

Impact of Marketing Channels on the Share of Farmers in Horticultural Markets of Assam

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Abstract—Agricultural and allied activities play an important role in socio-economic development of Assam as this sector is a major contributor of the state. Assam is basically an agricultural state and out of total rural population 80% depend on agriculture. So agricultural marketing is a vital tool for developing agriculture sector of Assam. Agricultural marketing can be defined as physical and institutional set up to perform all activities involved inflow of goods and services from point of initial producer to ultimate consumer. But the marketing of farmer's product is a complex phenomenon. Involvement of large number of trade channels in the procurement of agricultural product, attitude of farmers and getting the immediate return are the main factors governing the whole marketing operation. There are various types of problems pertaining to organizational, functional, and infrastructural aspects. The organizational aspects are mostly concerned with the state intervention in agricultural marketing by implementing market regulations as an instrument to offer better price to farmers. The functional aspects are concerned with bottlenecks during grading, pricing, payments and other marketing operations. The physical infrastructure in Assam is weak in case of coverage of village, accessibility and marketing information. The rural go-down facilities are not so much available. Due to lack of proper market information facilities, the supply chain is multilayered. Taking advantages of farmer's illiteracy and poor marketing condition, a set of middlemen at different stages have emerged as a channel for selling the agricultural product. Due to variation of price across the rural market the farmers get only 1/3 of retail or consumers price. Rest is absorbed by intermediaries and there is spatial price dispersion. So in this paper my study is the problems of agricultural marketing and how the marketing channels impacts the share of farmers and give some suggestions to remove the problems.

Key words: Agricultural Marketing, Marketing Channels, Infrastructure, Marketing Information, Supply Chain

I. INTRODUCTION

In developing countries, due to high transport costs, the lack of reliable price information, and the inability to verify the quality of produce, farmers who produce cash crops are often exploited by intermediaries. There is growing recognition among economists and policymakers that this lowers farmer's profitability and reduces incentives to produce and control quality thereby leading to an adverse effect on both equity and efficiency (Pranab Bardhan 1989; Jason Clay 2004).

Assam is basically an agriculture state. The rural population is about 89%, and they are living in 21,995 villages. Out of total rural population, about 80 % depend directly upon agriculture. The overall economy of the state depends upon the development of agriculture. Marketing is a vital tool for developing agriculture sector of Assam. Agriculture marketing can be defined as physical and

institutional set up to perform all activities involved inflow of goods and services from point of initial producer to ultimate consumer (Acharya's book 2011). Marketing is an important link in the chain of production activities of agriculture sector. But marketing of agricultural crops in Assam is largely unorganized and is in the hands of intermediaries such as retail traders, wholesalers, pre harvest contractors and others. This type of marketing is called traditional marketing channels. The traditional rural marketing channels mainly functions as a primary market which serves small areas of 1.5 km to 5 km radius and operates once or twice a week. There are 1150 markets in Assam which are known as haats where the farmers sell their produce through an open outcry ascending bid auction.

The agricultural marketing especially the horticultural marketing in India is highly decentralized having wide capacities. There is no direct connection between farmers and consumers which implies that traditional marketing channels prevail in the rural horticultural markets of India. The traditional marketing can be defined as that type where large number of middlemen are involved, marketing conditions are poor and where marketing efficiency is less. The high and fluctuating consumer prices exists in horticultural markets and due to this fact only a small share of the consumer rupee reaching the farmers. Many committees review it and the reports stated that Indian farmers are good producers but not good marketer. As early as 1976, National Commission on Agriculture pointed out the inefficiency in agricultural marketing with particular reference to fresh perishables and strongly recommended that, "It is not enough to produce a crop; it must be satisfactorily marketed." The marketing of horticultural crops is complex especially because of perish ability, seasonality and bulkiness. Fruits and vegetables are the items of daily consumption, and though perishable in nature, they constitute essential component of human diet. Many a time, fruits & vegetables is marketed mostly either through regulated APMC markets or totally unregulated local fruit and vegetable markets. Marketing through these traditional channels is characterized by very little attention to grading, sorting and storage with weak regulation, poor handling during loading, unloading and transport resulting in loss of 30-40 per cent of the total production. This involves long distance transport. For these purpose good roads in the interior villages is necessary but there are no good roads in the interior areas. Vegetables are usually sold through commission agents and very little of pre-harvest contacting is done. Due to this, the net returns are generally low. In case of marketing of fruits and vegetables, producer cannot go to wholesale market or long distant market and he has to depend on some intermediaries to sell his produce. Therefore, in the marketing of fruits and vegetables costs are to be incurred for grading, packing, transport, loading/unloading, fees, etc. In addition, the intermediaries also charge some margins for

them. These costs and margins determine the final price to be paid by the consumer. Hence retail price become very high.

Due to variation of price across the rural market the farmers get only 1/3 of retail or consumers price. Rest is absorbed by intermediaries which is loss to actual producers. So spatial price dispersion of agro crops specially vegetables crops are observed in markets. Farmers often do not have any information about market conditions prior to the sale. Moreover, processors are unable to perfectly monitor the traders. So Organized marketing is a precondition to sustain production and marketing programme, more particularly, in respect of horticultural production.

Efficient marketing mechanism ensures better price of farm product and helps in getting profit to actual farmers. With the implementation of APMC Act 1972, Direct marketing is an innovative concept of emerging marketing system, which involves marketing of produce by the farmer directly to the consumers/millers without any intermediaries. Direct marketing enables producers and other bulk buyers to economize on transportation cost and improve price realization. It also provides incentive to large-scale marketing companies and exporters to purchase directly from producing areas. Direct marketing helps to generate the idea of market oriented production and increases profit of the producer. It helps in better marketing, minimizes marketing cost and encourages distribution efficiency. It promotes employment to the rural sectors.

This paper examines the impact of traditional and direct marketing on the share of producers in horticultural markets of Assam. The study area is Assam with special reference to Darrang District. And since there is large amount of price spread in case of vegetables, so for sampling I take into account the impact of marketing channels on producers in case of two vegetables- ridge gourd and cucumber and price dispersion of tomato between wholesale and retail market.

Though various studies are done regarding agricultural marketing, there is need for addressing the impact of traditional marketing channels of horticultural marketing in rural areas of Assam. It is also important to know how the emerging marketing channels reduce the share of intermediaries and increase the share of farmers in retail price. To study these aspects, Darrang district is chosen for taking sample survey. In Assam, Darrang district is a large supplier of agriculture specially horticulture crops. Large amount of vegetables are supplied from Darrang district to different corners of Assam. But the most of farmers of Darrang district are small and marginal farmers whose are very poor. Since most of them are illiterate they do not get proper marketing information, even they don't know the retail price of selling products. The trader, commission agent, wholesaler takes their crops at a very low price and sell them in retail market at a very high price. The supply chain is multilayered and farmers are exploited. For studying their problems, supply chain and price spread of vegetables crops, Darrang district is taken into account.

II. REVIEW OF LITERATURE

The review of literature is related to the problems related to agricultural marketing, imperfection of market, imperfection of information about price between producers and buyers, and importance of ICT on improving the marketing infrastructure.

Gopalan and Gopalan(1991), BC Mathur(2000), Elamathi C(2013), Sanjay Kumar discussed various problems of marketing channels of agriculture specially infrastructural problems, organizational problems, price spread between producer's share and consumer rupee, lack of awareness, lack of proper price information, long marketing channels which include large no of intermediaries, illiteracy of farmers .

Saikia and Borah (1998), Pandey (2003), Kakaty (2009) discussed about price spread between producers and market intermediaries in the consumer price in the traditional marketing channels and showed that due to prevalence of intermediaries producers get lower share and suggested emerging marketing channel for improving marketing efficiency.

Shakeel, Selvaraj, Swenson and Yanagizana, Robert Jensen, Sandip Mitra stated that internet facilities, mobile facilities drastically reduce the search cost and thereby reduce retail price which enable the market to become more competitive. He showed that the internet market places an alternative or supplements to traditional retail market and make market more developed.

III. OBJECTIVES OF STUDY

The main objectives of this study are explained-

- 1) To study the rural marketing system of Assam.
- 2) To study the share of farmers in consumer price of horticultural crops.
- 3) To estimate the degree of marketing efficiency and price dispersion in rural agricultural market.
- 4) To study the constraints faced by the farmers in rural agricultural market.

IV. RESEARCH QUESTIONS

- Are the farmers getting actual price of their product? If not why?
- What are the problems in agricultural marketing

V. DATA SOURCE AND METHODOLOGY

The data is collected through primary and secondary sources. The research is analytical in nature.

A. Data Sources

- The secondary data is collected through various reports published by agriculture department, economic surveys, statistical handbooks, journals, website such as department of agriculture, economics and statistical department of Assam.
- The primary data is collected by conducting survey, with the help of multistage random sampling method. The survey is conducted by collecting data from farmers, retailers, traders, marketing committee and consumers. 10 farmers of each crop are taken into survey, two blocks and two villages of each block are taken into sample survey. For selection of buyer, contractor, commission agent, retailer, trader, faria, 5 buyers, 5 contractors, 5 commission agent, 5 traders and 5 farias for each vegetable crop are taken into primary survey.

1) Conceptual framework

The concepts which are used to study the impact of traditional and emerging marketing channels are marketing cost, marketing network, marketing efficiency, marketing

channels, price spread. These concepts are explained as follows-

a) Marketing Channels

Marketing channels are routes through which agricultural products move from producers to consumers. . There are two main routes – a. Direct routes- in which agricultural commodities directly pass from producer to consumer. There is a complete absence of middlemen or intermediaries and in Indirect route agricultural commodities generally move from producer to consumers through intermediaries. The intermediaries are involved in indirect channels which is called traditional marketing channels.

b) Marketing Efficiency

The term marketing efficiency may be defined as the effectiveness or competence with which a market structure performs its designated functions. Thus it implies the effectiveness with which a marketing service is performed. According to Acharya , an ideal measure of marketing efficiency , particularly for comparing the efficiency of alternate markets or channels should be such which takes into account all of these – MC=Total marketing cost, MM= Net marketing margins, FP= Price received by the farmers, Price paid by the consumers.

Thus the following modified measure is - MME= FP/ MC+MM,

c) Producer's Price

This is the net price received by the farmer at the time of first sale. This is equal to the wholesale price at the primary assembling centre, minus the charges borne by the farmers in selling his produce. Thus

$$P_f = P_a - C_f$$

d) Producer's Share in the Consumer's Rupee

Producer's share is the price received by the farmers expressed as a percentage of the retail price. If Pr is the retail price, the producer's share in the consumer's price may be expressed as follows-

$P_s = (P_f/P_r) \times 100$, where Pf is producer's price, Ps is the producer's share in consumer's rupee, Pr is retail price.

e) Marketing Margins of a Middleman

This is the difference between the total payments and receipts of the middleman. These alternatives measures may be used to know the market margin which are expressed as follows-

- Absolute margin of ith the middleman. $A_{mi} = P_{ri} - (P_{pi} + C_{mi})$
- Percentages margins of ith middleman

$$P_{mi} = P_{ri} - (P_{pi} + C_{mi}) / P_{ri} \times 100$$

f) Total Cost of Marketing

The Total cost incurred on marketing by the either producer or by the various intermediaries involved in sale and purchase of the commodities till the commodities reaches the ultimate consumers may be computed as follows-

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

Where C= total cost of marketing of the commodity.

C_f = Cost paid by the producer from the time the produce leaves the farms till he sell it,

C_{mi} = Cost incurred by the ith middlemen in the process of buying and selling the product.

Some of the costs are linked with the quantity marketed and some are linked with the value to the commodity.

g) Relationships of Farmer's Price, Marketing Cost, Consumer's Price

The farmer receives that portion what the consumer pays after deduction of various costs of marketing. This residual expressed as a percentage of the price paid by the consumer is the farmer's share. The farmer's share may be calculated as follows-

$$FS = (RP - MC) \times 100 / RP \quad FS = PF \times 100 / RP \quad \text{Where, FS= Farmer's share in consumer's rupee, RP= Retail price, MC= Marketing cost}$$

VI. ANALYSIS AND DISCUSSION

The researcher wants to study rural marketing system of Assam, the share of producers, intermediaries in retail price of vegetable crops and price spread of these crops. This discussion is explained as follows-

A. Rural Marketing System of Assam

Rural agricultural marketing can be defined as a function which manages all these activities in assessing, stimulating and converting purchasing power into effective demand for specific production and moving them to people in rural areas to create satisfaction and improve the standard of living for them. Rural periodic markets are known as haats and they are oldest trading institutions.

Rural marketing In Assam generally perform three functions-

- Selling of local produce within the area,
- Assembling of local produce for selling to others,
- Retailing of wholesalers from producers to local areas.

The selling of local product is the predominant activity in these markets. There are 1273 markets in Assam comprising primary and secondary markets. In each market area, there is one market yard and more sub market yards.

The haats and regulated markets are two major channels existing in the state for marketing of agriculture product. The number of rural agricultural markets is highest in Barpeta district. The rural farmers sell their products to itinerant traders namely as faria and such sales constitutes about 60 % of their marketable surplus. The remaining percentages are sold to village merchants. The dadan system is still prevalent in rural areas under which village money lender advance loans to cultivators at the time of need. The cooperative network is very much weak and understates the procurement of agriculture product. The farmers sell their product in small quantity through the network of regulated markets and large number of their product is sold in rural unorganized markets at regular intervals. The rural markets are of traditional in nature and many times the farmers are at a disadvantages at striking their bargains due to various economic reasons such as lack of adequate infrastructure, indebtedness etc.

The apex of cooperative body of the state cooperative markets is functionally weak to provide any support to primary rural markets. Processing activities are absent and the consumer has to pay nearly double. The regulated markets possess poor marketing infrastructure. There are 3 cold storage of 5000 MT capacity available in the state and regulated markets have no shops of agriculture inputs. In the absence of grading, the farmers often get a low price for their product. The regulated market committee charges 1 percent cess on the market transaction while

panchayats managing the rural markets charge 10 percent from buyers of farm product. The large price variation due to lack of infrastructure force the farmers to sell at harvest times at a lower price and in retail market there is higher price. So the marketing system should be strengthened to become a stronger link of state agricultural economy.

1) Marketing Network and Agriculture Marketing and Storage Facility in Assam

At present the marketing network and marketing infrastructure of Assam are explained below-

Rural go down= 66 Rural seed storage go down- 13, cold storage- 25, Principal Marketing yard- 20, Sub Market – 206, regulated marketing committee- 24, Total Regulated Market- 224, wholesale market- 405no, rural primary markets- 806, drying platform- 42, Trader’s shop- 143, packaging room-18, Auction platform- 532, Total markets- 1175, organized market-1, processing units- 15, cold storage- 26. The chief minister has proposed to set up 30 cold storage

in Assam at an estimated cost Rs150 crore in 2013-14. (Collected from economic survey 2014-15).

To assist the farmers for carrying vegetables to distant market, The Assam State Marketing board provided transport subsidy to 980 farmers. The state Govt. proposed to construct three storied market at Pamohi (Guwahati), Growers consumers market complex at Ulubari, and establish 11 numbers of sale counters for marketing of farm product. For transportation of agricultural produces from field to market as many as 1102 numbers of three /four wheelers are providing in 2012-13. The rural connectivity scheme implemented under PMGSY is a major step towards benefit of farmers to take out their agricultural products to nearest urban markets.

B. Area, production and productivity of horticulture crops of Assam in 2014-15

year	Fruits			Spices			vegetables		
	Area (lakh hect)	Production (lakh MT)	Productivity MT/hct	Area (lakh hect)	Production (lakh MT)	Productivity	Area (lakh hect)	Production (lakh MT)	Productivity
2005-06	1.13	13.52	12005	0.86	2.12	2475	2.32	18.18	16485
2006-07	1.14	13.72	12139	0.86	2.12	2476	2.36	38.87	16469
2007-08	1.16	14.08	14142	0.88	2.18	2478	2.38	39.18	16462
2008-09	1.34	16.61	12425	0.93	2.80	3023	2.46	44.20	17923
2009-10	1.27	15.65	12370	0.94	2.35	2505	2.51	42.55	16952
2010-11	1.37	16.56	12485	1.01	2.30	2271	2.57	44.33	17231
2011-12	1.38	17.75	12885	1.04	2.56	2464	3.66	52.51	24325
2012-13	1.51	20.74	13760	1.10	3.28	2970	3.86	60.34	27536
2013-14	1.42	20.25	14219	1.04	2.67	2578	3.65	53.30	24797

Table 1: Area, production and productivity of horticulture crops of Assam in 2014-15

Source: Directorate of Agriculture, Assam and directorate of horticulture & FP, Assam

From the above table it is seen that the production and productivity increases in case of horticulture crops- fruits, vegetables and spices which implies the prospects of increasing productivity of crops.

C. Profile of the Sample District

The district is situated in central part of Assam and it and it is considered to be plain. It is situated on the northern side of the river of Brahmaputra. The district is bounded by Arunachal Pradesh in the south, Bhutan and Udalguri district in the North, The district Sonitpur and Kamrup are in the east and the west of Darrang district respectively.

The economy of Darrang district is mainly agriculture based. With the area 1850.58 sq km, the district is rich with sizable production of vegetables. The climate of the district is congenial and the soil is very fertile for cultivation. The main economy of the district is agriculture based where 85 % is engaged in agriculture and allied activities. The demographic features of the district are as follows-

Literacy rate- 64.55%, Sex ratio- 923, population growth – 19.81, population density- 491(According to economic survey 2011)

D. Study Marketing Channels

Traditional marketing channels and emerging marketing channels and its price spread from farmers to consumers.

This study is about the marketing of vegetables which are perishable in nature. So the involvement large numbers of middlemen such as trader, faria, retailer,

wholesaler in traditional marketing channels will be studied. Due to prevalence of large number of intermediaries, the price spread between producer and consumers become larger and producer get less than actual price. The traditional marketing channels can be defined as that type of marketing channels in which a large number of middlemen are involved, marketing efficiency is less and producer get less than actual price. .The traditional Channels for ridge gourd, cucumber in Darrang district of Assam are explained below-

- Channel 1: Producer- commission agent – wholesaler-retailer-consumers
- Channel 2: Producer—Faria-(trader) - wholesaler-retailer- consumer

Emerging Marketing channels are those marketing channels in which the farmers can sell directly to the food processing industry, private players, self-help groups, and ultimate consumers. These type of marketing such as direct marketing, contract farming ensures mutually agreed price and assured sale of the product. Producer’s share in consumer rupee is higher, involvement of marketing intermediaries is very less. This channels ensures fair return, It improves credit facilities, helps in growing up some products under direct marketing. The direct marketing which is considered as one type of emerging marketing improves marketing efficiency and helps in increasing profit of farmers. The channel is producer to consumer.

E. Price determination process in TMC and EMC

In traditional marketing channels, lack of auction market and absence of minimum support price for vegetables, price is determined by wholesalers or commission agent which is immediate buyer of products. But in the emerging marketing channels, price is determined on the situation of the markets and quality of the product.

In this study we want to study the benefit of producers, Intermediaries, consumers and price spread of horticulture crops and its marketing efficiency. We also want to study the economics of cultivation in traditional marketing channels. In this study the small and marginal farmers are taken into consideration since in the markets the small and marginal farmers are highly exploited.

F. Economics of Cultivation

Particulars	cucumber	Ridge gourd
Total production (Qntl.)	38.65	100.51

Sl. no	Item cost and market functionaries	Average price of ridge gourd (per quintal)	Margin at different level	Percentage share	Average price of cucumber (per quintal)	Margin at different level	Percentage share
1.	Net price to the producer	1000	1000	45.45	800	800	55.17
2	Commission agent's marketing cost	25	25	1	22	22	1.5
	Labour charge	10.00			7.20		
	Transportation cost	5.30			4.60		
	Weighting cost	3.20			3.20		
	Storage cost	5.50			5.00		
	Wastage	1.00			2.00		
3	Commission agent's selling price or wholesaler's purchase price	1400	375	17.04	1000	178	12.22
4	Wholesaler's marketing cost	136.00	136	6.18	123	123	8.48
	Labour charge	60.00			50		
	Transportation cost	50.00			40		
	Weighting cost	5.30			4.30		
	Storage cost	5.00			4		
	Marketing fee	10.00			20		
	Wastage	5.70			4.70		
5	Wholesaler's selling price or retailer's purchase price	1800	264.00	12	1250	127	8.78
6	Retailer's marketing cost	171	171	7.7	127	127	8.78
	Labour charge	80.00			40		
	Transportation cost	60.00			60		
	Weighting cost	5.20			5.40		
	Storage cost	5.00			5		
	Market fees	10.00			10		
	other expenses	10.80			6.60		
7	Retailer's selling price	2200	229	10.00	1450	73	5.03
8	Total			100	1450		100

Table 3: Price spread of ridge gourd and cucumber in channel 1 (Farmers-commission agent- wholesaler- retailer- consumers) is explained below.

From the above it is seen that the share of producer in sale of ridge gourd, cucumber and are 45.45, 55.15. The shares of commission agent of ridge gourd, cucumber and bhindi are 17.04 and 12.22 respectively. The share of

Total marketed(Qntl)	38.66	97.51
Total production cost in Rs	15843.20	17640.23
Total farmer's cost in Rs	20759.69	29095.65
Total farmer's sale(Rs)	38060	127093
Farmer's margin per qtl(Rs)	459.81	975.01
BCR(gross return/total prodn cost)	2.4	7.2

Table 2: Economics of Cultivation
Source; Collected from sample survey

G. Price Spread of Vegetables

The price spread become larger in traditional marketing channels. The price spread can be estimated by involvement of intermediaries. The price spread of vegetable crops in both traditional marketing channels are as follows-

1) Price spread of ridge gourd and cucumber in channel 1 (Farmers-commission agent- wholesaler- retailer- consumers) is explained below

intermediaries in the consumer price in different crops can be explained with the help of diagrams-

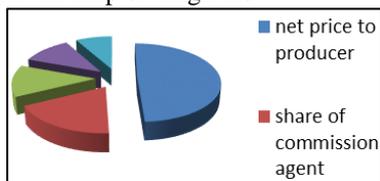


Fig. 1: Particulars percentage share of cucumber

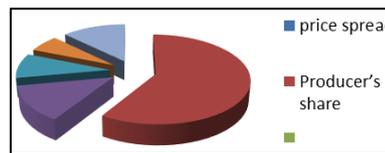


Fig. 2: Percentage share of price of ridge gourd
2) Price spread of vegetable crops in traditional marketing channel 2 (Producer—Faria-(trader) - wholesaler-retailer-consumer)

Sl. no	Item cost and market functionaries	Average price of bhindi	Margins at different level	Percentage share	Average price of tomato	Margins at different level	Percentage level
1.	Net price to the producer	920	920	41.81	750	750	51.72
2	Producer's marketing cost	130	130	5.9	111	111	7.6
	Labour charge	60			40		
	Transportation cost	50			36		
	Development cess	10.00			5.30		
	Storage cost	4.30			5		
	Marketing fee wastage	3.20 2.50			20 4.70		
3	Trader's selling price or	1400	237	10.77	1100	139	9.58
4	Wholesaler's marketing cost	145	145	6.59	95	95	6.55
	Labour charge	60.00			40.00		
	Transportation cost	40.00			20.00		
	Storage cost	5.00			5.60		
	Marketing fee	20.00			20.00		
	Wastage	10.00			4.20		
	Other expenditure	7.00			5.20		
5	Wholesaler's selling price or retailer's purchase price	1870	325	14.7	1275	80	5.51
6	Retailer's marketing cost	109	109	4.95	81	81	5.58
	Labour charge	40.00			30.00		
	Transportation cost	40.00			20		
	Weighting cost	5.00			5.00		
	Storage cost	10.00			10.00		
	Market fees other expenses	10.0 4			10.0 6.00		
7	Retailer's selling price	2200	221	10	1450	94	6.48
8	total		2200			1450	100

Table 4: Price spread of vegetable crops in traditional marketing channel 2 (Producer—Faria-(trader) - wholesaler-retailer-consumer) Collected from sample survey

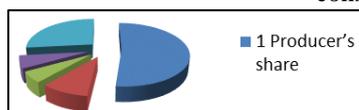


Fig. 3: Particulars percentage share of cucumber

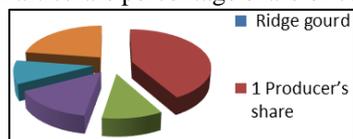


Fig. 4: Percentage share of price of ridge gourd

From the above table it is seen that the share of producer in sale of ridge gourd and cucumber, are 41.71 percent and 51.72 respectively. The shares of trader are 10.77 and 9.58, the share of wholesaler are 14.7 and 5.51, the share of retailer's are 10.00 and 6.48 in the sale of ridge gourd and cucumber. In Darrang district there is not so much prevalence of direct marketing so its price spread is not taken into account.

3) Price spread of vegetables in traditional marketing channel 1 and 2

Share of price	Price spread in Traditional marketing channel 1 in percent		Share of price	Price spread in Traditional marketing channel 2 in percent	
	Ridge gourd	cucumber		Ridge gourd	cucumber
Producer's share	45.45	55.17	Producer's share	41.81	51.71
Commission agent	17.04	12.22	Trader's margin	10.77	9.58
Wholesaler's margin	6.18	8.48	Wholesaler's margin	14.7	5.51
Retailer's margin	12	5.83	Retailer's margin	10.00	6.4
Total cost of marketing	7.7	11.82	Total cost of marketing	22.59	26.68

Consumer's rupee	100	100	Consumer's rupee	100	100
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Table 5: Price spread of vegetables in traditional marketing channel 1 and 2

4) The marketing efficiency in traditional marketing channel in traditional marketing channels

Sl. No.	Particulars	Traditional marketing channel 1		Traditional marketing channel 2	
		Ridge gourd	cucumber	Ridge gourd	cucumber
1	Retailer sale price	2200	1450	2200	1450
2	Total marketing cost in Rs/ qnt	332	172	497	387
3	Total net margin in intermediaries	868	378	783	313
4	Net price received by farmer in Rs/qntal	1000	800	920	750
5	Value added in Rs/qntls	1200	650	1280	700
6	MME ratio	0.83	1.23	0.718	1.07

Table 6: The marketing efficiency in traditional marketing channel in traditional marketing channels

From the above it is seen that the modified marketing efficiency of ridge gourd, cucumber are 0.83, 1.23 in traditional marketing channel 1 and modified marketing efficiency of ridge gourd, cucumber are 0.718 and 1.07 in traditional marketing channel 2 respectively.

H. Price spread of vegetables in emerging marketing channel (direct marketing)

Price spread of the vegetables crops in direct marketing between producer and consumer.

Price spread of ridge gourd and cucumber in emerging marketing channel is explained below

Sl. No.	Market particulars	Rs. per Qntl. in ridgegourd	Different level	share	Rs per qntl in cucumber	Different level	share
1	Net price to the producer	2000	2000	90.91	1310	1310	90.34
2.	Farmer's marketing cost	200	200	9.09	140	140	9.66
	Labour charge	80			50		
	Transportation cost	70			50		
	Development cess	10			6		
	Marketing fee	20			20		
	Storage cost	4.50			4.20		
	wastage	6.30			6.00		
other expenditure	9.20	3.80					
3.	Producer's selling price	2000	2000	100	1450	1450	100

Table 7: Price spread of vegetables in emerging marketing channel (direct marketing)

From the table it shows that the share of producer in emerging marketing channel in 90.01 and 90.34 in ridge gourd and cucumber respectively. The share of marketing cost is 9.62 and 9.69 in direct marketing between producer and consumers. Diagram of price spread of ridge gourd and ridgegourd in direct marketing are explained below-

1) Price spread in ridgegourd

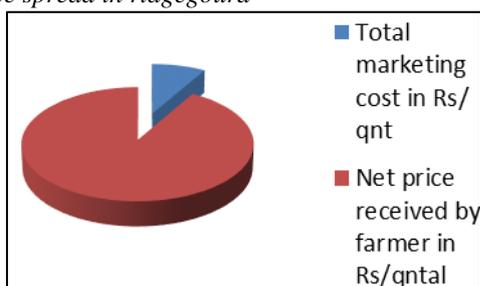


Fig. 5: Price spread in ridgegourd

2) Price spread in cucumber

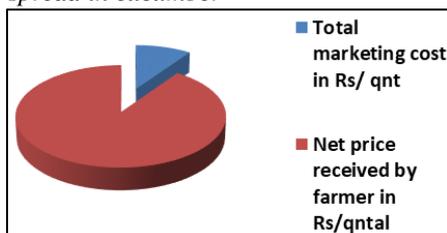


Fig. 6: Price spread in cucumber

I. The total share of consumer price and marketing efficiency in emerging marketing channel

Sl. no	particulars	Ridge gourd	Cucumber
1	Retailer sale price	2200	1450
2	Total marketing cost in Rs/ qnt	200	140
3	Net price received by farmer in Rs/qntal	2000	1310
4	Value added in Rs/qntls	200	140
5	MME ratio	10	9.35

Table 8: The total share of consumer price and marketing efficiency in emerging marketing channel

In emerging marketing channel the modified marketing efficiencies are 10, 9.35 in the sale of ridge gourd and cucumber respectively.

J. There is spatial price dispersion of tomato between wholesale price and rural price. This can be explained with the help of a table.

time	Price in wholesale market	Price in rural retail market
January 2014	1900	3200
February 2014	950	1300
March 2014	900	1250
April 2014	900	1200
May 2014	1000	1500

June 2014	2000	3000
July 2014	2100	3100
August 2014	2800	3800
September 2014	2500	4000
October 2014	2400	4000
November 2014	2600	4800
December 2014	2200	3800
January 2015	1200	2000
February 2015	900	1400
March 2015	800	1200
April 2015	800	1150
May 2015	1100	1500
June 2015	2200	2800
July 2015	2800	3500
August 2015	2900	4000
September 2015	2800	0.00
October 2015	2750	0.00
November 2015	2700	0.00
December 2015	2700	4000
January 2016	1100	1700
February 2016	900	1500
March 2016	800	1400
April 2016	1100	1500
May 2016	900	1300
June 2016	2600	4000

Table 9: There is spatial price dispersion of tomato between wholesale price and rural price. This can be explained with the help of a table.

K. We can explain with the help of diagram

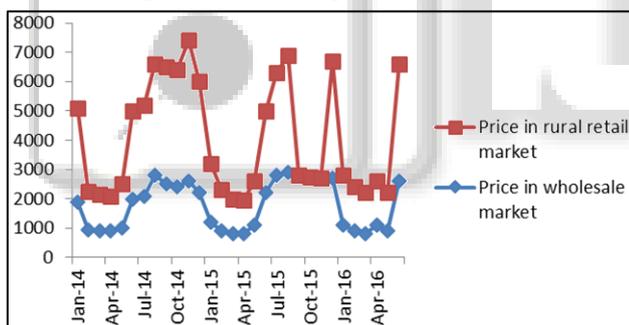


Fig. 7: diagram

L. Problems of Rural Agricultural Marketing

Agricultural Marketing is a complex phenomenon. There are different types of problems in the marketing of agricultural product. The functional aspects of problems are concerned with bottlenecks involved in transaction during grading, pricing, payment and other market operations. The problems prevails in rural agricultural marketing are explained below-

- Absence of proper transport facilities- There are some constraints related to physical access of markets. The problems are related to bad connections of roads which increase transport cost and retail price to a higher rate.
- Absence of proper telephone and mobile facilities- Markets are poorly linked with telephone and internet facilities. Only 45% of market is linked with telephone facilities and rest of markets has no access of information and communication technology. In Assam, only 85 markets are connected by telephone and 3 are conveyed by email.

- No knowledge about pricing- Farmers have no knowledge about what they should ask for products during transactions. Few educated farmers keep in mind the cost of production, cost of transportation while negotiating in the market. 64 % of farmers are not able to decide sell on a certain price.
- Unavailability of agriculture credit at proper sense- There is no proper availability of agricultural credit to farmers in Assam. 22 districts remain under banked. Per capita credit disbursement to farmers was Rs 91 only in Assam.
- Lack of proper trading facilities- Traders place vegetables in smaller quantity are even retailed by farmers themselves on the market day. Itinerant traders are common in selling paddy that collect them and sell to the market directly.
- No authorized commission agents- In haats only unauthorized middleman operated as buyers who neither maintains a document nor issue any receipt which makes markets non transparent.
- Lack of proper marketing information- Marketing information on commodity markets arrivals and suppliers are much important for small and marginal farmers. The low level of literacy and lack of proper market information leads to loss of income and exploitation of farmers by middleman. 40 % of farmers are aware that transportation cost must be included in pricing.

These problems are prevailing in horticulture marketing of Assam.

VII. CONCLUSION

The main aim of rural agricultural marketing is to develop the rural economy and reduces poverty. From this study it is seen that In traditional marketing channel 1 share of producer in sale of ridge gourd and cucumber are 45.45 and 55.15. The shares of commission agent of ridgegourd and cucumber are 17.04 and 12.22. , the share of wholesaler in sale of ridge gourd is 12 and it is 8.78 percent in sale of cucumber. Retail's share is 10 and 5.03 in sale of ridge gourd and cucumber respectively. In study of traditional market channel 2 it is seen that the share of producer in sale of ridge gourd and cucumber, are 41.71 percent and 51.72 respectively. The shares of trader are 10.77 and 9.58, the share of wholesaler are 14.7and 5.51, the share of retailer's are 10.00and 6.48 in the sale of ridge gourd and cucumber. That means price is spreaded at a high rate and producer get less price than actual price. But due to adoption of direct marketing, farmers get actual price of their products and marketing efficiency increases. Though direct marketing system is introduced, it is not popularized in Assam. It is applicable only in a few districts.

So Government should implement some measures to improve marketing conditions of most districts of Assam. Suitable marketing system, innovative and creative approaches must be implemented so that it brings fruits to sweat of the farmers and ensures farmers fair prices. Proper physical infrastructures and effective distribution system must be provided so that produce must be reached to ultimate user at right time and minimum cost. Effective land reform must be implemented as they are assets of the farmers. The

price information system should be strengthened and illiteracy of consumers should be reduced for proper development of rural agricultural marketing system of Assam.

A. Suggestions

These are some suggestions regarding improvement of agricultural markets of Assam so that the economy of Assam can be developed. These suggestions are explained as follows-

- 1) Developing effective farmers linkage to supply chain- The market system in Assam is very much fragmented in vegetables markets, there are 4 or 5 intermediaries in the supply chain. Farmers do not aware about marketing skill, do not receive market information. So marketing skill has to be developed so that they get actual price for their product.
- 2) Removing asymmetry of information- The asymmetry of information can be removed through emerging marketing channels such as direct marketing, contract farming etc.
- 3) Dissemination of marketing information and promoting direct marketing- Farmers have to be properly informed about prevailing retail price of the product from various sources such as AGMARKNET, mobile, ICT. By providing Kissan call centre, the various types of information can be provided to the farmers. . Public private participation is also an important path to improve market information system. By promoting emerging marketing channels the direct connection between producer and buyer can be made and enable farmers to get adequate price.
- 4) Improving marketing infrastructure- The marketing system can be developed by improving market infrastructure such as provision of cold storage and go down facilities, developing forward and backward linkage and providing facilities for grading, standardization, packaging etc to improve quality of the product.

Thus these are ways to improve and promote the rural agricultural market which help in reducing the number of intermediaries and helps in getting adequate price to the farmers.

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