Price behaviour of onion – A non - linear model approach

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ABSTRACT

The present study on price behaviour of onion is based on the primary data on arrival and prices of onion at Nagpur. A.P.M.C. monthly data for the period 1999-2000 to 2009-2010 have been analysed by using the exponential trend and arima model ignoring seastanality the model with smallest A.I.C or S.B. The prices behaviour indicated that prices were low during summer while at peak between August to November the price forecast indicating decline from October (Rs. 887/qt.) to April (Rs. 604/qt.)

INTRODUCTION

India is one of the important producers of onion. Onion is grown all over the country. Onion is cultivated extensively in Maharashtra, Gujarat, Tamilnadu, Orissa, Karnatak, Madhya Pradesh, Chhatisgarh, Bihar and Andhra Pradesh.

The major onion growing district in Maharashtra are Nasik, Pune, Satara, Sangli, Dhule, Kolhapur, and Buldana, Amravati of Vidarbha region. Onion is a bulb crop commercially important. It constitutes an essential and traditional part of the common man's normal diet. Onion is also used in cattle and poultry feed. Onion is rich in proteins, minerals and vitamins.The characteristic pungency is due to traces of iron and calcium. Onion has many medicinal uses.

Its value as a preventive sunstroke is well known. Onion can be kept for fairly long time. Onion can also safely withstand the hazards of rough handling without much damage. The traders get advantage of price due to lack of storage facilities with producers. As there is no regular price support scheme for onion as a result cultivators are adversely affected.

Government's policy makers are interested in the performance of markets for many reasons, they want to ensure price stability and to improve the welfare of farmers. Hence, the performance of markets is examined through price trend.

Time series data reveal wide fluctuations in onion prices, so systematic efforts are being made for onion marketing through NAFED (National Agricultural Co-operative Marketing Federation).

The present study is an attempt in the direction of studying: Price behavior of onion in APMC, Nagpur and Forecast onion prices for ensuing manths.

MATERIALS AND METHODS

The present study is based on monthly price data obtained from APMC, Nagpur for the period 1999-2000 to 2009-2010 (upto September 2009).

The following analytical techniques were used:

Exponential trend -
 $Y = a*b^t$ to study the price growth.

Arima model ignoring seasonality:
 Auto regressive process - $Y_t = a + b\,Y_{t-1} + e_t$

Moving average process – It can be expressed as-
$Y_t = c\,u_{t-1} + e_t$

where, u_{t-1} is first lag random error term.