

## **A Study on Marketing aspects of Banana in Goalpara District of Assam**

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### **Abstract**

The study was conducted in Goalpara District of Assam. Random sampling technique was used for selection of blocks, Villages and Proportionate random sampling for selection of banana growers. From the list of all the banana growers, 100 growers were selected using proportionate sampling method i.e. 31 Marginal, 33 small, 21 semi medium and 15 Medium respectively. For collection of primary data from the respondents' pre structured interview schedules were widely used. Secondary data related to the study were collected from various sources like Agriculture development office of the block, journals, magazines etc. The marketable surplus for Banana in the area was found to be 327.44, 411.21, 573.78, 745.53 quintals per farm for marginal, small, semi medium and medium farms respectively which constitute (99.09%), (98.94%), (98.85%) and (98.73%) to their total Banana production. In Channel I the Producer directly sell to the consumer at Rs 3000/quintal, the net price received by the farmer was Rs 2850, the Producer's share in consumer rupees is 95%, Price spread is 150 and marketing efficiency is 20%. In Channel II the producer sell their produce to Wholesaler, than the wholesaler to retailer, after collecting margin the produce reaches the consumer, the total Marketing cost in channel II was Rs 430, Price spread was 1380, Producer's share in consumer rupees was 70.75% and marketing efficiency was 3.07%. in channel III which was identified as the longest channel, where there are two intermediaries Post harvest contractor and Wholesaler and from wholesaler to retailer than retailer after collecting margin reaches the consumers. The total marketing cost in channel III was Rs 550 and total marketing margin was Rs 1630. The consumer purchase price was Rs 5040 per quintal. Producer's share in consumer rupees for channel III was found out to be 59.52%, price spread was Rs 2180 and marketing efficiency was 2.31%. The highest cost of marketing was for gunny bags and transportation cost.

**Keywords:** Marketable surplus, Price Spread, Marketing efficiency, Producer's share in consumer rupees.

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### **I. Introduction**

Banana (Apple of Paradise) is one of the world's oldest fruits and a high-energy food (104 calories per 100 grams). It's both nutrient-dense and delicious. This crop is thought to have originated in Southeast Asia. It's also used in a variety of foods, medicines, feeds, fuels, and personal care products. In 2016, bananas were estimated to be grown in 130 nations, with a total population of 150 million tones. Banana production, exports, and imports, on the other hand, are concentrated in a few countries. India, China, the Philippines, Brazil, and Educator produced more than 60% of the bananas produced worldwide. Although there is a regional difference, the concentration of banana production has increased over time. Among the fruits grown in India, banana is the most widely produced and consumed. India is the world's leading banana-growing country, accounting for 29.82 million tones of the total harvest per year. Maharashtra, Tamil Nadu, Andhra Pradesh, Kerala, Karnataka, Bihar, Gujarat, and Assam are the major banana-growing states. However, the country's current banana production is woefully inadequate. India's current annual per capita banana consumption is projected to be 50 kg, which is quite low when compared to other progressive banana-growing countries such as Jamaica, Congo, Ecuador, and Uganda. As a result, there is a huge potential for growing banana output in the country. Taking into account identified production issues such as a lack of technical know-how, a paucity of labour, pests and diseases, a lack of suitable credit, and a scarcity of water (Guledgudda, et al.)

Banana is a popular fruit crop in India's tropical and subtropical regions. It is grown on an area of 830.5 thousand hectares in India, with a total production of roughly 29780.0 (000MT) and a productivity of 35.88 MT/hectare. (APEDA Portal is the source.) Maharashtra, Tamil Nadu, Gujarat, Andhra Pradesh, and Karnataka are the main banana-growing states. India ranks 2<sup>nd</sup> in production of fruit crops in the whole world and in banana production it stands and 1<sup>st</sup> position in area among fruit crops where 20% of total area of fruit production and more than 37% of production of fruit is counted under it. Production is highest in the state of Tamilnadu (5650 MT) followed by Maharashtra (4830 MT). Where Assam placed on 12th rank with 723.60 MT production and UP bags 10<sup>th</sup> rank according to state wise rank list by National Horticulture Board of India report. Productivity is highest in the State of Tamilnadu with 65.8 HA/ MT where National average is 37 MT/HA. Banana which is also known to be a common man's fruit, because there is a large area under banana in India, its per hectare yield is also highest (35-40 MT/ha) among all the other fruits. Therefore its production is large and he prices are within the reach of common people. The total area under banana is 3.70 lakh ha, next to mango. According to a study conducted in marketed surplus and price spread in banana marketing carried out in Nanded district of Maharashtra during the year 2008-2009 it was revealed that size of banana garden was 1.98 hectares with 439.56 quintals of banana production (**Pawar et al. 2010**). Among the states, Maharashtra contributes the maximum area of about 90,000 ha. In Maharashtra, area under banana is concentrated in Jalgaon district with nearly 60% area in that district. Banana is a very perishable fruit and hence its marketing faces a lots of problems such as number of middlemen, transportation, storage facilities, etc. in local or short distance marketing number of intermediaries is small (one or two) but in long distance marketing commission agents and wholesalers are involved in addition to co-operative society.

## II. Methodology

Methodology was used for the study under following heads:

1. Sampling technique
2. Method of enquiry and collection of Data
3. Period of Study
4. Analytical tools used.

### Sampling Technique

Various sampling techniques were used as per need.

### Selection of District

Goalpara District is selected purposively because of highest Production of Banana in the state of Assam.

### Selection of block

Out of 9 blocks of Goalpara district, one block namely Rangjuli Block was selected purposively because of high concentration of Banana growers in the area.

### Selection of Villages

A list of all the villages of the selected block was prepared along with area under Banana cultivation. Than the list of the villages were arranged in descending order according to area under cultivation. Thereafter 5% villages were selected purposively.

### Selection of Banana growers

A complete list of all the Respondents growing banana was collected from the Head of the village (Gram Pradhan) of each village in the block. After this the respondents were arranged in ascending order according to the area under banana cultivation and the respondents were than classified into different farm groups according to the area under banana cultivation. Marginal (less than 1 ha area), Small (1-2 ha area), Semi medium (2-4 ha area), Medium (4-10 ha area). Then out of that 10% sample respondents/ households were selected randomly from each selected villages thus all together 100 banana growers or households i.e. Marginal 31, Small 33, Semi medium 21, Medium 15 respondents/ households were selected for the present study.

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

SL. No	Name of villages	Total Number of households/farmers in different farms group					Selected number of households/farmers in different farms group				
		Marginal	Small	Semi medium	Medium	Total	Marginal	Small	Semi medium	Medium	Total
1.	Adopara	80	100	70	40	290	8	10	7	4	29
2.	Kamarpara	50	60	40	30	180	5	6	4	3	18
3.	Madang	80	50	50	30	210	8	5	5	3	21
4.	Darrangiri Tilapara	50	50	30	20	150	5	5	3	2	15

5.	Khara Medhipara	50	70	20	30	170	5	7	2	3	17
	Total	310	330	210	150	1000	31	33	21	15	100

**Selection of Market**

The data related to prices and arrivals of Banana was collected from Darrangiri Banana Market in Rangjuli Block of Goalpara District.

**Selection of market functionaries**

From each of the market wholesalers and traders were chosen and they were interviewed personally to elicit required information related to price and marketing margins by simple survey method. The data pertaining to banana prices were obtained from Banana retail stores in Rangjuli block. 5% of the functionaries were selected randomly for collecting of data regarding marketing of banana in different channels of marketing.

**Table 2: Details of market functionaries**

SL. No	Market (Primary & Secondary)	Market functionaries	Total
1.	Darrangiri Sub market yard	Wholesalers / Commission agent	20
		Pre harvest contractor	10
		Retailer	30
		Total	60

**Methods of enquiry and Data collection**

The enquiry was conducted by survey method. The primary data were collected from the Banana growers of the study area through personal interview on well structured schedules and secondary data were obtained from the records available at district Agriculture office, Block office village level offices etc.

**Period of study**

The study was conducted for the agricultural year 2021-22,

**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-** It includes all the marketing charged from local assembling of banana to retailing it in the marketing process.

**Formula-**  $C = C_f + C_{m1} + C_{m2} + C_{m3} + \dots + C_{mn}$

Where,

C = Total marketing cost of banana

C<sub>f</sub> = Cost paid by the producer from the time the produce (banana) leaves the farm till the sells,

C<sub>mn</sub> = cost incurred by the middleman in the process by buying and selling of Banana.

**2. Marketing margin-** The term marketing margin refers to the differences in prices for a commodity at different stages of the marketing system.

**3. Price Spread-** This is the net price received by the farmers, which is equal to the wholesaler's price at the primary assembling centers minus the charges borne by the producer in selling his produce.

**Price spread** = Total Marketing cost + Total Marketing Margin.

**5. Marketable surplus :** Marketable surplus will be calculated by the following formula-

$$M.S = P - C$$

Where,

MS = Marketable surplus

P = Total production

C = Total requirements (home consumption, for gifts , payments to labour for social works and others)

**6. Marketed surplus** – It is the quantity of the produce, which the grower actually sells in the market, irrespective of his own family consumption and other needs.

**7. Producer's share in Consumer's rupee-** The producer's share in Consumer's rupee is the price received by the producer expressed in terms of percentage of the retail Price ( i.e. the price paid by the consumer) which is the producer's share.

$$P = \frac{C \times M}{C + M}$$

Where,

P = Producer's share in consumer Rupee

C = Consumer Price

M = Total Marketing cost + middleman's margin

**8. Marketing efficiency** – Shepherd’s index of marketing efficiency ( M.E) was be used for calculation of market efficiency which is as follows

$$ME = \frac{\text{Retailer's sale price or Consumer's purchase price}}{\text{Total marketing cost + Marketing Margins}}$$

(Total cost = Charges paid by the producer + wholesaler + Retailer)

### III. Results and Discussion

#### Marketable Surplus

The higher marketable surplus was due to the perishable nature of Banana, that it cannot be kept for a long period of time. Moreover there are no proper Storage facilities available in the study area. Hence, the banana growers were engaged in other enterprises like Piggery, Rice cultivation etc. to generate profit, which resulted in high marketable surplus of banana in the study area. The marketable surplus of banana in the study area was found to be 327.44, 411.21, 573.78, 745.53 quintals per farm for marginal, small, semi medium and medium farms respectively which constitute (99.09%), (98.94%), (98.85%) and (98.73%) to their total Banana production. The rest of the quantity was used for Home consumption, as kind payments as wages and for gifting to relatives and used for religious purposes. The marketable surplus was also high for marginal size of farms as they tend to sell most of their produce to earn profit as compared to Small, semi medium and medium size farms. The sample average of marketable surplus of banana in the study area for different size of farms was 514.49 quintals which constitute 98.90% of their total production.

**Table 3: Marketable surplus of Banana (Qts) for the study area**

SL. NO	Particulars	Size of Farm Groups				Sample Average
		Marginal	Small	Semi Medium	Medium	
1.	Total Production of Banana in quintals per Farms level	330.45	415.60	580.45	755.12	520.40
2.	Retained for Banana (in quintals)	-	-	-	-	-
i.	Home Consumption	0.96 (0.29)	1.66 (0.40)	2.61 (0.45)	3.77 (0.50)	2.14 (0.41)
ii.	Kind Payment as wages	1.52 (0.46)	1.95 (0.47)	2.84 (0.49)	3.92 (0.52)	2.56 (0.49)
iii.	Relatives and Religious persons	0.53 (0.16)	0.78 (0.19)	1.21 (0.21)	1.88 (0.25)	1.10 (0.20)
iv.	Retain for Next years	-	-	-	-	
3.	Marketable Surplus	327.44 (99.09)	411.21 (98.94)	573.78 (98.85)	745.53 (98.73)	514.49 (98.90)

#### Marketing Channels

During the study three prevailed marketing Channels were identified in the study area.

1. Channel I: Producer – Consumer
2. Channel II: Producer – Wholesaler – Retailer – Consumer
3. Channel III: Producer – Pre harvest Contractor – Wholesaler – Retailer – Consumer

**Table 4: Channel I: Producer – Consumer**

SL No	Particulars	Rs/ Quintal
1.	Producer sale Price to Consumer	3000 (100)
2.	Cost incurred by the Producer	
i	Transportation Cost	50 (1.67)
ii	Gunny bags	60 (2.00)
iii	Loading and unloading Cost	20 (0.67)
iv	Weighing cost	10 (0.33)
v	Miscellaneous charges	10 (0.33)
vi	Total Cost incurred by Producer	150 (5.00)
3.	Net Price Received by Producer	2850 (95.00)

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4.	Price Spread	150 (5.00)
5.	Consumer's Paid Price	3000 (100)
6.	Producer's Share in Consumer Rupees (%)	95.00
7.	Marketing Efficiency (in %)	20.00

**Note:** Figure in the parenthesis indicated percentage of the total consumer Price

Table 4 reveals the marketing cost when producers sold their product directly to consumers in the local market which was Rs 150/ quintal. Among these cost transportation was Rs 50/ quintal, Gunny bags Rs 60/ quintal, loading and unloading cost Rs 20/ quintal, weighing charges Rs 10/ quintal and Miscellaneous charges was Rs 10/ quintal respectively. The Producer net share was 95.00 per cent in consumer's Price the price spread was Rs 150/ quintal, Marketing Efficiency was worked out to know the efficiency of different Channels. Marketing efficiency for Channel 1 was 20.00 Per cent.

**Table 5: Channel II: Producer – Wholesaler – Retailer – Consumer**

SL No.	Particulars	Rs/ quintal
1.	Producer sale price to Wholesaler	3000
2.	Cost incurred by the Producer	
i.	Transportation Cost	40 (1.05)
ii.	Gunny Bags	60 (1.58)
iii.	Loading and Unloading charges	20 (0.52)
iv.	Weighing Charges	10 (0.26)
v.	Miscellaneous Charges	10 (0.26)
	Total Cost incurred by Producer	140 (3.70)
3.	Net Price received by Producer	2860 (75.66)
4.	Sale Price of producer to Wholesaler	3000 (79.36)
5.	Cost incurred by Wholesaler	
i.	Transportation Cost	30 (0.79)
ii.	Loading and unloading charges	10 (0.26)
iii.	Market Fee	20 (0.52)
iv.	Weighing Charges	10 (0.26)
v.	Losses and Miscellaneous Charges	10 (0.26)
vi.	Gunny bags	60 (1.58)
	Total Cost incurred by Wholesaler	140 (3.70)
6.	Net amount Paid by Wholesaler	3140 (83.06)
7.	Sale Price of Wholesalers to Retailers	3440 (91.27)
8.	Wholesaler's Margin	300 (9.09)
9.	Cost incurred by the Retailers	
i.	Transportation Cost	25 (0.06)
ii.	Weighing Charges	10 (0.26)

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iii.	Gunny bags	60 (1.58)
iv.	Miscellaneous Charges	10 (0.26)
v.	Town Charges	20 (0.52)
vi.	Carriage up to Shop	10 (0.26)
vii.	Loading and Unloading charges	15 (0.39)
	Total Cost incurred by Retailer	150 (3.96)
10.	Net amount paid by Retailer	3590 (95.82)
11.	Sale Price of Retailers to Consumers	4240 (100.00)
12.	Retailer's Margin	650 (17.19)
13.	Price Spread	1380 (36.50)
14.	Consumer's Paid Price	4240
15.	Producer's Share in Consumer's Rupee (%)	70.75
16.	Marketing Efficiency (in %)	3.07

**Note:** Figure in the Parenthesis indicates percentage to the total consumer Price

Table 5 shows that Marketing cost, marketing margin, and Price spread for Channel II. Two intermediaries were identified through which banana reaches to the consumers i.e. Wholesalers, who in turn sell it to retailers in the market. Finally the produce reaches the consumers after collecting margin. Marketing cost when producers sold their produce to Wholesaler in the market was Rs 140/ quintal, among these Cost of transportation was Rs 40/quintal, loading and unloading cost Rs 20/quintal, Gunny bags Rs 60/quintal, weighing charges Rs 10/quintal, and miscellaneous charges Rs 10/quintal respectively. Sale price of the producer to Wholesaler was Rs 3000/quintal. In these channel marketing cost of the producer, Wholesalers and retailers was 2.71 per cent of the consumer paid price. Producer share in consumer price, Price spread, and Marketing Efficiency was 70.75 Per cent, 1380 and 3.07 per cent respectively, in different size of farms group.

**Table 6: Channel III: Producer – Pre harvest Contractor – Wholesaler – Retailer – Consumer  
(Value in Rs/ quintal)**

SL No.	Particulars	RS/quintal
1.	Producer sale price to Pre harvest Contractor	3000
2.	Cost incurred by the producer	
i.	Transportation cost	40 (0.97)
ii.	Gunny bags	60 (1.48)
iii.	Loading and Unloading Charges	20 (0.48)
iv.	Weighing Charges	10 (0.24)
v.	Miscellaneous Charges	10 (0.24)
	Total cost (i-v)	140 (3.41)
3.	Net price received by Producer	2860 (69.92)
4.	Sale price of Producer to Pre harvest Contractor	3000 (73.34)
5.	Cost incurred by Pre Harvest contractor	
i.	Transportation cost	30 (0.73)
ii.	Loading and unloading charges	15 (0.36)
iii.	Weighing Charges	10 (0.24)
iv.	Losses and miscellaneous charges	10 (0.24)
v.	Gunny bags	60 (1.46)

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	Total cost (i-v)	125 (3.05)
6.	Contractor's Margin	500 (16.66)
7.	Sale price of Pre harvest contractor to Wholesaler	3625 (81.29)
8.	Cost incurred by Wholesaler	
i.	Loading and unloading Cost	10 (0.24)
ii.	Market fee	20 (0.48)
iii.	Weighing Charges	10 (0.24)
iv.	Losses and Miscellaneous Charges	10 (0.24)
v.	Transportation	25 (0.60)
vi.	Gunny bags	60 (1.46)
	Total Cost (i-vi)	135 (3.30)
9.	Net amount paid by Wholesaler	3465 (84.56)
10.	Sale Price of Wholesalers to Retailer	4240 (88.99)
11.	Wholesaler Margin	480 (11.32)
12.	Cost incurred by the Retailers	
i.	Transportation Cost	20 (0.48)
ii.	Weighing charges	15 (0.36)
iii.	Loading and Unloading charges	15 (0.36)
iv.	Gunny bags	60 (1.46)
v.	Town charges	20 (0.48)
vi.	Carriage to the shop	10 (0.24)
vii.	Miscellaneous charges	10 (0.24)
	Total Cost incurred by Retailer (i-vii)	150 (3.66)
13.	Net amount paid by retailer	3790 (92.66)
14.	Sale price of retailers to consumers	5040 (100.00)
15.	Retailers margin	650 (12.89)
16.	Price spread	2180 (43.25)
17.	Consumer's paid price	5040
18.	Producer's share in consumer rupees (%)	59.52
19.	Marketing Efficiency (in %)	2.31

**Note:** Figure in the parenthesis indicated percentage of the total consumer Price

Table 6 shows the Marketing cost, Marketing margin, and Price Spread for Channel III. Three numbers of intermediaries were identified through which Banana reaches to the consumers i.e. Pre harvest Contractor, Wholesalers and Retailers. This is the longest Channel among the identified channels. The producer sells his produce to the Pre harvest Contractor and the contractor to the Wholesalers, who in turn sell it to retailers in the market. Finally the produce reaches the consumer after collecting margin. Marketing cost when the producer sells the produce to pre harvest contractor is Rs 140/quintal. Among these cost transportation cost was Rs 30/quintal, loading and unloading cost was Rs 10/quintal, market fee Rs 10/quintal, weighing charges Rs 10/quintal and miscellaneous charges Rs 10/quintal respectively. Sale price of the producer to the Wholesaler is Rs 3000/quintal in different size of farms group.

In these channel marketing cost of the producer, pre harvest contractor, wholesalers and retailers was 2.77 per cent, 2.48 per cent, 2.67 per cent and 2.97 per cent of consumer paid price respectively. The contractor

margin was estimated to be 9.92 per cent and the retailer's margin was 12.89 per cent of the Consumer paid price. Producer share in consumer price, Price spread and marketing efficiency was 59.52 per cent, 2180 and 2.31 per cent respectively in different size of farms groups.

#### **IV. Summary and Conclusion**

The higher marketable surplus was due to the perishable nature of Banana, that it cannot be kept for a long period of time. Moreover there are no proper Storage facilities available in the study area. Hence, the banana growers were engaged in other enterprises like Piggery, Rice cultivation etc. to generate profit, which resulted in high marketable surplus of banana in the study area. There were a total of three marketing channels that were identified in the study area and the most preferred channel was Channel III where 48.49% of the total produce from different size of the farm groups was marketed followed by 33.13% through Channel II and the least preferred Channel was Channel I where only 18.38% of the total produce was marketed. The most efficient marketing Channel was channel I with 20% marketing efficiency followed by Channel II with 3.07% marketing efficiency and the least efficient Channel was Channel III where the marketing efficiency was 2.31%. The Producer's sale Price was Rs 3000 per quintal in all the three channels. In Channel I the Price spread and Producer's share in Consumer Rupee were Rs 150 and 95% respectively. In Channel II the Price spread was 1380 which includes the total marketing margin plus the total marketing cost of the producer, wholesaler and retailer and the producer's share in consumer rupee was 70.75%. For Channel III which is found out to be the longest Channel among all the three Channel where there are three intermediaries between the Producer and the Consumer, the Pre harvest contractor, Wholesaler and Retailer. The Selling Price of Retailer to Consumer in Channel III was Rs 5040 per quintal, the Price spread and Producer share in consumer rupee for channel III were Rs 2180 and 59.52% respectively.

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