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**Rudra Pratap Narayan Singh**  
SMS, Department of Agricultural  
Extension, KVK, Dariyapur,  
Raebareli, Uttar Pradesh, India

## Knowledge level and adoption pattern of aonla production technology among farmers

**Rudra Pratap Narayan Singh**

### Abstract

The study was conducted in Unchahar block of Raebareli district, U.P. There are 107 villages. Out of these 107 villages only 20 villages were selected with the help of lottery method of random sampling. Found that It is further observed that 73.33, 71.33 and 70.00 per cent of respondents had knowledge about the practices like time of plantation, post harvest management and plant protection measures against insect pest & disease control, respectively. Majority of the respondents (57.33 per cent) were mediocre in adoption of the Aonla technology reveals that in age established a significant but negative correlation with knowledge possessed by respondents.

**Keywords:** Knowledge, adoption, Correlation and aonla farms

### Introduction

The Aonla (*Emblica Officinalis* L.) one of the most important minor fruits and a crop of commercial significance, is quite hardy, prolific bearer and highly remunerative even without much care. It belongs to the family *Euphorbiaceae* and is known as amla, amlaki, amali, ambala, amalakamu and nelli in different parts of India.

The fruit is highly nutritive and it is the richest source of vitamin C. The fruits are made into preserves (murabba) souce, candy, dried, chips, tablets, jellies, pickle, tophies, powder etc. The stability of ascorbic acid and presence of astringency in Aonla fruit may be assigned to the presence of Polyphenols or levcoanthocyanins.

Aonla can be grown in light as well as heavy soil except very sand one. However, well drained fertile loamy soil is the best. The plant have capacity for adoption to dry regions and can also grown in moderately saline and alkaline soil. It is most popular in Uttar Pradesh where it is largely cultivated in commercial orchard in Azamgarh, Pratapgarh, Varanasi, Bareilly and Raebareli districts. In view of its diverse uses, its cultivation is increasing fast and the tree in becoming popular with the Orchardists.

A full grown grafted Aonla tree with good bearing habit yield from 187 to 299 kg fruits per year.

In Uttar Pradesh Aonla cultivation is concentrated in Raebareli showed a yield of 1.8 qts from the 10 year old tree of Chakaiya and Banarsi varieties. The low yields might be due to lack of technical knowledge about technical know how and non adoption of Aonla production technology by farmers. To examine the knowledge and adoption of Aonla production technology following two specific objectives were formulated.

The study the knowledge possessed by the farmers about Aonla production technology- To study the adoption of Aonla production technology by the farmers.

### Methodology

The study was conducted in Unchahar block of Raebareli district, U.P. There are 107 villages. Out of these 107 village only 20 villages were selected with the help of lottery method of random sampling. The sample of 150 respondents were drawn with the help of proportionate random sampling method. The data was collected by personal interview method with the help of structural interview schedule.

### Correspondence:

**Rudra Pratap Narayan Singh**  
SMS, Department of Agricultural  
Extension, KVK, Dariyapur,  
Raebareli, Uttar Pradesh, India

## Findings

The data in Table-1 with respect to the practice-wise knowledge possessed by the respondent revealed that 80 per cent respondents were aware about the improved variety and time of harvesting of Aonla. It is further observed that 73.33, 71.33 and 70.00 per cent of

respondents had knowledge about the practices like time of plantation, post harvest management and plant protection measures against insect pest & disease control, respectively. However, 56.67 per cent and 49.32 per cent respondents had knowledge about spacing of plants and balanced dose of fertilizer, respectively.

**Table 1:** Distribution of respondents according to their knowledge and adoption of recommended Aonla production technology.

S. No.	Particulars	Knowledge	Percent	Adoption		
		N=150		Full	Partial	Nil
1	Improved variety	120	80.00	110 (91.67)	10 (8.33)	30 (20.00)
2	Time of plantation	110	73.33	83 (55.33)	29 (19.33)	38 (25.33)
3	Spacing	85	56.67	77 (51.33)	38 (25.33)	35 (23.33)
4	Dose of fertilizer	74	49.33	42 (28.00)	34 (22.67)	74 (49.33)
5	Disease & insect pest management	105	70.00	37 (24.67)	58 (38.67)	55 (36.67)
6	Time of harvesting	120	80.00	76 (50.67)	48 (32.00)	26 (17.33)
7	Post harvest management	107	71.33	44 (29.33)	63 (42.00)	43 (28.67)

Table-1 shows that, 91.67 per cent respondents had adopted improved variety followed by 55.33 per cent, 51.33 per cent and 50.67 per cent of them adopting the time of plantation, recommended spacing from plant to plant and time of harvesting respectively. Less than half of respondents had complete adopted regarding post harvest management, balanced dose of fertilizer, disease and insect pest management of Aonla crop (29.33%, 28.00% and 24.67% respectively.)

In case of partial adoption majority of respondents 42 per cent, 38.67 per cent and 32.00 per cent adopted post harvest management, disease and insect pest management and time of harvesting followed by spacing, dose of fertilizer, time of plantation and improved variety (25.33 per cent, 22.67 per cent, 19.33 per cent and 8.33 per cent, respectively). However majority of respondents (49.33 per cent) had not adopted balanced dose of fertilizer followed by disease and insect pest management (36.67 per cent).

**Table 2:** Distribution respondents according to their knowledge and adoption.

S. No.	Category	Knowledge		Adoption	
		Frequency N=150	Percentage	Frequency N=150	Percentage
1	Low	38	25.33	35	23.33
2	Medium	85	56.67	86	57.33
3	High	27	18.00	29	19.33
		150	100	150	100

Table-2 Shows that 56.67 per cent of respondents found to have medium level of knowledge followed by 25.33 per cent low level and 18.00 per cent in high level of knowledge categories. Majority of the respondents (57.33 per cent) were mediocre in adoption of the Aonla technology. It is therefore, concluded that there is a wide scope to increase the adoption of recommended Aonla production technology.

**Table 3:** Relationship between selected characteristics of the respondents with their knowledge and adoption

S. No.	Variables	Correlation coefficients	
		Knowledge	Adoption
<b>I</b>	<b>Personnel characteristics</b>		
1	Age	0.2799**	-0.1335
2	Education	0.7736**	0.7043**
3	Land holding	0.6013**	0.7386**
4	Annual family income	0.6104**	0.7225**
5	Area under Aonla fruits	3.988**	0.6304**
<b>II</b>	<b>Socio-economic characteristics</b>		
6	Socio-economic status	0.7663**	0.7988**
<b>III</b>	<b>Communication behavior</b>		
7	Source information	0.8322**	0.7322**
<b>IV</b>	<b>Psychological characteristics</b>		
8	Scientific orientation	0.7132**	0.5033**

\*\* Significant at 0.01 level of probability

A critical examination of the data presented in Table-3 reveals that in age established a significant but negative correlation with knowledge possessed by respondents. It meant that with the increase in age, the knowledge, level of respondents decreased significantly. The education level, land holding, annual family income, area under Aonla fruits was found to have positive and significant correlation with the knowledge and adoption of Aonla production technology.

The socio-economic status, source of information and scientific

orientation had significant correlation with the knowledge and adoption of the respondents regarding Aonla production technology.

It could be inferred that middle age group farmers with higher education, small size of land holding, higher annual family income, high socio-economic status, high source of information and scientific orientation had higher level of knowledge and adoption of Aonla production technology.

### **Conclusion**

The findings of study indicated that the majority of respondents had knowledge of the recommended practices. This showed that majority of respondents had low knowledge about recommended spacing of plant to plant and balance dose of fertilizer.

The majority of respondents adopted the practices recommended were improved variety, time of plantation and spacing of plant. The non adoption of practices like post harvest management and time of plantation has found to be very high.

It could be, therefore suggested from the above findings that organized technical training programme, method and result demonstrations, farm tours to the University Research Centre as well as farm of progressive Aonla growers.

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