Research Article

MARKETING ANALYSIS OF AGRICULTURAL INPUTS IN JAMMU DISTRICT OF JAMMU AND KASHMIR STATE

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Abstract- An investigation entitled "Marketing Analysis of Agricultural Inputs in Jammu District of Jammu and Kashmir State" was conducted in Jammu district of J&K state during the year 2016. Two blocks were selected from Jammu district (Marh Block and R.S Pura Block) and two villages were selected from each block randomly. From each village 15 farmers were selected randomly to make a total of 60 farmers. From the 60 farmers, list of retailers was prepared and out of prepared list 5 retailers were selected randomly from each village to make a total of 20 retailers and also list of dealers was prepared and out of prepared list 1 dealer was selected randomly selected from each village to make a total of 4 dealer. Thus, total of 84 samples were collected from study area. It has been observed during the investigation that three different types of marketing channels exists in the research area *viz.*, Channel I: Company → Dealer → Farmer, Channel II: Local villager → Retailer → Farmer and Channel III: Company → Dealer → Retailer → Farmer. The study revealed that 100.00 per cent farmer purchased fertilizer from retailer and 91.00 per cent farmer purchased seed from state agriculture department. Both the dealer and retailer earn maximum net profit by selling MOP fertilizer *i.e.*, ₹16.67 and retailer ₹475.40 per 50 kg bag whereas they earned least profit by selling urea *i.e.*, ₹5.30 by dealer and ₹9.30 by retailer per 50 kg bag. Round up 1 liter was found to have highest marketing efficiency (0.91) in marketing channel I. In marketing channel II only, paddy seed of sharbati varieties was sold with (0.67) marketing efficiency. Urea was found to have highest marketing efficiency (0.93) and MOP was found to have least marketing efficiency (0.60) in marketing channel III.

Keywords- Distribution, Marketing, Channel, inputs, Retailing.

Introduction

Agricultural marketing concerned with two aspects that is the marketing of the farm produces and marketing of farm inputs that are consumed by the farms to produce agricultural produces. Agriculture and allied sector contributes 24 per cent of the total GDP and provide employment to around 67 per cent Indian population [1]. Use of chemical fertilizers and pesticides and higher farm mechanization have played a positive role in increasing agricultural productivity and in making India self-sufficient in food grain production. In the 21st century, the challenges in Indian agricultural sector are quite different from the last decades. The higher emphasis to produce more food from less land with declining natural resources is a difficult task for the farmers. To keep up the steady of growth farm output a careful economic evaluation of inputs like seeds, fertilizers, irrigation sources etc., are of considerable importance. The impressive growth in agricultural production since independence has been generated by higher input use, particularly purchased inputs as well as technology induced productivity improvement. The key inputs which changed the face of agriculture in India include HYV (High Yielding Variety) seeds, chemical fertilizers, irrigation, pesticides, farm machineries and equipment, credit and labour. A specialized marketing effort is required to reach the farmers who are spread across the nooks and corners of the country [2]. The world seed market is nearly 53.76 billion USD in 2014-15 out of which Indian seed market is about ₹15700 cr in 2015. Global seed market will be 92.04 billion USD by 2020 at a CAGR of 9.4 per cent. The seed market segmented and projected on the basis of major region involved: North –America, Europe, Asia –Pacific, Latin America and rest of the world.

India seed industry ranks 6th in the world in value term accounting USD 2.2 billion with the major growth from cotton, rice and vegetable seed which accounted 2 per cent of the global market after US (12 per cent), China (10 per cent), France (2.8 per cent), Brazil (2.6 per cent) and Canada (2.1 per cent). India with 48 per cent of its land being arable and its population employment under agriculture being 55 per cent, the value of global vegetable seed market is estimated to be at USD 6.75 billion. India and china together contribute about 50 per cent vegetable production but seed are imported by European nation. Top vegetable seed exporter in term of value is Netherland followed by US, France, China, and Chile. India`s contribution in export is only about 1 per cent globally in term of value. Vegetable seed are mainly exported to Asia-pacific (about 57 per cent), Europe (23 per cent) and North America (12 per cent). About 8 per cent of total vegetable seed export goes to Africa. The corporation achieved premium of ₹1,362.40 cr in 2014-15 as compare to ₹1,303.73 cr during 2013-14 with growth of 4.5 per cent. The value of business covered during 2014-15 is ₹2,80,190 cr in comparison to last financial year of ₹2,79,256.33 cr (Seed Time Jan-June 2016). India's Position in Global Fertilizer Market from the available data in fertilizer statistics, it is clear that India is an important player in the world market for fertilizers. India is the second highest importer of Nutrients after USA (11 per cent of world import in 2012), highest importer of phosphatic nutrients (7 per cent of world import in 2012) and third highest potassic nutrients importer (6 per cent of world import in 2012) after USA and China *(Indian council for research on international economic relations 2015)*. The fertilizer distribution in Jammu and Kashmir State is dominated by few

renowned industries in industries. Namely National fertilizer limited (NFL), Indian farmer fertilizer cooperative limited (IFFCO), Chambal fertilizer limited, TATA fertilizer and Indian potash limited (IPL). Out of which IFFCO contribute maximum share in the distribution of fertilizer. The fertilizer company in J&K deals with five types of fertilizer namely urea, Di-Ammonium phosphate (DAP), Muriate of potash (MOP), Single super phosphate (SSP) and complex fertilizer (NPK). The total distribution of all the fertilizer in J&K shows flexible trend *i.e.*, both the positive and negative growth. But in aggregate it shows positive trend in distribution in last seven year *i.e.*, the distribution of total fertilizer from 187734.00 (MT) in 2009-10 to 235935.80 (MT) in 2015-16 [1]. Since Jammu and Kashmir consist three division Jammu, Kashmir and Ladakh. Jammu and Kashmir division have high agricultural area therefore consumption of fertilizer in these two regions is relatively high. About 68Per cent of total fertilizer is consumed in Kashmir division and remaining 32Per cent of total fertilizer is consumed in Jammu division. Keeping in view the facts discussed, the present proposed investigation entitled, "Marketing Analysis of Agricultural Inputs in Jammu District of Jammu and Kashmir State" has carried out with objective to study the agricultural input marketing in Jammu district.

Methodology

To conduct the present investigation the present study has been purposively carried out in Jammu district of J&K state. As it was not possible to cover up the entire Jammu district, thus four villages from two blocks of Jammu district were taken into consideration. To collect the relevant information from the selected four villages, equal numbers of respondents (farmer, retailer and dealer) were chosen in all the respective area.

Table-1 *Coverage of respondents area wise*

Block	Village	Farmer	Retailer	Distributor	Total
R.S Pura	Kadayal	15	5	1	21
	Langrial	15	5	1	21
Marh	Wand Ghai	15	5	1	21
	Chak Lal Din	15	5	1	21
Total		60	20	4	84

Sampling design

The multiphase sampling technique was used in following manner.

Phase I^st- In the first phase two blocks on the basis of highest area under food grains were selected. From the above selected blocks, two villages were selected randomly from each block and from each village 15 farmers were selected by using simple random sampling method without replacement to make a total of 60 farmers.

Phase IInd–From the above 60 farmers, a list of retailers was prepared and out of the prepared list five retailers from each village, were selected randomly to make a total of 20 retailers.

Phase IIIrd- List of distributors of the Jammu district who deals in agri input marketing were prepared in consultation with selected retailers and four distributors were selected randomly out of the prepared list.

Thus, in total 84 sample size consisting of 60 farmers, 20 retailers and 4 distributors were drawn from the study area.

Data management and analysis

Simple statistical tools like average, growth and percentage were used. In addition to this following method were used to analysis the data collected from the respondents associated with the purchase of agricultural inputs (seed, fertilizer and pesticides) in Jammu district. After collecting the data, the results has been analyzed by using percentage analyses, descriptive statistics and factors analysis.

Percentage analysis

Percentage to a special kind of ratio. It is used to make comparison between two or more series of data. In the present study the percentage analysis helped to check the relative comparison of total numbers of agriculture inputs consumed in different season in different village, margin share earns by the different intermediaries.

$$Percentage = X/Y*100$$

Where, X and Y differ according to the objectives of the study

Marketing Efficiency

Marketing efficiency is essentially the degree of market performance. In this since the concept is broad and dynamic. The term marketing efficiency refers to the effectiveness or competence with which a market structure performs its designated function. Since the efficiency of input marketing channels emphasizes upon the lower prices of agricultural inputs supplies, an attempt was made to estimate the marketing efficiency (ME) of different channels by employing equation given below [6].

$$ME = \frac{1}{PC / PF}$$

Where, ME = Efficiency of input marketing channel.
PC = Price received by the company/ distributor and
PF = Price paid by the farmers for input.
A higher value of ME means more efficiency of marketing channel and vice versa.

Marketing margin of a middle man (retailer and dealer)

To determine the marketing margin of the retailers and dealer in different area. Following steps have been involved in the study:
i) Percentage margin of ith middle man (P_{mi})

$$P_{mi} = P_{Ri}-(P_{pi}+C_{mi})/P_{Ri}*100.$$

Where,
P_{Ri} = Total value of receipts per unit (Sale price).
P_{pi}= Purchase value of inputs per unit (Purchase price).
C_{mi}= Cost incurred on marketing per unit.

Results and Discussion

Input purchase by the farmer has been presented in [Table-2]. It has been revealed from the table that maximum farmer *i.e.*, about (91.70 per cent) farmer they purchased seed from the State agriculture department on subsidy rate whereas only (8.30 percent) farmer they purchase seed from retailer. Whereas all the farmer they purchase fertilizer from retailers. For pesticides about (98.30 per cent) farmer they purchase the pesticides from pesticides retailer and (1.70 per cent) farmer they purchase pesticides from dealer directly. The result suggested that most of the farmer purchase fertilizer and pesticides from the retailer and seed from the state agriculture department.

Table-2 *Input purchased by the farmer from various agencies (in per cent)*

Trader	Block (Marh)		Block (R.S Pura)		Total farmers	Per cent
	No's of farmers Wand Ghai	No's of farmers Chak Lal Din	No's of farmers Langrial	No's of farmers Kadayal		
Agriculture Department(seed)	15.00	15.00	15.00	10.00	55.00	91.70
Retailer (seed)	0.00	0.00	0.00	5.00	5.00	8.30
Retailer (fertilizer)	15.00	15.00	15.00	15.00	60.00	100.00
Retailer (pesticides)	14.00	15.00	15.00	15.00	59.00	98.30
Dealer (pesticides)	1.00	0.00	0.00	0.00	1.00	1.70

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Marketing pattern of fertilizer

Results depicts the marketing pattern of fertilizer [Table-3]. The table revealed that marketing of fertilizer followed the marketing channel II. It has been observed from the table that dealer earn maximum net profit by selling MOP fertilizer *i.e.*, (₹16.67) per 50kg bag and earn least profit by selling Urea *i.e.*, (₹ 5.30) per 50kg bag. Retailers earn maximum profit by selling MOP *i.e.*, (₹475.40) per 50 kg bag and least profit by selling urea *i.e.*, (₹9.30) per 50kg bag. It is also observed that highest percentage margin of middleman was found on MOP *i.e.*, (65.31 per cent) and least percentage margin of middleman is found on urea (5.31 per cent).

Table-3 *Marketing pattern of fertilizer*

S. No	Marketing Channel III			
	Particulars	Fertilizers		
		Urea	DAP	MOP
1	Unit (50 kg)/bag	50.00	50.00	50.00
2	Dealer purchase price (₹)	270.78	1155.67	753.33
3	Dealer net profit (₹) (5-2)	5.30	12.32	16.67
4	Percentage margin of dealer (5-2)/2*100	1.90	1.10	2.20
5	Retailer purchase price/dealer sale price (₹)	276.11	1167.99	770.00
	Marketing cost of retailers			
6	Unloading(₹) (per bag)	2.00	2.00	2.00
7	Rent of shop (₹)	2.60	2.60	2.60
8	Total cost incurred by retailers(₹) (6+7)	4.60	4.60	4.60
9	Retailers gross profit(₹) (12-5)	13.90	82.00	480.00
10	Retailer net profit(₹) (9-8)	9.30	77.40	475.40
11	Percentage margin of retailers (12-5-8)/5*100	3.36	6.62	61.74
12	Farmer price(₹)	290.00	1250.00	1250.00
	Marketing cost of farmers			
13	Transportation cost (₹)(per beg)	20.00	20.00	20.00
14	Total price to Farmer(₹) (12+13)	310.00	1270.00	1270.00
15	Percentage margin of middleman(₹)	5.39	7.76	65.31

Marketing pattern of seed

Results depicted the marketing pattern of seed [Table-4]. It was found that marketing of seed followed the marketing channel II. In channel II farmer purchase seed from the retailer. About (93.00 per cent) farmer they get seed from the state agriculture department on subsidy rate. State agriculture department provide (50.00 per cent) subsidy on paddy poonam variety, (38.20 per cent) on paddy 6444 gold, (44.00 per cent) on paddy 6129, (41.13 per cent) on paddy VNR-2355 and (26.05 per cent) on tHD2967 wheat. It has been observed from the table that Paddy 6444 gold variety have highest price (₹ 285 per kg) on which (38.20 per cent) subsidies was provide and t HD 2967 wheat have least price on which (26.05 per cent) subsidies was provide. Only paddy seed of sharbati varieties was sold through channel II in which percentage margin of middleman were found to be (29.84 per cent).

Conclusion

The study concludes that the inputs were purchased by the farmer from various agencies. 100.00 per cent farmers' purchased fertilizer from retailer, whereas 91.00 per cent farmers' purchased seed from state agriculture department. Both the dealer and retailer earned maximum net profit by selling MOP fertilizer *i.e.*, (₹16.67) per 50 kg bag by dealer and ₹475.40 by retailer per 50 kg bag. They earned least profit of (₹5.30) by dealer and (₹9.30) by retailer per 50kg bag by selling urea. About 93.00 per cent farmer get seed from the state agriculture department on subsidy rate. State agriculture department provides 50.00 per cent subsidy on paddy poonam variety, 38.20 per cent on paddy 6444 gold, 44.00 per cent on paddy 6129, 41.13 per cent on paddy VNR-2355 and 26.05 per cent on tHD2967 wheat. Only paddy seed of sharbati varieties was sold through channel II in which percentage margin of middleman were 29.84 per cent.

Table-4 *Marketing pattern of seed*

S. No	Particular	Marketing of seeds by Agriculture Department on subsidy					Marketing channel II
		Paddy poonam	Paddy 6444 gold	Paddy 6129	Paddy VNR-2355	t HD 2967(wheat)	Sharbati
	Subsidies (in percent)	50	38.2	44	41.13	26.05	
1	Unit (per kg)	kg	kg	kg	kg	kg	kg
2	State Agri. Dept/Dealer purchase price (₹)	220.00	285.00	250.00	265.00	29.75	
3	Retailer purchase price (₹)						18.00
4	Marketing cost of retailers						
5	Transportation cost (₹)						1.00
6	Rent (₹) (per bag)						2.63
7	Total cost Incurred by Retailer(`) (5+6)						3.63
8	Retailer gross profit (₹) (11-3)						9.00
9	Retailer net profit (₹) (18-7)						5.37
10	Percentage margin of retailer (11-3-7)/3*100						29.83
11	Farmer purchase price (₹)	110.00	176.00	140.00	156.00	22.00	27.00
12	Marketing cost of farmer						
13	Transportation cost (₹) (per bag)	1.00	1.00	1.00	1.00	1.00	1.00
14	Total price to farmer (₹) (11+13)	111.00	177.00	141.00	157.00	23.00	28.00
15	Percentage margin of middleman						29.84

Application of research: Marketing Analysis of Agricultural Inputs

Research Category: Marketing Analysis

Abbreviations:

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