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Price analysis of soyabean in agricultural produce market committee Ahmednagar Maharashtra

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Abstract
Nine oilseeds are the primary source of vegetable oils in the country, which are largely grown under rainfed condition over an area of about 26 million ha. Among these, soybean (34%), groundnut (27%), rapeseed & mustard (27%) contributes to more than 88% of total oilseeds production and more than 80 per cent of vegetable oil with major share of mustard (35%), soybean (23%) and groundnut (25%). The present study was undertaken the Price Analysis of oilseeds in APMC, Ahmednagar Maharashtra. The secondary data of arrivals and prices of major oilseeds (soyabean) was collected from APMC Ahmednagar (10 years from the years 2009-10 to 2017-18). In overall level, an arrival of soyabean was increased by 4.93 per cent and prices were increased by 9.78 per cent at overall level. The price index for the month of May was the highest 85.47 per cent followed by August 85.47 per cent. The correlation coefficients of soyabean was negative during the whole year indicating that increased arrivals resulted into decreased in prices; in this case the phenomenon of inverse relationship is proved.

Keywords: Price analysis, soyabean

Introduction
On the oilseeds map of the world, India occupies a prominent position, both with regard to acreage and production. India is the 4th largest oil seed producing economy in the world after USA, China and Brazil, which contributes about 10 per cent of the world oilseeds production, 6-7 per cent of the global production of vegetable oil, and nearly 7 per cent of protein meal. Although India has 20.8 per cent of the world's area under oilseed crops, it accounts for about 10 per cent of global production. This is because of low productivity of oilseed crops and year to year fluctuations in production in India.

A wide range of oilseed crops are produced in different agro-climatic regions of the country. Three main oilseeds namely, groundnut, soybean, and rapeseed-mustard accounted for over 88 per cent of total oilseeds output. Soybean is the most important crop grown mainly in Madhya Pradesh, Maharashtra, and Rajasthan accounting for more than 95 per cent of total production. The second most important oilseed crop is rapeseed-mustard mainly grown in Rajasthan, Madhya Pradesh, Haryana, Uttar Pradesh, West Bengal and Gujarat with an estimated share of about 93 per cent in total production in the country. Groundnut, which was the largest oilseed crop in the 1990s, lost its share and is now third important oilseed and grown in Gujarat, Andhra Pradesh, Tamil Nadu, Rajasthan, Karnataka and Maharashtra with a combined share of about 91 per cent in total groundnut production in the country. Oilseeds are not high yielding crops in comparison with cereals and other competing crops.

Moreover, compared with traditional cereals, these crops are generally more risky because oilseeds are mostly grown under rainfed conditions, and market price support is also not very effective. However, India's it is important oilseed crop, occupying an area of 2.47 million hectares with total production of 3.06 million tonnes and productivity of 1195 kg/ ha (Anonymous, 2017-18). Andhra Pradesh (groundnut) and Gujarat (groundnut), Haryana(Mustard), Karnataka (G. nut), M.P (Soybean), Maharashtra(Soybean), Rajasthan (Mustard & Soybean), Tamil Nadu (G. nut), U.P (Mustard), West Bengal(Mustard) contributing more than 95 per cent of total oilseed production in the country.

Maharashtra accounts for 17.03 per cent of India's total oilseeds area (2 nd rank) and 13.81 per cent of production of oilseeds after Madhya Pradesh and Rajasthan. The area and production of oilseeds in the state is 4.20 million hectare and 4.2 million ton. respectively, while productivity is 1006 kg. / during the year 2017-18. The major oilseeds growing districts of Maharashtra are, Latur, Osmanabad, Buldhana, Nanded, Parbhani, Hingoli, Washim, Amravati and Wardha, Therefore, the present study is made with an attempt to study Price Analysis of oilseeds in APMC, Ahmednagar Maharashtra.

Materials and Methods

The present study was undertaken of 10 years from the years 2009-10 to 2017-18 of Ahmednagar district. The secondary data of arrivals and prices of soyabean was collected from APMC Ahmednagar. The collected data were further compiled and analysed keeping in view the objectives of the study.

I. Trends in Arrival and Prices

The growth rate of arrivals and prices of soyabean was estimated by using semi log trend equation For Period I (2009-2013), Period II (2014-2018) and Overall (2009-2018)

$Ya = ab^t$ and $Yp = ab^t$

CGR (%) = (antilog b – 1) x 100

Where,

Ya and Yp = Monthly arrivals and prices, respectively

a = Constant, b = Trend Coefficient, t = Time Period

II. Seasonal indices of arrivals and prices of soyabean

The seasonal indices of soyabean were worked out by using the simple average method.

III. Variability in Arrivals and Prices

CV= SD/Mean x 100

Where,

CV= Coefficient of variation, SD= Standard Deviation, Mean= $\sum X/N$,

X =Monthly arrivals and prices b,N= Number of years

Results and Discussion

Compound Annual growth rates of arrivals and prices of Soyabean

Annual compound growth rate of arrivals and prices of soyabean were estimated and presented in Table 1. It can be revealed that, in period I (2009 to 2013), the arrivals of soyabean was declined by 7.24 per cent and in period II (2014 to 2018), it was increased by 2.78 per cent.

In case of prices, in period I (2009 to 2013), the prices were significantly increased by 12.65 per cent and in period II (2014 to 2013), it was increased by 0.10 per cent, but turned out to be non-significant.

Table 1: Annual compound growth rates of Arrivals and Prices of Soyabean in APMC Ahmednagar

Sr. No.	Periods	Arrival	Prices
1	Period I (2009-2013)	-7.24	12.65 *
2	Period II (2014-2018)	2.78	0.10
3	Overall (2009-2018)	4.93	9.78 **

*,**, and *** indicates significant at 10,5 and 1 per cent level of significance

Seasonal Indices of arrival and prices of Soyabean

Data on arrivals and prices of soyabean was analysed to ten years (2008-09 to 2017-18) estimate the seasonal indices and are presented in Table 2. The result of analysis revealed that, the peak arrivals of soyabean were concentrated during the months of October to December. The indices of arrivals were the lowest during the month of August (2.59 per cent).

Table 2: Seasonal Indices of Arrivals and Prices of Soyabean in APMC, Ahmednagar

Month	Arrivals		Prices	
	Mean	Seasonal Indices	Mean	Seasonal Indices
January	630.10	40.82	2728.45	77.39
February	357.00	23.13	2730.30	77.44
March	166.80	10.81	2794.05	79.25
April	97.40	6.31	2913.50	82.64
May	69.20	4.48	3013.40	85.47
June	52.70	3.41	2918.50	82.78
July	67.90	4.40	2907.00	82.45
August	40.00	2.59	2936.95	83.30
September	854.50	55.36	2889.25	81.95
October	10729.90	695.18	2664.30	75.57
November	3758.80	243.53	2694.70	76.43
December	1912.20	123.89	2769.00	78.54

The seasonal indices regarding prices revealed that, there were less fluctuation in prices as it is ranged between 75.47 to 85.47 per cent. The price index for the month of May was the highest 85.47 per cent followed by August 83.30 per cent.

It can be concluded that the, seasonal indices for prices was more stable than that of arrivals during the study period.

Correlation between arrivals and prices of soyaben in APMC, Ahmednagar

Co-relation indicates the relationship between market arrivals and prices of soyabean. The phenomenon of inverse relationship between arrivals and prices is well known. The degree of relationship between market arrivals and prices of soyabean was studied for 12 months over the period from 2008-09 to 2017-18 by computing correlation coefficient. The results of correlation analysis are depicted in table 3.

Table 3: Correlation between arrivals and prices of Soyabean in APMC, Ahmednagar

Months	Soyabean
January -June	-0.82
July-Dec	-0.84
Annual	-0.63

It can be revealed from table that, there exist negative relationship between market arrivals and prices of soyabean in APMC, Ahmednagar for a year. This implies that, arrivals and prices of soybean have moved in opposite direction in APMC,

Ahmednagar during the study period. The correlation coefficients were negative during the whole year indicating that increased arrivals resulted into decreased in prices.

Conclusion

The higher prices of soyabean were observed during the months of May to August. Therefore, farmers are advised to schedule the sell of soyabean in Ahmednagar APMC during the above period to get the better prices for the produce.

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