A Study On Agribusiness Management in Karnataka: A Case Analysis of Dry Chilies and Its Products

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INTRODUCTION

Agricultural marketing in our country has not received as much attention as that in the field of agricultural production. For the farmer, disposal of his produce has become as important as the adoption of modern production technology in improving yield levels. The journey of each product from the farm to the ultimate consumer plays a crucial role in determining the price for the farmer. The evolution of new production technology cannot "be sustained without the improvement in agricultural marketing system unless simultaneous efforts are affected. Therefore, simultaneous efforts are needed to improve the overall Agricultural Marketing System. Incentives to expand production through high yielding varieties will not attract the farmers unless the marketing system improves. Only stability in income of farmers could be brought about by stable yields, and more than this, the stable prices will induce the cultivators to expand production and increase their marketed surplus. The instability in yield and prices, more in the case of commercial crops, has posed a serious problem in generating stability in the income of the farmers. If the sustained break-through in agricultural sector has to be achieved, the farmers are to be relieved of the risks and uncertantaties involved in agricultural production and marketing. Therefore, equal attention has to be focused on the diversified production activities as well as diversified marketing aspects of agricultural commodities.

IMPORTANCE OF CHILIES IN INDIAN ECONOMY

In India, chillies are grown in almost all states of the country. The important states growing chilli in terms of production are Andhra Pradesh (49%), Karnataka (15%) Orissa (8%), Maharashtra (6%), West Bengal (5%), Rajasthan (4%) and Tamil Nadu (3%). The total production in the country is around 8.4 Lakh tonnes from 8.2 lakh hectares in the country (2002-03). In India during 2002-03, Karnataka stood next only to Andhra Pradesh with an area of 1.61 lakh hectares, followed by Maharashtra and Tamil Nadu. Even though the area under chilli is comparatively more in Karnataka (1,43l hectares) than Maharashtra and Tamil Nadu but Karnataka's production of chilli (4.37 lakh tonnes) is found to be less as compared to the state of Tamil Nadu mainly because chilli is cultivated extensively under rain fed conditions in Karnataka. Hence, the average yield per hectare is as low as 353 kg in Karnataka as against 1,044 kg in Tamil Nadu. India's exports of chilli oleoresins increased from the value of Rs. 741 lakhs (2000-01) to Rs. 2313.1 lakhs (2000-03) and chilli powder exports increased from the value of Rs. 62.76 crores (2000-01) to 89 crores (2002-03). The expected world demand of chilies in 2007 was 11.3 lakh tonnes, therefore it is expected that there is a great scope for export of chillies. Demand is increasing for value added products of chillies, such as chilli paste, curry powders and other sauces for the convenience of food industry. In the extraction industry, there is always demand for high capsaicin content (over1%) in chillies. This offers extractors a direct saving on unit costs of extraction.

In Karnataka during 2002-03, Dharwad district ranks first in respect of area with 70,933 hectares followed by Belgaum (12,364 hectares), Shimoga (9,612 hectares), Mysore (7,412 hectares), Chickamaglur (4,988 hectares), Chitradurga (4,491 hectares).These districts together contribute to about 80.28 percent of total area and production of the dry chillies in Karnataka, respectively. In addition, Dharwad district stands first in production with 16,953 tonnes, followed by Belgaum (5,824 tonnes), Shimoga (3,826 tonnes), Mysore (3,410 tonnes) and Chitradurga (2,286 tonnes). The area under dry chillies in Dharwad district has been increasing over the years. The 5 talukas namely Byadgi, Hubli, Hirekerur, Haveri and Kundagol constitute about 60 percent of the area under chilli cultivation. A major portion of dry chillies produced in Dharwad districts are exported to other states like Gujarat, Kerala, Rajasthan and many other northern parts of the country.

DOMESTIC PRODUCTION AND PRICE COMPETITIVENESS

Production and domestic price competitiveness are the two most important indicators to be looked into when a region contemplates to encourage exports of a particular commodity to other areas/ countries. Karnataka's production and price competitiveness of chilli with other states was examined with the help of latest productivity levels of different states and prices prevailing in the important markets of production centers. The overall spice area in Karnataka can be significantly increased from 2, 65,443 ha to 2, 82,875 ha and in case of production, it has increased from 29,555 tonnes to 3, 01,563 tonnes. Whereas in case of chillies, the area has increased from 1.29 lakh hectares (1992-93) to 1.61 lakh hectares (2002-03) and the production was increased from 0.37 lakh tonnes (1992-63) to 0.94 lakh tonnes (2002-03).

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Looking at the production potential of dry chilli in Karnataka and its trade potentials in domestic and international markets, the study intended to make an attempt to identify the problems related to producers about its production and marketing and also problems related to various market functionaries involved in marketing of chilli. Similarly, it is planned to assess the competitiveness and value addition in chillies. Hence, the study was undertaken with the specific objective.i.e to analyze the existing domestic marketing of dry chillies and its products.

METHODOLOGY

The study was confined to north Karnataka with top two chilli growing districts viz., Haveri and Dharwad, which represent the highest area under the chillies in Karnataka. Similarly, four important markets (Byadgi. Haveri, Kundagol and Hubli) were selected based on highest transactions and arrivals to the market of dry chillies in these districts. The regulated markets were selected, which represents incidentally highest arrivals of dry chillies in these selected districts. The regulated markets considered for the detailed study are Hubli and Kundagol taluks of Dharwad district. Similarly, Haveri and Byadgi are regulated markets from Haveri district. Tabular presentation was followed by working out the averages and percentages for estimating the costs, returns and margins in chilli marketing.

In the selected markets, ten market intermediaries such as village traders, wholesaler/ exporter, wholesaler cum commission agents were selected. Out of that, five village traders and five wholesalers cum exporters were selected and five processors were selected from each market that has been considered for the study**.** These samples were selected randomly from each market. However only three processors were selected from Kundagol and Haveri market due to less number of processors available in those markets but seven processors were selected from Byadgi and Hubli market due to large number of processing units present in the market. The details of selection of samples are presented in Table 3.1. Thus a total of 60 market intermediaries were selected for collection of needed information about present marketing system, market margin and quantity and value of chillies traded and problems faced by chilli traders in trading.

Table 1: Distribution of Sample Size of Market Intermediaries from the Selected Markets

Market intermediarie	Selected Markets				
	Hubli	Kundagol	Byadgi	Haveri	Total
Village trader	5	5	5	5	20
Wholesaler	5	5	5	5	20
Processor	7	3	7	3	20
Total	**17**	**13**	**17**	**13**	**60**

RESULTS AND DISCUSSION

1. MARKETING OF DRY CHILLIES IN DOMESTIC MARKETS

An analysis of costs and returns of various market functionaries involved in marketing of dry chillies would help to know the various services rendered by these intermediaries and their economic performances in the marketing of dry chillies. The price spread is one of the measures of market efficiency. The price spread includes marketing costs incurred and margins obtained by various market intermediaries and producers. Apart from this, pace and pattern of arrivals and prices of dry chillies, price fluctuations and market integration were studied to understand the performance of marketing of dry chillies and the findings are discussed under following sections.

1.1 MARKETING COSTS INCURRED BY FARMERS IN THE CHANNEL –I

In all the selected markets, the producers incurred the cost in marketing of the produce only on sorting (Table 1). Hence, most of the farmers sold their produce to the local traders in the village level only.

1.2 MARKETING COSTS INCURRED BY FARMERS IN THE CHANNEL –II

The marketing costs incurred by the producers/farmers was found to be highest in Hubli market (Rs.114.61/quintal) followed by Kundagol (Rs113.73/qtl), Byadgi (Rs 112.56/qtl) and Rs 110.56/quintal in Haveri market (Table 2).

The magnitude of marketing costs incurred by farmers in case of dry chillies was found to be higher in Hubli market (Rs.114.61/quintal) followed by Kundagol (Rs113.73/qtl), Byadgi (Rs 112.56/qtl) and Rs 110.56/quintal in Haveri market, mainly due to higher cost paid on packing paid by them.

An appraisal of components of marketing costs clearly revealed that the cost on packing formed the most significant constituent of total marketing cost incurred by farmers especially in dry chillies in the study area. This is in line with the results obtained by Chatha *et al.* (1982) in marketing of dry chillies. However, the magnitude of packing cost in dry chillies was considerably higher in Haveri (36.17), Byadgi (35.53%), Hubli (34.90%) and Kundagol (31.65 %) markets. This may be attributed to the fact that the farmers were required to sell their produce along with their own gunny bag (packing material) costing Rs.12 to Rs.16 per bag.

The commission charges formed the second most significant constituent of the total marketing cost incurred by the farmers. Similar results were obtained for dry chillies in different locations by Subrahmanyam (1988). This was mainly due to

abnormally high rate of commission charged by the commission agent/commission agent-cum-wholesaler, which varied from two to 10 per cent of the value of the produce sold.

The cost on transportation also formed a major component of the total marketing cost incurred by the farmers in marketing of dry chilli. The dry chillies growers in all the taluks under study area sold their produce in the distant markets in the state as well as outside the state for better prices, which resulted in higher cost of transportation. Further, lack of cheap and timely transportation facilities might be other reasons for higher transportation cost as expressed by majority of the farmers in the opinion survey. Therefore, it is suggested that transportation cost could be substantially reduced through the device of 'pooling' small, scattered and isolated individual lots/packings by making an arrangement for collection at specific areas and transport the produce to the market.

In case of dry chillies, the cost on wastages accounted for eight to 12 per cent of the total marketing cost incurred by the farmers mainly in transit and handling of the produce.

1.3 MARKETING COSTS INCURRED BY DIFFERENT INTERMEDIARIES IN DRY CHILLIES' MARKETING IN THE STUDY AREA.

Village merchants in all the selected markets incurred more cost as compared to other intermediaries involved in dry chilli marketing (table 3 & 4). The factors responsible for this variation were high amount of commission charge and market fee paid by village merchants. The village merchant incurred the market cost ranging from Rs 99.40/quintal in Haveri market to Rs 115.43 in Hubli market.

The Commission agent is another market intermediary who incurred more cost in Byadgi market (Rs 32.06/qtl) than other markets. It was mainly due to the variation in tax paid that is the tax paid was Rs 20.00 in Haveri market, Rs 20.00 in Kundagol market, Rs 21.00 in Hubli market and Rs 22.25 in Byadgi market.

The wholesaler also incurred more cost in Byadgi market than in Hubli, Kundagol and Haveri markets. The transportation cost was high in Byadgi market as the wholesaler dispatched his produce to a distant place from the market yard. Other factors responsible for higher cost were tax and market fee as the wholesaler paid proportionately higher amount corresponding to the higher price received for dry chilli.

2: MARKETING COSTS, MARGINS, PRICE SPREAD AND MARKETING EFFICIENCY IN MARKETING OF CHILLIES

Marketing margins indicates the gap between the net price received by producer and the price paid by the consumer. From the point of view of marketing efficiency, this gap has to be reduced to the barest minimum. Broadly, two factors contributed towards widening of the gap. First, cost incurred by the producer and the various market intermediaries. Second, the margin of profit taken over by village merchant, wholesaler, commission agents and retailers.

It is worth noting that the percentage of margins realized by the different market intermediaries was higher than their cost incurred in the marketing of dry chillies. Among the market intermediaries, the share of the retailers in the marketing margin was higher than other intermediaries. This may be attributed to the fact that retailers often incurred losses due to wastage in handling, spoilage with passage of time and also price fluctuations, which may result in higher cost of marketing and risk in handling. Similar results were reported by Balappa in 2000.

Among the wholesalers, it is interesting to note that the commission agent-cum-wholesalers/commission agents annexed exorbitantly higher net margin disproportionate to their cost incurred in the marketing process mainly due to higher commission charges (up to 10 per cent of the value of the produce sold). The margins realized by these commission agents appears to be disproportionate as they do not take title of the goods or bear risk of handling or fluctuations in prices. In the case of wholesalers, even though the net margins realized were maximum, their costs in marketing process were also higher. Further, wholesalers take the title of the goods and bear the risk of handling and price fluctuation in the trade.

The village merchant plays a very important role in moving the produce from village to the market particularly smaller lots of produce by the farmers. However, the net margins accrued to the village merchants was considerably lower than that of other intermediaries, even though the proportion of cost incurred by him was higher. Further, the producer's share in consumer's rupee realized in dry chillies in channel-I was almost equal to that of channel-II. In channel-I, even though an additional intermediary of village merchant was involved in the chain of marketing system, the producer's share in consumer's rupee has not changed indicating the favourable role of village merchants in the marketing of dry chillies. Therefore, considering the role of village merchants especially in handling small lots, it is important to encourage the village merchants in linking production centres with the wholesale markets of dry chillies.

As indicated in Table 5 & 6, the average producer share in consumer's rupee was 77.74 percent in channel-I which is almost similar for all the selected markets as village sales prevailed. The producer's share in consumer's rupee was high in channel II (78.46 per cent). It was mainly due to the absence of village merchant, the profit taken by him was reduced and the marketing efficiency ranges from 3.37 to3.67 in the selected markets and it was found to be significant.

In channel II, between the markets, the producer share in consumer's rupee varied. It was high in Kundagol market followed by Hubli, Haveri and Byadgi market, though the profit margin taken over by different intermediaries was high but the consumer price was high in Byadgi market, as a result, the net price received by producer was high in Byadgi market. And

the marketing efficiency was found to be significant which ranges from 3.44 to 3.78.Similar findings were observed by Chauhan (1998) in his study on marketing costs, margins and price spread in chillies.

Table 1.2: Marketing cost incurred by samples farmers under Channel I

(Rs/qtl)

Sl No.	Particulars	Haveri	Byadgi	Hubli	Kundagol	Average
1	Sorting	30.00 (100.00)	32.00 (100.00)	28.00 (100.00)	30.00 (100.00)	30.00 (100.00)
2	Packing	–	–	–	–	–
3	Storage	–	–	–	–	–
4	Transportation including	–	–	–	–	–
	Loading & unloading					
5	Weighment	–	–	–	–	–
6	Commission	–	–	–	–	–
	Total	**30.00 (100.00)**	**32.00 (100.00)**	**28.00 (100.00)**	**30.00 (100.00)**	**30.00 (100.00)**

Figures in the parentheses indicate percentage to the total

Table 2: Marketing cost incurred by samples farmers under Channel II

(Rs/qtl)

Sl No.	Particulars	Haveri	Byadgi	Hubli	Kundagol	Average
1	Sorting	30.00(27.13)	32.00(28.42)	28.00(24.43)	30.00(28.44)	30.00(27.09)
2	Packing	40.00(36.17)	40.00(35.53)	40.00(34.90)	36.00(31.65)	39.00(34.55)
3	Storage	–	–	–	–	–
4	Transportation including	20.00(18.08)	20.00(17.76)	24.00(20.94)	23.00(20.22)	21.75(19.87)
	Loading & unloading					
5	Weighment	0.40(0.36)	0.40(0.35)	0.36(0.31)	0.38(0.33)	0.38(0.33)
6	Commission	20.16(18.23)	20.16(17.91)	22.25(19.41)	22.00(19.34)	21.14(18.73)
	Total	**110.56(100)**	**112.56(100)**	**114.61(100)**	**113.73(100)**	**112.85(100)**

Figures in the parentheses indicate percentage to the total

Table 3: Marketing cost incurred by intermediaries in dry chili marketing

(Rs/qtl)

		Hubli				Kundagol			
Sl No.	Particulars	Village merchant	Commission agent	wholesaler	Retailer	Village merchant	Commission agent	wholesaler	Retailer
1	Labour charge	6.25(5.41)	9.20(29.53)	6.50(4.60)	9.00(21.50)	5.50(5.71)	9.00(30.14)	7.50(6.55)	8.50(23.30)
2	Transport cost	16.00(13.86)	-	70.00(49.48)	6.50(15.53)	14.00(14.55)	-	48.00(41.97)	6.50(17.81)
3	Packing cost	12.00(10.39)	-	8.00(5.65)	-	12.00(12.47)	-	8.00(6.99)	-
4	Loading &	11.00(9.52)	-	5.00(3.53)	-	6.50(6.75)	-	5.00(4.37)	-
	unloading								
5	Weighment	3.50(3.03)	-	-	1.00(2.38)	3.00(3.11)	-	-	0.80(2.19)
	charges								
6	Commission	42.00(36.38)	-	-	24.50(58.54)	36.00(37.42)	-	-	20.00(54.82)
	charges								
7	License fee	-	0.20(0.64)	-	-	0.20(0.20)	0.16(0.53)	-	-
8	Tax	-	21.00(67.41)	31.00(21.91)	-	-	20.00(66.97)	25.00(21.86)	-
9	Market fee	24.00(20.79)	-	20.00(14.13)	-	18.00(18.71)	-	20.00(17.49)	-
10	Miscellaneous	0.68(0.58)	0.75(2.40)	0.95(0.67)	0.85(2.03)	1.00(1.03)	0.70(2.34)	0.85(0.74)	0.68(1.86)
	Total	**115.43(100)**	**31.15(100)**	**141.45(100)**	**41.85(100)**	**96.20(100)**	**29.86(100)**	**114.35(100)**	**36.48(100)**

Figures in the parentheses indicate percentage to the total

Table 4: Marketing cost incurred by intermediaries in dry chili marketing

Rs/qtl)

		Haveri					Byadgi		
Sl No.	Particulars	Village merchant	Commission agent	wholesaler	Retailer	Village merchant	Commission agent	wholesaler	Retailer
1	Labour charge	6.00(6.03)	9.00(30.16)	7.35(5.68)	8.70(19.07)	6.25(5.53)	8.90(27.76)	6.25(4.56)	8.70(21.85)
2	Transport cost	16.00(16.09)	-	60.00(46.38)	8.30(18.20)	16.00(14.17)	-	68.00(49.68)	6.25(15.69)
3	Packing cost	12.00(12.07)	-	6.00(4.63)	-	12.00(10.62)	-	6.00(4.38)	-

		Haveri				Byadgi			
Sl No.	**Particulars**	**Village merchant**	**Commission agent**	**wholesaler**	**Retailer**	**Village merchant**	**Commission agent**	**wholesaler**	**Retailer**
4	Loading & unloading	8.00(8.04)	-	5.00(3.86)	-	9.00(7.97)	-	5.00(3.65)	-
5	Weighment charges	2.00(2.01)	-	-	2.00(4.38)	3.00(2.65)	-	-	0.80(2.00)
6	Commission charges	36.00(36.21)	-	-	26.10(57.23)	44.00(38.97)	-	-	23.20(58.27)
7	License fee	0.20(0.20)	0.16(0.53)	-	-	-	0.26(0.81)	-	-
8	Tax	-	20.00(67.02)	25.00(19.32)	-	-	22.25(69.40)	29.67(21.64)	-
9	Market fee	18.00(18.10)	-	25.00(19.32)	-	22.00(19.48)	-	21.00(15.34)	-
10	Miscellaneous	1.20(1.20)	0.68	1.00(0.77)	0.50(1.09)	0.65(0.57)	0.65(2.02)	0.95(0.69)	0.86(2.16)
	Total	**99.40(100)**	**29.84(100)**	**129.35(100)**	**45.60(100)**	**112.9(100)**	**32.06(100)**	**136.87(100)**	**39.81(100)**

Figures in the parentheses indicate percentage to the total

Table 5: Marketing costs, margins and price spread in Channel I

(Rs/qtl)

Sl. No	Particulars	Haveri	Byadgi	Hubli	Kundagol	Average
1	Producer's Price	2950 (77.63)	3150(77.77)	3200(79.01)	2900(79.45)	3050(78.45)
2	Cost incurred by producer	30.00	32.00	28.00	32.25	30.56
3	Producer net price	2930(77.10)	3118(76.98)	3172(78.32)	2867.75(78.56)	3021.94(77.73)
4	Cost incurred by village merchant	99.40	112.90	115.43	96.20	105.98
5	Purchase price of village merchant	2950	3150	3200	2900	3050.00
6	Wholesaler's purchase price (sale price by village merchant)	3200(84.21)	3390(83.70)	3450(85.10)	3100(84.93)	3285(84.50)
7	Profit of village merchant	150.60	127.10	134.57	103.80	129.02
8	Cost incurred by wholesaler	129.35	136.87	141.45	114.35	130.51
9	Wholesaler's selling price (Retailer purchase price)	3400(89.47)	3600(88.88)	3660(90.37)	3300(90.41)	3490.00(89.77)
10	Profit of wholesaler	70.65	73.13	68.55	85.65	74.50
11	Cost incurred by retailer	45.60	39.81	41.85	36.48	40.94
12	Consumer's price *	3800	4050	4050	3650	3887.50
13	Profit of retailer	354.40	410.19	348.15	313.52	356.57
14	Producer's share in consumer rupee (%)	77.10	76.98	78.32	78.56	77.74
15	Price spread	870	932	878	781.25	865.31
16	Marketing efficiency (3/15)	3.37	3.35	3.61	3.67	3.49

*- Consumer price considered as 100 per cent

Figures in the parentheses indicate per centages to the consumer's price.

Table 6: Marketing costs, margins and price spread in Channel II

(Rs/qtl)

Sl. No	Particulars	Haveri	Byadgi	Hubli	Kundagol	Average
1	Producer's Price	3100(82.00)	3250(80.00)	3300(81.00)	3000(82.00)	3162.50(81.00)
2	Cost incurred by producer	110.56	112.56	114.61	113.73	112.85
3	Producer net price	2989.44(79.00)	3137.44(77.00)	3185.39(79.00)	2886.27(79.00)	3049.65(78.00)
4	Cost incurred by village merchant	–	–	–	–	–
5	Purchase price of village merchant	–	–	–	–	–
6	Wholesaler's purchase price (sale price by village merchant)	3100(82.00)	3250(80.00)	3300(81.00)	3000(82.00)	316.50(8.00)
7	Profit of village merchant	–	–	–	–	–
8	Cost incurred by wholesaler	129.35	136.87	141.45	114.35	130.50
9	Wholesaler's selling price (Retailer purchase price)	3320(87.00)	3500(86.00)	3540(87.00)	3200(800)	3390(87.00)
10	Profit of wholesaler	90.65	113.13	98.55	85.65	96.99
11	Cost incurred by retailer	45.60	39.81	41.85	36.48	40.93
12	Consumer's price *	3800(100)	4050(100)	4050(100)	3650(100)	3887.50
13	Profit of retailer	434.44	510.19	468.15	413.52	456.57
14	Producer's share in consumer rupee (%)	78.66	77.46	78.65	79.07	78.46
15	Price spread	810.56	912.56	864.61	763.73	837.86
16	Marketing efficiency (3/15)	3.69	3.44	3.68	3.78	3.64

*- Consumer price considered as 100 per cent

Figures in the parentheses indicate per cent ages to the consumer's price.

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