FACTORS AFFECTING MARKETING AND DISPOSAL OF ONION IN RAJASTHAN

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Abstract

The present study was undertaken in eight selected districts of Rajasthan based on the highest area and production. A total sample size of 600 onion growers was taken from selected eight major onion growing districts of state. Agro-climatic condition of the Rajasthan is the most suitable for onion. In the total area and production in the country, Rajasthan stands 6th position in area and production in India and contributes about 4.79% share in area and 5.06% share in production. The study revealed that Physical characters and pungency are the most important characters considered by farmers while selecting varieties as it affects its marketability. The study found that the farmers practicing grading before marketing of the onion accounted 60.0 (Chittor) to 78.67 per cent (Alwar).The price realized for the graded onion was 20 to 30 per cent higher than the price of ungraded onion.The marketable surplus of onion among the sample farmers worked out in the range of 85 to 87 per cent of the total production. Wide variation in onion storage was observed among districts as 26.67 (Chittor) to 69.33 (Jodhpur) per cent of the total farmers. Majority of onion farmers disposed their produce through commission agents in mandi.

Keywords: - Marketing, Disposal, Onion

INTRODUCTION

An onion, today being compared with diamonds indicates its value for a normal household budget. A global review states that China is the first in area and production while India occupies second position in the production andexports to Dubai, Kuwait, Saudi Arabia, Middle East, Malaysia, Singapore, Bangladesh, Sri Lanka etc.

India ranks second in global onion production after China and with an annual production of 16 to 17 million tonnes accounts for around 20% of global production.Major producing states are Maharashtra, Karnataka, Madhya Pradesh, Andhra Pradesh, Bihar, Gujarat, Rajasthan and Haryana, which together account for 85 percent of total production. It occupies an area of 1064 thousand ha, with production of 15118 thousand tonnes.

In Rajasthan onion is cultivated mainly in *rabi* season (85-90%), however, in *kharif*season its production also being taken up traditionally in Alwar district (10-15%).%). Rajasthan has a comparative advantage in onion production. In the total area and production in the country, Rajasthan stands 6th position in area and production in India and contributes about 4.79% share in area and 5.06% share in production (Anonymous, 2011).

In this scenario it is important to study the marketing and disposal pattern adopted by onion growers and factors affecting it as it have direct relation with the income and profits of onion growers. Keeping this in mind the present study was undertaken with an objective to study thevarious factors affectingmarketing and disposal pattern adopted by onion growers.

Research Methodology

Keeping the view of formulated objectives, the study was carried out in the selected eight major onion producing districts of Rajasthan state on the basis of highest area, production and productivity of onion.The methodology for collection of primary data involved structured interview schedule using personal interview method.A structured schedule was prepared for collection of data from 600 onion farmers from eight districts i.e. Jaipur, Sikar, Jhunjhunu, Jodhpur, Nagaur, Chittor, Ajmer and Alwarfor the fulfillment of objectives.

Multistage stage sampling was adopted: At first stage, only highest onion producing 3tehsils were selected in each selected district.At second stage 3-4 villages were randomly selected for the purpose of primary data collection in each district. At third stage the list of the onion growers along with their operational holdings in each of the randomly selected village was prepared with the help of villagers. From this prepared list of onion growers, 7-8 onion growers were randomly selected from each village for the present study. A total sample of seventy five onion growers from ten villages was selected from each district. Thus, the total sample size constituted of 600 onion producing farmers for the study as a whole in all the selected eight major onion growing districts in the state.Data obtained from the survey was analyzed through tabular analysis including appropriate statistical tools.

RESULTS AND DISCUSSION

1.1 Preference for Cultivation for Growing Particular Type of Onion:

The highest percentage of farmers of Nagaur (85.3 per cent) district preferred to grow onion on the basis of physical characters and 82.7 per cent of farmers ofAlwar district preferred pungency character while selecting varieties for growing onion.

Table 1.1: Preference for Growing a Particular Cultivar of Onion by Sample Farmers in Rajasthan

S.o.	Characters	Jaipur	Sikar	Jhunjhunu	Jodhpur	Nagaur	Chittor	Ajmer	Alwar
1.	Physical characters	57(77.0)	54(72.0)	58(77.3)	62(82.7)	64(85.3)	46(61.3)	51(68.0)	57(76.0)
2.	Pungency	32(42.7)	27(36.0)	30(40.0)	48(64.0)	47(62.7)	54(72.0)	60(80.0)	62(82.7)
3.	Early maturity	52(69.3)	62(82.7)	51(68.0)	58(77.3)	44(58.7)	41(54.7)	57(76.0)	54(72.0)
4.	High yielding	61(81.3)	57(76.0)	64(85.3)	68(90.6)	58(77.3)	49(65.3)	56(74.7)	60(80.0)
5.	Keeping quality	50(66.6)	36(48.0)	47(62.7)	67(89.3)	62(82.7)	34(45.3)	24(32)	15(20.0)
6 .	Pest & diseases resistant	16(21.3)	21(28.0)	26(34.7)	32(42.7)	36(48.0)	18(24.0)	31(41.3)	34(45.3)
7.	Moisture stress tolerance	28(37.3)	26(34.7)	32(42.7)	38(507)	44(58.7)	12(16.0)	37(49.3)	42(56.0)

Note: Figures within the parentheses are the percentages of preference of the farmers.

About more than 54 per cent onion grower's opined that they preferred onion varieties having shorter duration of 100-110 days particularly in Sikar district to get better returns through

early marketing. It was found that about 65.3 (Chittor) to 90.6 per cent (Jodhpur) of the farmers preferred onion genotypes for its potentiality to produce higher bulb yield per unit area. It was further found that farmers of Jodhpur, Nagaur, Jaipur and Jhunjhunu preferred the onion varieties having better shelf-life for storing the onion for higher returns by selling them in the lean period.

1.2 Source of Onion Seed:

Most of the farmers used their own bulb as seed materials for the next crop in the selected districts of Rajasthan. They used to store the bulbs by using the traditional storage practices in their areas for seed purpose. But during the period of higher price and shorter supply in the market, they sold the onion immediately and purchased the seed material from private agencies whenever required. The details on sources of planting material are presented in the table 1.2.

Table 1.2: Source of Seed for Onion Cultivation in the Major Onion Growing Districts of Rajasthan

S.No.	Particular	Jaipur	Sikar	Jhunjhunu	Jodhpur	Nagaur	Chittor	Ajmer	Alwar
1.	Own farm	42(56.0)	51(68.0)	47(62.7)	38(50.7)	34(45.3)	22(29.3)	39(52.0)	36(48.0)
2.	Private agencies	13(17.3)	9(12.0)	15(20.0)	20(26.6)	26(34.7)	43(57.3)	18(24.0)	32(42.67)
3.	Neighbours'	18(24.0)	14(18.7)	10(13.3)	15(20.0)	11(14.7)	8(10.7)	15(20.0)	5(6.7)
4.	Government agencies	2(2.7)	1(1.3)	3(4.0)	2(2.7)	4(5.3)	2(2.7)	3(4.0)	2(2.7)

Note: Figures within the parentheses are the percentages of preference of the farmers for source of seed.

It could be observed from the table that 29.3 (Chittor) to 68.0 per cent (Sikar) farmers used their own seed materials for the next crop. In the sample, it was found that 12 (Sikar) to 57.3 per cent (Chittor) farmers purchased onion seed from private agencies. Generally, farmers were purchasing seed materials from the local traders on credit basis and repaid after the harvest of the crop. Present study further reveals that 6.7 (Alwar) to 24.0 per cent (Jaipur) onion growers were purchasing seed material from their neighboring farmers, however, the purchasing trends of onion seed materials from Government agencies are negligible, because in the state Govt. seed producing agencies *viz.*, RSSC, NSC etc. are not much involved in the production of onion seed in Rajasthan, however, these state Govt. agencies some time purchase small quantity of onion seed from the markets of Maharashtra and Gujarat states to sell in Rajasthan at their outlets.

1.3 Grading Practices at Farm Level:

Generally the onion producing farmers of the selected districts of Rajasthan were practicing grading at farm level by size, separating very big and small sized onion, doubles, bolters and diseased bulbs before marketing or storage of onion. From the table 1.3, it could be noted that the farmers practicing grading before marketing of the onion accounted 60.0 (Chittor) to 78.67 per cent (Alwar) in the studied areas in the state. Results further reveals that 21.33 to 40.0 per cent farmers did not practice any grading. They just remove the decayed bulbs from the fresh ones in the harvested lot and from the stored onion before packing in the gunny bags.

Table 1.3: Grading Practices of Onion Adopted at Farm Level by the Sample Farmers

S. No.	District	Sample farmers adopted grading	Cost incurred(Rs./q)		Total cost incurred (Rs./q)	Sell price of ungraded onion	Sell price of graded onion	Profit(Rs./q)
			Grading	Losses				
.	Jaipur	55 (73.33)	7.70	44.40	52.10	310.0	445.0	82.90
.	Sikar	52 (69.33)	8.40	36.85	45.25	320.0	460.0	94.75
.	Jhunjhunu	49 (65.33)	8.10	46.15	54.25	345.0	490.0	90.75
.	Jodhpur	58 (77.33)	6.90	45.50	52.40	330.0	475.0	92.60
.	Nagaur	48 (64.00)	7.60	46.50	54.10	300.0	450.0	95.90
.	Chittor	45 (60.00)	7.20	39.60	46.80	295.0	430.0	88.20
.	Ajmer	57 (76.00)	8.45	44.80	53.25	340.0	485.0	91.75
.	Alwar	59 (78.67)	8.80	53.90	62.70	380.0	520.0	77.30

Losses: value of unmarketable bulbs. Note: Figures within parentheses are percentages to totals farmers.

The cost incurred in grading of onion was least in Jodhpur district (Rs 6.90 per quintal) and maximum in Alwar district (Rs. 8.80 per quintal). During grading the produce unsuitable for marketing was discarded which was in the range of Rs. 36.85/qt in Sikar district to Rs. 53.9/qt in Alwar district. The table 1.3 reveals that the practice of grading had an impact in terms of higher price realized for graded onion. The price realized for the graded onion was 20 to 30 per cent higher than the price of ungraded onion. Thus, selected onion growers got benefitted by selling graded onion in the market.

1.4 Uses and Marketable Surplus of Onion:

As revealed in the table 1.4 about 13 per cent to 15 per cent of the total produce was either used at home by the selected farmers or either used as seeds or consumed at home or discarded due to poor quality of produce. Thus, the marketable surplus of onion among the sample farmers worked out in the range of 85 to 87 per cent of the total production. The highest marketable surplus was found in Jhunjhunu district (86.9 per cent) followed by Jodhpur (86.7 per cent), Nagaur (86.5 per cent), Ajmer (86.4 per cent), Alwar (86.2 per cent) and Sikar (85.4 per cent) districts. The least marketable surplus was there in Jaipur and Chittor (84.7 per cent) districts.

Table 1.4: Marketable Surplus of Onion by Sample Farmers in Rajasthan

S. No.	Districts	Total production (q/farm)	Own used (q/farm)		Post harvest losses (q/farm)	Total quantity Used (q/farm)	Marketable surplus (q/farm)
			For seed	For home uses			
1.	Jaipur	217.5	3.8	5.7	23.7	33.2 (15.3)	184.3 (84.7)
2.	Sikar	181.1	2.6	4.9	19.0	26.5 (14.6)	154.6 (85.4)
3.	Jhunjhunu	176.8	2.4	5.0	15.8	23.2 (13.1)	153.6 (86.9)
4.	Jodhpur	169.8	2.8	4.6	15.2	22.6 (13.3)	147.2 (86.7)
5.	Nagaur	143.4	1.8	4.2	13.4	19.4 (13.5)	124.0 (86.5)
6.	Chittor	134.2	1.2	4.6	14.8	20.6 (15.3)	113.6 (84.7)
7.	Ajmer	113.2	1.3	3.8	10.4	15.4 (13.6)	97.8 (86.4)
8.	Alwar	211.5		1.7	27.5	29.1 (13.8)	182.4 (86.2)

Note: Figures within parentheses are percentages to total production.

1.5 Storage of Onion:

It can be seen from the table 1.5 that in Rajasthan state wide variation in onion storage was observed among 26.67 (Chittor) to 69.33 (Jodhpur) per cent of the total farmers. The highest percentage of onion storage was practiced in Jodhpur district (69.33%) followed by Nagaur(58.67%), Jhunjhunu (54.66%), Jaipur (49.33%), Ajmer (46.67%), Sikar (30.67%) and Chittor (26.67%) districts.

Table 1.5: Storage Practices of Onion Adopted at Farm Level in Selected Districts of Rajasthan

S. No.	District	Number of farmers stored onion	Number of farmers not stored	Total number of sample farmers
1.	Jaipur	37 (49.33)	38 (50.67)	75 (100.00)
2.	Sikar	23 (30.67)	52 (69.33)	75 (100.00)
3.	Jhunjhunu	41 (54.66)	34 (45.33)	75(100.00)
4.	Jodhpur	52 (69.33)	23 (30.67)	75(100.00)
5.	Nagaur	44 (58.67)	31 (41.33)	75(100.00)
6.	Chittor	20 (26.67)	55 (73.33)	75 (100.00)
7.	Ajmer	35 (46.67)	40 (53.33)	75 (100.00)
8.	Alwar	-	75 (100.00)	75 (100.00)

Note: Figures within the parentheses are the percentages of the farmers to total farmers.

It was evident from the survey that all the farmers under study, who stored onion, disposed off the produce from storage within six months. Storing for more than six months was found uneconomical by farmers because of high level of product decay and losses.

1.6 Means of Transport:

Majority of farmers from Jaipur and Chittor districts preferred transport by tractor trolley to sell their produce in the market (Table-1.6). But in Alwar (49.3%), Nagaur (38.7%), Jodhpur (38.6%), Sikar (37.4%), Ajmer (36.0 %) and Jhunjhunu (32.0%) districts, farmers preferred to transport the onion by trucks to get better price in nearby markets or other states (Haryana, Punjab, U.P., Assam and Himachal Pradesh). It was also found that farmers used 6.7 to 49.3 per cent truck; 16.0 to 41.3 per cent Tempo Van; 5.3 to 25.3 per cent Tempo van and 14.7 to 52.0 percent tractor trolley for marketing of onion in different markets of the state from their farms.

Table 1.6: Means of Transport Used for Sale of Onion by Sample Farmers in Rajasthan

S.No.	Particular	Jaipur	Sikar	Jhunjhunu	Jodhpur	Nagaur	Chittor	Ajmer	Alwar
1.	Tractor Trolley	32(42.7)	16(21.3)	18(24.0)	14(18.7)	18(24.0)	39(52.0)	12(16.0)	11(14.7)
2.	Tempo Van	18(24.0)	9(12.0)	12(16.0)	6(8.0)	7(9.3)	19(25.3)	5(6.7	4(5.3)
3.	Lorry	17(22.7)	22(29.3)	21(28.0)	26(34.7)	21(28.0)	12(16.0)	31(41.3	23(30.7
4.	Truck	8(10.6)	28(37.4)	24(32.0	29(38.6)	29(38.7)	5(6.7)	27(36.0)	37(49.3)
	Total	75(100.0)	75(100.0)	75(100.0)	75(100.0)	75(100.0)	75(100.0)	75(100.0)	75(100.0)

Note: Figures within the parentheses are the percentages of preference of the farmers for means of transport.

1.7 Disposal Pattern:

Onion growers of the selected districts sold their produce to different agencies like through commission agent in mandi, to wholesaler, to village level trader, and to retailer. It is evident from the table 1.7 that, large proportion of farmers sold onion through commission agent in mandi i.e. Nagaur and Alwar districts (45.3 per cent farmers in each district) followed by in Jaipur (42.7 per cent), Nagaur and Ajmer (41.3 per cent in each district) and least in Chittor district (25.3 per cent). The proportion of farmers selling onion directly to wholesaler was found highest in Nagaur district (50.7 per cent) followed in Jodhpur (46.7 per cent), Ajmer (44 per cent), and least in Jaipur district (21.3 per cent). About 4 per cent of the total sample farmers in Nagaur sold onion to traders at village level while selling to traders was highest in Jaipur district (18.7 per cent of total farmers). About 10 per cent (in Alwar district) to 22 per cent (in Chittore district) sold their produce directly to retailers.

Table 1.7: Disposal Pattern of Onion in the market by Sample Farmers through Different Market Agencies in Major Onion Growing Districts of Rajasthan

Districts	Commission Agent	Wholesaler	Trader	Retailer	Total
Jaipur	32 (42.7)	16 (21.3)	14 (18.7)	13 (17.3)	75 (100.0)*
Sikar	27 (36.0)	26 (34.7)	8 (10.7)	14 (18.7)	75 (100.0)
Jhunjhunu	25 (33.3)	25 (33.3)	10 (13.3)	15 (20.0)	75 (100.0)
Jodhpur	31 (41.3)	35 (46.7)	9 (12.0)	-	75 (100.0)
Nagaur	34 (45.3)	38 (50.7)	3 (4.0)	-	75 (100.0)
Chittor	19 (25.3)	32 (42.7)	7 (9.3)	17 (22.7)	75 (100.0)
Ajmer	31 (41.3)	33 (44.0)	11 (14.7)	-	75 (100.0)
Alwar	34 (45.3)	28 (37.3)	5 (6.7)	8 (10.7)	75 (100.0)

Note: Figures in parentheses are percentages to total; *No. of Farmers selling to agencies

1.8 Marketing Institutions:

Marketing institutions are the business organizations which have come up in course of time in the marketing process as the marketing machinery in fruit and vegetable mandi. Important sources of income of the market committee are the market fee Rs. 1.60 per Rs. 100 worth of sale of produce, shop rent, penalty charges and license fee realized from the different functionaries existing in the mandi. The market functionaries as wholesalers of fruits and vegetables have to

obtain the license after making the payment of prescribed market functionaries in the mandi are shown in table 1.8.

All the market functionaries' labourers to wholesalers working in the mandi have to obtain the license from the market committee after being the prescribed fee for carrying their business in the mandi premises.

Table 1.9: Marketing Charges in the Fruit and Vegetable Markets of Rajasthan(2010-11)

S. No.	Particulars	Unit	Rates (Rs.)	Borne by
1.	Mandi fee	Per 100 rupee worth of produce	1.60	Buyer
2.	Commission	Per 100 rupee worth of produce	6.0	Buyer
3.	Weighing charges	Per bag	1.00	Buyer
4	Loading charges	Per bag	1.50	These charges are borne by the seller up to the arrival of produce in the mandi and after these charges borne by the buyers
5	Unloading charges	Per bag	1.50	Buyer

Source: Directorate of Agricultural Marketing, Govt. of Rajasthan, Jaipur

The number of licensed marketing agencies in the fruit and vegetable mandi, are shown in table 1.10. The 'A' class commission agents, wholesalers, joint agents and retailers are the licensed agencies working in the mandi area. The total number of licensed marketing agencies increased over time in the mandi. Among different agencies, the percent increases in the number of joint agents were highest percent. The retailers purchase vegetables directly through the commission agent from the producer sellers in the mandi. A list of the licensed commission 'A' class commission agent, Wholesaler, Joint agent was prepared from the records of KrishiUpajMandiSamiti of Jaipur, Sikar, Jhunjhunu, Jodhpur, Nagaur, Chittor, Ajmer and Alwar districts (Table 1.10).

Table 1.10: Number of Licensed Marketing Agencies in Selected F&V Markets of Rajasthan

S. No.	District	Number of market agencies			Total licensed agencies
		'A' class commission agent	Wholesaler	Joint agent	
1.	Jaipur	38(1.58)	2032(84.42)	337(14.00)	2407(100.00)
2.	Sikar	22(3.18)	449(64.88)	221(31.94)	692(100.00)
3.	Jhunjhunu	18(2.88)	402(64.42)	204(32.69)	624(100.00)
4.	Jodhpur	49(6.59)	408(54.84)	287(38.58)	744(100.00)
5.	Nagaur	14(2.16)	480(74.07)	154(23.76)	648(100.00)
6.	Chittor	12(3.19)	242(64.36)	122(32.45)	376(100.00)
7.	Ajmer	33(4.60)	427(59.55)	257(35.84)	717(100.00)
8.	Alwar	24(3.06)	489(62.29)	272(34.65)	785(100.00)

Source: Directorate of Agricultural Marketing, Govt. of Rajasthan, Jaipur;
Figures in parentheses are percentages to total.

Implications of the study:

The following implications emerged from the results of study:

1. Strengthening information support for onion production and marketing practices.
2. Provision of storage facilities at farm level and market level to avoid force sales at less price.
3. Need to develop the central storage and packaging houses by the Rajasthan Govt.
4. Directing marketing channel for onion district for state and National Market.

Conclusion:

Agro-climatic condition of the Rajasthan is the most suitable for onion cultivation and onion crop has tremendous scope to be popularized as a commercial crop in the state. Rajasthan has a comparative advantage in onion production. The study concludes thatPhysical characters and pungency are the most important characters considered by farmers while selecting varieties as it affects its marketability.Majority of onion farmers practice grading before marketing of the onion and the price realized for the graded onion was found to be 20 to 30 per cent higher than the price of ungraded onion.The marketable surplus of onion among the sample farmers worked out in the range of 85 to 87 per cent of the total production.Wide variation in onion storage was observed among districts as 26.67 (Chittor) to 69.33 (Jodhpur) per cent of the total farmers. Majority of onion farmers disposed their produce through commission agent in mandi and wholesalers. Provision of Grading,storage at farm level and market and adoption of direct marketing needs to be adopted for improving the marketing and getting better returns for the producers.

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