

RESEARCH PAPER

# Economics of marketing and processing of Aonla in district Pratapgarh (U.P.)

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## ABSTRACT

The study was carried out in Sadar block of district Pratapgarh in Uttar Pradesh with thirty Aonla growers (18 marginal, 6 small and 16 big farmers ) selected randomly from six village of the selected block. One mandi and three processing units were also selected to study the economics of different Aonla products and marketing functionaries. The investigation revealed that on an average investment of Rs. 510950 was needed to establish an Aonla processing unit. The cost of Morabba preparation worked out to Rs. 5594.40 for one quintal of Aonla morabba while cost of one quintal of aonla pickle preparation came to Rs. 4998.85 and Rs. 6073.45 worked out for preparation of one quintal of aonla chutney. There were four marketing channels observed to dispose of the aonla produce. Channel IV was more common to dispose off aonla and aonla produce in the study area. The highest producers' share in consumers' rupee was achieved in channel I (98.5 %) but only 10 per cent respondents followed this channel due to lack of demand in local. Channel III was second largest followed channel provide 60.5 per cent of the producers' share in consumers' rupee.

**KEY WORDS :** Processing, Marketing, Price spread, Producers' share in consumers' rupee

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India makes a valuable location for investment in horticulture and food processing sector. India enjoys an ideal agro-climatic condition for growing of all horticultural crops. Such a system diversification has a great potential in increasing productivity or income per

unit area and time, providing higher employment and generating foreign exchange through export of horticultural products. Although a large number of fruits, vegetable and flower crop are grown all over the country but aonla may be given higher priority because of its greater export opportunity and higher income to the producers. India rank second in fruit production in the world with a share of 71.30 million tones horticultural crops over 13per cent of cropped area of the country.

The horticultural sector has established its credibility for improving diversification and value addition activities are playing important role in generating income and employment in horticultural sector and Indian farmers are looking forward for diversified area.

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The various parts of an Aonla tree are of great economic importance. Fruit is very rich source of vitamin 'C' and its other constituents serve important item of food and medicine. The fresh aonla fruits contain protein, fat, minerals, fibres, carbohydrate, calcium, phosphorus, iron and near about all vitamins with rich in vitamin C.

Marketing play 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 cause low share of aonla producer's in the price paid by the final consumers. The lion share of marketing cost in general enjoyed by the intermediaries in the form 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

A multi-stage purposive sampling technique was adopted to select the district development block, villages and the aonla growers. District Pratapgarh was selected purposely because of higher concentration of aonla cultivation. A list of all the development blocks, growing aonla of district Pratapgarh was prepared. Out of this list, one development block, *i.e.* Sadar block having the highest area under aonla orchards was selected purposely. A list of all villages of Sadar block practicing aonla cultivation was prepared. Out of this list 6 villages the highest area under aonla namely- Gondey, Setapur, Baijalpur, Bariya samundra, Lohanpur and Param Nathpur were selected randomly. A list of all aonla growers of the selected villages was prepared and out of this, five growers from each selected villages were selected at random process with proportion to the aonla growers falling in each village under different size groups of farms. The selected aonla growers were categorized in three size groups *viz.*, marginal growers (0-1ha.), small growers (1-2ha) and large aonla growers (2 ha and above).

The main aonla producing area is in the vicinity of the city. There is only one aonla mandi in the city known as fruit and vegetable mandi Sadar, Pratapgarh is selected purposely for study of market and market functionaries'.

A list of all the market functionaries of the selected mandi was prepared out of which 10 per cent market functionaries were interviewed for the purpose of present enquiry. For 10 aonla producers who brought their produce in the selected mandi for disposal were interviewed to find out the marketing cost, market margin and Producer's share in Consumer's price. There were three aonla processing unit of different capacities working in the mandi. All the three units were selected for the purpose of present enquiry to work out the processing cost of aonla for different uses.

## ANALYSIS AND DISCUSSION

The findings of the present study as well as relevant discussion have been summarized under the following heads :

### Economics of processing of Aonla:

Aonla is used extensively by the fruit processing industry to prepare a wide variety of products, like morabba, pickle, chutany, chyawanprash etc. Both ripe and unripe aonla are utilized for this purpose. There were four aonla processing unit in the study area. The average processing capacity for different aonla processing unit was 3000 quintals in a year.

### Establishment cost of Aonla processing unit:

The capital investment units varied considerably for different units. The information supplied by unit owners in respect of cost of processing equipments, land, building etc., are displayed in Table 1.

The Table 1 revealed that the total cost came to Rs. 510950.00 for establishment of aonla processing unit. Further, breakup of the total capital investment on processing unit indicated that the building cost accounted relatively highest share (58.71%) followed by processing equipment (27.39%), depreciation cost on building and interest on fixed capital (2.93%), depreciation cost on equipment (2.73%), interest of fixed capital for equipment (1.37%), insurance for building (1.17%), electric and water charges per year (1.04%) and maintenance cost on building (0.58%). Singh *et al.* (2004) and Jadhav *et al.* (2008) have reported the similar results.

### Preparation cost of Aonla morabba:

The Aonla morabba preparation cost for one quintal of Aonla has been worked out in Table 2.

The Table 2 revealed that, the per quintal cost of Aonla morabba came to Rs. 5594.40, which was highest for sugar cost and lowest for transportation cost being Rs. 3800 and Rs. 20 per quintal, respectively.

#### Preparation cost of Aonla pickle:

The Aonla pickle preparation cost for one quintal of Aonla has been worked out in Table 3.

Table 3 indicated that the per quintal preparation cost of aonla pickle came to Rs. 4998.85, which was highest for mustard oil and lowest for transportation cost being Rs. 3150 and Rs. 20 per quintal.

#### Preparation cost of Aonla chutany:

The aonla chutany preparation cost for one quintal aonla has been worked out in Table 4.

The Table 4 indicated that, the per quintal preparation cost of aonla chutany came to Rs. 6073.45, which was highest for sugar charges and lowest for transportation cost being Rs. 3040 and Rs. 20, respectively. Changule *et al.* (2010) have contributed the processing cost of aonla.

#### Marketing channels, marketing cost and margins:

The study of marketing may be helpful in judging and rationalizing the marketing charges for different

**Table 1 : Cost of establishment of aonla processing unit**

Sr. No.	Particulars	Costs	Percentage
<b>Building cost</b>			
1.	Building cost estimated 20 years life	3,00,000	58.71
2.	Depreciation cost per year (@ 5%)	15,000	2.93
3.	Interest on fixed capital (for half of investment @ 10%)	15,000	2.93
4.	Maintenance cost per year (@ 1%)	3,000	0.58
5.	Insurance per year (@2%)	6,000	1.17
<b>Processing equipments</b>			
1.	Processing equipment cost estimated 10 years life	1,40,000	27.39
2.	Depreciation cost per year (@ 10%)	14,000	2.73
3.	Interest on fixed capital (for half of investment @ 10%)	7,000	1.37
4.	Maintenance cost per year (@ 2%)	2,800	0.54
5.	Insurance per year (@2%)	2,800	0.54
<b>Electric and water charges</b>			
1.	Electric and water charges	5,000	0.98
2.	Interest on working capital (@ 7%)	350	0.06
3.	Total electric and water charges per year	5,350	1.04
	<b>Total</b>	<b>5,10,950</b>	<b>100.00</b>

**Table 2 : Aonla morabba preparation and processing cost for one quintal Aonla**

Sr. No.	Particulars	Amount (Rs.)
1.	Aonla (One quintal)	1,000
2.	Transportation cost	20
3.	50 liter solution (2.5 kg Salt, 75 g Potassium metabisulphate)	70
4.	Picking cost (@ Rs. 1 kg.)	100
5.	Cooking gas (1 cylinder @ Rs. 1000 per cylinder)	1000
6.	Sugar (1 qt. @ 3800 per quintal)	3800
7.	Labour cost including supervision	1000
8.	Packing charges	800
9.	Interest on working capital (8%)	621.6
10.	Total cost	8391.60
11.	Total prepared product (quintal)	1.5
12.	Cost of one quintal product	5594.40

functionaries and efficiency of marketing system. Therefore, study examines marketing margins, costs and marketable surplus for aonla in different channels. The main marketing channels involved in marketing of aonla and its product in study area was as follow:

- Producer-Consumer (Channel I)
- Producer-Wholesaler-Retailer-Consumer (Channel II)
- Producer-Contractor-Wholesaler-Retailer-Consumer (Channel III)
- Producer-Contractor-Wholesaler-Processor-

Wholesaler-Retailer- Consumer (Channel IV)

Marketing channels I, II, III and IV is used by 10, 16.66, 22.34 and 50 per cent sample growers, respectively. Channels IV is one of the most important on sample farms, because of a maximum farmers disposed of their marketed produce.

#### Price spread :

This price spread consists of marketing cost and margins of the intermediaries, which ultimately determine the overall effectiveness of marketing system.

**Table 3 : Aonla pickle preparation and processing cost for one quintal of Aonla**

Sr. No.	Particulars	Amount (Rs.)
1.	Aonla (1 quintal)	1000
2.	Transportation cost	20
3.	Salt (15 kg. @ Rs. 15/kg.)	225
4.	Mustard oil (35 kg. @ Rs. 90/kg.)	3150
5.	Red chillies (1 kg. @ Rs. 80/kg.)	80
6.	Turmeric (1kg. @ Rs. 60/kg.)	60
7.	Black cumin (1 kg. @ Rs. 90/kg.)	90
8.	Fenugreek (3 kg. @ Rs. 25/kg.)	75
9.	Cooking gas (1/4 cylinder)	250
10.	Labour cost including supervision	750
11.	Packing charges	800
12.	Interest on working capital	518.4
13.	Total cost	6998.40
14.	Total prepared pickle (quintal)	1.4
15.	Cost of one quintal pickle	4998.85

**Table 4 : Aonla chutany preparation and processing cost for one quintal of Aonla**

Sr. No.	Particulars	Amount (Rs.)
1.	Aonla (1quintal)	1000
2.	Transportation cost	20
3.	Sugar (80 kg. @ Rs. 38/kg.)	3040
4.	Salt (4 kg. @ Rs. 15/kg.)	60
5.	Red chillies (1 kg. @ Rs. 80/kg.)	80
6.	Ginger (1.25 kg. @ Rs. 50/kg.)	62.50
7.	Spices (1.50 kg. @ Rs. 200/kg.)	300
8.	Garlic (1.25 kg. @ Rs. 60/kg.)	75
9.	Vinegar (1.25 kg. @ Rs. 25.50/kg.)	31.88
10.	Cooking gas (2/3 cylinder)	666
11.	Labour cost including supervision	1100
12.	Packing charges	2000
13.	Interest on working capital	674.8
14.	Total cost	9110.18
15.	Total prepared chutany (quintal)	1.5
16.	Cost of one quintal chutany	6073.45

Table 5 reveals that producer's share in consumer's rupee was lowest being 49.16 per cent in channel IV, it was 54.03 per cent in channel III, 60.50 per cent in channel II and 98.50 per cent in channel I in aonla marketing on sample farms. The lower producer's share in the price paid by the consumer was due to higher marketing cost and marketing margins of profit charged by the middleman.

Marketing cost incurred by retailer per quintal came to Rs.146.06 (9.30%) in channel II, Rs.165.60 (9.79%) in channel III and Rs.50.94 (2.83%) in channel IV, respectively. Retailer's net margin came to Rs.121.44 (7.73%), Rs.134.25 (7.96%) and Rs.36.00 (2%) in channel II, III and IV, respectively. Total marketing cost

incurred by wholesaler per quintal came to Rs.227.39 (14.48%), Rs.216.50 (12.84%) and Rs.260.41 (14.46%) in channel II, III and IV, respectively. Total marketing margin of wholesaler came to Rs.98.60 (6.28%), Rs.109.00 (6.46%) and Rs.128.95 (7.16%) in channel II, III and IV, respectively. Marketing cost incurred by contractor per quintal came to Rs.100.00 (5.93%) and Rs.190.75 (10.59%) in channel III and IV, respectively. Contractor's net margin came to Rs.50 (2.96%) and Rs.77.22 (4.29%) in channel III and IV, respectively. Marketing cost incurred by processor per quintal came to Rs.112.75 (6.26%) in channel IV. Processor net margin came to Rs.58.00 (3.22%) in channel IV. Price spread came to Rs.15 (1.50%), Rs.628.57 (39.50), Rs.775.35

**Table 5 : Price spread and marketing charges for different channel of unripe Aonla / quintal**

Sr. No.	Particulars	Channel							
		I		II		III		IV	
		Rs./qt	Per cent	Rs./qt	Per cent	Rs./qt	Per cent	Rs./qt	Per cent
1.	Net amount received by producer	985.00	98.50	950.00	60.50	910.50	54.03	885.00	49.16
2.	Charge paid by producer	15.00	1.50	35.08	2.23	-	-	-	-
3.	Purchase price of contractor	-	-	-	-	910.50	54.03	885.00	49.16
4.	Marketing cost incurred by contractor	-	-	-	-	100.00	5.93	190.75	10.59
5.	Contractor's net margin	-	-	-	-	50.00	2.96	77.22	4.29
6.	Purchase price of wholesaler	-	-	985.08	62.73	1060.5	62.93	1152.9	64.05
7.	Marketing cost incurred by wholesaler	-	-	227.39	14.48	216.5	12.84	206.41	11.46
8.	Wholesaler's net margin	-	-	98.60	6.28	109.00	6.46	103.95	5.77
9.	Purchase price of processor	-	-	-	-	-	-	1463.3	81.29
10.	Marketing cost incurred by processor	-	-	-	-	-	-	112.75	6.26
11.	Processor's net margin	-	-	-	-	-	-	58.00	3.22
12.	Purchase price of wholesaler	-	-	-	-	-	-	1634.1	90.78
13.	Marketing cost incurred by wholesaler	-	-	-	-	-	-	54.00	3.00
14.	Wholesaler's net margin	-	-	-	-	-	-	25.00	1.39
15.	Purchase price of retailer	-	-	1311.1	83.49	1386.0	82.25	1713.1	95.17
16.	Marketing cost incurred by retailer	-	-	146.06	9.30	165.60	9.79	50.94	2.83
17.	Retailer's net margin	-	-	121.44	7.73	134.25	7.96	36.00	2.00
18.	Price spread	15.00	1.500	628.27	39.50	775.35	46.01	915.24	50.84
19.	Purchase price of consumer	1000	100.00	1578.6	100.0	1685.8	100.0	1800.2	100.0
20.	Producers' share in consumers' rupee (%)	-	98.50	-	60.50	-	54.03	-	49.16

**Table 6 : Constraints of marketing and processing of Aonla**

Sr. No.	Marketing	Per cent
1.	Pre harvest contractor sale provision	92.50
2.	Storage facilities	78.75
3.	Processing units	45.33
4.	Transportation facilities	62.50
5.	Sale of aonla at distant place (Export)	94.10
6.	Mal practice in the market	75.82

(46.01) and Rs. 915.24 (50.84%) in channel I, II, III and IV, respectively. Gajanana *et al.* (2010) have explored the similar marketing trends in fruits marketing.

### Constraints of marketing and processing of Aonla:

The problems and constraints regarding in marketing aspect is worked out in Table 6

Table 6 indicated that the constraints regarding sale of aonla at distant places 94.10 per cent followed by pre harvest contractor sale provision (92.50%), storage facilities (78.75%), mal practices in the market was observed by 75.82 per cent, lack of transportation facilities (62.50%) and issues of the processing unit being 45.33 per cent of the respondents.

### 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. 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).

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