

International Journal of Statistics and Applied Mathematics

ISSN: 2456-1452

Maths 2023; SP-8(5): 375-377

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<https://www.mathsjournal.com>

Received: 05-06-2023

Accepted: 15-07-2023

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A study on marketing of Aonla in Pratapgarh District of Uttar Pradesh

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Abstract

We consider this paper as the one-dimensional bio-heat exchange condition with the perfusion of blood, reliant on temperature which oversees physiological heat dispersion issues relating to limbs and the organic properties are supposed to be distinctive along the radial direction. By methods for an extensive technique with metaphorical estimation, we acquire the correct analytical answer for inspect the heat circulation in the tissues. The dermal region is comprised of three layers, to be specific epidermis, dermis, and subcutaneous tissues. The model consolidates critical varieties of physical and physiological parameters like blood mass stream rate, rate of metabolic heat generation, and thermal conductivity in each layer. Numerical outcomes have been acquired for different instances of functional interest.

Keywords: Rate of metabolism, blood mass stream rate, warm conductivity, warm era, limited component method, pennes bio - heat model

Introduction

Aonla is an indigenous fruit 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 fruits crops generally do not survives. Aonla because of its specific nature has much scope for commercial cultivation. Aonla is suitable for marginal farms and does not require much care (Singh *et al.*, 2006) [12]. It is being grown across the country in an area of 108000 ha with production 1266.46 000 tonnes annually (NHB, 2013) [8]. Consumption of raw aonla fruit is considered to be good for human health, but because of the inherent high astringency it has little value. Therefore, it can used into various products *viz.* murabba, candy, juice, pickle, powder, segments-in-syrup etc. Among these, juice is the preferred product. The blended fruit beverages are far superior to synthetic beverages in terms of quality (Srivastava, 2004) [13]. India is the largest producer and consumer of sucrose in the world. But, over the past few decades the nutritional role of sucrose has become the issue of controversy due to changing dietary needs of urbanized population (Nishad and Gowda, 2006) [10]. The highest yield of fruits per tree was recorded in Kanchan (3459 fruits tree and 99.79 kg fruits tree). Higher size of fruits was observed in NA-7, whereas, small size fruits were observed in Krishna. (Maholiya *et al.*, 2015) [1]. The fruit, due to its sour and astringent taste, has very limited table value. The fresh fruits are generally not consumed due to their high astringency but it has got great potential in processed forms. Aonla fruits are highly perishable in nature and hence its storage in atmospheric conditions after harvesting is very limited (Kumar, *et al* 1993) [11]. The fruit is used in the preparation of various ayurvedic tonics like chavanprash, triphala, etc. However, aonla fruits are processed into a number of food products like preserve, jam, jelly, candy, toffee, pickle, sauce, squash, juice, RTS beverage, cider, shreds, dried powder, etc. (Tondon, *et al.* 2003 and Singh, *et al.* 2005) [4, 15]. Major constraints were lack of financial resources, high cost of agriculture inputs, perishable nature of the produce, pests and natural calamity attack, lack of market information, price fluctuation in national markets and high transportation cost (Khan and Khan, 2014) [6].

It was also found that there was a highly significant difference between the aonla growing farmers and farm women with respect to their suggestion of agriculture information. India is the largest producer of mangoes and bananas and is among the first ten in the production of apples, papayas, oranges and grapes (Wani *et al.*, 2017) [16]. That majority of the respondents faced problems as non-availability of extension field services, lack of irrigation water, lack of cold storage facilities, extra commissions, distant markets, scab disease and fruit fly (Khalil *et al.*, 2014) [7]. Production and marketing constraints faced by citrus growers in Jammu region of J & K. The study revealed that in the cultivation of citrus several constraints such as inadequate irrigation facilities, non-availability of good quality seedlings, farmyard manure and lack of latest technical knowledge were predominant and expressed by most of the farmers (Bhat *et al.*, 2015) [2]. Over all World, India has the second rank after China in production of fruits. Maharashtra state stood first in the production of Pomegranate (Shrote *et al.* 2018) [14]. India's ranks IInd in fruits production in the world with the production of 97358.00 thousand MT from 6506.00 thousand ha area. Contribution of aonla in fruit production is 1075.00 thousand MT from 93.00 thousand hectare area (NHB, 2018) [9]. Uttar Pradesh accounts for nearly 60 % of this production. Pratapgarh district of U.P. is a major aonla producing district covering 7000.90 hectares with the production 31064.30 MT. (DHO, 2018) [5]. It is

ascertain from above discussion that aonla cultivation can certainly help to raise the income and employment of the farming community taking marginal land underutilization. Thus, to understand the present scenario and future prospects of aonla cultivation in a leading aonla district of U.P. i.e. Pratapgarh.

Methodology

The study was conducted during agricultural year 2019-20. A multi-stage purposive cum random sampling technique was adopted for selection of district, blocks, villages and aonla growers. Pratapgarh district was selected purposively, two blocks namely Sadar and Sandwa Chandrika were selected purposively, 10 villages from each blocks selected purposively and 200 aonla growers were selected randomly. Therefore orchardists of the aonla were categories into four groups based on life of the orchard viz. 0-6 years, 6-12 years, 12-24 years and 24 & above years. In all 200 aonla orchardists were selected of which 34 orchardists were from 0-6 year's category, 62 orchardists from 6-12 years category, 68 orchardists from 12-24 years category and 36 orchardists from 24 & above category groups. Survey method was adopted to collect the information from the aonla growers. Percentage method was used to work out, problem and constraints in the production and marketing of aonla.

Table 1: Disposable pattern of Aonla under different channels of distribution

Channels	No. of farmers	Total production (qt.)	Own consumption of raw and proceed aonla					Marketable/Marketed surplus
			Morabha	Pickle	Chutany	Other	Total consumption	
Channel I	48	11147.18	19.98	11.27	3.79	6.70	41.74	11147.18
Channel II	52	12981.90	24.35	14.21	5.06	10.28	53.90	12928.00
Channel III	74	28340.25	30.49	19.42	9.95	14.55	74.41	28265.84
Channel IV	26	7889.94	14.22	9.94	2.54	4.13	30.83	7859.11
Total	200	60359.27	89.04	54.84	21.34	35.66	200.88	60158.39

Table 2: Price spread and marketing charges for different channels of kachcha Aonla/q

S. No.	Particulars	Channels							
		I		II		III		IV	
		Rs. /q	Percent	Rs. /q	Percent	Rs. /q	Percent	Rs. /q	Percent
1.	Net amount Received by producer	2400.00	98.58	2005.10	86.05	1985.75	84.49	1950.20	83.25
2.	Charge paid by producer	30.26	1.42	42.20	1.81	-	-	-	-
3.	Purchase price of contractor	-	-	-	-	1985.75	84.49	1950.20	83.25
4.	Marketing cost incurred by contractor	-	-	-	-	84.20	3.58	105.50	4.50
5.	Contractor's Net margin	-	-	-	-	62.30	2.65	94.50	4.03
6.	Purchase price of wholesaler	-	-	2047.30	87.86	2132.25	90.73	2150.20	91.79
7.	Marketing cost incurred by wholesaler	-	-	106.26	4.56	60.28	2.56	87.43	3.73
8.	Wholesaler Net margin	-	-	56.23	2.41	56.14	2.39	85.00	3.63
9.	Purchase price of retailer	-	-	2209.79	94.84	2248.67	95.68	2342.63	100
10.	Marketing cost incurred by retailer	-	-	62.22	2.67	52.00	2.21	-	-
11.	Retailer's Net margin	-	-	58.09	2.49	49.50	2.11	-	-
12.	Price spread	30.26	1.42	325.00	13.95	364.42	15.51	-	-
13.	Purchase price of consumer	2130.26	100	2330.10	100	2350.17	100	-	-
14.	Producers share in consumer's rupees (in percent)	98.58	-	86.05	-	84.49	-	-	-

Result

Marketing margin refers to difference between the price paid and received by specific marketing agencies. The price spread refers to the difference between the price paid by consumer and price received by producer for an equivalent quantity and quality of farm product. Marketable surplus were more or less equal to the marketable surplus, depending upon the condition of the farmer and crops. In aonla cultivation marketed surplus and marketable surplus were equal to each other. The marketable surplus refers to surplus available for sale with the producer/farmer after making his own consumption

requirements. This study may be helpful in judging and rationalising the marketing charges for different functionaries and the 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 products in the study area were 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).

Disposable Pattern of Aonla

Disposable Pattern of aonla in different channels is presented in table 1.

Marketing channels I, II, III and IV is used by 48, 52, 74 and 26 orchardists farmers respectively. Channel III is one of the most important on sample farms, because of maximum no. of farmers disposed of their marketed produce.

Price spread, marketing margin and marketing charges for different channels of kachha Aonla

The price spread and marketing charges for different channels of kachha aonla are given in table 2.

Table 2 indicated that the producer's share in consumer's rupees came to 98.58 %, 86.05 %, 84.49 % and 83.25 % for channels, I, II, III and IV respectively. The contractor's net margin came to 2.65 % and 4.30 % for channels III and IV respectively. The wholesaler's net margin came to 2.41 %, 2.39 % and 3.73 % for channel II, III and IV respectively. Retailer's net margin came to 2.49 % and 2.11 % for channel II and III. The price spread came to 1.42 %, 13.95 % and 15.51 % for channels I, II and III, respectively.

Conclusion

Marketing channels I, II, III and IV is used by 48, 52, 74 and 26 orchardists farmers respectively. Channel III is one of the most important on sample farms, because of maximum no. of farmers disposed of their marketed produce. The producer's share in consumer's rupees came to 98.58 %, 86.05 %, 84.49 % and 83.25 % for channels, I, II, III and IV respectively. The contractor's net margin came to 2.65 % and 4.30 % for channels III and IV respectively. The wholesaler's net margin came to 2.41 %, 2.39 % and 3.73 % for channel II, III and IV respectively. Retailer's net margin came to 2.49 % and 2.11 % for channel II and III. The price spread came to 1.42 %, 13.95 % and 15.51 % for channels I, II and III, respectively.

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