Marketing Pattern Analysis of the King Chilli Cultivation in Peren District of Nagaland

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ABSTRACT

Background: The King chilli cultivation in Peren district is very common practice in Nagaland state, which influence the socio-economic status of the family due to daily diet, so the present research work have been highlight the marketing cost and price analysis.

Methods: The present research investigation for data collection works was carried out during the agricultural year 2019 to 2021 with a total of 60 King chilli respondents; selected by following a multi-stage stratified simple random sampling technique to known about the factors responsible for the production.

Result: Study reveals the overall benefit-cost ratio over total cost on the sample farm was 3.27: 1. Total four marketing channel were identified and the marketing efficiency by Acharya's method was higher (0.13) on channel A.

Key words: Chilli, Cultivation, King, Marketing, Pattern.

INTRODUCTION

Chilli has been used conventionally by different ethnic communities of the North eastern India in treating various ailments. In Nagaland chilli are used to tone up body muscles, toothache and muscles pain, due to the presence of capsaicinoids. The chilli is extremely hot which is found only in capsicum spp. The capsicin content of fruit of Capsicum chinense has been found to be very high in comparison to the fruits of the chilli species (Anonymous, 2018a).

King chilli is used in bulk quantities both in fresh as well as dried forms. King chilli in Nagaland is grown commercially for its fruits and constitutes the principal source of dry chillies for marketing. Chilli is an indispensible condiment and used in the diet of every Naga household in one or the other form. For a decade Naga people have been eating chilli. It fruits forms an essential ingredient of the Naga kitchen cuisine. It is also used for a medicinal purpose, fresh and dried chillies are used for ingredients and pickle, it is also used for extraction of oleoresin and capsaicin (Anonymous, 2018b). For the present study mainly two specific objectives were fame to conduct the research *viz*; i). To identify the marketing channel and estimates the marketing margin, marketing cost and price spread of King chilli and ii). To suggest appropriate policy framework for expansion of area and enhancement of yield.

Highlights

- Even for the King chilli Geographical Indication (GI) has been registered by the Nagaland State Government to be a hottest chilli in the world in 2006 with 1,001,304 Scoville heat units (SHU) (Anonymous, 2021).
- The King chilli cultivation is very popular in the Nagaland state with different varieties, pungency, size, shape and colours and its usage (Sharma, 2014).
- King chilli is also used for a medicinal purpose, fresh and dried chillies are used for ingredients and pickle; it is also used for extraction of oleoresin and capsaicin (Kedrishi, 2018).

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METERIALS AND METHODS

Price spread refers to the difference between price paid by the consumer and price received but the producer. The study of price spread involve not only the ascertainment of the actual prices at various stages 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 (Sharma, 2011).

$$\text{Price spread} = \frac{\text{Producer's price}}{\text{Consumer's price}} \times 100$$

Marketing channels of king chilli

The marketing channels of King chilli were identified based on the intermediaries/middleman involved from the point of production to the point of ultimate consumer.

Marketing cost, margins and price spreads

Marketing cost was calculated by estimating the cost incurred in the process of marketing of King chilli. The cost incurred after harvesting of the crops till it reaches the final consumer hand generally constitutes the marketing cost. It include transportation cost, handling cost, storage cost, market fees, weighing charges and labour charges for packaging, loading and unloading. The marketing cost at various stage of King 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 follows:

$$MM_1 = SP_1 - (PP_1 + MC_1)$$

Whereas:

MM_1 = Marketing margin of the ith middlemen.

SP_1 = Selling price of the ith middlemen.

PP_1 = Purchase price of the ith middlemen.

MC_1 = Marketing cost incurred by the ith middlemen.

After the calculation of the marketing margin at different stages, finally the total marketing margins were calculated.

Price spread

Price spread is the difference between the price paid by the consumer and the price received by the producer. It may consist of marketing costs and margin; the price spread analysis was carried out as follows:

Producer's shared in consumer's rupee =

$$\frac{\text{Producer's price}}{\text{Consumer's price}} \times 100$$

Similarly, the share of the total marketing cost and the total marketing margin were also estimated to analyse the price spread.

Marketing efficiency

The efficiency of various identified marketing channels was calculated through the Shepherd's formula. The formula is given below:

$$ME = \frac{V}{I} \times 100$$

Whereas,

ME = Index of marketing efficiency.

V = Value of goods sold (Consumer's price).

I = Total marketing cost.

The present research study was conducted in Peren district of Nagaland during the agricultural year of 2019 to 2021 (two years).

RESULTS AND DISCUSSION

Table 1 reveals that a sample of 60 King chilli growers were selected following a multi stage sampling technique. In the first stage two blocks of Peren district *viz*; Peren Block 'B' and 'C' and four villages were selected randomly, then a list of farmers of the village were prepared separately and on the basis of land holdings (ha), then 15 farmers from each village were selected by purposively stratified simple random method and distributed into two groups, based on the area of land holding of the respondent for the assessment of resource-use efficiency of king chilli cultivation viz; respondents were classified into two groups Group-I: marginal (<1.00 ha), Group-II: small (1.01 to 2.00 ha) based on the area under land holding (Kedrishi, 2018).

Agriculture commodities or goods are produced by different producers or cultivators and the produce is consume by people throughout the country at different places, basically the marketing channel is the people, organisation and activities necessary to transfer the ownership of goods from the point of production to the point of consumption. It is the way products and services get to the end user, the consumer and are also known as distribution channel. The length of channel differs from commodity to commodity and also depends on the quantity to be moved, the nature and degree of specialization in production similar study in the line with Sharma (2013).

At present study, four marketing channels of King chilli in Peren district were identified and different marketing channels for King chilli observed in the study area:

i. Marketing channel A: Producers-Consumer.
ii. Marketing channel B: Producers-Wholesalers-Retailer-Consumer.
iii. Marketing Channel C: Producer-Retailer-Consumer.
iv. Marketing Channel D: Producer-Commission agent-Wholesaler-Retailer-Consumer.

In the above mentioned marketing channels, Channel C is the most commonly used for the marketing channel so according to it, the channel C is the most efficient, because the producer cannot sell in bulk quantity so the retailer have to come and purchase from the producer.

Table 2 reveals the highest net price received by the farmer is at channel A, after which the net price is received by channel B, channel C and channel D respectively, the market cost price is highest in channel D. The net margin of intermediaries is zero for channel A and channel B and channel D scores the highest. So, the consumer price is highest for channel D and lowest for the channel A as shown in the above measurement of marketing efficiency table, for the farmers channel A is to be much preferred because the net price

Table 1: Area allocated under King chilli cultivation on different farm size.

Area under king chilli cultivation (ha)	Number of households		
	Marginal	Small	Overall
< 1.00 ha	19	0	19
	(31.67)	(0.00)	(31.67)
1.01 ha and above	0	41	41
	(0.00)	(68.33)	(68.33)
Total cultivated area	64.46	204.04	268.50
	(24.01)	(75.99)	(100.00)
Total king chilli area	15.21	57.15	72.36
	(21.02)	(78.98)	(100.00)
Average per household area	0.801	1.394	1.206

(Figures in parentheses indicate percentage to total).

Table 2: Marketing cost and marketing efficiency of King chilli cultivation.

Channel/market cost (per kg)	A	B	C	D
Retailer sale price/consumer price (RP)	300	350	350	400
Total marketing cost (MC)	30	20	30	70
Total net margin of intermediaries (MM)	0	80	70	80
Net price received by farmers (FP)	270	250	250	250
Value added (1-4)	30	100	100	150

Table 3: Marketing efficiency of King chilli cultivation.

Methods	Channel A	Channel B	Channel C	Channel D
Conventional method (E)	1	5	3.33	2.14
Shepherd's method (ME)	10	17.5	11.66	5.71
Acharya's method (MME)	0.13	0.04	0.04	0.02
Price spread (PS)	90	71.42	71.42	62.5

received for farmer is at channel A. But the channel A cannot be feasible for bulk selling due to its direct sell to the consumers and also due to that the farmer cannot devote his full time for marketing as the farmer has to do its field work (Sharma, 2016).

Even for channel B and channel C since the farmers is getting the same price so they can go for selling in any way and in channel D marketing cost and marketing margin is highest due to the fact that the produce is transferred to Dimapur and Kohima for selling.

Table 3 revealed the marketing efficiency refers to the degree to which stock price and other securities prices reflect all available, relevant information. Investors who agree with this statement tend to buy index funds that track overall market performance and are proponents of passive portfolio management. The estimates of marketing efficiency by using Conventional method (CE), Shepherd's methods (ME) and Acharya's method (MME). As shown in the table that the marketing efficiency was higher in channel B (5) in the conventional methods as compared to other channels *i.e*; A (1), C (3.33) and D (2.4) and same in shepherd's method the marketing efficiency was higher in channel B (17.5) as compared to channels A (10), C (11.66) and D (5.71). While, in Acharya's method the marketing efficiency was higher in channel A (0.13) as compared to other channels B (0.04), C (0.04) and D (0.02), due to the fact that there was no intermediaries involved in the channels. The price spread analysis of various marketing channel in king chilli. The table represent that then producer share in consumer rupee was higher in channel A (90) as compared to channel B (71.42), C (71.42) and D (62.5) (Sharma, 2015).

CONCLUSION

The following conclusions emerge from the study entitled study the economics and marketing of chilli in Peren districts of Nagaland. Total four marketing channels of king chilli in Peren district were identified. These are as A, B, C and D, found that the channel C is the most efficient, for farmers channel A is to be much preferred by the farmers. Marketing efficiency was found to be higher in channel B (5), while, in Acharya's method the marketing efficiency was higher in channel A (0.13). A benefit cost ratio (BCR) is an indicator, used in cost-benefit analysis that attempts to summarize the overall value for the money of a production. A BCR is the ratio of the benefits of a production, expressed in monetary terms, relative to its costs.

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