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RESEARCH PAPER

Seasonal Arrival and Price Behaviour of Soybean in Amravati District of Maharashtra

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ABSTRACT

Soybean cultivation in Amravati district has grown significantly as soybean has been labeled as major crop in the district. Farmers sell their produce majority in local markets situated at the Taluka places. The economy of Amravati farmers did not allow them to sell their produce at Ahmednagar, Nandurbar, latur, Kolhapur, Jalgaon markets . The issue of market arrival and prices needs to be handled critically because the arrival indices for soybean in selected APMC's are maximum during the months of October-December every year, resulting in price indices substantially below 100. As such farmers are not benefited much by soybean cultivation. The price behaviour of soybean also indicated exactly identical picture where in the lowest prices with higher arrival. The price indices in selected APMC's were above 100 during the months of February-May every year. However during peak arrival prices were 62%of the price index indicating farmers are substantially at loss selling their produce immediately after harvest. This cycle needs to be broken such that Amravati district farmers will get optimum price for their produce.

HIGHLIGHTS

- Soybean cultivation is increased in study area and it is now an important crop in Amravati district
- Farmer sell their produce mainly in local markets at taluka place.
- When soybean arrivals in market are high then prices were low. So farmer should sell their produce during Ferbuary-March when price stability was observed in markets.

Keywords: Soybean cultivation , local markets, taluka places, e-choupal, storage facilities

Vidarbha region as the eastern part of Maharashtra state is predominantly known as *Kharif* prone region. The *kharif* season cultivation is dominated by soybean followed by cotton. Therefore, economy in the region is moving around the soybean production. Vidharbha region is popularly known as backward region in the state and hence markets are not well developed. Hence the markets at the taluka places are the main markets for selling produce for farmers (Yogisha, 2005). Amravati district is adjoining to Madhya Pradesh and hence knows as the soybean producing district. Soybean is mostly purchased by businessmen in the district as well as from Madhya Pradesh.

The main markets for soybean in the Maharashtra are situated in Ahmednagar district which are 500 to 600 km from the farmers places. As such farmers are compelled to sell their produce in taluka regions only considering their source of transport and need (Jadhav *et al.* 2011). As the soybean produce in Amravati district is sold in majority at taluka markets only. Resulting in disparities in prices with increase in arrivals, limited businessman shoe their

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interest in purchase. Small and medium farmers could not transport their produce to long distance markets, hence fetching the problem of prices (Benke *et al.* 2010). The economy of Amravati district farmers did not allow to retain their produce for harvesting maximum prices. As such this viscous cycle of arrival and prices could not breakup by Amravati district farmers (Bacha and Gemeda, 2002).

In view of it the researcher feels to study the picture of soybean arrival and prices to suggest some remedies, so that farm producers will be benefited by receiving maximum prices. The another facilities like storage, grading, market intelligence, efficient transport or the bank facilities of the loan against the produce are rarely available. Amravati district farmers are unsuccessful in establishing the processing until for soybean. So that, cake and oil can be extracted, as such farmers are selling their produce at lower prices sometimes they are at loss also. The ICT launched e-choupal during 2000 for supply chain management. However, Amravati district farmers are not much benefitted out of it. Hence, the researcher made an attempt to analyze the present situation in light of following objectives:

(i) To study seasonal variations in markets arrival in the district .

(ii) To study the price variations for soybean in Amravati district.

METHODOLOGY

Soybean occupies the first position in cropping pattern of Amravati district with its dual benefit as pulse and oil seed crop. Protein extraction from soybean has significantly transform Vidarbha agriculture since 1980s presently the area under soybean is about 2,91,600 hectares. The main market is at the district headquarters and all tehsil places. Government policies for soybean prices are not much beneficial to Vidarbha farmers for achieving maximum profit through soybean cultivation. As such the technologies developed have benefited farmers in achieving highest yield but the prices declared by the state government and ICT could not stabilize soybean prices.

The soybean productivity in the district ranges between 7 to 12 quintals per hectare with production of 161100 tonnes during 2022-2023. The major APMC's included in the study were Amravati, Achalpur, Chandur bazaar, Daryapur, Morshi, Warud and Anjangaon Surji. The data recorded in the selected APMC's was used to analyze the arrival and the price of the crop. The seasonal variation in the prices and arrival were worked out using monthly average method for data analysis.

RESULTS AND DISCUSSION

Seasonal Variation in Soybean Arrival

The variation indicate the deviations in original data for a short run fluctuations in the series. The indices worked out for seasons may be used to study the variations in the data. These indices are centered around 100 to indicate the variations in percent. The data collected for study period on soybean arrival in selected APMC was analyzed for seasonal variations. The seasonal variations are also known as periodic movements which occur frequently in the data and have their origin in the nature of year under. The variations are repeated during the period of 12 month which are easily predictable. The term seasonal variations indicates relation with the season of the year which are of periodic nature and repeated cyclically with a specific duration of time.

In the present study the arrival and the prices data from selected APMC's for monthly basis which constitutes the important part of time series to indicate seasonal pattern in the data. It may further help intelligental planning or scheduling of soybean sale for maximum prices. The behaviour of arrival in the market in relation to low prices is generally observed when the higher values of arrival are observed. It is the policy of purchasers, as such researchers calculated soybean arrival over the study period using monthly data and these averages are used to find average of averages. Considering the total arrival as 100 percent with the annual sum of indices for arrival as 1200.

The monthly indices for arrival from April to March for selected APMC's are presented in the table 1.

Ongoing through the table it is observes that the minimum indices of arrival were observed during March and April. The indices for month of April were 23.27% to 77.86% in Daryapur and Warud APMC. The seasonal pattern of indices indicated that the indices were minimum during May to the tune of 28.32%in Achalpur and maximum 137.36%

Table 1: Seasonal indices for soybean arrival in selected APMC's

Months	Amravati	Achalpur	Chandur bazar	Daryapur	Morshi	Warud	Anjangaon Surji
April	52.21	30.39	77.11	23.27	42.39	77.86	63.11
May	89.08	28.32	76.25	20.50	137.36	68.26	37.59
June	46.26	22.20	109.93	32.00	106.48	66.86	30.46
July	32.98	20.55	77.66	15.60	18.24	49.48	31.16
August	31.23	19.37	93.50	20.05	74.42	58.20	40.17
September	26.25	41.31	92.51	24.86	27.93	77.20	54.36
October	213.7	147.40	97.66	246.83	145.87	104.32	119.54
November	233	241.63	264.62	346.63	196.29	215.51	377.14
December	192.7	289.98	85.60	193.52	74.38	219.16	154.97
January	114.8	173.67	76.74	151.08	161.83	144.75	102.75
February	79.87	118.78	64.80	80.73	171.11	62.45	73.01
March	57.94	66.35	61.59	44.85	143.64	55.89	115.67

in Morshi APMC. The scenario of arrival during June indicated the Achalpur indices were lower to the tune of 22.20% where Chandur Bazar indices were higher 109.93%. the scenario of July indicated that Daryapur APMC index was minimum 50.60% while Chandur Bazar was 77.66%. During August the index picture was 19.37% in Achalpur and 93.5% in Chandur Bazar. The indices crossed 100 in all the APMC'S during October, November months, where in arrivals were maximum. The figures of October were 97.66% in Chandur Bazar 246.83% in daryapur while during November 196.29% in Morshi and 346.63% in Daryapur.

It further continued in December and January, also during February and March the indices started declining. So that they were 62.45% and 44.85%. The above behaviour indicates that the peak arrival in soybean is between October-December every year where indices were almost above 100 during October –December every year while minimum during February-May.

Seasonal Variations in Soybean Prices

The soybean prices have a critical concern with farmers economy. As soybean cultivation is the richest source of farmers income in the district. The economist dedicated significantly in forecasting trends in soybean prices in the interest of farmers benefit such that farmers should get maximum prices in the soybean cultivation. The analysis if data on the prices focuses on behavioural patterns of soybean prices in Amravati district. Valuable insight will help the farmers for selling their produce at maximum prices. As such the study on seasonal variations in soybean prices will help in empowering farmers for selling their produce at highest prices. The knowledge to farmers on seasonal prices fluctuations will help in decision making for selling produce. The seasonal behaviour analysis will enable farmers implementing the policy of sell for fair returns. The peak prices cannot be overstated. Hence , the farmers need to seek the optimistic price for earning benefit. The price indices above 100 will definitely benefit farmers in receiving higher benefit in soybean cultivation. The data collected was analyzed for reaching the conclusion of price behaviour in light of the arrivals of soybean.

The monthly indices for soybean prices from April to March for selected APMC's are presented in table 2.

The indices present in the table indicates that price fluctuations were observed across the APMC's in Amravati district. During April the price indices were in the range 89.85% to 106%in Morshi and Amravati APMC's indicating a moderate level of price variation in the period. During May the scenario was 86.91%in Anjangaon Surji and 107.70% in Daryapur. Further fluctuations were observed during June 76.04%in Warud and 102.89% in Daryapur APMC. The variability across the APMC's was 92.24% in Morshi and 105.70% in Amravati APMC.

General upward trend was observed in the prices during August and September which was mostly

Table 2: Seasonal indices for soybean prices in selected APMC's

Months	Amravati	Achalpur	Chandur bazar	Daryapur	Morshi	Warud	Anjangaon Surji
April	106	98.60	100.24	102.72	89.85	102.65	95.52
May	104.9	98.18	101.08	107.70	95.67	93.30	86.91
June	101.7	97.85	99.77	102.89	96.73	76.04	100.92
July	105.7	97.71	104.05	105.56	92.24	102.91	110.36
August	105.6	97.99	103.91	103.85	102.20	100.99	109.76
September	97.28	98.64	98.82	95.55	103.07	102.42	103.08
October	86.3	99.47	90.08	86.88	96.56	97.77	95.06
November	93.53	100.44	91.58	92.93	99.81	97.82	94.26
December	95.81	101.55	99.15	99.45	100.62	100.28	98.60
January	100.7	102.42	102.42	98.26	105.85	105.61	99.84
February	99.61	103.46	104.75	101.69	108.65	109.46	101.04
March	102.8	103.63	104.08	102.45	108.68	110.68	104.59

100 or above it. November onwards majorly the price indices were below 100 in almost all the APMC's till January. During February and March price indices were 99.61% to 109.46% and 102.45% to 110.68% respectively. The overall price analysis indicated that seasonal variation trends in soybean prices were more effective and favourable to the farmers during February –March. Therefore farmers should take benefit of this by selling their produce during these months.

CONCLUSION

The soybean arrival analysis indicated that during peak harvest month of October-December, the arrival were highest and above 100. Conversely from February-May the arrival indices were below 100. This cyclic pattern underscores the seasonal nature of soybean cultivation and its impact on market dynamics. The price analysis indicated that the prices were majoritily above 100 or nearby 100 during February and March with narrow band of variation which is well for farmer participation in soybean sell. Farmers can confidently predict to sell their produce during these months only. The analysis of soybean arrival pricing pattern and various influencing factors within the market ecosystem are dynamics in price optimization for the farmers.

REFERENCES

Bacha, D. and Gemeda, A. 2002. Maize marketing in Ethiopia: A review. Mandefro Nigussie Tanner D. and Twumasi S. (ed.), 117-123.

Benke, S.R., Jagtap, M.D., Nichit, M.B. and Ramteke, S.H. 2010. An economic analysis of soybean arrivals and price behavior in Akola district of Maharashtra. *International Journal of Commerce and Business Management*, **3**(1): 57-60.

Bodade, V.M., Bhople, A.A and Deshmukh, R.G. 2017. Arrival and price behaviour of wheat in major markets of Madhya Pradesh. *Int. Jr. of App. & Pure Sci. & Agril.*, pp. 94-97.

Chaudhari, D.J. and Tingre, A.S. 2012. Pigeon pea (*Cajanus cajan* L.) price movement across major markets of India. *Journal of Food Legumes*, **25**(4): 344-347.

Dave, V.C. and Tarpara, V.D. 2017. A study of price behaviour of major pulses in Gujrat state. *Int. Jr. of Agril. Sci.*, **8**(26): 1549-1556.

Govardhana Rao G., Solomonrajupaul, K. and Dayakar, G. 2014. Seasonal variations and forecasting in wholesale prices of Rice in Guntur district of Andhra Pradesh. *Int. Jr. of Dev. Res.*, **4**(11): 2418-2422.

Jadhav, M.C., Ulemale, D.H. and Borkar, A.N. 2011. Trends and seasonal variation in arrivals and prices of soybean in Amravati district. *International Research Journal of Agricultural Economics and Statistics*, **2**(2): 232-239.

Kumbhar, P.M. 2019. Price forecasting and Seasonality of Soybean in Amravati District of Maharashtra India. *Current Agriculture Research Journal*, **7**(3): 417.

More, S.S. and Katkade, J.L. 2016. Seasonality and Volatility in arrivals and prices of oilseeds in Marathwada region of Maharashtra state. *Indian Journal of Agricultural Research*, **50**(1): 8- 14.

Murugananthi, D., Ajjan, N., Sivakumar, S.D. and K. Mani. 2014. Price behaviour and market integration in turmeric - evidences from empirical analysis. *Madras Agricultural Journal*, **101**(1/3): 74-78.

Patil, V.K. and Tingre, A.S. 2015. Soybean price movement across major markets of Maharashtra. *International Research Journal of Agricultural Economics and Statistics*, **6**(1): 67-73.

Sahoo, S.P. and Singh, R. 2017. Trend and seasonality in prices and arrivals of Bengal Gram. *Indian Journal of Economics and Development*, **5**(7): 1-5.

Sharma, H. and Burak, S.S. 2015. A study of seasonal price behavior and market concentration of Maize in Rajasthan. *Int. Jr. of Agri. Econ & Stat.*, **6**(2): 282-286.

Thakar, K.P., Singh, S.R., Soumya, C. and Chaudhari, D.D. 2017. An economic analysis of price movement of major pulse crops of north Gujarat. *Int. Jr. of Agril. Sci*., **9**(30): 4422-4426.

Vasudev, S. 2015. A study on the price instability and price behavior of Rice in Andhra Pradesh. *Ind. Jr. of Agril. Mktg.*, **29**(3): 26-32.

Verma, D.K., Suman, J., Patil, P., Singh, A. and Thanuja, P. 2018. Seasonal pattern and change in prices of soybean in Southern Rajasthan. *Journal of Pharmacognosy and Phytochemistry*, **7**(4): 1044-1048.

Wankhade, R.N., Dhanwate, S.P., Bhende, A.M. and Malthane, G.B. 2010. Marketing of Soybean in Amravati district of Maharashtra. *International Journal of Applied Agricultural Research*, **5**(2): 215-220.

Yogisha. 2005. Market integration for major agricultural commodities in Kolar district. *Indian J. Agril. Econ.*, **41**(04): 225-229.