

RESEARCH PAPER

# Trends in arrivals and prices of potato in Pune market

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## ABSTRACT

The market information relating to market prices and arrivals over a period of time helps the farmers to take decision about the future production pattern and sale of agricultural commodities in the market during specific period. For estimating trends in arrivals and prices of potato the exponential type function was fitted to data. The result revealed that, the ACGR for arrivals and prices of potato in the Pune market for the period from 2003-04 to 2012-13 were exhibited to 2.14 and 8.51 per cent per annum, respectively. The ACGR for arrivals and prices was found positive and significant. Seasonal indices of arrivals and prices of potato noticed highest during the month of October (129.58). The lowest indices of arrivals were noticed in the month of March (76.75), because this period was lean period. In case of prices indices was noticed highest in the month of November (121.82). While lowest in March (74.06) followed by Feb., January and April.

**KEY WORDS :** Growth rates, Seasonal indices, Arrivals, Prices

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Potato popularly known as ‘The king of vegetables’. It has emerged as a fourth most important food crop in India after rice, wheat and maize. Indian vegetable basket is incomplete without potato. Potato is native of the High Andes in South America. It occupies the largest area under any single vegetable in the world. Potato belongs to the family Solanaceae, Genus Solanum and Species Tuberosum. Potato (*Solanum tuberosum* L.) is one of the important tuber crops in India. India is the fourth largest potato producing countries in the world which include USSR, China, Poland and USA. In India,

potato is being grown on about 87.76 lakh hectares of land. It is grown in almost all the states under diverse climatic conditions although not all the states are self-sufficient in terms of production. Uttar Pradesh, West Bengal and Bihar are the largest producers and account for nearly 75 per cent of area and 82 per cent of production. In Maharashtra state, potato is one of the major cash crops, grown in Pune and Satara districts and account for 87 per cent of area and 72 per cent of production. Total area under potato in Maharashtra was 0.18 lakh hectares, with production 3.60 lakh MT. In Maharashtra, Pune has an area of about 9649 hectare of land under potato with 1.72 lakh MT production followed by Satara district with 4805 hectares area and production of 0.49 lakh MT. In Pune district potato crop is extensively grown in Ambegaon and Khed tehsil as the principal cash crop. Area under potato in Ambegaon tehsil is 1969 ha (20.40 %) and Khed tehsil 1500 ha

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(15.54 %).

**Objective :**

To study the trends in arrivals and prices of potato in Pune market.

**METHODOLOGY**

**Analysis of data :**

The compound growth rates of arrivals and prices of potato was worked out by using an exponential form of equation. The collected data were compiled and analyzed with a tabular method of analysis. Simple statistical tools such as arithmetical averages and percentages were worked out for the purpose of interpretation of results.

**Trends in arrivals and prices of potato :**

The time series data pertaining to arrivals and prices of potato covering the period of ten years (2003-2004 to 2012-2013) were collected from district Statistical office, Pune. The compound growth rates of arrivals and prices of potato was worked out by using an exponential form of equation as below :

$$Y = ab^t$$

where,

Y = Arrivals/ prices

a = Constant

b = Trend co-efficient

t = Time period.

Annual compound growth rate (CGR) in percentage

is calculated as :

$$ACGR (\%) = (\text{Anti log of } b - 1) \times 100$$

**ANALYSIS AND DISCUSSION**

The findings of the present study as well as relevant discussion have been summarized under the following heads :

**Arrivals and prices of potato :**

The annual compound growth rates of arrivals and prices of potato of Pune market in the year 2003-04 to 2012-13 were estimated by fitting an exponential type of equation and the results have been presented in Table 1.

**Arrivals of potato :**

The annual compound growth rates of arrivals in case of potato (2.14%) were found positive and significant at 10 per cent and this indicated that there was increase in the annual arrivals by 2.14 per cent per annum in APMC, Pune.

**Prices of potato :**

The annual compound growth rate of prices in case of potato (8.51%) was positive growth rate and significant at 1 per cent level, indicating thereby, the prices of potato were significant increasing by 8.51 per cent per annum.

It clearly shows that, the prices of potato increases annually, therefore, prices more significantly impact on arrivals of potatoes.

Table 1 : Arrivals and prices of potato in Pune market(2003-04 to 2012-13)				
Year	Arrivals (Tones)		Prices (Rs.)	
2003-04	73178.50		553.33	
2004-05	77110.33		570.83	
2005-06	87388.92		816.66	
2006-07	86278.58		854.16	
2007-08	95413.00		597.91	
2008-09	81465.17		1087.50	
2009-10	90459.75		772.91	
2010-11	97076.58		866.66	
2011-12	76692.08		1202.08	
2012-13	102543.3		1297.16	
	CGR (%)	't' value	CGR (%)	't' value
	2.14*	1.98	8.51***	3.97

\*, \*\* and \*\*\* indicate significance of values at P=0.1, 0.05 and 0.01, respectively

**Table 2 : Seasonal indices of potato in Pune market**

Sr. No.	Months	Pune market	
		Arrivals	Prices
1.	January	110.07	81.67
2.	February	82.24	74.13
3.	March	76.75	74.07
4.	April	76.88	86.72
5.	May	102.55	104.01
6.	June	96.11	106.15
7.	July	105.85	111.66
8.	August	97.24	109.46
9.	September	111.07	107.60
10.	October	129.58	111.27
11.	November	101.31	121.82
12.	December	110.18	111.37

### Seasonal indices of arrivals and prices of potato :

The seasonal indices of monthly arrivals and prices of potato were worked out by using simple average method.

It shows that the large fluctuation in the arrivals is observed in the 10 year period of data. The seasonal indices of prices of potato are observed good condition during the period of January to December. The seasonal indices of potato arrivals and prices in Pune during 2003 to 2013 and the results are depicted in Table 2.

The results of seasonal indices of arrivals and prices of potato indicated that for Pune market, arrivals were noticed highest during the month of October (129.58) followed by September and December. It means that the market was flooded with potato from September to January. The lowest indices of arrivals were noticed in the month of March (76.75). The indices of lower arrivals were from February to August except May and July. In case of price indices was noticed highest in the month of November (121.82). The higher prices indices were noticed during May to December. While lowest in March (74.06) followed by Feb, January and April.

The monthly arrivals and prices of potato in Pune market shows great fluctuations and no any specific trend was observed. However, during the month of September to January the arrivals were higher with higher prices in Pune market, it is due to the *Kharif* potato from Satara district and cold storage potato from Pune district has increasing arrivals in Pune market during September to January.

### Conclusion :

The annual compound growth rate of arrivals of Potato (2.14) were found positive and prices were also positive (8.51). Arrivals were significant and prices were significant both indicating thereby the arrivals of potato increased by demand for the potato for consumption purpose and also increased the production in the producer's region of potato.

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