Market Arrivals and Prices of Paddy in Major Markets of Telangana State

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The study was conducted to investigate the price behaviour of paddy and the relationship between market arrivals and prices in Suryapeta and Tirumalagiri markets of Telangana. In view of this the present study was undertaken by collecting monthly wholesale prices and arrivals of paddy in both the markets of Telangana for a period of 5 years (2015 to 2019). The seasonal price index provides a measure of the month to month variation in paddy prices. The price indices were lowest in the month of November in suryapeta markets where as Tirumalagiri market in price indices were lowest in the month of December. The study concluded that there was an inverse relationship between market arrivals and the prices.

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1. INTRODUCTION

The importance of cereals in the world of today is that they have been considered as the principal component of human diet for thousands of years and have played a major role in shaping human civilization [1,2]. Among cereals, paddy undoubtedly constitutes the largest and most important role in food consumption [3]. Agricultural marketing plays a significant role in the movement of commodity from the producer to the consumer and in stabilizing the prices [4,5,6]. The planned increase in agricultural output must be co-ordinated with changes in the demand and supply for agricultural commodities and marketing. This can be fruitful only when producer's share in consumer's rupee increases considerably irrespective of the volume of the marketable surplus with the farmers. Therefore, marketing rightly considered as essential activity in addition to improved input like seed and fertilizer in modern agriculture. In India, Paddy occupies nearly 43.86 million with 117.47 million

tonnes of the production with an average yield of 2191 kg per ha whereas, paddy area in Telangana is 1.97 million hectares with 6.25 million tonnes of the production with an average yield of 3176 kg per ha.(Agricultural Statistics at a glance, 2018). Suryapeta district ranks second in the area covered by paddy crop with 71,945 hectares. Paddy is transacted in all most all regulated markets of the Telangana.

In view of the importance of cereals, an attempt has been made to study pattern of market arrivals and prices of paddy and relationship between them in Suryapeta and Tirumalagiri markets in Telangana.

2. MATERIALS AND METHODS

The secondary data on month-wise market arrivals and prices of Paddy-Sambamasuri from 2015-19 were collected from Suryapeta and Tirumalagiri markets depicted in Fig. 1.
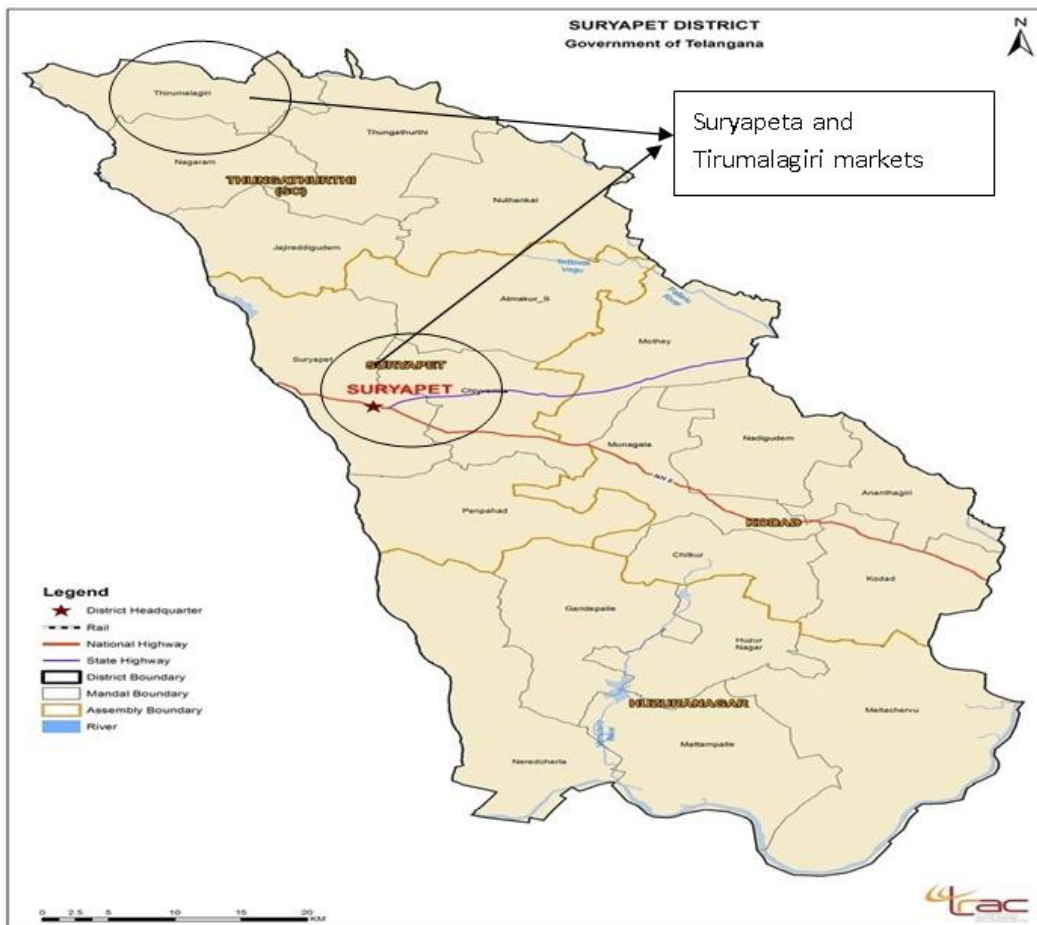

Fig. 1. Map showing the selected study area

Seasonal indices were calculated using ratio to moving average method. The Ratio to moving average method is one of the simplest of the commonly used analysis for measuring seasonal variation. The secondary data of market arrivals and prices was arranged by years and months. Quarterly total was calculated and then two months total was calculated. Average centered value was estimated and its percentage with initial market arrivals and prices was known. The percentage values are then arranged month wise and its average was estimated month wise. The average of total average gives the seasonal index of the months.

Simple linear regression analysis is used to study the relationship between market arrivals and prices calculated using the following formula

$$Y = a + bX$$

Where, Y = Market prices
X = Market arrivals
a = Intercept
b = Regression Coefficient

3. RESULTS AND DISCUSSION

The seasonal indices estimated for paddy prices and arrivals in the selected markets of Telangana are presented in Table 1. The results showed the presence of seasonality in prices and arrivals of paddy in both the markets.

From the Table it can be inferred that the peak period of paddy arrivals in the selected markets was November to February. However, a maximum arrival was observed in the month of December in both the markets. The price indices of paddy in the selected markets were lesser during the peak arrivals (i.e. less than 100) and higher during lean period between June to October (i.e. more than 100) [7,8]. The low price in the month of November and December may be attributed to the lack of competition in the absence of traders in the markets and also the harvesting the kharif season crop.

The price indices varied from 89.81 to 111.91 and 88.86 to 116.93 in the suryapeta, and Tirumalagiri markets, respectively (Table 1). The price indices were lowest in the month of November in suryapeta markets where as Tirumalagiri market in price indices were lowest in the month of December. The price indices were highest in the month of August in both the selected markets. The arrival indices varied from 8.19 to 517.01 and 4.10 to 546.94 in the suryapeta, and Tirumalagiri markets, respectively (Table 1). The harvest period of paddy in Telangana usually commences in November and March in Kharif and Rabi respectively. Here both the markets showed increased arrivals for 5-6 months. Thus, the maturity of the produce was sold soon after the harvest for want of cash or lack of storage facilities. Present finding is in conformity with finding [9,10]. Trends in market arrivals and prices of Suryapeta and Tirumalagiri were presented in Fig. 2 and Fig. 3.

Table 1. Seasonal indices of suryapeta and tirumalagiri markets

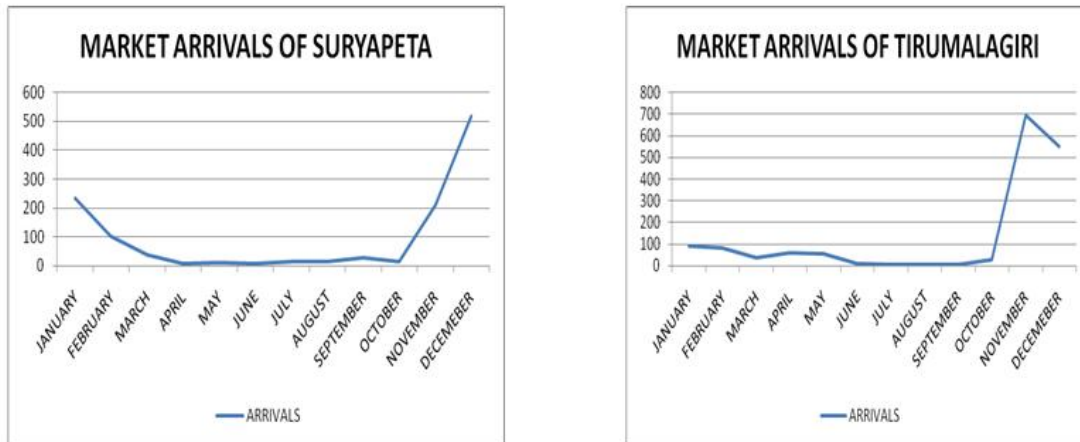| Month	Suryapeta		Tirumalagiri	
	Arrivals	**Prices**	**Arrivals**	**Prices**
January	234.74	96.44	90.71	97.30
February	103.79	97.83	81.21	98.91
March	39.75	96.24	34.57	98.23
April	8.19	102.43	60.00	94.97
May	11.28	95.37	51.53	98.19
June	8.24	108.27	8.92	101.11
July	16.20	107.33	4.10	108.29
August	14.95	111.91	4.15	116.93
September	27.37	111.21	5.87	116.24
October	16.29	109.44	26.58	106.12
November	210.12	89.81	692.99	94.92
Decemeber	517.01	93.90	546.94	88.86

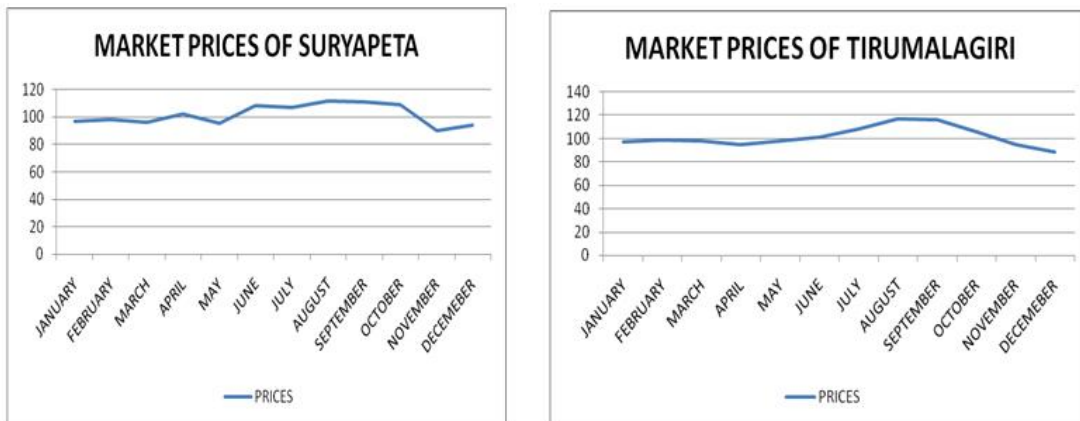**Fig. 2. Trends in market arrivals of Suryapeta and Tirumalagiri**

Fig. 3. Trends in market prices of Suryapeta and Tirumalagiri

The relationship between market arrivals and prices was calculated and presented in Table 2. The results revealed that there was a negative relationship between market arrivals and prices and statistically significant at 5% level of significance. The regression coefficient values indicated that, when there is an increase of market arrival by one unit then the prices decline by 0.018 and 0.045 per cent in Suryapeta and Tirumalagiri markets respectively [11,12].

Table 2. Relationship between market arrivals and prices

Parameters	Suryapeta	Tirumalagiri
Intercept	101.873	104.59
Regression Coefficient (b)	-0.018	-0.045

4. CONCLUSION

The study conducted on the price behaviour of paddy and the relationship between market arrivals and prices in Suryapeta and Tirumalagiri markets of Telangana indicates that the market arrivals were high in the months of December to April. In general the arrivals indicate that the farmers sold the bulk of their produce immediately after the harvest, probably for want of cash needs and or lack of storage facilities. But the price indices values are observed to be more or less the same during both peak and lean arrival months. There was a negative relationship between arrivals and prices of paddy crop in both markets.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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