Aditya Shukla *et al*, International Journal of Advances in Agricultural Science and Technology,
Vol.8 Issue.9, September-2021, pg. 142-154

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

A Study on Economics of Marketing and Production of Aonla in District Pratapgarh (U.P.)

Aditya Shukla
Department of Agricultural Economics, NAI, SHUATS, Prayagraj, Uttar Pradesh, India

Dr. Ramchandra
Assistant Professor, Department of Agricultural Economics, NAI, SHUATS, Prayagraj, Uttar Pradesh, India
Author's e-mail: ashukla.9998@gmail.com

DOI: 10.47856/ijaast.2021.v08i9.016

Abstract
The study was conducted, in Pratapgarh district of Uttar Pradesh. Random sampling technique was used for the selection of blocks, villages and proportionate random sampling for selection of growers. From the list, 200 growers were selected, using proportionate sampling method i.e. 90 small, 70 medium and 40 large farmers respectively. The primary data were collected from the respondents by using interview schedule, while secondary data were collected from the official records, published data, magazines etc. The marketable surplus for Aonla in the area was found to be 140, 160 and 180 quintals per farm which constituting (99.10%), (99.48%) and (99.48%) to their total Aonla production. Channel-I, Marketing cost when producers sold their produce to consumer in the market was Rs.90/quintal. Net price received by the producer is 410/quintal. Producer share in consumer price was 82 per cent. Price spread is Rs 90. Marketing efficiency was 5.55 per cent. Channel-II, Marketing cost when producers sold their produce to retailers was Rs.105/quintal. Among these cost transportation charges was most important which accounted for Rs.15/quintal, followed by loading and unloading cost Rs.10/quintal, market cost Rs.10/quintal, labour cost was Rs.10/quintal and miscellaneous cost Rs.50/quintal respectively. Sale price of the producer to retailer was Rs.500/quintals inn different farms size group. Channel-III, this is identified as the longest channel. The producer sells his produce to the commission agents, who in turn sell it to retailer in the market. Finally, the produce reaches to the consumer after collecting margin. Average marketing cost when producer sold their produce to commission agents, in the market was Rs.165. Among these grading, cleaning etc. was Rs. 10 and 10 per Qts. loading and unloading cost Rs. 10 per Qtl. Transportation cost Rs. 20per Qts, Miscellaneous charges Rs. 25/qts, respectively.

Keywords: Aonla, producer's share, marketed surplus, price spread and marketing channels

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Introduction

Aonla (Emblica Officinalis Gaertn. Syn. *Phyllanthus emblica* L.), a native of tropical South-East Asia, has been below cultivation in India on the grounds that time immemorial. Aonla or Indian gooseberry (Emblica Officinalis Gaertn) is an outstanding fruit and one of the treasured presents of nature to man. It is generally referred to as Amla (Hindi), Adiphal (Sanskrit), Amalaki (Bengali) and Nelli (Malayalam). The Aonla fruit is globular, small, round, six lobed fruit thick and rough inconsistency. It is light yellow in coloration and is sort of 1.5 cm to two.5 cm in diameter. Aonla is indigenous of India. It is full of Vitamin 'C' and used for preparation of several Ayurvedic medicine. Commercial Aonla orchards of indigenous cultivars are established particularly on calcareous and slightly saline soils where other fruit crops generally do not survive. Aonla because of its specific nature has much scope for commercial cultivation. Horticultural crops cover 6.1 per cent of the country's area. The area, production and productivity of fruits have increased, 3.0, 6.2 and 2 times respectively from 1961 to 1999. Creditability of horticultural crops established because of improving the productivity of land, generating employment and improving the economic condition of the farmers. Like green, blue and yellow revaluation, we have another revaluation called the "Golden revolution" with the advancement made in the horticultural sectors.

Aonla (Emblica officinalis Geartn) is the king of arid fruits, popularly known as "Indian gooseberry", is a small-sized minor subtropical fruit grown widely in North India. India ranks first in the world in Aonla area and production volume. It is considered to be a "wonder fruit for health" because of its unique properties. Uses Aonla fruit is very useful in treating many diseases such as diabetes, cough, asthma, bronchitis, headache, dyspepsia, colic, flatulence, skin diseases, leprosy, jaundice, scurvy, diarrhea and cancer. In order to obtain a good income from Aonla, it must be sold immediately in the market; if not, to make profit, proper storage facilities should be available.

India's ranks IInd in fruits production in the world with the production of 97358.00 thousand MT from 6506.00-thousand-hectare area. Contribution of Aonla in fruit production is 1075.00 thousand MT from 93.00-thousand-hectare area (National Horticulture Board 2018-19).

Uttar Pradesh accounts for nearly 60 per cent of this production. Pratapgarh district of U.P. is a major Aonla producing district covering 7000.90 hectares with the production 31064.30 MT. (Aonla Development Office, Pratapgarh U.P. 2018-19). It is ascertaining from above discussion that Aonla cultivation can certainly help to raise the income and employment of the farming community taking marginal land under-utilization.

Marketing plays a very important role in the profitability of any agricultural product. An efficient marketing result in higher profitability. The involvement of long chain of intermediaries causes low share of aonla producers in the price paid by the final consumers.

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

The lion shares of marketing cost in general enjoyed by the intermediaries in the farm of their margins. Therefore, urgent need to study the channels involved in the marketing of aonla and its product to find out the ways and means to minimize the channels for increasing the producer's share. Aonla is more popular in Uttar Pradesh where it is largely cultivated in commercial orchards in Pratapgarh, Azamgarh, Varanasi, Faizabad, Sultanpur, Raibareli and Bareilly districts.

Methodology

Methodology was used for the study under following heads:

1. Sampling technique
2. Methods of enquiry and collection of data
3. Period of enquiry
4. Analytical tools used

Sampling technique

Various sampling techniques were used as per need.

Selection of district

Pratapgarh district has higher concentration of area under aonla, thus district was selected purposively for the study.

Selection of block

Out of 16 blocks of Pratapgarh district, two blocks namely Lalganj and Sadar having highest area under Aonla crop was selected purposively.

Selection of villages

A list of all villages of the selected blocks was prepared along with area under Aonla Cultivation. Then, list of the villages was arranged in descending order according to area under Cultivation. Thereafter, 5-10% villages were selected purposively.

Selection of aonla growers/orchardist

A complete list of all the growers/orchardists was prepared. Therefore, the grower were arranged in ascending order of area under Aonla cultivation and then growers were classified into three groups on the basis of area under Aonla cultivation in all the selected villages *viz*., First farms group (Small Farmer, 0-1 hectare), Second farms group (Medium Farmer 1- 2 hectare), and Third farms group (Large Farmer 2ha or more than 2ha). Out of this list 200 growers were selected randomly.

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Table 1: Number of sample households under different categories in the study area

Sl. No.	Villages	Total no. of households				Total no. of selected samples			
		Small	Medium	Large	Total	Small	Medium	Large	Total
1	Pure kanthi	130	100	60	290	13	10	6	29
2	Sujakhar	140	110	50	300	14	11	5	30
3	Deewanganj	120	90	50	260	12	9	5	26
4	Jaitipur	110	80	60	250	11	8	6	25
5	Adharpur	120	90	50	260	12	9	5	26
6	Arjunpur	140	120	60	320	14	12	6	32
7	Kolbajardeeh	140	110	70	320	14	11	7	32
	Total	900	700	400	2000	90	70	40	200

Selection of the market

The data related to prices and arrivals of Aonla was collected from Mahuli market in Sadar block of Pratapgarh district.

Selection of the market functionaries

A list of all market functionaries of both primary and secondary market will be prepare with the help of market head out of total market functionaries 10% market functionaries selected randomly from both market for present study this market functionaries will be considered for data collection regarding different marketing cost and other charges in different marketing channels. Were selected respondent for the present study all together total number 20 Traders, 25 wholesaler, 32 retailers were selected randomly for the study.

Table 2: Details of market functionaries

S. No.	Market (Primary & secondary)	Market functionaries no.	Total
1.	Mahuli market	Traders	20
		Wholesalers	25
		Retailers	32
	Total		77

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Methods of enquiry and collection of data

The enquiry was conducted by survey method. The primary data were collected for a period of one year by personal interview with the selected Aonla growers on well prepared schedule and secondary data was collected from the records available at district head quarter, Block level, Village level officers and Lekhpal.

Period of enquiry

The data was pertained for the agriculture year 2020-21.

Analytical tools

Suitable tabular as well as functional analysis as per need was applied to analyses the data and presentation of the results.

Marketing tools SED in marketing channels

1. **Marketing cost**

The total cost incurred on marketing by various intermediaries involved in the sale and purchase of the commodity till it reaches the ultimate consumer was computed as follow:

$$M = Cf+Cm1+Cm2+Cm3+\ldots+Cmn$$

Where,

M = Total cost of marketing

Cf = Cost borne by the producer farmer from the produce leaves the farm till the sale of the produce, and

Cmn = Cost incurred by the i^{th} middlemen in the process of buying and selling.

2. **Marketable surplus**

$$MS = P - C$$

Where,

MS = Marketable surplus P = Total production

C = Total requirements (Family and farm)

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

3. Marketing margin of middlemen

(a) Absolute margin = PRi – (Pp i+ Cmi)

(b) Percent margin = $\frac{P_{Ri} - (P_{pi} + C_{mi})}{P_{Ri}} * 100$

4. Producer's share in consumer's rupee

$$P = \frac{(C - M)}{M} X\ 100$$

Where,

P = Producer's share in Consumer's Rupee C = Consumers' rupee

M = Marketing cost

5. Price Spread= Total Marketing Cost + Total Marketing Margin

1. Marketing efficiency

$$\text{Marketing efficiency} = \frac{\text{Consumer price}}{\text{Total marketing cost + Marketing margin}}$$

Result and Discussion Marketable surplus

The high marketable surplus was due to the perishable nature of the Aonla that it cannot be stored for a long period of time. Hence, the farmers cultivated tomato mainly for sale in the market to generate profit, which resulted in a high marketable surplus for Aonla in the study area. The marketable surplus for Aonla in the area was found to be 140, 160 and 180 quintals per farm which constituting (99.10%), (99.48%) and (99.48%) to their total Aonla production. And rest quantity used for home consumption, relatives and religious. The marketable surplus was also higher in large size group as compared to medium and small farm size groups. This increase shows that more production at large farms comparatively too small and medium farms respectively, with the sample average, was 158.99 quintal which constituting (99.37%) to total production.

Aditya Shukla *et al*, International Journal of Advances in Agricultural Science and Technology,
Vol.8 Issue.9, September-2021, pg. 142-154

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Table 3: Marketable surplus for aonla (Qts) for the study area

Particulars	**Small**	**Medium**	**Large**	**Sample average**
Total yield produced	140 (100)	160 (100)	180 (100)	160 (100)
Quantity used at home	0.80 (0.57)	0.60 (0.37)	0.65 (0.37)	0.68 (0.42)
Relatives and religious person	0.45 (0.32)	0.23 (0.14)	0.28 (0.15)	032 (0.20)
Marketable surplus	138.75 (99.10)	159.17 (99.48)	179.07 (99.48)	158.99 (99.37)

Existing aonla marketing channels in the study areas
In the study area, three different types of marketing channels prevailed through which Aonla production was distributed from the producer to the ultimate consumer, are given below:

Marketing channels
There are three marketing channels for the Aonla marketing in Paragraph district given below

- Channel-I: Producer-Consumer
- Channel-II: Producer- Village merchant/Retailer- Consumer
- Channel-III: Producer-Wholesaler/Commission Agent-Retailer/Village merchant-Consumer

i) Channel- I: Producer-Consumer:
Number of respondents = 200

SML = 90 + 70 + 40 = 200

(Value in Rupees/Quintal)

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Table 4(a): Producer – Consumer

S. No.	Particulars	Sample average
1	Producer sale price to consumer	500
2	**Cost incurred by the producer**	
I	Cost of packing	15(3.0)
II	Transportation cost	15(3.0)
III	Grading, cleaning, etc	10(2.0)
IV	Loading and unloading charges	10(2.0)
V	Packing material cost (wooden bucket, paper and straw)	15(3.0)
VI	Miscellaneous expenses and losses	25(5.0)
3	Net price received by the producer	410(82.0)
4	Consumers paid price	500(100)
5	Price spread	90
6	Producer share in consumer rupee (%)	82%
	Marketing Efficiency	5.55

Above table shows that marketing cost, marketing margin, and price spread for channel I. No intermediaries were identified through which Aonla reaches to the consumers. The producer sells his produce to the consumer. Marketing cost when producers sold their produce to consumer in the market was Rs.90/quintal. Net price received by the producer is 410/quintal. Producer share in consumer price was 82 per cent. Price spread is Rs 90. Marketing efficiency was 5.55 per cent.

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Table 5(b): Producer-village merchant/retailer-consumer

S. No.	Particulars	Sample average
1	Producer sale price to village merchant/retailer	500
2	**Cost incurred by the producer**	
I	Cost of packing	15(2.34)
Ii	Transportation cost	20(3.12)
Iii	Grading, cleaning, etc	10(1.15)
Iv	Loading and unloading charges	10(1.12)
-*	Packing material cost (wooden bucket, paper and straw)	15(2.34)
Vi	weighing charge	5(0.78)
Vii	Miscellaneous expenses	30(4.68)
3	Net price received by producer	395(61.71)
4	Total cost	105
5	Sale price of producer to village merchant/retailer	500
	Cost incurred by the village merchant/retailer	
I	Transportation cost	30(4.68)
Ii	Labour	20(3.12)
Iv	Miscellaneous charges	50(7.81)
6	Total cost incurred by Retailer/Village merchant	100
7	Margin of village merchant/retailer	40(6.25)
8	Sale price of village merchant/retailer to consumer	640(100)
9	Price spread	245
10	Consumers paid price	640
11	Producer share in consumer rupee%	78.12
12	Marketing efficiency	2.66

Note: Figure in the parenthesis indicate percentage to the total consumer price

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Table 6(c): Producer-wholesaler/commission agent-retailer/village merchant-consumer

S. No.	**Particulars**	**Sample average**
1	Producer sale price to wholesaler/commission agent	500
2	**Cost incurred by the producer**	
I	Cost of packing	15(2.12)
II	Transportation cost	20(2.83)
III	Grading, cleaning, etc.	10(1.42)
IV	Loading and unloading charges	10(1.42)
V	Packing material cost (wooden bucket, paper and straw)	15(2.12)
VI	weighing charge	5(0.70)
Vi	Miscellaneous expenses & losses	25(3.54)
3	Total cost	100
4	Net price received by producer	400(56.73)
5	Sale price of producer to wholesaler/commission agent	500
Cost incurred by the wholesaler		
I	Loading and unloading charges	10(1.42)
II	Packing cost	10(1.42)
III	Market fee	10(1.42)
IV	Commission of wholesaler/commission agent	60(8.51)
V	Miscellaneous charges	35(4.96)
	Total cost	165
	Margin of wholesaler/commission agent	40(5.69)
9	Sale price of wholesaler/commission agent to retailer/village merchant	705(100)

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Cost incurred by the retailer/village merchant		
I	Weighing charges	5(0.70)
II	Loading and unloading charges	10(1.42)
III	Transportation charges	15(2.12)
IV	Carriage up to shop	10(1.42)
V	Miscellaneous charges	25(3.54)
VI	**Total cost**	65
10	Margin of retailer/village merchant	35(4.96)
11	Sale price retailer/village merchant to consumers	805(100)
12	Price spread	405
13	Consumers paid price	805(100)
14	Producer share in consumer rupee (%)	62.11
15	Marketing efficiency	1.99

Note: Figure in the parenthesis indicates percentage to the total consumer price

Table 6 (c): Reveals that marketing cost, marketing margin, and price spread for channel III is important because lots of farm i.e. 62.11% of growers preferring sale their produce this channel. Two intermediaries were identified through which Aonla reaches to the consumer's i.e. commission agent, retailer. This is identified as the longest channel. The producer sells his produce to the commission agents, who in turn sell it to retailer in the market. Finally, the produce reaches to the consumer after collecting margin. Average marketing cost when producer sold their produce to commission agents, in the market was Rs.165. Among these grading, cleaning etc. was Rs. 10 and 10 per Qts. loading and unloading cost Rs. 10 per Qtl. Transportation cost Rs. 20per Qts, Miscellaneous charges Rs. 25/qts, respectively. The net price received by the producer was Rs. 400/qts. Sale price of the producer, to commission agents was Rs.500/qts. Among these loading, packing, market fee, commission, margin of wholesaler (Rs.10, 10, 10, 60, 35 and 40/qts) respectively. The sale price of commission agent to village merchant Rs.705/Qts. Cost incurred by village merchant weighing charges, town charges, margin of village merchant etc. (Rs.5,10,15.10,25 and 35/Qts) Sale price retailer/village merchant to consumers Rs. 805, price spread was Rs. 405/qts in different size of farm groups. Producer share in consumer rupee Rs. 62.11 The marketing efficiency is 1.99%.

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Summary and Conclusion

The higher marketable surplus was due to the perishable nature of Aonla that it cannot be stored for a long period of time. Hence, the farmers cultivated tomato mainly for sale in the market to generate profit, which resulted in a high marketable surplus for Aonla in the study area. The marketable surplus for Aonla in the area was found to be 140, 160 and 180 quintals per farm which constituting (99.10%), (99.48%) and (99.48%) to their total Aonla production. marketing cost, marketing margin, and price spread for channel I.

No intermediaries were identified through which Aonla reaches to the consumers. The producer sells his produce to the consumer. Marketing cost when producers sold their produce to consumer in the market was Rs.90/quintal. Net price received by the producer is 410/quintal. Producer share in consumer price was 82 per cent. Price spread is Rs 90. Marketing efficiency was 5.55 per cent. Marketing cost, marketing margin, and price spread for channel II. One intermediary was identified through which Aonla reaches to the consumer's i.e. Village merchant/Retailer. This is the channel among an identified channel. The producer sells his produce to retailers in the market. Finally, the produce reaches to consumers after collecting margin. Marketing cost when producers sold their produce to retailers was Rs.105/quintal. Among these cost transportation charges was most important which accounted for Rs.15/quintal, followed by loading and unloading cost Rs.10/quintal, market cost Rs.10/quintal, labour cost was Rs.10/quintal and miscellaneous cost Rs.50/quintal respectively. Sale price of the producer to retailer was Rs.500/quintals inn different farms size group. Marketing cost, marketing margin, and price spread for channel III is important because lots of farm i.e. 62.11% of growers preferring sale their produce this channel. Two intermediaries were identified through which Aonla reaches to the consumer's i.e. commission agent, retailer. This is identified as the longest channel. The producer sells his produce to the commission agents, who in turn sell it to retailer in the market. Finally, the produce reaches to the consumer after collecting margin. Average marketing cost when producer sold their produce to commission agents, in the market was Rs.165. Among these grading, cleaning etc. was Rs. 10 and 10 per Qts. loading and unloading cost Rs. 10 per Qtl. Transportation cost Rs. 20per Qts, Miscellaneous charges Rs. 25/qts, respectively.

Policy implication:

In the context of our new economic policy, plantation of aonla orchards may be encouraged as a focus area for diversification of agriculture. It has great potential of generating higher income per unit area and time besides, earning foreign exchange through export of aonla products. For trapping full potentials, there is need to develop such strategy which may provide strong production base and export opportunities for aonla products. It calls for a determined policy to integrate production, marketing and export.

In this regard identification of product specific aonla zones, provision of suitable technology, screening package and practices, creation of appropriate infrastructure etc., are essential.

ISSN: 2348-1358
Impact Factor: 6.057
NAAS Rating: 3.77

Formation of cooperative organizations may further help in safeguarding the interest of the producer/ growers and enable them to control the marketing of their products, strengthening of market intelligence network which may provide advice to the producer regarding demand/supply position in the market, latest practices in grading and packing and consumer's preferences is necessary. Over all, the government should support the aonla processing units as a whole in general and export oriented aonla products in particular (Goyal *et al.*, 2008).

References

[1]. Aonla Development Office, Pratapgarh U.P 2020-21.

[2]. Changule, R.B., Pawar, B.R. and Shelke, R.D. (2010). Economics of aonla processing business unit in Maharashtra. *Internat. J. Com. & Busi. Mgmt.*, **3**(2) : 6-9.

[3]. Gajanana, T.M., Gauda, I.N.D. and Reddy, B.M.C. (2010). Exploring market potential and developing linkages- A case study of under-utilized fruit products in India. *Agric. Econ. Res. Rev.*, **23**(CN) : 437-443.

[4]. Goyal, R.K., Patil, R.T., Kingly, A.R.P., Walia Himanshu and Kumar, Pradeep (2008). Status of post-harvest technology of aonla in India. *American J. Food Technol*., **3**(1) : 13-23.

[5]. Singh, Vinod, Singh, H.K. and Singh, I.S. (2004). Evaluation of aonla varieties (*Emlica officinalis* Gaertn) for fruit processing. *Haryana J. Hort. Sci.*, **33** :18-19.

[6]. Kore, Vijaykumar, T Devi, Lembisana H, Kabir J. Packaging, storage and value addition of Aonla, an underutilized fruit, in India. EDP Sciences 2013;68(3):255-266.

[7]. Mail BK, Bhosale SS, Shendage PN, Kale PV. Economics of production and marketing of banana in Jalgaon district of Western Maharashtra. Indian Journal of Agricultural Marketing 2003;17(1):173-179.

