Estimation of Marketing Cost, Marketing Efficiency and Constraints in Cauliflower Cultivation in Purnia District of Bihar

ABSTRACT

India is the 2nd largest producer of fruits and vegetables in the world leading in several horticulture crops Mango, Litchi, Banana, Papaya, potato, tomato, brinjal, lady finger. Cauliflower is one of the veggies in the species of Brassica , its edible part is curd. It has inviting taste and rich source of minerals like potassium, sodium, phosphorous, iron, calcium and magnesium, Vitamin B and C, protein, carbohydrate and dietary fibres. With this view a study was conducted in Purnia district of Bihar.The three channels are there channel I-Producer-Consumer where marketing efficiency is 25.33%, channel II-Producer-wholeseller-retailer-consumer where marketing efficiency is 3.64%, channel III – Producer-village trader-wholeseller-retailer-consumer where marketing efficiency is 3.51%,the main constraints of marketing was market was far from production point.

KEYWORDS: Marketing Channel, Marketing Cost, Marketing efficiency, Garret Ranking, Constraints.

INTRODUCTION

Vegetables are part of vegetation that are benefitted to living beings as food. The one of a kind that implies frequently utilized and is used to vegetation simultaneously to allude to all reasonable for eating plant matter, like the stem, leaves, roots and seeds. A substitute meaning of the time span is used actually self-assertively, much of the time through culinary and social practice.It might also perclude fixings got from some vegetation that are natural products, blossoms, nuts, and cereal grains, but include exquisite natural products, for example, tomatoes and courgettes, plant like brocolli and soyabean.

The Department of Agriculture and Farmer Welfare 2020-21 of area and production of Horticultural crops estimated 331.05 million tones and area involved in that was 27.59 million hectare. Production was increase about 10.6 million tonnes (3.3%) compared to 2019-20.Bihar is one of the main makers of veggies and natural products in India with 9.8 and 6.7 levels of countrywide assembling separately. It positions 1/3 and 6th among different states in the assembling of veggies and organic products separately. The total area under vegetable development is by and around 11% of the state's gross planted region, and is expanding. The fundamental vegetable plants comprise of potato,onion, tomato,cauliflower and brinjal.Hajipur in Vaishali is notable for an early scope of Cauliflower that arrives at market in a definitive seven days stretch to September.Creation of veggies is appropriately scattered over the locale, with a consideration of assembling in a few exact regions. Aside from Patna and Nalanda, the spot vegetable assembling is really broad, the various regions with exorbitant offers in complete vegetable assembling are Vaishali,Muzaffarpur,WestChamparan, East Champaran, Katihar, and Begusarai.

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Cauliflower is one of various veggies in the species Brassica oleraceae in sort Brassica , which is in the Brassicaceae(or Mustard) family. It is a yearly plant that duplicates with guide of seed.Ordinarily, exclusively the head is eaten the appropriate for eating white tissue infrequently alluded to as "curd". The cauliflower head is made out of a white inflorescenemeristem.Cauliflower heads look like those in broccoli, which contrasts in

having blossom buds as the fit to be eaten segment. Brassica oleracea also comprises of broccoli,Brussels sprouts, cabbage, collard greens, and kale, together alluded to as “cole”.

India produces 7.2 million tonnes of cauliflower every year, after China 10.2 milion(2019). Bihar is the third largest cauliflower growing state in the country with an area of about 65.71 thousand hectares with 935.56 thousand tonnes annually with an average of about 15.28 tonnes per hectare. Leading cauliflower producing state Bihar, Uttar Pradesh, Odisha, West Bengal, Assam, Haryana and Maharashtra. Though there has been a constant increase in the production of vegetable in the country, desired improvement in nutritional status of the population has not taken place as per capita availability of vegetables is hovering around 175 gm per day which is far below than the recommended dose of 300gm per day(Agarwal et al.2009).

RESEARCH METHODOLOGY

The research methodology is an important component of research. In order to fulfil the objectives of the study, an appropriate methodology for conducting the study is inevitable. The features of the population or phenomenon being examined are described in descriptive research design. It concentrates on the “what” of the research topic rather than the “why” of the topic. The most important goal of descriptive research is to describe the current state of circumstances. Because the current study is fact- finding and presents a description of the sample respondents as well as the area, a descriptive research design was used.

Sampling Technique

Multi stage sampling was followed for the selection of respondents for the present study.

Selection of Study Area

The Purnia District of Bihar was purposively selected because this district has abundant cauliflower production. This district was endowned with highly diversified favourable ecological condition for cauliflower cultivation.

Selection of Blocks

There were altogether 14 blocks in Purnia disrict. A list of cauliflower producing block along with the quantity of cauliflower produced in respective blocks was prepared. Out of 14 blocks, Krityanand Nagar were selected randomly.

Selection of Villages

From each selected block, alist of cauliflower producing villages were after arranging them in ascending order, Banbagh, Gokhulpur, Kattaha and Sauraha were selected randomly.

Selection of Farmers

A list of cauliflower growers of every selected villages were prepared and from each villages 20 cauliflower growers were selected randomly. Thus , total 80 cauliflower growers were selected randomly . Thus, total 80 cauliflower growers were selected for detailed investigation.

Three types of farms were selected:

Marginal farmers – 0-1 hactare farm size

Small farmers – 2-4 hactare farm size

Medium farmers – 4 and above hactare farm size

Period of Study

The data was collected during agricultural year 2021-22

Method of enquiry

The primary data was collected by survey method through personnel interview on well- structured and pre tested schedule, while secondary data was collected from book, journals, reports and records of the district and block headquarter, Land acreage in Purnia district is 4 bigha per hectare.

Tabulation and Analysis

The raw data thus collected were summarized and analysed in such a form that end product which was given in a tabular form, became pertinent to the objectives of the study. The data was first transferred village wise on different sheets. The subsequent master tables were prepared befitting to various objectives of the study. The entire information was arranged in manner to provide base for further analysis, thus, facilitating interpretation of the result.

Analytical tools used:

Total Marketing Cost :

Producer and various intermediaries involved in the sale and purchase of the commodity till it reaches the ultimate consumer is computed by:

$C = C_f + Cm_1 + Cm_2 + Cm_3 + Cm_4 \ \ldots\ldots\ldots\ldots\ldots + Cm_n$

Where,

C = the total cost of marketing of commodity,

$C_f =$ the cost paid by the producder from time the produce leaves the farm till it sold.

$Cm_{1,}Cm_2 =$ denotes the cost in the cost incurred by different.

$Cm_{1,}Cm_2 \ldots\ldots\ldots$ $Cm_n =$ denotes the producers from time leaves the farm till it sold.

Index of Marketing Efficiency :

The marketing efficiency was worked out by employment the shepherds for formula as follows :

$$ME = \frac{V-I}{I}$$

Where, V = Value of Cauliflower sold.

I = Total marketing cost plus margin.

Garret's Ranking Techniques :

Constraints perceived and the measures for improvements suggested by the producer in production and marketing of Cauliflower were priortized by using Garet's ranking technique using the following formula:

$$\text{Percentage Position} = 100 * \frac{Rij - 0.5}{Nj}$$

Where,

Rij = Rank given for ith item by jth individual

Nj = Number of ith tems ranked by jth individual

Result and Discussion

Channel of marketing

Movement of the produce from producer to ultimate consumer comprises chain of intermediaries. Called marketing channel. Different intermediaries are involved in holding of produce through different channel. Different intermediaries are involved in holding of produce through different channel of trade. From the preliminary survey conducted in the study area, it was observed that the marketing of cauliflower was done mainly through three channels.

Channel 1- Producer- Consumer.

Channel 2- Producer- Wholeseller- Retailer - Consumer

Channel 3- Producer- Village Contractor- Wholeseller- Retailer-Consumer

Table 1: Channel I- Producer- Consumer

Description	Rs./qtl	%
1. Producer sale price to consumer	3800	100
1.1. Transportation cost	50	33.33
1.2. Packaging cost	20	13.33
1.3. Storage cost	50	33.33
1.4. Miscellaneous cost	30	20
2. Total Marketing Cost	150	100
3. Net price received by producer	3650	96.05
4. Total Marketing Cost	150	3.94

5. Consumer paid price	3800	100
6. Marketing Efficiency (%)	25.33	-

Table 2-Channel-2-Producer-Wholeseller-Retailer-Consumer (Rs./qtl)

Description	(Rs./qtl)	%
A. 1. Producer sale price to wholesaler	3350	100
2. Charges paid by producer	200	5.97
3. Net price received by producer	3150	94.02
4. Producer selling price	3350	100
B. Cost incurred by wholesaler		
1. Wholesaler buying price	3350	87.92
2. Transportation / Storage	50	31.25
3. Loading and Unloading Charges	50	31.25
4. Market fees (@ 2%)	60	37.5
5. Net price paid by wholesaler	3350	100

Table 3-Channel-3-Producer-Village Contractor-Wholesaler-Retailer-Consumer(Rs/qtl)

A. 1. Producer sale price to traders	3750	100
2.Cost incurred by Producer	-	-
3. Total marketing cost	-	-
4. Net price received by Producer	3750	-
B. Cost incurred by traders	-	-
1. Traders buying price	3750	90.14
2. Transportation	85	34.00

3. Loading & Unloading Charges	60	24.00
4. Packaging Charges	55	22.00
5. Market fees	50	20.00
6. Total Marketing Cost of traders	250	6.00
7. Marketing Margin of traders	200	4.8
8. Traders Selling Price	4160	100
C. Cost incurred by wholesaler	-	-
1. Wholesaler buying price	4160	91.32
2. Transportation	-	-
3. Loading & Unloading	40	32.00
4. Market fees	35	28.00
5. Storage cost	50	40.00
6. Wholesaler Marketing Cost	125	2.74
7. Wholesaler Marketing Margins	300	6.74
8.Wholeseller Selling Price	4555	100
D. Cost incurred by retailer	4555	89.66
1. Transportation	60	35.29
2. Loading and Unloading	30	17.64
3. Storage Cost	-	-
4. Cleaning	-	
5. Containers	40	23.5
6. Market fees	40	23.5
7. Marketing Cost of retailer	170	3.34
8. Marketing Margins of retailers	400	7.87
9. Retailer Selling Price	5080	100
E. Total Marketing Cost	545	-
F. Total Marketing Margins	900	-

G. Marketing Efficiency (%)	3.51	-

Table 4: Marketing Cost and Marketing Efficiency of different Channel

Sl. No.	Particulars	Channel 1	Channel 2	Channel 3
1.	Marketing Cost (Rs)	150	490	545
2.	Marketing Margin (Rs.)	-	700	950
3.	Consumer paid price (Rs.)	3800	4340	5080
4.	Marketing Efficiency (%)	25.33	3.64	3.51

Table 1 indicates the marketing cost has been increased from channel 1 (Rs.395) to channel 3. Marketing margin has been increased by channel 2 (Rs.250) to channel 3. Consumer paid price increase from channel 1 to channel 2 and channel 2 to channel 3 i.e., Rs.3800, Rs.4340, Rs.5080. The maximum % of marketing efficiency is in channel 1 i.e.,25.33, than channel 2 i.e., 3.64 and channel 3 i.e., 3.51% respectively.

Table 5: Constraints faced by Cauliflower growers at the time of marketing.

Sl.No.	Description	Garret's Score	Rank
1.	Market is far from production point	75	1st
2.	High cost of transportation	60	2nd
3.	Malpractices in weighing	50	3rd

4.	Price flactuation	40	4th
5.	Illegal deduction	24	5th

Summary and Conclusion

Cauliflower is one of the important veggies of cold season in India. It is grown from its tenders head or curd. India is the second largest producer of the cauliflower in the world after China. It is a labour and capital intensive annual crop which generate the better possibilities for income and employment to the growers family. The present study revealed that channel 1 have showed highest marketing efficiency and less in channel 3 because channel 1 has less number of intermidiaries as compared to channel 2 and channel 3. The marketing cost was highest in channel 3 than channel 2 and less in channel 1 because as intermidiaries will increase the marketing cost will increase, the channel 1 has less marketing cost because they have to sell nearby market as compare to channel 2 and channel 3 have to sell for long distance.

The main constraints faced by the cauliflower growers at the time of marketing is mandi is far from cauliflower growing field they have to put extra expenses on going to mandi and then sell their cauliflower. They have to give high transportation charge for going to sell the cauliflower. As the roads are not that much develope they face many problem. Many seller in mandi malpractice in weighing and give less amount for their crop.

To make cauliflower crop more lucrative, market organization should be strengthened, state government should come forward for lucrative price for the cauliflower growers.The farmers are producing abundant quantity of cauliflower crop to meet the demand of consumer, they are facing constraints at the time of marketing of their growers. On the other hand market intermediaries getting higher margin by incurring less cost and services. Therefore, in order to regulate the expenditure on commision, transportation and packing, efforts should be made to develope the necessary armature for marketing of cauliflower crops in the state.

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