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Study of disposal pattern, price spread, marketing efficiency of chickpea in Auraiya district of Uttar Pradesh

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Abstract

The present study attempted to estimate the disposal pattern, price spread, marketing efficiency and constraints in marketing of Chickpea in Auraiya district of Uttar Pradesh. The period of enquiry pertain to the agriculture year 2017-18. District Auraiya and block Auraiya was selected purposively on the basis of highest acreage under Chickpea was selected purposively for the study. Lists of all villages falling under selected block were prepared along with acreage under chickpea cultivation and 5 villages were selected randomly for the study. In all selected villages 100 farmers were selected proportionally from each category of farmers and they classified into three categories marginal (below 1 ha), small (1-2), medium (2-4 ha). The data were collected by personal interview technique with the help of pre-tested structured schedule. It was found that 79.73 per cent of total yield of chickpea were disposed through different marketing channels prevailing in the locality. But for home consumption purpose 4.39 per cent of total crops regarding disposal of marketed surplus of chickpea it was found that maximum quantity i.e. 192.49 chickpea was sold through channel II was found more efficient. It concluded that channel II was more efficient and adopted by majority of the sample farmers, through its efficiency is lower than channel I and higher than channel III of the marketing channels prevailing in the locality. It revealed that producer's share in consumer's price were 99.07, 95.68 and 89.15 per cent in marketing of chickpea against channel I, II and III respectively.

Keywords: Marketed surplus, marketing channel, marketing efficiency

Introduction

Chickpea is one of the major pulse crops grown in India. Chickpea has the richest, cheapest and easiest source of best quality proteins and fats. Chickpea is also a good source of vitamins (especially B vitamin) and minerals like potassium and phosphorus (Wable *et al.*, 2017) ^[9]. Chickpea is a very important pulse crop that grows as a seed of a plant named *Cicer arietinum* in the Leguminosae family. Chickpea is eaten fresh as a green vegetable or parched, fried, roasted, or boiled seeds. Dal (Split chickpea without seed coat) and flour are used extensively in India as a thick soup for making breads. Sprouted seeds are eaten as a vegetable or added to salads. Young seedlings and green pods are also eaten. Recently, prices of pulses have increased significantly as compared to other food crops pushing pulses out of the reach of poor masses. Chickpea is a highly nutritious pulse and places third in the important list of the food legumes that are cultivated throughout the world. In India, the total food production in 2013-14 was about 257.4 million tonnes out of which only 19.3 million tonnes was contributed by pulses (Sengar *et al.*, 2018) ^[8]. India is the largest producer of chickpea in the world sharing 65.25 and 65.49 per cent (FAO STAT, 2015) of the total area (11.97 m ha) and production (9.53mt), respectively. In India, total production of chickpea was 7.33 million tonnes from 8.25 million ha area with average yield of 889 kg/ha in year 2014-15. In Uttar Pradesh total chickpea production 0.73 million tonnes from 0.6 million hectare area with 1217 kg/ha productivity in year 2012-2013 (NFSM 2014). Chickpea seems to have lucrative pulse crop of Auraiya district of Uttar Pradesh.

Methodology

The purposive cum random sampling technique was applied for the selection of district, block, villages as well as respondents (Chickpea grower). The investigator is familiar to the socioeconomic and cultural conditions of the area; it helps in rapport building and authentic data collection. Thus Auraiya district of Uttar Pradesh was selected purposively seeing the convenience of investigator.

A list of all 6 blocks of Auraiya district was prepared and one block namely Auraiya having highest area coverage under chickpea crop was purposively selected for the study. A list of all the villages falling under selected block Auraiya was prepared and five villages were selected randomly from the list. A separate list of all the chickpea growers of selected five villages were prepared along by their size of holdings, and were grouped into three categories; [1] Marginal 20 farmers (below 1ha.), [2] Small 35 farmers (1-2 ha.), and [3] Medium

45 farmers (2-4ha.). From this list, samples of 100 respondents were selected following the proportionate random sampling technique. The data were pertained to the agricultural year 2017-19.

Simple tabular and functional analyses were used to analyze the data for presentation of the results. Most of the Agricultural produce of the study area are disposed in the local market. Few sample farmers having heavy marketable surplus also approach district level market.

Table 1: Village wise total farmers and selected farmers under different size group of farms

S. No.	Name of selected village	Marginal (below 1 ha)		Small (1-2 ha)		Medium (2-4 ha)		Total farmers	
		T	S	T	S	T	S	T	S
1.	Uddyampur	20	6	31	9	14	4	65	19
2.	Talepur	41	11	42	12	15	4	98	27
3.	Garha Manik Chandra	45	13	7	2	14	4	66	19
4.	Shikhola	20	6	29	8	24	7	73	21
5.	Inguthiya	31	9	13	4	01	01	45	14
	Total	157	45	122	35	68	20	347	100

Note: T= Total Farmers, S= Selected Farm

Marketable surplus

The marketable and marketed surplus of, Chickpea originated by different size groups of sample farms have been worked out as follow:

$$MS = P - C$$

Where

MS = Marketable surplus

P = Total production of crop

C = Total requirement (family consumption, seeds, education, payment of wages to labours, cattle feed, payments to service providers persons such as carpenter, blacksmith, barber, etc).

Marketed surplus

The marketed surplus connotes the actual quantity of produce sold by the farmers in the markets has been worked out as follows:

$$MT = MS + PS + D - L$$

Where

MT = Marketed surplus

MS = Marketable surplus actually sold

D = Distress sale

PS = Post stock sold out, if any

L = Losses during storage and transmit marketable surplus left for sale.

Price spread

“The difference between the price paid by the consumer and the net price received by producer was taken as the concept of

spread”. This included not only the actual prices at various stages of marketing channels, but also the costs incurred in the process of the movement of the produce from the point of producer farm to the consumer and the margin of the various intermediaries.

Result and Discussion

Marketing aspect of chickpea deals with the marketing pattern of the chickpea covering mainly marketable and marketed surplus, marketing costs and margins and price spread of the marketing channels prevailing in the study area. As the marketing efficiency depends on the number of middle man involved in the process, it was considered appropriate to study the disposal pattern of chickpea in study area through different channels of marketing.

Three channels were prevalent in the study area in respect of the disposal of chickpea produced on the sample farms.

- Channel I:** Producer- Consumer
- Channel II:** Producer-Village trader/Retailers- Consumer
- Channel III:** Producer - Village trader - Whole seller - Retailers – Consumer

(i) Disposal pattern of chickpea in Auraiya district

Most of the Agricultural produce of the study area are disposed in the local market Muradganj and Talepur which is situated at 5-10 km distance from the sample villages. Few sample farmers having heavy marketable surplus also approach district level market Auraiya to dispose of their produce in whole sale market. Thus the data concerned with marketing of chickpea were recorded from a large number of market functionaries functioning in both the market.

Table 2: Nature and extent of marketable and marketed surplus of chickpea (qtl.)

S. N.	Size group of farms	Total production	Family consumption	Seed	Wage payment	Distress sale	Marketable Surplus	Marketed surplus
1.	Marginal	85.50(100)	1.40(1.63)	4.88(5.71)	6.42 (7.51)	13.05 (15.2)	59.75(69.88)	72.80(85.15)
2.	Small	160.32(100)	2.13(1.33)	7.45 (4.64)	9.28 (5.78)	12.93 (8.06)	128.53(80.17)	141.46(88.23)
3	Large	217.31(100)	3.10(1.42)	13.69(6.30)	19.49 (08.98)	10.00(04.61)	171.03(78.82)	181.03(83.30)
	Total	463.13(100)	6.63(1.43)	26.00(5.61)	35.19(7.59)	35.98(7.76)	359.31(77.58)	395.29(85.35)

(Figure in parenthesis indicate the percentage)

Disposal of total yield of chickpea by different categories of farmers depicted in Table- 2 and it revealed that, total yield of chickpea production on marginal, small and medium farms were 85.50qt, 160.32qt and 217.31 qt respectively. It also revealed from the table that out of total produce of the chickpea 1.43 per cent was retained for family consumption, 5.61 per cent for seed requirement, 7.59 per cent for wage payment, 7.76 per cent for distress sale and 77.58 per cent was marketed through different marketing channels. Channel wise disposal of the chickpea was presented in the

table -3. It revealed that among all three channels, the channel 1st was most preferred by all categories of farmers as 39.80 per cent of total marketed surplus was disposed through it by 45 farmers in the study area. Whereas 31.80 and 28.42 per cent of the marketed surplus were disposed through channel 2nd and 3rd respectively by 32 and 23 member of the sample farmer. It is observed that the channel 3rd was followed by very less number of sample farmers for disposal of little quantity of marketed surplus.

Table 3: Disposal Pattern of chickpea under different marketing channel (qt.)

S. no.	Size group of Farm	No. of farmers	Total quantity	Channel - I		Channel -II		Channel -III	
				No. of farmers	Quantity	No. of farmers	Quantity	No. of farmers	Quantity
1	Marginal	45	72.80(100)	20	35.00(48.07)	15	20.00(27.47)	10	17.80(24.45)
2	Small	35	141.46(100)	17	61.30(43.33)	10	40.16(28.38)	8	40.00(28.27)
3	Large	20	181.03(100)	8	61.03(33.71)	7	65.55(36.21)	5	54.45(30.07)
	Total	100	395.29(100)	45	157.33(39.80)	32	125.71(31.80)	23	112.35(28.42)

(Figure in parenthesis indicate the percentage)

(ii). Price spread of chickpea in the study area (Auraiya District of UP.)

The difference between consumer price and producer price is called price spread. Price spread includes the total marketing costs and marketing margins incurred at various stages of the marketing process. The price spread included in the marketing of chickpea, through different channels in the study area are discussed as below:

a) The price spread of Chickpea in Banda district

The price spread (marketing cost + market margin) of chickpea in the study area was worked out and presented in table 4. It revealed from the table that the price spread came to Rs. 40.16, Rs. 194.35 and Rs. 523.80 per quintal in channel I, II and III respectively, with accounted for 0.93, 4.32 and 10.85 per cent of the consumer's price.

Table 4: Price spread for the Chickpea in Auraiya district

S. No.	Particulars	Channel - I		Channel - II		Channel - III	
		(Rs/qt)	% share	(Rs/qt)	% share	(Rs/qt)	% share
1.	Net price received by producer	4291.20	(99.07)	4300.06	(95.44)	4310.43	(89.56)
2.	Expenditure incurred by producer	40.20	(0.93)	79.98	(1.78)	86.15	(1.79)
a.	Preparation charges	12.25	(0.29)	13.62	(0.30)	13.79	(0.29)
b.	Transportation cost	4.95	(0.12)	13.30	(0.30)	14.85	(0.31)
c.	Cost of gunny bags	22.00	(0.52)	22.41	(0.49)	25.05	(0.52)
d.	Loading Unloading	-		7.81	(0.17)	8.60	(0.18)
e.	Weighing Charges	-		9.50	(0.21)	9.91	(0.21)
f.	Marketing fees	-		5.78	(0.13)	5.88	(0.12)
g.	Losses	-		6.56	(0.15)	8.07	(0.17)
3.	Producer sale price/V.T. purchase price	4331.40	(100)	4380.04	(97.21)	4396.58	(91.34)
4.	Expenditure incurred by V.T.	-		55.57	(1.23)	60.24	(1.25)
a.	Grading and cleaning	-		10.89	(0.25)	11.77	(0.24)
b.	Market fees	-		4.85	(0.11)	5.94	(0.12)
c.	Loading Unloading	-		10.36	(0.23)	9.96	(0.21)
d.	Weighing charges	-		9.02	(0.20)	10.08	(0.21)
e.	Transportation cost	-		14.93	(0.33)	16.79	(0.35)
f.	Losses	-		5.52	(0.12)	5.70	(0.12)
5.	V.T. Net margin	-		70.00	(1.55)	80.00	(1.66)
6.	V.T. sale price/W.S. purchase price	-		-		4536.82	(94.26)
7.	Expenditure incurred by W.S.	-		-		55.95	(1.62)
a.	Storage charges	-		-		8.87	(0.18)
b.	Transportation cost	-		-		16.54	(0.34)
c.	Loading Unloading	-		-		10.66	(0.22)
d.	Market fees	-		-		5.90	(0.12)
e.	Weighing charges	-		-		9.14	(0.19)
f.	Losses	-		-		4.84	(0.10)
8.	W.S. Net margin	-		-		70.00	(1.45)
9.	W.S. sale price/R. purchase price	-		-		4662.77	(96.87)
10.	Expenditure incurred by R.	-		-		60.27	(1.25)
a.	Transportation cost	-		-		16.81	(0.35)
b.	Grading and cleaning	-		-		10.39	(0.22)
c.	Loading Unloading	-		-		10.89	(0.23)
d.	Marketing fees	-		-		6.57	(0.14)
e.	Weighing charges	-		-		9.69	(0.20)

f.	Losses	-		-		6.59	(0.14)
11.	Retailer's Net margin	-		-		90.00	(1.87)
12	Price spread	-		205.55	(4.56)	502.61	(10.44)
13.	Retailer's sale price/ V.T. sale price /Consumer's Purchase price	4331.40	(100)	4505.61	(100)	4813.04	(100)

(Figure in parenthesis show the per cent to corresponding consumer's price)

It revealed from the table4 that the producer's share in consumer price was highest (99.07) in channel-I followed by channel- II (95.44) and channel III (89.56).

Summary and Conclusion

Marketing of chickpea in the study area concerned, it estimated that 85.35 per cent of total yield of chickpea, was disposed through different marketing channels prevailing in the locality, family consumption purpose 1.43 per cent, seed 5.61 per cent, wages payment 7.59 per cent and distress sale 7.76 per cent of total production. Regarding disposal of marketed surplus of these crops it observed that maximum quantity 39.80% of chickpea was sold through channel I. Thus it concluded that channel I was more efficient and adopted by majority of the sample farmers, through its efficiency higher than the marketing channel II and channel III prevailing in the locality. It concluded from the results that producer's share in consumer's price were 99.07, 95.44 and 89.56 per cent in marketing of chickpea in channel I, II and III respectively, comparing the efficiency index of all three channel in chickpea marketing, it also concluded that channel I was most efficient then rest of two channel and highest quantity of marketed surplus was disposed through channel I.

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