IV. MARKETING AND MARKETS OF OFF-SEASON VEGETABLES

Marketing efficiency is of great significance for the financial viability of off-season vegetable production due to their perishable nature. Their production cannot be increased until or unless an efficient marketing system is functioning. An efficient marketing system as visualized by the farmer is one which maximizes his net returns from a given transaction and helps in expanding the market for that product.

Marketing Seasons and Seasonality of Vegetables Prices

More than 66 per cent of the total green pea production in the State is marketed in the months of March-April in the nearby markets of the plains (Table 8). Off-season tomatoes flood the Northern India market in the months of July-August while August-September is the main season for capsicums. More than 63 per cent of the total off-season cauliflower production is marketed in the months of June, July, and August. During this period, in-season cauliflowers can not be produced in the plains due to high temperature during the growth period of the crop. Cabbages and French beans are ready for the market in this period when their cultivation in the plains is not possible. Thus, it is clear that vegetables grown in any hill states have a well-defined marketing season during which they have a comparative advantage.

As regards capsicums, commonly known as *Shimla, Mirch*, Himachal Pradesh is the only producer of this crop in Northern India. However, a small quantity of inferior quality capsicum is also produced in other regions. But the Himachal capsicum dominates the markets in the plains during its main season - August-September. During these two months, nearly two-thirds of capsicums produced by sample farmers was sold. The other important season for this crop is reported to be June-July when 29 per cent of the quantity was sold. The third minor season is reported to be October.

Seasonality of Vegetables Prices

It is common knowledge that the prices of vegetables change frequently, and no price rules the market for more than a few days. Sometimes, the prices change so abruptly that it causes much discontentment both to the producers and consumers. The demand for vegetables in general is more or less constant and the prices depend largely on the market arrivals. They are lowest when the market arrivals are high and vice versa. This is so because vegetables are highly perishable and cannot be stored for long. However, in the case of off-season vegetables of Himachal Pradesh the prices of different vegetables do not reveal wide variations (Table 8). The coefficient of variation in prices of peas realized by farmers in different seasons is observed to be 15.84 per cent. As regards the other three selected vegetables, the highest variation in prices is observed in cauliflowers (52.14%). The least seasonal variation is observed in capsicum prices (7.02%) followed by 9.32 per cent in tomatoes.

It may be seen from the Table 8 that retail prices i.e. consumer prices for all the vegetables are much higher than the prices received by the farmers. The maximum differences are observed for the May-June season pea crop in which farmers realized only 31 per cent of the market price.

Table 8: Marketing Seasons and Price Received by Sampled Growers of Himachal Pradesh, 1984/85

Crop	Marketing Season	Sold		Average prices of growers (Rs/qtl)	Retail market prices (Rs/qtl)	Farmers' price as percentage of retail price
		(Qty. qtl)	Percentage			
Peas	March-April	90.95	66.0	278.95	406.67	68.6
	Oct-Nov	30.39	23.0	394.90	715.00	55.2
	Jan-Feb	2.59	1.9	372.72	250.00	149.1
	May-Jun	14.00	9.1	310.67	1000.00	31.1
	C.V. (%)			15.84	56.18	
Tomato	July-August	758.56	89.4	282.83	680.00	41.6
	Sep-Oct	54.64	6.4	237.96	478.33	49.7
	May-Jun	8.54	4.2	246.46	228.00	108.1
	C.V. (%)			9.32	49.00	
Cauliflower	June-August	256.15	63.5	373.43	833.33	44.8
	Mar-May	128.53	28.0	158.30	376.00	42.1
	Sep-Oct	38.69	8.5	167.74	438.00	38.3
	C.V. (%)			52.14	45.18	
Capsicum	August-September	223.27	65.7	217.39	392.40	55.4
	Jun-Jul	94.17	28.9	222.55	316.30	70.4
	October	18.44	5.4	247.48	409.27	60.5
	C.V. (%)			7.02	13.29	

Source: Prices quoted from Bulletin of Agricultural Prices, New Series, Vol. XXXIV & V (July-June), 1984/85. Directorate of Economics & Statistics, Ministry of Agriculture & Rural Development, Government of India.

C.V. = Coefficient of variation.

However, during the Jan-Feb season the quantity marketed is low (i.e. 1.9%) but growers realized 49 per cent higher prices than the retail market prices. This may be due to the quality of the peas from Himachal Pradesh as compared to those from the plains. During this period the arrival of plains' peas is in full swing. The same picture is also observed in the case of tomatoes in the May-June season. However, the difference in price is only 8 per cent. In the other two seasons i.e. July-August and Sept-Oct the difference in prices is much more than in the May-June season. In the case of cauliflowers, the difference between growers' prices over retail market prices in all the three seasons varies from 38 to 45 per cent. The least variation in prices is observed in the case of the capsicum crop. This may be explained by Himachal Pradesh's monopoly in producing this crop. The highest price variation is observed for peas i.e. 56.18 per cent followed by tomatoes i.e. 49 per cent and 45.18 per cent in cauliflowers. Here, it may be concluded that higher price variations may be due to competition from the plains' vegetables during their harvesting season.

Target Markets and Price Variability

Prices received by sampled farmers in different vegetable markets are set out in Table 9. As can be seen from the Table, prices realized (or received) by them reveal an inverse trend to the size of farms i.e. as the size increases, prices decline for most of the vegetables. For peas Rs 377.43 were received by sample farmers of marginal farms, Rs 338.75 per Qtl for small farms, and Rs 335.17 per Qtl for medium farms. The same trend is also observed in the case of tomatoes and capsicums. However, the prices of cauliflower are higher on marginal farms i.e. Rs 251.20 per Qtl and the next place is occupied by medium farms (i.e. Rs 228.12) followed by small farms (Rs 218.08/Qtl).

Table 9: Average Prices of Selected Vegetables of Sampled Growers in Different Markets (1984-85)

(Rs/Qtl)

Size of Farm/Market	Peas	Tomato	Cauliflower	Capsicum
Marginal				
Delhi	487.00	343.46	323.72	227.19
Shimla	427.31	302.49	286.12	339.00
Chandigarh	-	380.77	-	-
Other markets	347.50	325.00	-	165.00
Local sale	247.92	221.94	143.75	225.26
Average	377.43	314.73	251.20	239.11
C.V. (%)	27.43	18.83	37.79	30.35
Small				
Delhi	-	304.81	304.09	239.13
Shimla	361.01	221.18	200.00	220.31
Chandigarh	-	364.00	-	223.00
Other market	400.00	299.00	-	252.00
Local sale	253.76	177.69	150.15	190.86
Average	338.26	273.34	218.08	225.58
C.V. (%)	22.39	26.97	36.02	11.77
More than 2 ha.				
Delhi	-	274.54	286.85	185.80
Shimla	459.52	-	-	-
Chandigarh	300.00	284.93	-	253.63
Other markets	-	-	-	-
Local sale	246.00	260.55	169.38	-
Average	335.17	248.00	228.12	219.72
C.V. (%)	33.12	28.75	36.41	21.83

Note: Weighted prices are given for all the vegetables in different markets realised by sampled farmers.

Regarding the prices realized by sampled farmers in different vegetable markets, Delhi market is paying the highest prices for peas; however, the quantity sold is only 0.69 Qtl. This fact establishes the hypothesis that Delhi is the appropriate market for Himachal peas. For tomatoes, Chandigarh market is paying higher prices followed by Delhi and Shimla markets. This reveals that the tomato crop has three important markets for disposal. The Shimla market is paying higher prices for capsicums which may be due to longer shelf life of capsicums in the cold climate of Shimla, as a result of which sellers have better margins between purchase and sale prices of this commodity. As regards cauliflowers, the Delhi market paid higher prices as compared to other markets. This may be due to the high prices of off-season cauliflowers, which can be afforded only by higher income consumers, who are numerous in a metropolitan city such as Delhi. In local sales, prices of all the vegetables are not much lower as compared to other markets.

Point of Vegetable Sale

The quantity of produce actually marketed depends upon the marketable surplus, immediate need for cash, price trend, nature of crops, and availability of storage facilities. Ninety per cent of the total production of tomatoes, capsicums, cabbages, and cauliflowers is marketed while less than seventy per cent of the beans and peas production enter the market. The seasons for this trend is the higher domestic demand for peas for consumption as well as for seed. Ninety four per cent of the total marketed surplus of capsicum is sold outside the village followed by tomatoes (90%), cauliflowers and cabbages (76%) and peas and beans (56%).

The domestic demand for the vegetables in the State is limited by its small proportion of urban population. Thus, off-season vegetable growers are totally dependent on the markets of neighbouring States. Delhi happens to be the most important off-season vegetable market to which 70 per cent of marketed surplus of tomatoes, 80 per cent of cauliflowers and cabbages, 68 per cent of capsicums, and 56 per cent of the peas and beans are despatched by farmers or local traders for sale. Chandigarh, Ambala, Pathankot, Jalandhar are other markets for these crops. Some enterprising pea growers of Shimla District as well as of Solan Tehsil are dispatching peas to Bombay market and are getting higher prices than in Delhi. Sixty five per cent of the total marketed surplus of tomatoes is routed through commission agents, 26 per cent is handled by wholesalers, and 9 per cent by local dealers. Commission agents are playing a dominant role in the marketing of capsicums, cauliflowers, and cabbages followed by wholesalers, while wholesalers dominate the scene in the disposal of peas followed by local dealers (Fig. 4).

Marketing Channels and Margins

The sequences through which produce reaches the final consumers are termed as marketing channel. The various marketing channels that exist for marketing of off-season vegetables are presented in (Fig. 5).

FIGURE: 4 DISPOSAL BEHAVIOUR OF OFF-SEASON VEGETABLE GROWERS

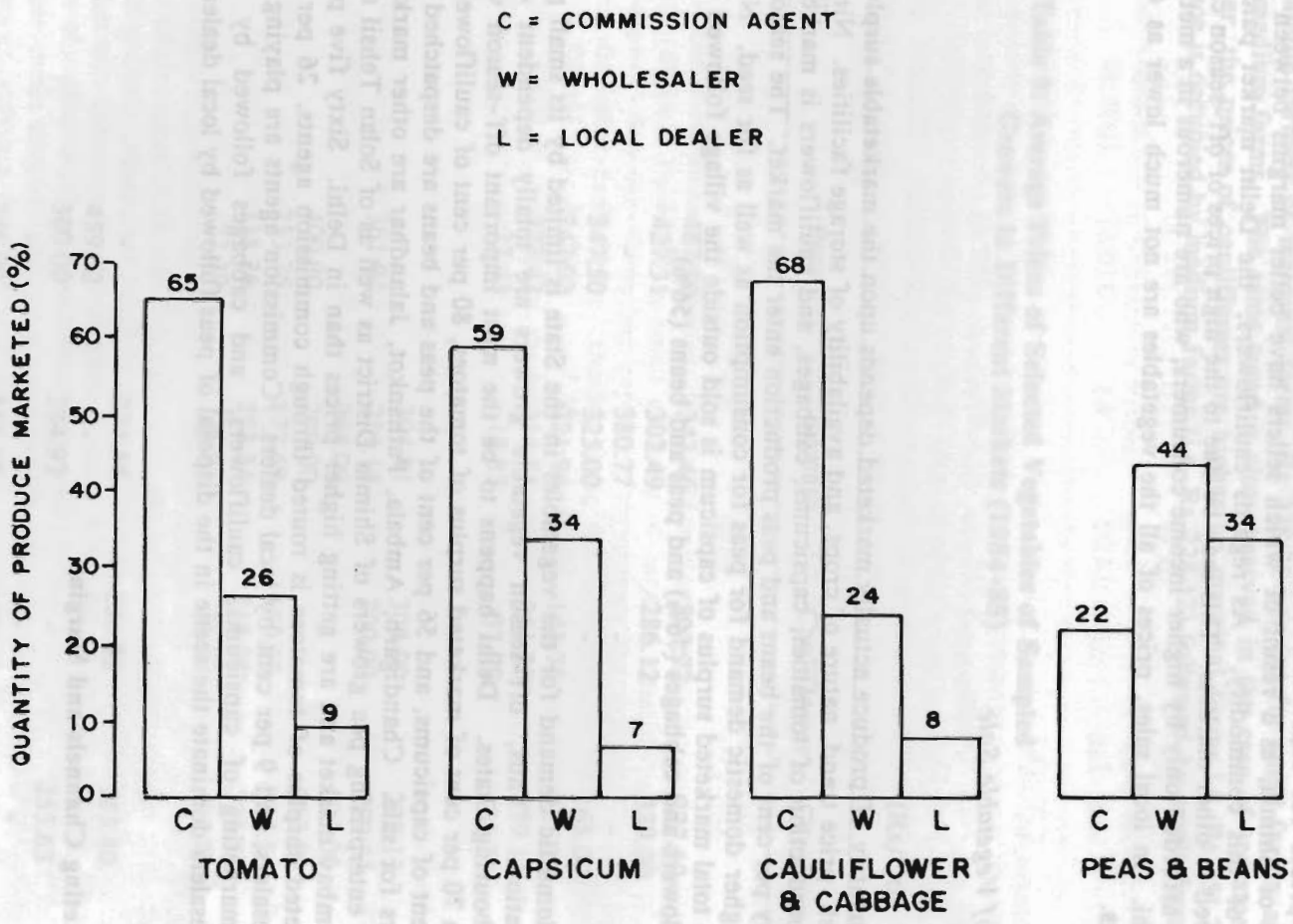
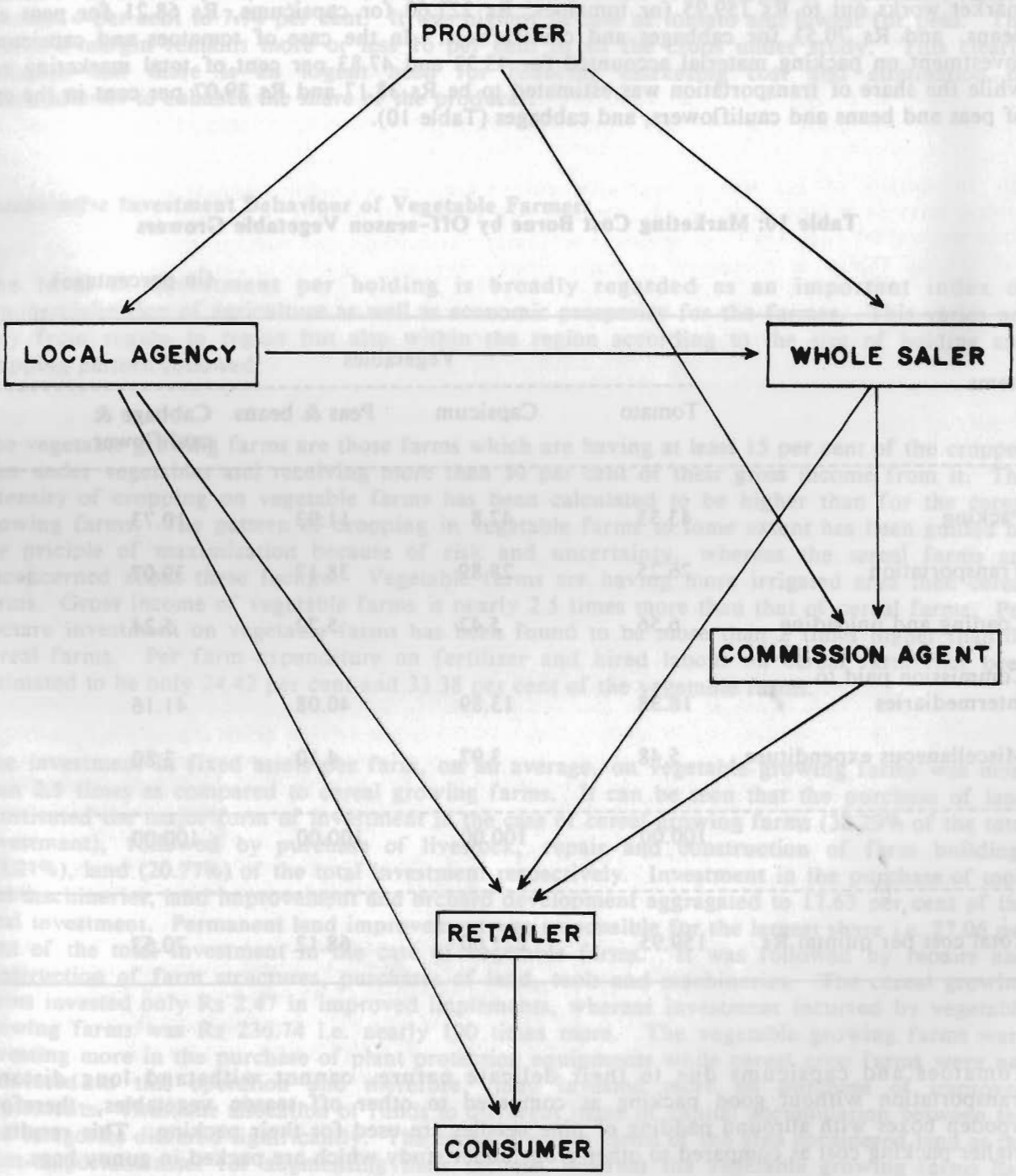


FIGURE: 5 MARKETING CHANNEL OF OFF-SEASON VEGETABLES IN HIMACHAL PRADESH



Marketing Costs

No matter who performs the functions of marketing or how they are organised, each operation of marketing costs. Main items of marketing costs in the case of off-season vegetables are transportation, commission, loading and unloading and miscellaneous expenditures. Per quintal cost of marketing borne by the off-season vegetable growers for selling their produce in Delhi market works out to Rs 159.95 for tomatoes, Rs 221.60 for capsicums, Rs 68.21 for peas and beans, and Rs 70.53 for cabbages and cauliflowers. In the case of tomatoes and capsicums, investment on packing material accounted for 43.33 and 47.83 per cent of total marketing cost while the share of transportation was estimated to be Rs 38.17 and Rs 39.07 per cent in the case of peas and beans and cauliflowers, and cabbages (Table 10).

Table 10: Marketing Cost Borne by Off-season Vegetable Growers

(in percentage)

Items	Vegetables			
	Tomato	Capsicum	Peas & beans	Cabbage & cauliflower
Packing	43.33	47.8	11.93	10.73
Transportation	26.25	28.89	38.17	39.07
Loading and unloading	6.56	5.42	5.72	5.24
Commission paid to intermediaries	18.38	13.89	40.08	41.16
Miscellaneous expenditure	5.48	3.97	4.10	3.80
	100.00	100.00	100.00	100.00
Total cost per quintal Rs	159.95	221.60	68.12	70.53

Tomatoes and capsicums due to their delicate nature, cannot withstand long distance transportation without good packing as compared to other off-season vegetables, therefore, wooden boxes with allround padding of pine needles are used for their packing. This results in higher packing cost as compared to other crops under study which are packed in gunny bags.

Marketing Margins

The share of the producer in the consumer's rupee was 41 per cent and 31.25 per cent for tomato and capsicum crops respectively. The share was more than fifty per cent of the price paid by consumer in case of peas, beans and cabbage and cauliflower. The margin of wholesalers ranged between 4 per cent to 7.74 per cent. It was highest in case of tomato and lowest for peas. The retailer's margin remains more or less 16 per cent in all the crops under study. This clearly indicates that there is an urgent need for reducing marketing cost and elimination of intermediaries to enhance the share of the producer.

Comparative Investment Behaviour of Vegetable Farmers

The level of investment per holding is broadly regarded as an important index of commercialization of agriculture as well as economic prosperity for the farmer. This varies not only from region to region but also within the region according to the size of holding and cropping pattern followed.

The vegetable growing farms are those farms which are having at least 15 per cent of the cropped area under vegetables and receiving more than 50 per cent of their gross income from it. The intensity of cropping on vegetable farms has been calculated to be higher than for the cereal growing farms. The pattern of cropping in vegetable farms to some extent has been guided by the priciple of maximization because of risk and uncertainty, whereas the sereal farms are unconcerned about these factors. Vegetable farms are having more irrigated area then cereal farms. Gross income of vegetable farms is nearly 2.5 times more than that of cereal farms. Per hectare investment on vegetable farms has been found to be more than 2 times higher than on cereal farms. Per farm expenditure on fertilizer and hired labour on cereal farms has been estimated to be only 24.42 per cent and 33.38 per cent of the vegetable farms.

The investment in fixed assets per farm, on an average, on vegetable growing farms was more than 2.5 times as compared to cereal growing farms. It can be seen that the purchase of land constituted the major form of investment in the case of cereal growing farms (38.29% of the total investment), followed by purchase of livestock, repair and construction of farm buildings (23.21%), land (20.77%) of the total investment respectively. Investment in the purchase of tools and machineries, land improvement and orchard development aggragated to 17.63 per cent of the total investment. Permanent land improvement was responsible for the largest share i.e. 27.06 per cent of the total investment in the case of vegetable farms. It was followed by repairs and construction of farm structures, purchases of land, tools and machineries. The cereal growing farms invested only Rs 2.47 in improved implements, whereas investment incurred by vegetable growing farms was Rs 236.74 i.e. nearly 100 times more. The vegetable growing farms were investing more in the purchase of plant protection equipments while cereal crop farms were not interested in this operation and therefore, they invested more on purchase of improved implements. Thus, the allocation of funds to different items of capital accumulation between the two categories differed significantly. The cereal growing farms of the area considered land as the most important asset for augmenting their income, whereas the vegetable growing farms had given priority to improving the quality of land by adopting different land development measures and installing irrigation works.