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BK Jha
Birsa Agricultural University, Ranchi, Jharkhand, India

Arun Kumar
Birsa Agricultural University, Ranchi, Jharkhand, India

SK Jha
Birsa Agricultural University, Ranchi, Jharkhand, India

Correspondence
BK Jha
Birsa Agricultural University, Ranchi, Jharkhand, India

Marketing strategy of vegetable growers in Ranchi district of Jharkhand

BK Jha, Arun Kumar and SK Jha

Abstract
The state of Jharkhand is endowed with conducive condition for cultivation of a variety of vegetables crops. It is common knowledge that farmers do not get adequate shares in consumer's rupee. In the backdrop of market- led extension and doubling income of the farmers, a study on "Marketing strategy of vegetable growers in Ranchi district of Jharkhand" was conducted in Ranchi district of Jharkhand. One block *i.e.* Kanke was purposively selected. Two villages namely, Pithoriya and Rendo were also purposively selected. Fifty farmers from each village were randomly selected making the sample size of 100 respondents. The findings indicated that major parts of the vegetables were sold in local market directly to the consumer. Price negotiation was dominated by the buyers. Majority of the respondents used cycle as a means of transport and did not adopt any primary processing measures. Farmers with larger area under vegetable crops earned higher profit. Potato was found to be the least earning crop. Hence, it could be concluded that marketing efficiency and profit margin of the farmers could be increased through the strategies like strengthening marketing infrastructure, cold chain, market information and intelligence, organization of farmers and subsidy on transportation vehicle and packaging materials.

Keywords: Marketing strategy, vegetable growers

Introduction
Marketing is the set of marketing tools that the firm uses to pursue its marketing objectives in the target market (Kotler, 1998). Developing an effective marketing strategy is an important key to success of vegetable growers. An effective marketing strategy combines the 4 Ps of the marketing mix. Like other business, vegetable growers must confront with many factors that are beyond their control. Reducing risk and managing uncertainty is how business and growers can improve profits. It is as important for a grower to develop a marketing strategy as it for a large corporation. The important marketing channels being followed are: (i) Producer – Commission Agent/Wholesaler – Retailer – Consumer, (ii) Producer – Agent of the distant market/wholesaler – Retailer – Consumer, (iii) Producer – Cooperative Society – Consumer, and (iv) Produce – Processor – consumer (Subramanian and Gajanana, 2000; Gajanana *et al.*, 2002) [3]. The most effective channel in marketing of vegetables was Producer-Wholesaler (local)-Commission Agent (distant)-Retailer (local)-Consumer. Producer's share in consumer's rupee was highest in channel where only one intermediary was involved. Also, marketing efficiency was highest in Producer –Retailer (local) – Consumer channel (Dutta and Hazarika, 2014) [2].

Methodology
The study was conducted in Ranchi district of Jharkhand state as it is the leading district in terms of total area under vegetables in the state. The district Ranchi comprises 20 community development blocks, out of which Kanke block was selected purposively for the study. Two villages namely, Pithoriya and Rendo were also selected purposively. Fifty vegetable growers from each village were selected randomly. Thus, the sample constituted 100 respondents.

Findings and Discussion
Findings and discussion thereof have been presented under market place chosen, marketing channel adopted, price negotiation process, mode of transport, primary processing adopted, packaging undertaken, assessment of profit margin and suitable measures for enhancing marketing efficiency and profit margin.

Market place chosen

Frequency distribution of the respondents according to chosen market place is presented in Table 1.

Table 1: Frequency distribution of respondents according to chosen market place chosen (n=100) (Multiple responses)

S. N.	Vegetable	Market place								
		Local						Distant		
		Pithoriya	Ranchi	BIT, Mesra	Bodeya	Vikas	Bariyatu	Bengal	Bihar	Odisha
1.	Potato	46 (46 %)	02 (02 %)	49 (49 %)	43 (43%)	30 (30%)	04 (04%)	09 (09%)	15 (15%)	00 (0%)
2.	Tomato	44 (44 %)	02 (02 %)	49 (49%)	44 (44%)	30 (30%)	04 (04%)	23 (23%)	16 (16%)	11 (11%)
3.	Cauliflower	23 (23%)	01 (01%)	47 (47%)	42 (42%)	30 (30%)	04 (04%)	36 (36%)	28 (28%)	27 (27%)
4.	French bean	40 (40%)	02 (02%)	48 (48%)	41 (41%)	29 (29%)	05 (05%)	14 (14%)	13 (13%)	17 (17%)

It is revealed by the table that majority of the farmers sold potato in local market as indicated by 46%, 2%, 49%, 43%, 30% and 4% respondents in cases of the markets like Pithoriya, Ranchi, BIT Mesra, Bodeya, Vikas and Bariyatu, respectively. Similarly, in case of tomato 44%, 25%, 49%, 43%, 30% and 4% farmers sold their produce at Pithoriya, Ranchi, BIT Mesra, Bodeya, Vikas and Bariyatu markets respectively. Likewise, 23%, 1%, 47%, 42%, 30% and 4% farmers sold cauliflower at Pithoriya, Ranchi, BIT Mesra, Bodeya, Vikas and Bariyatu respectively. Altogether 40%, 2%, 48%, 41%, 29% and 5% farmers sold French bean at Pithoriya, Ranchi, BIT Mesra, Bodeya, Vikas and Bariyatu, respectively. The table indicates that some of the farmers sold potato in distant markets like Bengal and Bihar as indicated by 9% and 15% respondents, respectively. Similarly, in case of tomato 23%, 16% and 11% farmers sold their produce at Bengal, Bihar and Odisha, respectively. Likewise, 36%, 28% and 27% farmers sold cauliflower at Bengal, Bihar and Odisha, respectively. Altogether 14%, 13% and 17% farmers sold French bean at Bengal, Bihar and Odisha, respectively. It could be inferred from the table that tomato and cauliflower have potential for distant marketing.

Marketing channels adopted

Frequency distribution of the respondents according to marketing channels adopted is presented in Table 2.

Table 2: Frequency distribution of respondents according to marketing channels adopted (n=100)

S. N	Vegetable	Direct	Mediator	Mixed
1.	Potato	65 (65%)	15 (15%)	20 (20%)
2.	Tomato	68 (68%)	22 (22%)	10 (10%)
3.	Cauliflower	47 (65%)	31 (31%)	22 (22%)
4.	French bean	71 (71%)	11 (11%)	18 (18%)

The table shows that majority of the farmers sold their produce directly to the consumer as indicated by 65%, 68%, 47% and 71% respondents in case of potato, tomato, cauliflower and French bean, respectively. Similarly, some of the farmers sold their produce through mediator as indicated by 15%, 22%, 31% and 11% respondents in case of potato, tomato, cauliflower and French bean, respectively. Likewise, some of the farmers adopted both the mode i.e. mixed as indicated by 20%, 22%, 10% and 18% respondents in case of potato, tomato, cauliflower and French bean, respectively. Srinivas *et al.* (2014) [9] reported that 53.33% of the tomato growers belong to medium level of marketing practices category followed by high (25%) and low (21.67%).

Price negotiation process

Frequency distribution of the respondents according to price negotiation process is presented in Table 3.

Table 3: Frequency distribution of respondents according to price negotiation process (n=100)

S. N.	Particular	Frequency	Frequency
1.	Negotiation in favour of buyer	82	82
2.	Negotiation in favour of seller	18	18

The process of price negotiation was conceived in terms of price negotiation between buyer and seller. Majority (82%) of the farmers reported that negotiation was in favor of buyer. the Price negotiations materialized only in favor of 18% farmers. The findings led to infer that there is scope for increasing profit through proper marketing strategy.

Mode of transport used

Frequency distribution of the respondents according to mode of transport used is presented in Table 4.

Table 4: Frequency distribution of respondents according to mode of transport used (n=100) (Multiple responses)

S.N.	Particular	Frequency	Percentage	Rank
1.	Cycle	94	94	I
2.	Motorcycle	29	29	IV
3.	Tempo	44	44	II
4.	Bus/truck	38	38	III

It is apparent from the table that majority (94%) of the farmers used cycle as means of transport to carry their produce to the markets which was followed by tempo (44%), bus/truck (38%) and motorcycle (29%). As most of the farmers most of the time sell their produce in local markets, hence, they use their personal cycle as primary means of transport which is the cheapest.

Primary processing undertaken

Frequency distribution of the respondents with respect to primary processing undertaken is presented in Table 5.

Table 5: Frequency distribution of respondents with respect to primary processing undertaken (n=100) (Multiple responses)

S. N.	Particular	Frequency	Percentage
1.	Cleaning	29	29
2.	Grading/sorting	24	24
3.	No primary processing	46	46

It is indicated by the table that majority of the farmers (46%) do not adopt any primary processing. Cleaning practice was adopted by (29%) of the respondents which was followed by grading/sorting (24%) of the respondents. It could be made out from the table that farmers are ignoring the important process of value addition which could have increased their Profit margin.

Packaging process adopted

Frequency distribution of the respondents with respect to packaging process adopted is presented in Table 6

Table 6: Frequency distribution of respondents with respect to packaging process adopted (n=100) (Multiple responses)

S. N.	Particular	Frequency	Percentage
1.	No packaging	18	18
2.	Gunny bag	61	61
3.	Bamboo crates	21	24

It is indicated by the table that majority (61%) of the respondents used gunny bag for packaging of their produce which was followed by bamboo crates (21%). However, 18% of the respondents did not do any packaging. It could be inferred from the table that there is enough scope of value addition in respect of packaging of produce.

Assessment of profit margin

Frequency distribution of the respondents according to their cost of production and profit is presented in Table 7.

Table 7: Frequency distribution of respondents according to their cost of production and profit (n=100) (Multiple responses)

S. N.	**Area** (Decimal)	**Frequency**	**Cost of Production** Rs/kg	**Sale Price** Rs/kg	**Profit** Rs/kg
A.	**Potato**				
	Up to 25	67 (67%)	09.37	10.52	1.15
	26-50	24 (24%)	07.82	10.52	02.7
	51-100	09 (09%)	06.71	10.52	03.81
B.	**Tomato**				
	Up to 25	37 (37%)	18.12	24.60	06.48
	26-50	52 (52%)	15.39	24.60	09.21
	51-100	11 (11%)	12.84	24.60	11.76
C.	**Cauliflower**				
	Up to 25	34 (34%)	12.64	16.37	03.73
	26-50	54 (54%)	10.87	16.37	05.50
	51-100	10 (10%)	08.94	16.37	07.43
	Above 100	02 (02%)	08.20	16.37	08.17
D.	**French bean**				
	Up to 25	71 (71%)	12.46	20.16	07.70
	26-50	23 (23%)	11.17	20.16	08.99
	51-100	06 (06%)	09.51	20.16	10.65

N.B. 1 Decimal =1/250 hectare

It is apparent from the table that majority of the respondent farmers cultivated potato (67 %) and French bean (71 %) in an area up to 25 decimal. Whereas in case of tomato and cauliflower the majority of the respondent farmers cultivated in an area between 26-50 decimal as depicted by percentage values of 52 % and 54 %, respectively.

The table indicates that respondents with size of holding up to 25 decimal incurred the cost of production, sold their produce and earned profit at the rate of Rs. 9.37, Rs. 10.52, and Rs. 1.15 per kg., respectively in case of potato; Rs.18.12, Rs.24.60 and Rs.6.48per kg., respectively in case of tomato; Rs. 12.64, Rs. 16.37 and Rs. 3.73 per kg, respectively in case of cauliflower; and Rs. 12.46, Rs. 20.16 and Rs. 7.70, respectively in case of French bean.

Similarly, the farmers with the size of holding between 26-50 decimal incurred the cost of production, sold their produce and earned profit at the rate of Rs. 7.82, Rs. 10.52, and Rs. 2.70 per kg., respectively in case of potato; Rs.15.39, Rs.24.60 and Rs.9.21, per kg., respectively in case of tomato; Rs. 10.87, Rs. 16.37 and Rs. 5.50 per kg., respectively in case of cauliflower; and Rs. 11.17, Rs. 20.16 and Rs. 8.99 respectively in case of French bean.

Likewise, the farmers with the size of holding between 51-100 decimal incurred the cost of production, sold their produce and earned profit at the rate of Rs. 6.71, Rs. 10.52, and Rs. 3.81 per kg., respectively in case of potato; Rs.12.84, Rs.24.60 and Rs.11.76, respectively in case of tomato; Rs. 8.94, Rs. 16.37 and Rs. 7.43 per kg., respectively in case of cauliflower; and Rs. 9.51, Rs. 20.16 and Rs. 10.65, respectively in case of French bean.

The above table shows that the farmers with the size of holding above100 decimal incurred the cost of production, sold their produce and earned profit at the rate of Rs. 8.20, Rs. 16.37, and Rs. 8.17 per kg., respectively in case of only cauliflower.

Grover *et al.,* (2003) [4] showed that the gross returns from tomato in Punjab were the lowest for small farms (Rs. 58999/hectare) and the highest for the large farms (Rs. 76553/ hectare). The net returns based on cost C2 varied between Rs. 29639/hectare for small farms and Rs. 45521/hectare for large farms. Sen and Maurya (1998) [7] reported that the share of the producers was highest for vegetables with less perishability or with facilities of cold storage while it was lowest for vegetables with greater perishability.

It could be concluded from foregoing that by and large the farmers earn higher profit in case of tomato and French bean whereas potato was found to be the least profit earning vegetable crop.

Suitable measures for enhancing marketing efficiency and profit

Frequency distribution of the respondents with respect to suggested suitable measures is presented in Table 8.

Table 8: Frequency distribution of respondents with respect to suggested suitable measures (n=100) (Multiple responses)

S. N.	Strategies	Frequency	Percentage	Rank
A.	**Measures**			
1.	Training on primary and secondary processing	61	61	IV
2.	Cold storage facilities	74	74	I
3.	Subsidy on transportation vehicle	18	18	VIII
4.	Promotion of FPOs	28	28	VII
5.	Procurement price for vegetables	69	69	II
6.	Market information and intelligence	66	66	III
7.	Facilities in market	38	38	VI
8.	Subsidy on packaging material	51	51	V

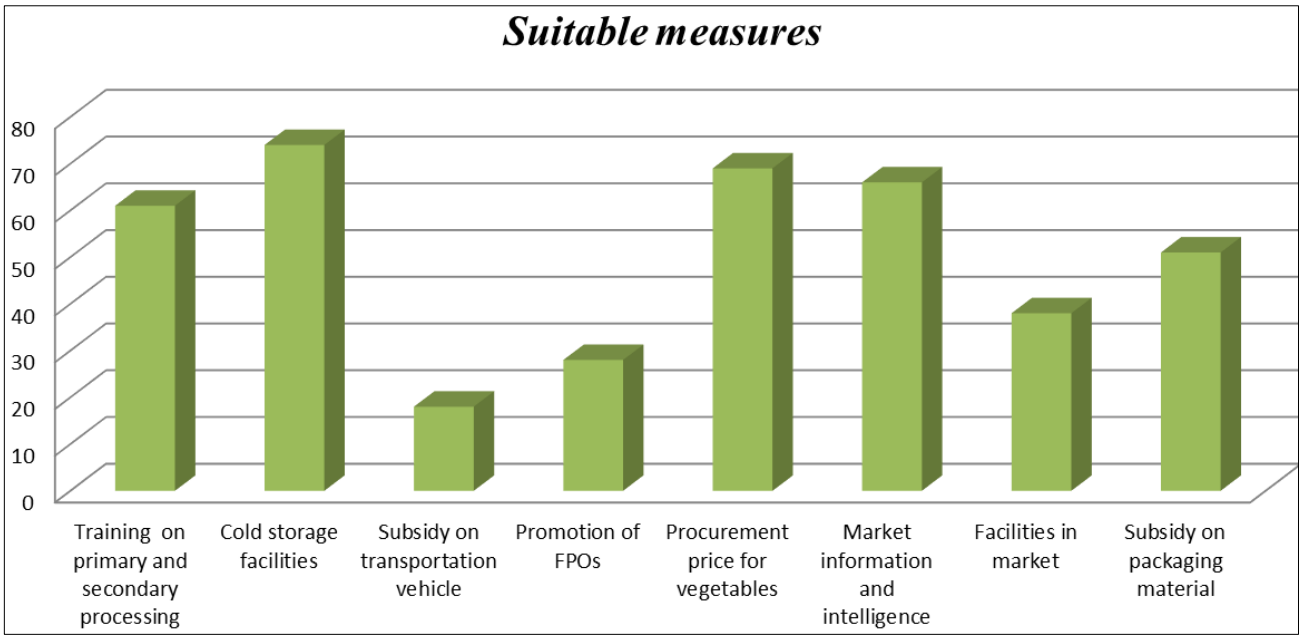

Fig1: Graph showing distribution of respondents according to their suitable measures

It is indicated by the table that majority (74%) of the farmers suggested about cold storage facilities which was followed by procurement price for vegetable (69%), market information and intelligence (66%), training on primary and secondary processing (61%), subsidy on packaging material (51%), facilities in market (38%), promotion of FPO (28%) and subsidy on transportation vehicle (18%).

It could be inferred from table that cold storage is the need of the hour to save post-harvest losses which ultimately reduces profit margins of the farmers. Million and Belay (2004) [5] reported that lack of market outlets, storage and processing problems, lack of marketing information, capital constraints, high transportation cost and price variation are some of the important constraints in vegetable production.

Till now there has not been any procurement price for vegetables due to which the intermediaries exploit the farmers ruthlessly. Knowledge and awareness about primary and secondary processing can enable the farmers to add value to their produce. The researcher has observed that farmers are not using any standard packaging material which could save losses in transportation and increase the shelf life of the produce. Shin (2001) [8] reported that small-scale production, poor infrastructure and inadequate post-harvest technology and facilities hamper operational efficiency. The pricing efficiency is hampered by several problems and constraints related to fruit grading, marketing channel and market information.

Hence, it is urgently needed to provide subsidy on packaging material. Farmers sell their vegetable at village hats, road side and Thela which are under the knowledge of administrations. Therefore, minimum facilities are required to be provided at these places. Dhanasree *et al.* (2014) [1] indicated that about three-fourth respondents expressed lack of credit facilities, illiteracy, exploitation of money lenders, poor connectivity, Lack of accessibility to nearby markets.

It has emerged from the study that individual growers mostly use personal cycle and motorcycle as means of transport. So, subsidies need to be provided on transportation vehicles. Large producer has the potential to increase the bargaining power of the farmers at the same time. The produce can be taken to distant market. This is possible through farmers Organization like FPOs.

Conclusion

Cultivation of vegetable crops is profitable for the farmers. Majority of the respondent farmers were small-scale cultivators who sold their produce in local market directly to the consumers using cycle as a mode of transport. Price negotiation was mostly in favour of buyers. Primary processing and packaging were not adopted by majority of the growers. Profit margin was found higher in cauliflower in case of higher size of cultivation. Tomato was found to be the most remunerative vegetable crop whereas potato was reported to be least remunerative. The perishability of

vegetable is the biggest problem and farmers are not able to cope with due to lack of cold storage facilities. Hence, it is imperative that marketing efficiency and profit margin of the farmers should be increased through the strategies like strengthening marketing infrastructure, cold chain, market information and intelligence, farmer producer organizations (FPOs) and subsidy on transportation vehicle and packaging materials.

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