



Study on Marketing Pattern of Chilli Cultivation in Wokha District of Nagaland

Nchumthung Murry and James Tsoepoe

Department of Agricultural Economics
Nagaland University, SASRD, Medziphema-797 106 (Nagaland)

ABSTRACT

The present research study was conducted in Wokha district of Nagaland during the year 2015-16 for the assessment of economics and marketing of chilli. The study comprises of 60 sample farmers by following a multi stage stratified random sampling technique. The selected farmers were stratified into three groups viz., Group-I marginal (< 1 ha), Group-II small (1.01 to 2.00 ha) and Group-III medium (> 2.01 ha & above) based on the area under land holding of the respondents. Two marketing channels of chilli marketing were identified viz., Producer - Consumer (Channel I), Producer - Retailer - Consumer (Channel II). Producer share in consumer rupee was higher in channel - I (80.0%) as compared to channel - II (57.14%). Marketing efficiency was estimated using Shepherd's formula and it was found that marketing efficiency was higher in channel - I (39.02%) as compared to channel - II (18.67%).

Keywords: Chilli, Efficiency, Marketing channels, Shepherd, Wokha.

INTRODUCTION

Chilli or hot pepper is a tropical vegetable cum spice crop commonly used throughout the world as spice for its pungency and red colour of ripe dried fruits and also for its green fruits for pungency and flavour. India is one of the leading chilli producing and exporting countries in the world. Other major chilli growing countries are Mexico, Japan, Ethiopia, Uganda, Nigeria, Thailand, Turkey, Indonesia, China and Pakistan. Chilli (*Capsicum annum* L.) is a crop of tropical and subtropical regions and requires a warm humid climate. The quantity of chilli exports grew annually by 14.32 per cent, export value by 23.16 per cent and unit value by 8.41 per cent. Thus, country has a comparative advantage in the export of chilli and this can be achieved with the concerted efforts of government by developing transport facilities to export the chilli (Babu *et al*, 2003).

In India, the major chilli growing states are Andhra Pradesh, Karnataka, Maharashtra, Orissa, Tamil Nadu, Madhya Pradesh, West Bengal and

Rajasthan in that order and account for more than 80.00 per cent of the total area and production. Andhra Pradesh has been leading both in area and production contributing on an average of 25.00 per cent of the total area and over 40.00-50.00 per cent of the total production (Gaganjot and Chahal, 2009). Nagaland is predominantly an agrarian economy with agriculture and allied sector as one of the main contributors to the State economy. Agriculture is also the largest employer of the workforce in the state, engaging more than 60.00 per cent of the working population. In Nagaland about 14.00 per cent of the operational holders fall in the large size category, 11.00 per cent fall in the small size category and only 4.00 per cent of the operational holders fall in the marginal size category (Anonymous, 2015). Hence, a study was undertaken to know marketing pattern of chilli cultivation in Wokha district of Nagaland.

MATERIALS AND METHODS

The present study was conducted in Wokha district of Nagaland. In Wokha District out of total

five rural development blocks, two blocks viz; Wozhuro-Ralan and Wokha were selected due to good number of chilli growers. Two villages from each block were selected by random sampling method and total respondents based on the size group of land holding were classified as given in Table 1.

Table 1. distribution of the total respondents based on the size group of land holding. N=60

Group	Land holding size(ha)	No. of selected farmers
Marginal	<1.00	11
Small	1.01-2.00	14
Medium	>2.01	34

Collected data were scrutinized, tabulated and processed systematically according to the objectives laid down for the study. The marketing channels of chilli cultivation were identified based on the intermediaries / middleman involved from the point of production to the point of ultimate consumer. Marketing cost was calculated by estimating the cost incurred in the process of marketing of chilli. The cost incurred after harvesting of the yield till it reached the final consumers hand generally constitutes the marketing cost. It included transportation cost, handling cost, storage cost, market fees, weighing charges and labour charges for packing, loading and unloading. The marketing cost at various stages of chilli marketing was calculated and finally the total cost was computed.

Absolute marketing margin of its intermediaries at any stages of marketing was calculated as

$MM_i = SP_i - (PP_i - MC_i)$ where MM_i = Marketing margin of the i-th middlemen; SP_i = Selling price of the i- th middlemen; PP_i = Purchase price of the ith middlemen; MC_i = Marketing cost incurred by the i-th middlemen.

After the calculation of the marketing margins at different stages, finally the total marketing margins was calculated. Price spread is the difference between the price paid by the consumer and the net price received by the producer. It may consist

of marketing costs and margin the price spread analysis was carried out as follows:

$$\text{Producer's share in consumer's rupee} = \frac{\text{Producer's price}}{\text{Consumer's price}} \times 100$$

The efficiency of various identified marketing channels was calculated through the Shepherd's formula as under

$ME = CP / MC$ Where ME = Index of marketing efficiency; CP = Consumer's purchase price and MC = Total marketing cost.

RESULTS AND DISCUSSION

Channels involved in marketing of chilli

Marketing channels are routes through agricultural products move from producer to consumers. The length of the channels varies from commodity to commodity, depending on the quantity to be moved, the form of consumer demand and degree of regional specialization in production. In the present study, two marketing channels of chilli were identified. The two marketing channels were follows:

CHANNEL I : Produce – Consumer and CHANNEL II: Produce – Retailer- Consumer

The data (Table 2) represent the quantity of produce sold through different channels. It appeared that channel II was the most effective channel through where marginal, small and medium farmers transacted 0.0, 45.46 and 65.22 per cent of their marketed surplus. For all farmers group 16.0q or 60.38 per cent was sold through channel II. In channel I marginal, small and medium farmer transacted 100.0, 54.54 and 34.78 per cent of their marketed surplus. For all groups of farmer 10.5q or 39.62 per cent was sold through channel I. Rajur (2013) also reported a similar finding.

Pattern of disposal showed that channel II was the most effective for small and medium group of farmer where they transacted 45.46 and 65.22 per cent of their marketed surplus through this channel. Channel I was the most effective for marginal group of farmer where they transacted

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Table 2. Effectiveness of various marketing channels of chilli according to different size groups.

Sr. No.	Channel	Marginal		Small		Medium		Total	
		Qty(q)	%	Qty(q)	%	Qty(q)	%	Qty(q)	%
1	I	1.3	100.00	1.2	54.54	8.00	34.78	10.5	39.62
2	II	0.00	0.00	1.00	45.46	15.00	65.22	16.00	60.38

Table 3. Area, production, marketable surplus and marketed surplus of chilli for different size groups.

Sr. No.	Farm size group	Area under chilli (ha)	Production (q)	Average area under chilli (ha)	Per ha Yield (q)	Requirement for family consumption (q) + Non market Transaction	Marketable surplus (q)	Marketed surplus (q)	Per ha marketed surplus (q)
1	Marginal	0.064	4.8	0.005	75.00	3.5	1.3	4.8	75.00
2	Small	0.107	8.00	0.007	74.76	5.8	2.2	7.9	73.83
3	Medium	0.569	43.00	0.017	75.57	17.2	23.2	40.4	71.00
4	Average	0.245	18.6	0.009	75.11	8.84	8.9	17.7	73.28

100.0 per cent of their marketed surplus through this channel. Parthasarathi *et al* (2012) and Jagtap *et al* (2014) also revealed similar finding in their study on marketing of chilli. The marginal group of farmers mostly preferred to sell their produce through channel I which is due to the fact that their volume for transaction is less and channel I is easier for marketing. On the other hand, medium group of farmers had comparatively larger marketed surplus and preferred to sell through channel II.

Marketed and marketable surplus of chilli

Marketed surplus is that quantity of the produce which the producer-farmer actually sells in the market, irrespective of his requirement for family consumption, farm needs and other payments. On the other hand, marketable surplus is that quantity of the produce which can be made available to the non-farm population of the country or it is the residual left with the producer-farmer after meeting his requirement for family consumption, farm needs for seeds and feed for cattle, payment to labour in kind, payment to artisan, payment to landlord as rent, and social and religious payment in kind (Acharya

and Agarwal, 2011). The data (Table 3) reveal that the area, production, requirement for family consumption, marketable surplus and marketed surplus of chilli production. The values revealed that the average size of operational holding under chilli was 0.005, 0.007 and 0.017 for marginal, small and medium group of farmers, respectively. The average/ ha was highest in medium group of farmer followed by small and marginal group of farmer, the amount being 75.57 q, 75.00 q and 74.76 q, respectively. Further, it was observed that marketed surplus was higher than marketable surplus with all groups of farmer. This finding was in conformity with Thakur and Sharma (1994) due to the fact that chilli is perishable in nature and the farmers need hard cash for meeting their family consumption and for other commodities.

Marketing cost

Table 4 represents the marketing cost incurred by the different intermediaries in different marketing channels. From the table, the highest marketing cost was in channel III (Rs. 700/q). It was mainly because of the presence of intermediaries involved

Table 4. Price spread analysis and marketing efficiency for different marketing channels.

Sr. No.	Item	Unit	Channel I	Channel II
1	Marketing cost			
a	Producer	Rs / q	238.09	0.00
b	Retailer	Rs / q	0.00	0.00
c	Total marketing cost	Rs / q	238.09	700.00
2	Marketing Margin			
a	Producer	Rs / q	0.00	0.00
b	Retailer	Rs / q	0.00	2300.00
c	Total marketing margin	Rs / q	0.00	2300.00
3	Consumer's price	Rs / q	4000.00	7000.00
4	Producer's share in consumer's price	%	80.00	57.14
5	Marketing efficiency	-	21.00	10.00

in the channel. The marketing cost for Channel I (Rs. 238/q). The cost incurred by the intermediaries (Retailer) was 56.25 per cent of the total marketing cost in channel II.

Marketing Margin

The marketing margin earned by the intermediaries in marketing of chilli in study area was Rs. 2300/q. Price spread is difference between price paid by the consumer and price received by the producer. The study of price spread involve not only the ascertainment of the actual prices at various stage of the marketing channel, but also the cost incurred in the process of movement of the produce from the farm to the consumer and the margin of various intermediaries (Acharya and Agarwal, 2011 and Ramachandra *et al*, 2012).

The data (Table 4) showed that producer share in consumer rupee was higher in channel I (80.00%), where no intermediaries was involved, as compared to channel II (57.14%) where there was a presence of retailer in the channel.

Marketing efficiency

The values (Table 4) showed that the marketing efficiency was higher in channel I (21.00) as compared to channel II (10.00) because there was no intermediaries involved in the channel.

CONCLUSION

It was found out that two marketing channels of chilli were identified in Wokha District of Nagaland *viz*; Producer - Consumer (Channel I) and Producer - retailer - Consumer (Channel II). Nature of marketing showed that channel II was the most effective for medium group of farmer where they marketed 65.22 per cent of their marketed surplus through this channel. Channel I was the most effective for marginal group and small group of farmer where they marketed 100.0 per cent and 54.54 of their marketed surplus through this channel. The marketing margin earned by the intermediaries for the retailer was Rs. 2300/q. The price spread analysis of different marketing channels in chilli showed that producer share in consumer rupee was higher in channel I (80.0% where no intermediaries was involved, as compared to channel II (57.14 %) where there was a presence of retailer in the channel. Marketing efficiency was higher in channel I (21.0) as compared to channel II (10.0) due to the fact that there was absence of intermediaries in the channel.

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