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Price spread and marketing of banana in vaishali district (Bihar)

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Abstract
The study was conducted in the year 2017-2018 to study the "Marketing channel, price spread and marketing efficiency in different marketing channels of banana in Vaishali district of Bihar" It revealed that, Price spread in channel I, channel II and channel III were (Rs. 150/quintal,920/quintal and 1230/quintal) respectively. Producer's share in consumer's rupee for the channel I was 95.00 per cent, channel II was 79.36 per cent and channel III was 73.34 per cent. Marketing efficiency for channel I was 20 per cent, channel II was 4.10 and channel III was 3.25 per cent respectively.

Keywords: Price spread, marketing efficiency, ANOVA

Introduction
Banana *(Musa paradisica)* is one of the oldest fruits known to mankind and also a rich source of energy (104 cal/100gram). It is highly nutritive and very delicious. The probable origin of this crop is Southeast Asia. It is also utilized in a number of forms of food, medicine, feed, fuel and individual applications. This concentration of banana production has increased over time although showing a different regional distribution. Banana is the largest produced and maximum consumed amongst the fruits cultivated in India. India ranks first amongst the banana cultivating countries of the world. According to a study conducted in marketed surplus and price spread in banana marketing was carried out in Nanded district in Maharashtra during the year 2008-2009 revealed that size of banana garden was 1.98 hectares with 439.56 quintals of banana production (Pawar *et al*. 2010) [8]. Studied that banana marketing in Bihar, Jharkhand, Orissa, west Bengal and Assam market. The findings indicate that the longer the marketing channel, the smaller was farmers' share (Verma and Singh 2002) [9]. Studied that the fruits and vegetables are important commercial crops of Himachal Pradesh. Studied the Comparative Analysis of Marketing Margin of Fruit and Vegetables in Mindanao, The Philippines The paper aims to determine the general efficiency of fresh produce marketing systems in Mindanao and to identify which actor[s] in the marketing chain benefit the most (Ebarle 2013) [5].

Research Methodology
Banana cultivation is practiced throughout the district. However the large scale cultivation of banana is concentrated mainly in Hazipur taluk extending on an area of 2000 hectares. Hence, Hazipur taluka was specifically selected for the study. The information on area under Banana crop and number of banana growers from the selected villages was obtained from the respective village accountants a proportionate sample of ten per cent of the population from each village was selected randomly. Thus, the total size of the sample selected for study was 110. For analyzing the data collected during the study, tabular analysis and, a nova were employed of banana.

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Results and Discussion

Table 1: Marketing cost, marketing margin and price spread in different size of farms group, S M L= 50+ 40+ 20=110 Channel-I = Producer – Consume (Value in rupees/quintal)

S. No	Particulars	Rs/Quintal
1	Producer sale price to Consumer	3000
	2Cost incurred by the producer	
i	Transportation cost	50(1.67)
ii	Gunny bags	60(2.00)
iii	Loading and unloading charges	20(0.67)
iv	Weighing charges	10(0.33)
v	Miscellaneous charges	10(0.33)
	Total cost (i-v)	150(5.00)
3	Net price received by producer	2850(95.00)
4	Price spread	150(5.00)
5	Consumers paid price	3000.00(100.00)
6	Producer share in consumer's rupee (%)	95.00
7	Marketing efficiency (in %)	20.00

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

Table 2: Marketing cost, marketing margin and price spread in different size of farms group SM L= 50+ 40+ 20 =110 (Value in rupees/ quintal) Channel-II = Producer–Commission gent/Wholesaler - Retailer – Consumer

S. No.	Particulars	Sample Average
1	Producer sale price to wholesalers	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 (i-v)	140(3.70)
3	Net price received by producer	2860(75.66)
4	Sale price of producer to commission agent/Wholesaler	3000(79.36)
	5 Cost incurred by the commission agent/ Wholesaler	
i	Transportation charges	30(0.79)
ii	Loading and unloading charge	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 (i-vi)	140(3.70)
6	Net amount paid by commission agent/Wholesaler	3140(83.06)
7	Sale price of commission agent/ wholesalers to retailers	3330(88.09)
8	Commission agent /Wholesaler margin	190(5.02)
	9 Cost incurred by the retailers	
i	Transportation cost	25(0.66)
ii	Weighing charges	10(0.26)
iii	Gunny cost	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 (i-vii)	150(3.96)
10	Net amount paid by retailers	3380(89.41)
11	Sale price of retailers to consumers	3780(100.00)
12	Retailers margin	300(7.93)
13	Price spread	920(21.69)
14	Consumer's paid price	3780
15	Producer's share in consumer rupee (%)	79.36
16	Marketing efficiency (in %)	4.10

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

Table 3: Marketing cost, marketing margin and price spread in different size of farms group. S M L= 50+ 40+ 20 =110 (Value in rupees/quintal)
Channel-III = Producer – Pre-harvest contractor –Wholesaler-Retailer – Consumer

S. No	Particulars	Rs/Quintal
1	Producer sale price to pre-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 per- contractor	3000(73.34)
5	Cost incurred by the pre- contractor	
i	Transportation cost	30(0.73)
ii	Loading and unloading changes	15(0.36)
iii	Weighing charges	10(0.24)
iv	Losses and miscellaneous charges	10(0.24)
v	Gunny bags	60 (1.46)
	Total cost (i-v)	125 (3.05)
6	Contractor margin	200 (4.88)
7	Sale price of pre-contractor to wholesaler	3325 (81.29)
8	Cost incurred by the wholesaler	
I	Loading and unloading changes	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 commission agent/ wholesaler	3465(84.56)
10	Sale price of wholesalers to retailers	3640(88.99)
11	Wholesalers margin	180(4.40)
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 up to shop	10(0.24)
v	Miscellaneous charges	10(0.24)
	Total cost (i-v)	150(3.66)
13	Net amount paid by retailers	3790(92.66)
14	Sale price of retailers to consumers	4090(100.00)
15	Retailers margin	300(7.33)
16	Price spread	1230(30.07)
17	Consumers paid price	4090
18	Producer's shares in consumer rupee (%)	73.43
19	Marketing efficiency (in %)	3.32

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

Table 4: Marketing efficiency, marketing cost and margin and producers share in consumer's rupee in different marketing channels.S M L = 50+40+20=110(rupees/quintal)

Sl. No	Particulars	ChannelI	Channel II	Channel III
1	Total marketing cost	150(5.00)	430(11.68)	550(13.44)
2	Total marketing margin	--	490(12.96)	680 (16.62)
3	Price spread	150(5.00)	920(21.69)	1230(30.07)
4	Producer share in consumer rupee in per cent	95.00	79.36	73.34
5	Marketing efficiency in per cent	20	4.10	3.25

Table 4.1: ANOVA for marketing efficiency, marketing Cost, margin and producer's in consumer's rupee in different marketing channels

Source	d. f.	S.S.	M.S.S.	F. Cal.	F. Tab. 5%	Result	S. Ed. (±)	C.D. at 5%
Due to channel	2	618203.442	309101.721	5.603	5.14	S	191.770	388.9266
Due to particular	3	707368.823	235789.608	4.274	4.76	NS	166.077	336.820
Error	6	330979.893	55163.315	-	-	-	-	-
Total	11	1656552.158	-			-	-	-

Table 4 shows that total marketing cost was highest for channel III (Rs. 555/quintal) compare to channel I and channel II (Rs. 150/quintal and Rs. 430/quintal), respectively.

Price spread was high for channel III ((Rs.1230/quintal) compare to channel I and channel II (Rs.150/quintal and Rs. 920/quintal), respectively. Marketing efficiency was high for

channel I (20 percent) compare to channel II and channel III (4.10 percent and 3.32 percent), respectively.

Table 4.1 revels that price spread and market cost, in the market channels in which Null hypothesis is accepted and the result are satisfied.

Conclusion

The study pertains to the marketing and of banana in Vaishali district. The objective of the study was to estimate marketing channels, price spread and marketing efficiency.

The study shows that there is scope to increase the producer's share in consumer's rupee by marking the market more effective by reducing the number of intermediaries which is to be restricted and marketing costs and marketing margins is to be reduced. In Bihar there is lack of a proper marketing information and market system, as well there is not any existence of single regulated market which draws back the producers' (farmers) share in consumer rupee, and they fall back in achieving the remunerative price of their product. Thus government needs to give some sort of official and functional marketing system so that exploitation of farmers at wholesale level can be minimized.

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