Journal of Pharmacognosy and Phytochemistry

Available online at www.phytojournal.com

E-ISSN: 2278-4136
P-ISSN: 2349-8234
JPP 2018; SP1: 2186-2188

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Patterns of arrivals & price and constraints in marketing of chickpea in Madhya Pradesh

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Abstract
This study was conducted to determine the relationship between market arrivals and prices of chickpea considered the base year and current year from the year 2004-05 and 2014-15 related to market monthly arrivals and prices were collected from the secretary, M.P. State Agricultural Marketing Board, Jabalpur, Madhya Pradesh and to identify the problems faced by the farmers and traders in that particular regulated market the required Primary data were collected from the 50 selected farmers and 20 selected traders in the selected regulated market through personal interview schedule during the rabi season 2015. As regards to monthly arrivals of chickpea, it is observed that in the selected regulated market the maximum arrival of chickpea was found to be arrived 30.30 per cent in peak season i.e. March and April while, 60.99 and 8.71 per cent arrivals was found to arrived in the mid and lean season respectively. In the month of August only 6.4 per cent of total arrival of chickpea was found to be arrived in the selected regulated market and this was might be due to lack of all-weather road. The price of chickpea was found maximum in lean season that is 104 per cent more than the average price (Rs2936.25/q) followed by peak period (94%) less and mid-season (102%) more which proved the law of supply that when the supply is more in the market, the price of the product found to be low. The lack of market finance was found the main constraint of the farmer's followed by lack of facilities of insurances of produces, lack of grading facilities, lack of lodging facilities, inadequate weighing facilities, wastage and spoilage, delay in marketing process and problem of theft, delay in payment. The inadequate transport facilities were found the main constraint of the trader's followed by inadequate storage facilities and irregularity in electric supply and availability of quality grain. The regulated markets are lagging in providing ancillary infrastructural facilities and succeeded in increasing their arrivals and economic efficiency but with high instability (variability). There is still lot of scope for better performance of regulated markets provided more ancillary infrastructural facilities are created in the yards and some important market specific constraint faced by farmers, traders and managements of regulated markets are removal.

Keywords: Arrivals & Price, Constraints, Marketing, Chickpea, Madhya Pradesh

Introduction
The price and arrivals of any commodity are useful in understanding the present scenario and to forecast the future. This instability in prices of agriculture commodities is influenced by number of factors such as annual variation in production, low prices, elasticity of demand and seasonality of agriculture production. (Kalon and Tyagi, 1989) The information about behaviour of the prices in terms of price level, trend and fluctuation is the most important factor in determining competitiveness of commodity in the domestic and international level and do draw inferences for future prices and formulate the long term strategy on trade. (Chand Ramesh, 2002)

The price variations are common in agricultural commodity mainly because of seasonality in production and inter market arrivals and forced to sale cause decline in price and the intermediate functionaries reap the benefit of such large income (Asmatoddin *et al*., 2008). Hence, it is essential to understand the fluctuation in prices and arrivals of each commodity in given market so as to decide the period to maximize the net returns.

The arrivals during the post-harvest period were maximum in the markets with the passage of time, the arrivals proportionately decreased in lean period and increased in mid period. This was mainly due to lack of withholding capacity of the producers on account of poor financial position and lack of storage facilities with them. The finding in all the markets showed that the producer-sellers marketing decision was not much directed by price differentials in one lean period to the next and difference over post-harvest. Even though there have been considerable increase in the lean to lean period prices and post-harvest to lean period and mid period prices, but it did not affect the marketing pattern of chickpea with the farmers in a significant manner, because they could not withhold the producer for sale in lean and mid lean months due to pressing financial needs and lack of storage facilities (Nandlal and Hasija 1995).

Foremost problem of farmers is to determine, as accurately as possible each year before sowing of crop the magnitude of demand, supply and price for each product which is expected at the time it is ready for sale in the market. In other words, after farmers have made their decisions as to what to produce and product are ready for market. The problem remains of selling at a time in the place and that will bring in the highest net returns. Production is activity involved in getting farm product to consumers in the volume and form in which they want. Thus, a net return from the production to a great extent depends on the market price (which is fluctuated by the respective demand and supply) that farmer receives. Lack of storage facility followed by poor quality of produce due to poor retting facility, variation in quality of production, transportation bottlenecks, absence of organizational market, marketing intelligence and market prices are the major marketing problems face by the farmers (Shrivastava, 1998).

This study showed the variation in farm products arrivals and prices in different seasons and relative impact of arrival on price. Thus, on the basis of price fluctuation trend, the cultivators can make decision for proposal disposal of their farm products by anticipating future prices based on the prices, which prevailed in the past. This information would help the farmers in ensuring remunerative market prices. Therefore, it is necessary to study market arrivals and their respective price behaviour which forms an essential requirement for the policy formation.

This study was conducted to determine the relationship between market arrivals and prices of chickpea considered the base year and current year from the year 2004-05 and 2014-15 related to market monthly arrivals and prices were collected from the secretary, M.P. State Agricultural Marketing Board, Jabalpur, Madhya Pradesh and to identify the problems faced by the farmers and traders in that particular regulated market the required Primary data were collected from the 50 selected farmers and 20 selected traders in the selected regulated market through personal interview schedule during the rabi season 2015.

RESULTS

The relationship of market arrivals and price and identify the problems faced by the farmers and traders in that particular regulated market were analyzed from the collected data for chickpea and presented in these subheads.

Relationship between arrivals and prices

The relationship of market arrivals and price of chickpea have been analyzed and it is observed that the arrival of chickpea increases from 98065 q per year (2005-06) to 321856 q per year (2014-15) during the last ten years. (Table 1) The arrivals of chickpea increased by 228 per cent during the period under study with the annual fluctuation of 47.17 per cent (89029.2q) The data confirm that absolute change and relative change was responding positive with just double arrival change in annual and monthly basis which is remarkable of chickpea the producers and traders with regulated market structure of chickpea the finding is conformity with the finding of Upendra and Chary (1996).

The model price of chickpea increase from Rs.1619 per q (2005-06) to Rs.2838 per q (2014-15) showed at relatively change of 75 per cent while the maximum and minimum price of chickpea found to be increase, respectively of 65 per cent and 74 per cent.

Table 1: Relationship between Annual market arrivals (q) and prices (Rs/q) of Chickpea

Years	Arrivals		Annual prices of Chickpea		
	Total	Monthly	Modal	Minimum	Maximum
2005-06	98065	8172	1619	1326	2033
2006-07	117104	9759	2340	1893	2554
2007-08	120175	10015	2135	1658	2363
2008-09	91290	7608	1034	627	1338
2009-10	175035	14586	2014	1276	2279
2010-11	157342	13112	2174	1754	2418
2011-12	194922	16244	2922	2163	3554
2012-13	253242	21104	3913	3009	4988
2013-14	357878	29823	2838	2390	3247
2014-15	321856	26821	2838	2305	3357
Average	188691	15724	2383.3	1840.2	2813.2
Standard deviation	89023	7418.6	755.15	639.32	962.07
Coefficient of variation (%)	47.17	47.17	31.68	34.74	34.19
Regression coefficient	0.05	2352.6	177.14	146.27	222.27
TN AV G up to 2008	111781	9315.1	1625.6	1625.7	2316.7
TN AV G up to 2015	310992	25916	3199.1	2568.2	3863.8
Absolute change	223791	18649	1219	979	1324
Relative change (%)	228	228	75	74	65
Correlation coefficient	0.70				

The trend of price also shows increasing trend with a magnitude of Rs.222.27 per q (maximum price), Rs.177.14 per q (model price) and Rs.146.27 per q (minimum price) per year during the period under study.

As regards to monthly arrivals of chickpea, it is observed that maximum arrival of chickpea was found to be arrived in the months of March (13.8%), April (16.5%), May (11.7%) and in June (7.4%) to the total arrivals (92876 q) in regulated market, Jabalpur in the month of August only 6.2 per cent of total arrival of chickpea was found to be arrived in the market and this was might be due to lack of all-weather road. (Table 2) It is also found that 30.3 per cent of the arrival of chickpea was arrived in the peak season (March-April) while 60.4 per cent to 9.3 per cent was found to arrive in the mid and lean season respectively. The price of chickpea was found to be maximum in lean season that is 104 per cent more than the average price (Rs2936.25/q) followed by peak period (94%) less and mid-season (102%) more which proved the law of supply that when the supply is more in the market, the price of the product found to be low.

The maximum arrivals of chickpea were maximum during March and April in 30.3 per cent of the total arrivals of chickpea were transacted in the market the coefficient of variation of average monthly arrivals 43.3 per cent showing average variation of arrivals of chickpea during different months of the years in the market during September to January the prices of chickpea were higher as compared to average annual model prices. Which indicates the fact that prices are governed supply for the commodity while supply control the price as it happens for industrial product. Finding is conformity with the finding of Kiradiya (2000).

Table 2: Relationship between monthly arrivals (q) and prices (Rs/q) of chickpea

Months	Arrivals	% to total arrivals	Modal prices	Monthly/seasonal price indices
February	8086	4.30	2920	103
March	25934	13.79	3061	99
April	31052	16.51	3600	88
May	21995	11.70	3600	89
Jun	13896	7.39	2999	90
July	14672	7.80	2811	90
August	11649	6.19	2551	97
September	13887	7.38	2851	108
October	14879	7.91	3011	108
November	13707	7.29	2699	109
December	10017	5.33	2527	107
January	8289	4.41	2605	105
Total	188062.4	100.00	35235	1200
Mean	15671.8	8.97	2936.25	100
Standard deviation	6793.81	3.75	342.94	49
Coefficient of Variation	43.35	43.31	11.67	49
Peak season	56985	30.30	3331	94
Mid-season	114702	64.40	2881	102
Lean season	16375	9.30	2762	104
Regression coefficient	0.40			
Correlation coefficient	0.70			

The monthly arrivals and prices were found maximum arrivals in April month 31052 q. and minimum arrivals in February month 8086 q. and maximum modal price in April month Rs. 3600 per q. and minimum modal price in December month Rs. 2527 per q. during the last ten years. These might be due to comprehensive interaction of production technology market structure, demand and supply with fair price policy of Government and consumer satisfaction.

Marketing Constraints

The main constraints perceived by the majority of the farmers were found to be delay in marketing process and payment (68%) followed by wastage/ spoilage (65%), lack of lodging/ boarding facilities (54%), shortage of labour in marketing activities (50%), inadequate information of market prices (45%), unauthorized deduction (42%), malpractices in weighing (34%), availability of market finance(30%), lack of facilities of insurances of process (25%), problem of theft (24%) and lack of grading facilities (17) respectively in Jabalpur regulated market.

Table 3: Constraints face by the farmers and traders in the regulated market (%)

S.No.	Particulars	Per cent
Farmer		
1	Shortage of labour in marketing activities	50
2	Delay in marketing process and payment	68
3	Wastage/ spoilage	65
4	Problem of theft	24
5	Lack of grading facilities	17
6	Unauthorized deduction	42
7	Lack of lodging/ boarding facilities	54
8	Malpractices in weighing	34
9	Availability of market finance	30
10	Lack of facilities of insurances of process	25
11	Inadequate information of market prices	45
Trader		
1	Irregularity in electricity supply	20
2	Inadequate transport facilities	28
3	Inadequate storage facilities	25
4	Availability of quality grain	20

The constraints reported by the traders were found to be inadequate transport facilities (28%) followed by inadequate storage facilities (25%), irregularity in electric supply (20%) and Availability of quality grain (20%) respectively. The results of marketing constraints analysis clear shows that the major constrains were related to transport and storage facilities, grading, input supply etc and mal practices prevailing in the marketing of these farm products.

Conclusion

There is need for uplifted the market arrivals with the increased in prices of the products as it is cleared from the study that price, plays an important role for increasing arrivals of the products and significantly affected the arrivals of the products. The concentration of arrivals of products were less in the rain season periods hence, it is suggested that there is a necessity of all weather roads from the village to regulated market. Affords can also be follow up for regular cleaning of sheds, proper arrangement for loading of the produce, parking facilities of the produces in the regulated market. Transportation facilities to the market yards, regular water and electric supply and improve the timely payment system in the regulated market. Further, the cover shade facilities are also required to protect the produces in monsoon.

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