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Factors affecting the extent of knowledge about mango post-harvest management practices

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Abstract
At the present time, India is the second largest producer of fruits in the world. Diversified agro climate across the country provides a unique advantage for fruit production through extended period of availability and differential quality. Mango is the king of fruits. In India, Lucknow is play a vital role in import and export of mango. Post harvest management practices are inter disciplinary "Science and Technology" applied to mango after harvest for its protection, conservation, processing, packaging, distribution, marketing and utilization to meet the nutritional requirements of the people in relation to their needs. The majority of respondents 68 percent were found having medium level of knowledge, 8.50 percent respondents who were low and 23.50 percent high level of knowledge respectively, the majority of all mango growers have 92.25 percent knowledge among grading practice. This conclusion reveals that out of 14 variables, only one variable was moderately significant and rest of all variable were found highly significant nature influenced the extent of knowledge. The study showed that majority of mango growers were dominated in medium category of knowledge.

Keywords: Mango post harvest practices, mango growers, Knowledge of mango growers

Introduction
Mango has been cultivated, praised and even revered in its homeland since ancient times. Mango is originally native to southern Asia, specially Eastern India, Burma and the Andaman Islands. Buddhist monks are believed to have taken the mango on voyages to Malaya and Eastern Asia in the 4th and 5th Centuries BC. Persians are said to have taken mangoes to East Africa around the 10th Century AD. The fruit was grown in the East Indies before the earliest visits of the Portuguese who apparently introduced it to West Africa in the early 16th Century and also into Brazil. Mango (*Mangiferaindica*), the "King of fruits" is the most important fruit of India is cultivated in a larger area i.e., 2.516 million ha. and the production of around 18.431 million tons source ((Horticultural Statistics at a Glance 2015). The major mango producing states in India are Uttar Pradesh (23.47%), Andhra Pradesh (15.23%), Telangana (9.71), Karnataka (8.89%), Bihar (6.87) etc. source (NHB 2014-15). Uttar Pradesh is the leading mango producing state in 2013 with an area of 0.274 million hectare and production of 4.39 million tonnes. India produces 18.431 million tonnes of mango from an area of 2.516 million hectare have the share of 38 per cent area and 21.70 per cent production of major fruits (Horticultural Statistics at a Glance 2015). Post-harvest management practices are inter disciplinary "Science and Technology" applied to mango after harvest for its protection, conservation, processing, packaging, distribution, marketing and utilization to meet the nutritional requirements of the people in relation to their needs. Importance of post-harvest management practices in mango lies in the fact that it has the capability to meet requirement of growing population by elimination losses, making more nutritive items from its pulp by proper processing and fortification. The postharvest losses in mangoes have been estimated in the range of 25-40 per cent from harvesting to consumption published by Universal Multidisciplinary Research Institute. If proper methods of harvesting, handling, transportation and storage are adopted, such losses could be minimized. The knowledge has been recognized as one of the most important component of human behavior, which gives impetus to adopt a technology. The knowledge in the present context has been conceptualized as the amount of information about currently recommended practices known to the farmers.

Materials and methods
Out of eight communities development blocks in Lucknow district. The Malihabad and Mal block was selected purposively on the basis of highest area and production. These two blocks ten villages were selected in each of the block. Villages of Malihabad Block were selected
1. Karamandi kala

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2. Katouli
3. Kasmanda khurd
4. Hamirapur
5. Sherpur shesha
6. Nadinagar
7. Sendharwa
8. Ramai kala
9. Kanar
10. Rusouna

Villages of Mal Block were selected 1. Aumau, 2. Atari, 3. Ahinder, 4. Umarabal, 5. Kamalpurlodhaura, 6. Khandasara, 7. Jamoliya, 8. Tilan, 9. Dhari and 10. Narayanpur, through random sampling techniques. At the last stage of sampling, the list of respondents was prepared separately and 200 mango growers through proportionate random sampling technique. The extent of knowledge about mango post harvest was measured by using questionnaire which consisted close questions.

Table-1 clearly indicates that there were majority of respondents belong to (68%) medium category, followed by (23.50%) respondents high and (8.50%) respondents belong to low category extent of knowledge respectively. The mean of scores was found to be 32.10 with a range of minimum and maximum score was observed 16 and 46 respectively almost similar finding was also reported by Jadhav et al. (2010) [1], and Moulasab et al. (2006) [2].

Table 1: Distribution of respondents according to extent of knowledge about mango growers N=200

S. No.	Categories (score)	Respondents	
		Frequency	Percentage
1	Low (up to 23)	17	8.50
2	Medium (23 to41)	136	68.00
3	High (41 and above)	47	23.50
	Total	200	100.00

Mean = 32.10,   S.D. = 8.98,   Min. = 16,   Max = 46
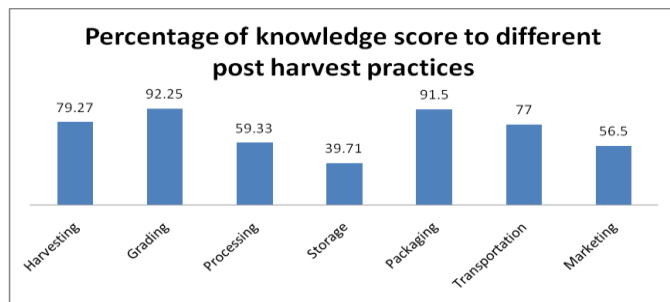
Fig 1

Table 2: Percentage of knowledge score to different post harvest practices

S. No.	Particulars	Percentage	Rank
1	Harvesting	79.27	III
2	Grading	92.25	I
3	Processing	59.33	V
4	Storage	39.71	VII
5	Packaging	91.50	II
6	Transportation	77.00	IV
7	Marketing	56.50	VI

The Table-2 & figure-1 clearly indicates that there were highest knowledge percent (92.25%) about grading practices, followed by (91.50%) packaging, (79.27%) harvesting, (77%) transportation, (59.33%) processing, (56.50%) marketing and (39.71%) knowledge about storage practices respectively. The

similar finding of grading (95%) and harvesting (79.27%) by Achut Raju et al. (2002), storage, grading and packing Manwar et al. (2013) and dissimilar finding of harvesting practice by Ranganna et al. (2009) [3] respectively.

Table 3: Correlation coefficient (r), extent of knowledge between different socio economic variables

S. No.	Independent variables	Correlation coefficient (r)
1	Education	.915**
2	Land holding	.648**
3	Family annual income	.601**
4	Extension participation	.707**
5	Experience in mango cultivation	.179*
6	Achievement motivation	.645**
7	Economic motivation	.582**
8	Source of information	.880**
9	Marketing facility	.800**
10	Post harvest practices	.290**
11	Risk orientation	.836**
12	Decision making pattern	.875**
13	Innovativeness	.908**
14	Training	.751**

*Significant at 0.05 probability level = 0.195
** Significant at 0.01 probability level = 0.254

The Table-3 clearly indicate that variables like education, land holding, family annual income, extension participation, achievement motivation, economic motivation, source of information, marketing facility, post harvest practices, risk orientation, decision making pattern, innovativeness and training wore found highly significant and positive relationship with the extent of knowledge of the respondents, where as the relationship with the experience in mango cultivation, was moderately significant and positive correlation with respect to knowledge level of respondents, almost similar finding was also reported by Bandyopadhyay et al. (2013) [4], Singh et al. (2011) [5] and Mazumder et al. (2011) [6].

Conclusion
Postharvest management is a set of post- production practices that includes: cleaning, washing, selection, grading, disinfection, drying, packing and storage. These eliminate undesirable elements andimprove product appearance, as well as ensuring that the product complies with established quality standards for fresh and processed products. The result of this study revealed that, majority of respondents belong to (68%) medium category, followed by (23.50%) respondents high and (8.50%) respondents belong to low category extent of knowledge respectively. The mean of scores was found to be 32.10 with a range of minimum and maximum score was observed 16 and 46 respectively. This conclusion reveals that out of all variables, only one variable was moderately significant and rest of all variable were found highly significant nature influenced the extent of knowledge.

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