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Marketing Practices of Kinnow in Haryana

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Abstract

The present study seeks to measure marketing practices (product, price, place and promotion practices) of kinnow that influence the grower shares in consumer rupees (final price paid by the consumer) and to determine whether these practices negatively influence kinnow grower returns and real income of consumer. The study has revealed that grower share in consumer rupees is deeply influenced by marketing practices performed by intermediaries (wholesaler / trader, commission agent and retailer etc.). The sample of 270 growers is selected on the basis of consecutive sampling method and data is analyzed through frequency distribution, tabular analysis and modified formulas regarding marketing practices. It has also been found as marketing practices adopted by growers for disposal of their harvested kinnow fruit has a negative impact on their returns and also influence real income of consumer. The present study makes a significant contribution to the literature on marketing practices of kinnow /fruits. It can be helpful to develop appropriate price policy that aims to offer minimum support price to growers and assures significant share in consumer's rupee; and also helps in developing and valuation of the market policies like regulation of market charges and percent share of intermediaries in consumer rupees etc. The adequate policies for scientific storage and fruit processing plants, transportation and infrastructure etc. are required. The growers should be imparted marketing practices through training and sufficient resources. The study is based on the data of only 270 kinnow growers of districts Sirsa and Fatehabad. Therefore, the results may not be generalized for the entire kinnow growers of Haryana. The price realized for harvested kinnow produce differs a little from grower to grower every year.

Key words: *Harvest and Post harvest handling, Marketing channels, Marketing costs, Marketing margins and Price spread.*

INTRODUCTION

Kinnow, a variety of mandarin citrus fruit is important commercial cultivars of India (Singh, 2011). Kinnow, a citrus fruit, large globular in shape and orange in colour, is a hybrid of two citrus cultivars-kings and yellow leaf, therefore, its uniqueness is ranged between mandarin fruit and sweet orange with neither tight nor loose skin (Goyal et. al., 2012). It was first developed by Dr. H.B. Frost in 1915 at citrus research centre, university of California, Riverside, U.S.A. After that, it was brought to PAU (Punjab Agriculture, university), Regional Fruits Research Centre, Abohar by Dr. J.C. Bakhshi from California (USA). After a long evolution of 20 years it was released in year 1935 as new variety in commercial fruits (Parkash, 2000). Kinnow fruit has medium globose to oblate size,

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golden orange skin when fully mature, moderate acidity, very rich flavor, and matures in the months of December to January and also contains 15 to 25 seeds per fruit (Gill and Mahindra, 2010). Kinnow fruit juice has high therapeutic value for antispasmodic, sedative, cytophylactic, digestive, anti-carcinogenic, anti-inflammatory and anti-allergic (kaur et. al.; 2018). Kinnow has proved itself important in citrus fruits because it has wide adaptability to various agro-climatic conditions and also comparatively more resistant to insect - pests and diseases (Choudhary and Bangarva, 2013). Kinnow has also proved itself environment friendly because its waste can be used as cattle feed after scientific modification**.** Therefore, no need of developing costly waste management programs and it may also prevent from problems of its disposal into environment (Malla *et. al.,*2015). Kinnow cultivation is a non conventional crop that helps in manifold increase in the farm income (Kumar *et. al.,* 2017). Kinnow is cultivated in almost all over Northern part of India. It is mainly cultivated in state like Punjab followed by others such as: Rajasthan, Haryana, Himachal Pradesh, Jammu & Kashmir and Uttar Pradesh of India (http://www.krishisewa.com). Haryana state has 13th rank in citrus fruit production (Kumar, 2011). The area under citrus fruits was 3,189 hectares in the year 1991-92 which increased to 5,041 hectares in the year 2005-06 (horticulture database, 2005-06). In citrus fruits, kinnow, malta and lemons are cultivated, but among all these varieties, kinnow acquires nearly 85 percent area out of total cultivated land under citrus fruit in Haryana (Horticulture statistics database, 1991-2016). In inter districts comparison, it is revealed that nearly 75 percent of kinnow is cultivated in north western zone means districts Sirsa and Fatehabad and Hisar, popularly known as wheat and cotton belt of the state (Horticulture statistics database,1991-2016). Sirsa district, tops in ranking with 9.65 thousand hectare of cultivated area and 191.78 thousand tones of production under citrus fruit and kinnow is major (nearly 50 percent) cultivated crop (Kumar et. al; 2017) and Fatehabad district also holds nearly 10 to 15 percent area under kinnow cultivation (Horticulture statistics database, 2017). Now a day, cultivation of kinnow has obtained a revolutionary enterprise rank in the state in the form of employment and income. Despite having a good production growers generally are not getting appropriate returns for their produce due to inefficient marketing practices and exploitation through market intermediaries (Kumar, et. al., 2017). Generally, they know how to produce (kinnow cultivation) but don't know how to sell (harvested kinnow produce). Usually, harvested kinnow produce is marketed through pre harvest contractor who supply it to the wholesaler/ trader and the wholesaler/ trader next supply it to the retailer and then the retailer sell it to final consumer. Market intermediaries' investment in kinnow cultivation is nil but still they obtain a good share in consumer rupees. Therefore, this study is undertaken with problems to know why the percent share of growers in consumer rupees is low. Is the existing network of kinnow disposal is efficient enough for growers? Why do the growers avoid self marketing of their produce?

REVIEW OF LITERATURE

This section discusses various literatures linked to understanding the various marketing practices to establish a framework for the study which is given below:

Gupta (2012) evaluated the production and marketing of fruits and vegetables in Punjab. The data of the survey was collected from 150 farmers, 25 commission agents/wholesalers and 25 retailers. The time series analysis, regression analysis, correlation analysis, percentages and averages, etc. were used for the purpose of the study. The study revealed that the farmers had to face several constraints regarding production and marketing of fruits and vegetables such as finance, prevalence of large number of intermediaries and their malpractices. The study suggested that awareness among the fruit and vegetable growers regarding modern/advanced agricultural marketing practices and

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technology is essential for their betterment.

Gawande (2007) studied the marketing pattern of orange in Madhya Pradesh. The study was based on a sample of 40 traders and 50 orange growers. Correlation analysis, percentage and average were applied to compute the collected data. The study found that majority of growers sells their produce to pre harvest contractors. Further, it was also revealed that higher the number of intermediaries lower would be the share of growers in consumer rupees. Major marketing problems were rate of commission, transportation charges, non availability of crop insurance, absence of government mandies and co-operative societies, non-scientific technology of pre and post harvest handlings and lack of awareness regarding market information.

Kumar *et. al.* (2017) **identified the economics of** production and marketing of kinnow in Haryana. The data was collected from 60 kinnow farmers and analyzed by Acharya's and Aggarwal model (2001), and statistical tools like average, percentage etc. The study thereby revealed that kinnow is economically viable fruit crop but inefficient marketing practices adopted by the growers lead to less percent share of growers in consumer rupees which subsequently exploit consumers also.

Mahanta et. al. (2014) evaluated production and marketing of orange in Assam. Primary and secondary data were used and analyzed through statistical tools like average, percentage, tabular analysis and coefficient of correlation. The results show that most of the produce was sold through intermediaries and they exploit orange growers by purchasing the produces at a very low price and later on sell it to the consumers at higher price. The study revealed that growers experience a number of problems both at production as well as marketing level as they did not have pre-requisite resources and finance for expansion and strengthening their orchards.

Objectives of the study:

1) To find out harvest and post harvest handling techniques adopted by kinnow growers to improve quality and shelf life of the fruit.
2) To measure price spread, marketing cost and marketing margin under different channels of marketing.
3) To measure marketing efficiencies of marketing channels.

Hypothesis:

H_1: Traditional channels are used by growers for dispose of harvested kinnow produce.

H_2: Price spread, marketing margins and marketing costs are higher with larger involvement of intermediates.

H_3: Percent of grower's share in consumer rupees goes higher if higher price spread.

H_4: Marketing efficiencies of channels are not depending on involvement of intermediaries.

Methodology

The present study is designed to measure the marketing practices of kinnow growers in Haryana. The study covers Sirsa and Fatehabad districts because these districts hold majority of area (nearly 65 percent) of kinnow crop out of total area under this crop in Haryana. The data is analyzed through frequency distribution, tabular analysis and modified formulas regarding marketing practices.

Growers' net price received: NPG = [(GPG)-(CG)] – (LF×GPG). Where, NPG is the net

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price received by the growers (Rs. /quintal), GPG is gross price received by the growers, CG is the cost incurred by the growers during marketing (Rs/quintal), and LF is the physical loss of produce.

Marketing margins: Gross price (sell price) – price paid (cost price) – cost of marketing – loss of value during handling of produce.

Marketing cost (MC) incurred by the growers: MC = CG + CW + CR. Where, CG (cost incurred by growers and pre-harvest contractor), CW (cost borne by wholesalers) and CR (cost incurred by retailers).

Marketing efficiency: ME = NPG ÷ (MM+MC+ML). Where, NPG is net price received by Growers (Rs. / kg), MM is the marketing margin and MC is total marketing cost and ML is the marketing loss (Acharya and Agarwal (2001).

Sample

The universe of the study consists of all kinnow beneficiaries under NHM (National horticulture mission) scheme and kinnow non-beneficiaries of Haryana. Out of universe, a sample of 270 growers (150 from district Sirsa and rest 120 from Fatehabad) is selected on the basis of consecutive sampling method. For selling purpose, 5 pre harvest contractors, 5 wholesalers, 5 commission agents and 20 retailers and 20 consumers are selected from different markets. Further, sample of growers is categorized in to three parts such as marginal land holders (hold land up to 1.0 hectare), and small land holders (hold land from 1.01 hectare to 2.0 hectare) and other category land holders (hold land above 2.0 hectare). The study period ranges between the years 2010-11 to 2016-17. The data is collected through well designed and pre-tested questionnaire, designed with the help of academicians, review of literatures and horticulture scientists etc. and it consists of four sections namely, product (including harvest and post harvest handling items), price (growers net price received and modes of receiving payments, price spread in different disposal networks etc.), place (area of kinnow disposal within state, outside state and country) and promotions (kinnow processing activities).

Data analysis and interpretation

'4 Ps', short form for product, price, place and promotion is the core principle of marketing. Agriculture marketing in India is termed as distributive handling of agriculture produce and numbers of intermediaries are involved in this process (Jayaraju and Babu, 2012). The analysis of data and interpretation regarding marketing practices of kinnow growers are discussed in different sub- heads which are as follows.

Product: kinnow, a variety of mandarin citrus fruit is taken as product and its harvesting and post harvest handling is quite important for fruit quality and retail price. The techniques of harvesting and post harvest handlings adopted by kinnow growers are discussed below:

Table 1: Distribution of kinnow growers according to method adopted for harvesting

Sr. no.	Methods of harvesting	Marginal land holders	Small land holders	Other land holders	Total
1	Hand plucking and cutting with scissors	25 (28)	10 (11)	6 (7)	41 (15.18)
2	Use of clippers and twisting	65 (72)	80 (89)	84 (93)	229 (84.81)
3	Total growers	90 (100)	90 (100)	90 (100)	270 (100)

Vol. 10 No. 1-2, March-Sep. 2019
ISSN : 0976-0237
UGC Approved Journal No. 40903
Impact Factor 3.765

Source: Primary data collected through growers. *Note:* Figures within the parentheses are the percentages of total kinnow growers of their respective land holding.

Table 1 shows that 15 percent growers use hand plucking and scissors while rest of 84 percent growers use clipper and twisting for harvesting. The uses of clippers avoid injuries to other fruits during transport as twigs are completely cut off. The method of hand plucking is used by 28 percent marginal land holders followed by 11 percent small land holders and last but least 7 percent by other land holders means awareness regarding fruit quality and losses during transit are neglected the most by marginal land holders. On the other hand, twisting and clippers are mostly used by 84 percent by other land holders followed by small land holders (80 percent) and last but not least marginal land holders (65 percent) respectively.

Table 2: Allocation of kinnow growers on the basis of technique used to improve the shelf life of kinnow

Sr. no.	Techniques used to enhance shelf life of kinnow fruit	Marginal land holders	Small land holders	Other land holders	Total
1	Use of wax	34 (38)	40 (44)	42 (47)	116 (43)
2	Not using any technique	56 (62)	50 (56)	48 (53)	154 (57)
3	Total number of growers	90 (100)	90 (100)	90 (100)	270 (100)

Source: Primary data collected through growers. Note: Figures within the parentheses are the percentages of total kinnow growers of their respective land holding.

Table 2 indicates that the majority of growers (57 percent) are not using any technique to improve shelf life and quality of fruit while rest of (43 percent) growers applied wax to improve shelf life and the quality of fruit. Fruits are perishable in nature therefore; shelf life will be increased if wax is applied on them. Waxing is a cheap source that not only improves shelf life but also increases marketability of fruit (Goyal et. al., 2012). Wax technique is highly used by other land holders (47 percent) followed by small (44 percent) and marginal land holders (38 percent) respectively. Ignorance and unawareness of marginal land holders is the highest followed by small and other land holders respectively because they have to pay extra on labour, time consuming process and having no platform where quality of fruit is quite important.

Price: Price is a consideration for the growers and mainly depends on seasonality, perishability, and market demand and supply forces. Growers' incomes depend on final price paid by consumers. Therefore, growers' net price, their mode of receiving payments, price spread and margin of intermediaries are discussed according to the different routes of kinnow disposal. It is found that six channels of distribution for clearance of harvested kinnow produce are followed by kinnow growers. These channels are; channel-I (grower-pre harvest contractor-commission agent-wholesaler-retailer-consumer), channel-II (grower-pre harvest contractor-commission agent-retailer-consumer), channel-III (grower-commission agent-wholesaler-retailer-consumer), channel-IV (grower -commission agent-retailer-consumer), channel-V (growers-consumers in local or nearest market), and channel –VI (grower – fruit processing plant).

Vol. 10 No. 1-2, March-Sep. 2019
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Table 3: Distribution of growers according to channel selection for clearance of kinnow produce

Categories of growers according to their land holding	Clearance channels of kinnow produce						
	Channel I	Channel II	Channel III	Channel IV	Channel V	Channel VI	Total
Marginal land holders	21	34	19	6	9	1	90
Small land holders	29	40	9	6	4	2	90
Other land holders	30	38	9	6	3	4	90
Total	80	112	37	18	16	7	270
	(29.62)	(41.48)	(13.70)	(6.67)	(5.92)	(2.59)	(100)

Source: Field survey and responses of market functionaries. *Note:* Figures within the parentheses are the percentages of total kinnow growers' of their respective channel selection for clearance of kinnow produce.

Table 3 shows the distribution of growers as per their selection of clearance networks for disposal of kinnow produce. It indicates channel-II is highly accepted (41.48) percent) by growers and followed by channel-I (29.62 percent), channel-III (13.70), channel- IV (6.67), channel –V (5.92 percent), and least preferred channel is channel-VI (2.59 percent). It is clear from the above mentioned table that growers follow traditional channels of marketing instead of emerging marketing channels like direct selling to juice plants, self help groups, non government organization, Safal, Namdharie's, government and private cooperative societies etc. The reasons behind this are lack of awareness of growers about market and prices and they also want to avoid the risk of harvesting and post harvest handling due to improper facilities regarding transportation, infrastructure, cold storage and food processing plants etc. They have fear in their mind regarding unexpected changes in prices during peak and arrival time of fruit, and moreover, the MSP (minimum support price) is not decided by the government. Hence, hypotheses first (H_1) gets accepted as traditional channels are followed by growers for clearance of their harvested produce.

The total marketing cost and marketing margin of intermediaries and price spread are significant for knowing the nature, scope and genuineness of various marketing channels used for disposal of kinnow fruit. Their study will help in to find out those market functionaries which ultimately cut the growers' share in consumer's rupee.

Table 4: Channel-wise marketing cost, marketing margin and price spread in clearance of harvested kinnow produce (Rs. /quintal)

Sr. no.	Growers and other market functionaries	Channel I	Channel II	Channel III	Channel IV	Channel V	Channel VI
1	Net price received by grower/purchase price of pre harvest contractor	1,198 (41.30)	1,210 (53.7)	1,260 (52.1)	1,300 (64.0)	1,380 (92)	1550 (51.6)
2	Cost incurred by pre-harvest contractor / grower	298 (10.27)	288 (12.8)	260 (10.77)	260 (12.81)	120 (8)	200 (6.67)

Vol. 10 No. 1-2, March-Sep. 2019
ISSN : 0976-0237
UGC Approved Journal No. 40903
Impact Factor 3.765

3	Net margins of pre-harvest contractor	284 (9.79)	282 (12.54)	--	--	--	--
4	Sell price of pre-harvest contractor or grower /purchase price of wholesaler	1,780 (61.38)	--	1,520 (62.94)	--	--	--
5	Cost incurred by the wholesaler	380 (13.10)	--	302 (12.51)	--	--	--
6	Net margin of wholesaler	295 (10.17)	--	215 (8.90)	--	--	--
7	Sell price of wholesaler or grower /purchase price of retailer	2,455 (84.65)	1,780 (79.12)	1,980 (81.98)	1,560 (76.85)	--	--
8	Cost incurred by the retailer	205 (7.1)	280 (12.44)	189 (7.83)	288 (14.19)	--	--
9	Net margin of retailer	240 (8.27)	190 (8.44)	189 (7.82)	182 (8.96)	--	--
10	Sell price of retailer or grower/purchase price of final consumer	2,900 (100)	2,250 (100)	2,415 (100)	2,030 (100)	1500 (100)	3000 (100)
11	Price spread (Final price paid by consumer – net price received by grower)	1702	1040	1155	730	120	1450

Source: Field survey and responses of market functionaries. *Note:* Figures within the parentheses are the percent of final price paid by consumer.

Table 4 illustrates that Rs. 1,198 per quintal (41.30 percent of final price paid by consumers) is received through growers for contracting out their orchards to pre harvest contractors under channel-I till the fruit is not fully harvested from orchards. Therefore, harvest and post harvest handling costs are incurred by pre harvest contractor itself for Rs. 298 per quintal (consist of costs like harvesting charges, watch & wards, grading & sorting, filling & packing material charges, weighing, transportation with market fee & taxes and quantity losses etc.). The harvested produce is supplied to wholesaler with the help of commission agent for Rs. 1,780 per quintal including margin of Rs. 284 per quintal. Wholesaler at their level do some extra activities that incurred a cost of Rs. 380 per quintal in the form of loading –unloading & labour charges, transportation charges, grading & waxing of produce, cost of packing material, spoilage of produce and rent of cold storage, fee & taxes etc. After these the produce is sold to retailer for Rs. 2,455 per quintal (84.65 percent of final price paid by consumer) by wholesaler and earns a margin of Rs. 295 per quintal. At last, retailer spends Rs. 205 per quintal on kinnow produce for rent of their cart, transportation, market fee, spoilage & unsold produce, packing material etc. and finally sells it to consumer for Rs. 2,900 per quintal and receive margin of Rs. 240 per quintal on the sold produce. Like channel-I growers contact out their orchards to pre harvest contractor for a pre fixed amount in channel-II. Therefore, initial costs of harvest and post harvest handling are incurred through pre harvest contractor itself and a grower receives net Rs. 1,210 per quintal (53.78 percent of final price paid by consumers) for orchards. The harvested produce is supplied to retailer for Rs. 1780 per quintal from farm through a deal with commission agent and he charges 5 percent commission of Rs. 89 per quintal on sold produce. Further, retailer also spends some money for betterment and accessibility of kinnow produce to consumer for Rs. 280 per

Vol. 10 No. 1-2, March-Sep. 2019
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Impact Factor 3.765

quintal. Finally, produce is sold in fresh form to consumer for Rs. 2,250 per quintal and earn a margin of Rs. 190 per quintal on it. The clearance route of kinnow produce in channel-III differ from pre discussed channels as initial costs of harvest and post harvest operations are born by grower itself for Rs. 260 per quintal and receives net Rs. 1260 per quintal (52.17 percent of final price paid) for their produce. Further, kinnow produce is supplied to wholesaler at Rs. 1,520 per quintal (62.94 percent of final price paid) and wholesaler spends Rs. 302 per quintal on it and sell to retailer at Rs. 1980 per quintal and receives a margin of Rs. 215 per quintal. Retailer spends Rs. 189 per quintal on purchased kinnow produce in form of rent of cart / shop, transport charges, spoilage & unsold produce and local market fees etc. Thereafter, sell it to final consumer for Rs. 2415 per quintal and earns a margin of Rs. 189 per quintal on it. Under disposal channel-IV, like channel-III, initial costs are borne through grower and harvested produce is supplied to retailer through commission agent. Grower receives net Rs. 1,300 per quintal (64.04 percent of final price paid) for their produce and spends Rs. 260 per quintal on harvest and post harvest handling operations. The harvested produce is supplied to retailer for Rs. 1,560 per quintal excluding commission of agent of Rs. 78 per quintal. Further, retailers also incurs cost of Rs. 288 per quintal for maintenance of quality of fruit, distribution and transport etc. and sell to consumer for Rs. 2,030 per quintal; and obtains a margin of Rs. 182 per quintal. In channel-V, grower sell their kinnow produce directly to end user or sometimes with the help of village retailers; rehdiwala and hawkers etc. and receive net Rs. 1,380 per quintal (92 percent of final price paid by end user) for their produce after spending Rs. 120 per quintal on harvesting and handling activities. The produce is sold directly in local areas therefore; no need of extra transport and packing material etc., at last final consumer purchases it from grower and local market functionaries at Rs. 1,500 per quintal. In clearance route-VI, net price paid to growers is Rs. 1550 and they have to do harvest and few post harvest operations itself. Fresh fruit and processed juice is supplied to final consumers through fruit processing plants at a cost of Rs. 3000 per quintal.

Table 5: Marketing efficiency of channels used for kinnow disposal (Rs. / quintal)

Particulars	Channel I Rs.	Channel II Rs.	Channel III Rs.	Channel IV Rs.	Channel V Rs.	Channel VI
Net price received by growers (Rs./quintal)	1198	1210	1260	1300	1380	1550
Marketing margins	819	472	404	182	00	00
Marketing costs	883	568	751	548	120	200
Marketing efficiency	0.70	1.16	1.09	1.78	11.5	7.75

Source: Computed from the data in table 4.

It is found that (Table 5) marketing efficiency (11.5) is highest in channel-V, when growers sold their produce directly to consumer and followed by channel-VI (7.75), channel-IV (1.78), channel-II (1.16), and channel-III (1.09) and last but not least in channel-I (0.70) respectively. These results have conformity with those of Bhat *et al.,* 2011; Jhajhria, 2007; Monika, 2017; and kumar et. al., 2017. The growers get maximum benefits in channel-V; therefore it should be followed by

Vol. 10 No. 1-2, March-Sep. 2019
ISSN : 0976-0237
UGC Approved Journal No. 40903
Impact Factor 3.765

growers; although this route has its own limitations. It also indicates greater involvement of intermediaries resulting in higher marketing costs, marketing margins and price spread which not only inflate final price of consumer but also exploit consumers and reduce percent share of growers in consumer rupees. Therefore, per quintal total marketing cost is found the highest in channel-I as compared to other channels of disposal of kinnow produce (kaur and Singh, 2007; Goyal et. al., 2012; Bhat et. al., 2015). Hence, H_2 (Price spread, marketing margins and marketing costs are higher with larger involvement of intermediates) gets accepted as channel-I consists of large number of intermediates and also has highest cost of marketing, margins and price spread. Hypothesis (H_3) percent share of grower in consumer rupees is the highest as the highest price spread gets rejected as price spread under channel-I is the highest but the grower share in consumer rupees is the lowest. At last, hypothesis H_4 (Marketing efficiencies of disposal channels are not depend on the involvement of intermediaries) gets rejected because higher involvement of intermediates makes the efficiency of a channel low.

Table 6: Division of kinnow growers on the base of mode of payments they receive for their harvested kinnow produce

Sr. no.	Mode of payments	Marginal land holder	Small land holder	Other land holder	Total
1	Cash	19 (21)	6 (6.67)	2 (2)	27 (10)
2	Credit	9 (10)	5 (6)	3 (3)	17 (6.29)
3	Cash and credit	48 (54)	57 (63.33)	54 (60)	159 (59)
4	Cash and cheque	11 (12)	18 (20)	21 (24)	50 (18.51)
5	Digital mode of payments	3 (3)	4 (4)	10 (11)	17 (6.29)
6	Total	90 (100)	90 (100)	90 (100)	270 (100)

Source: Field survey and responses of market functionaries. *Note:* Figures within the parentheses are the percentages of total kinnow growers according to their mode of receiving payments.

Table 6 indicates different land holders' modes of receiving payments for their harvested kinnow produce. It is found that majority of growers accept cash and credit (59 percent) followed by cash and cheque (19 percent), cash (10 percent), and rest of them accept credit and digital mode of payment. At individual level, it is observed that cash (21 percent) and credit (10 percent) modes of payment is highly accepted through marginal land holder while poorly accepted by other land holders (2 and 3 percent) and cash and credit combined is highly accepted by other land holders (60 percent) and the lowest in case of marginal land holders (54 percent). Digital mode of payment is still neglected by marginal (3 percent) and small land holders (4 percent) category while a little percent of acceptance (11 percent) is found in case of other land holder category. It is because most of the produce is sold through pre harvest contractors and generally they make some payments to growers in advance and rest of it is paid in form of cheque or cash.

Vol. 10 No. 1-2, March-Sep. 2019
ISSN : 0976-0237
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Place: Place is a market area where kinnow produce is sold after harvest or from farm. It is found that during survey most of the growers don't have knowledge about market where they sell their produce directly to consumer or to fruit or food processing plant. Price and percent share of growers in consumer rupees etc. are mainly depend on place of sell. Thus, selection of sell place is important and growers sell areas are discussed below:

Table 7: Allocation of kinnow growers on the basis of place of selling of their harvested produce

Sr. no.	Marketing compass / region	Marginal land holder	Small land holder	Other land holder	Total
1	Haryana	72 (80)	67 (74)	60 (67)	199 (74)
2	Any other place (within country)	18 (20)	23 (26)	30 (33)	71 (26)
3	Any place (outside country)	00	00	00	00
4	Total number of growers	90 (100)	90 (100)	90 (100)	270 (100)

Source: Field survey and responses of market functionaries. *Note:* Figures within the parentheses are the percentages of total kinnow growers according to their marketing compass.

Table 7 shows that majority of growers (74 percent) are selling their produce within the state and rest (26 percent) of them sold outside the state but not outside the country. In distribution of channels it is clear that majority of produce is sold through pre harvest contractors or wholesalers and self participation of growers is quite less. Therefore, distribution of produce at different place is not only done through growers. Only 20 percent marginal land holders' produce is sold in outside the state while rest of 80 percent is sold within the state. Small land holder sold their produce i.e. 74 percent within state and rest 26 percent outside the state and 67 percent other land holder sold their produce within state and rest sold outside the state. The reason behind low demand in outside the state is that adjoining states of Haryana like Punjab, Rajasthan, and Uttar Pradesh and Himachal Pradesh also have significant share in kinnow production in India. Punjab is very well known for cultivation of kinnow and has 1st rank in India. Therefore, growers have difficulty to sell their produce in nearby states to get high price of their product.

Promotion: kinnow fruit is consumed in fresh as well as in juice, jam, and squash form. It is also used in cosmetic, medicine and cattle feeds etc. It is observed that not even a single grower is involved in any kind of promotion or value addition activities of kinnow fruit due to absence of fruit and food processing plant, lack of awareness, inadequate and expensive transport facilities and infrastructure etc. are prime responsible factor. A report on two multipurpose juice plants established at a cost of Rs. 84 crores at Hoshiarpur and Abohar districts of Punjab has suffered from losses in the year 2010-11 and 2011-12 because of kinnow growers ignorance and unawareness (Goyal et.al, 2012).

Vol. 10 No. 1-2, March-Sep. 2019
ISSN : 0976-0237
UGC Approved Journal No. 40903
Impact Factor 3.765

Conclusion

The result of study indicates that inefficient marketing practices are followed by kinnow growers for disposal of their produce and also growers face problem problems in marketing of their produce. The kinnow growers can make their returns better if they handle marketing practices in a proper manner.

It is also found that greater the involvement of intermediates in disposal process higher would be price spread, marketing costs and marketing margins that not only exploit the growers but also the consumers. The percent share of growers in consumer's rupees is low with higher involvement of intermediates. The marketing efficiency of different routes is dependent on the participation of growers. Therefore, the study can be employed to develop appropriate price policy that aims to provide incentive prices to growers, and assures them a significant share in consumer's rupee. This study will be helpful in development and valuation of the market policies like regulation of market charges and percent share of intermediates in consumer rupees etc. for different market functionaries and functions. The cultivation of fruit crops like kinnow is one of the options for manifold increase in farm income. The cultivation of kinnow should be advocated among growers by providing timely information pertaining to crop production and protection technologies. Growers should be encouraged for cultivation of fruit crops by incentivizing them through implementation of crop development programmes and arrangement for disposal of produce at remunerative prices. The adequate scientific storage for longer shelf life of fruits and processing facilities may also further increase in value addition and higher returns to growers.

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