	Components	Knowledge			Adoption		
		MPS	Gap (%)	Rank	MPS	Gap (%)	Rank
1.	Plucking	56.5	43.5	IX	56.50	43.57	VIII
2	Washing and cleaning	51.83	48.17	VIII	26.0	74	VI
3	Grading	35.00	65	VI	35.0	65	VII
4	Waxing	6.9	93.1	II	0	100	I
5	Packaging	40.92	59.08	VII	22.72	77.28	V
6	Storage	21.5	78.5	IV	19.71	80.29	IV
7	Processing	0	100	I	0	100	I
8	Marketing	23.16	76.84	V	11.14	88.86	III
9	Transportation	15.62	84.38	III	9.0	91	II

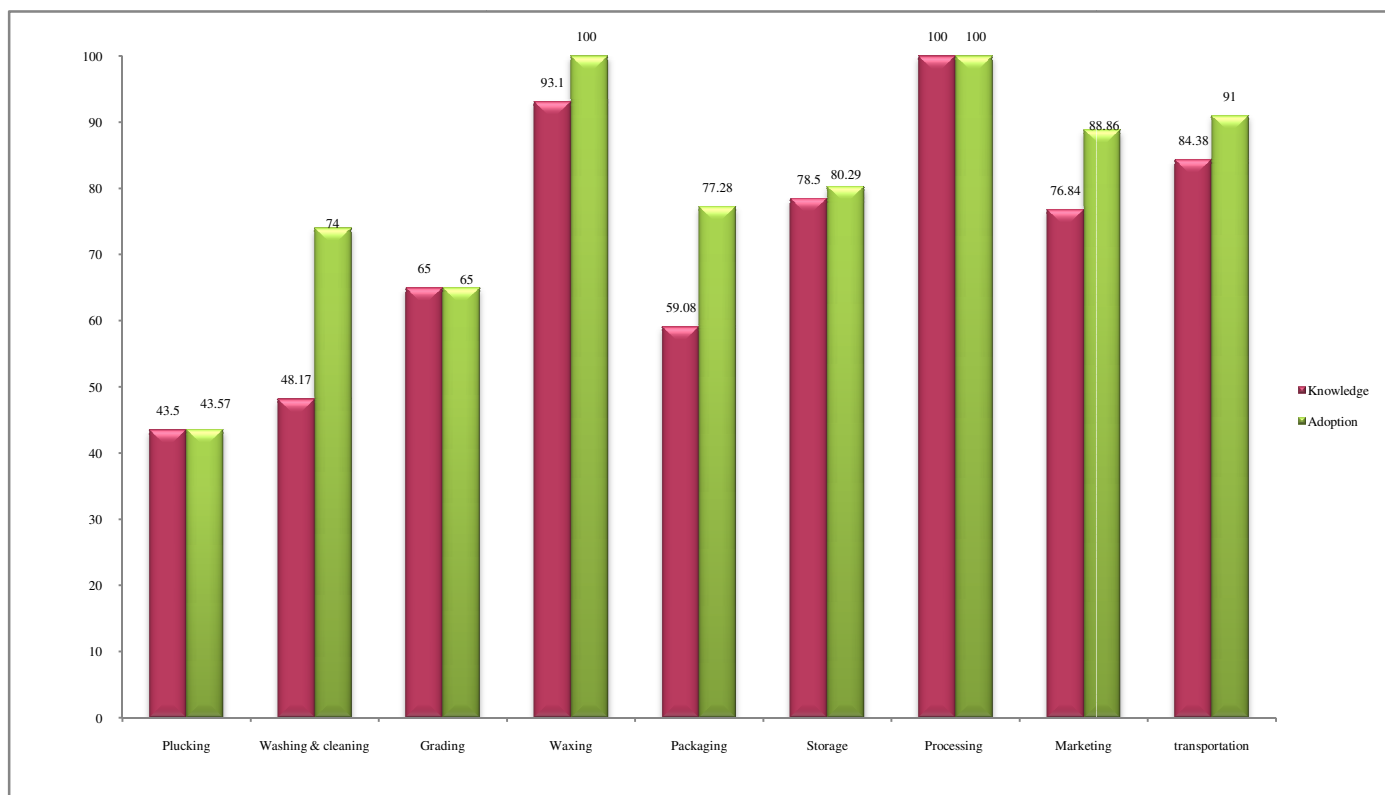


Figure-1: Component-wise knowledge and adoption gap of the respondents in different post-harvest practices of Kinnow.

Conclusion

The overall knowledge gap in post-harvest practices was 71.31 percent. Component wise highest knowledge gap was observed in processing (100%), waxing (93.1%) and transportation (84.38%). Similarly overall adoption gap in post-harvest practices was 71.20 percent. Highest gap was observed in the components waxing (100%), processing (100%), transportation (91%) and marketing (88.86%). Wide technological gap in both knowledge and adoption was found. Hence it is utmost important to educate and train the women regarding improved post-harvest practices of kinnow. So that existing technological gap could be minimized.

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