# A StudyOn BehaviourOf Market Arrivals And Prices Of Selected CerealsIn Mysore Region

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**ABSTRACT:** *In this study Mysore's Inconsistent behaviourpattern of the market arrivals and prices of selected cereals i.e. Paddy, Ragi, Jowar, and Maize are considered as the primary objective followed by its relationship as a secondary objective. As this study is focused on behaviour of market arrivals and prices of selected cereals, local APMC market of Mysore is considered and relevant data is extracted from KrishiMarataVahiniweb site for the period of 2007 to 2017.*
*The pattern was analyzed by basic descriptive statistics viz. mean value and trend is identified by the percentage change to know the variation among the selected cereals during the years in the region. In this study it is revealed that the influence of market region makes a huge impact on the market arrivals and price differs from the arrivals come into the market. A constant market arrival makes very less change in the price if the market arrivals are more than the usual appearance price is often decrease.*
*Type: Research Paper.*
**KEYWORDS:***Ragi, Paddy, Jowar, Maize, Market Arrivals, Market Prices, Cereals.*

## I. INTRODUCTION:
In Indian economy, Agriculture plays a very prominent role as of the other sectors. This sector's growth and development with its allied sectors are come closer to the people's welfare at its best. Most of the rural areas are influenced and defaulted by this sector as an occupation, promising more to do with betterment of these areas. The flexible opportunities for the youngsters in growing Agro based Industries and its services. Farmers are witnessed that there is a constant transformation in diversification of horticulture to highly modified value crops. As a result India has become second largest producers of vegetables, fruits after china.

Nowadays the market has become more volatile and the competition between these farmers is more it may be in terms of producing the crops or getting more profit from the market. Due to this the farmers are tend to sell their produced crops in those market areas where there is huge demand and selected region is one of them in the state.

Pricing and allied elements controls the marketing system in the region from time to time. The selected cereals can be stored, transported and sold at the desired prices as compared with the other regions of the state. This is an advantage to the farmers to sell the cereals at the different seasons and also to earn better profit from this region. The harvesting period of these selected cereals is relatively short, excellent profit is expected. Generally these cereals exhibit seasonal pattern based on the market arrivals and the price, this result in price fluctuations.

The price of these cereals are at the lowest when the arrivals are more and relatively increases with the arrivals start declining at the end of the season. The prices reach to the peak in the season and pattern of the arrivals and the prices of these cereals are examined to minimize the price fluctuation in the selected region.

Therefore this study presents momentary variations of market arrivals and prices of the selected cereals by analyzing percentage changes i.e. trends.

## II. OBJECTIVES FOR THE STUDY:
➢ To know the behaviour of market arrivals and the prices of selected cereals in Mysore region
➢ To know the relationship between the market arrivals and prices of selected cereals in Mysore region
➢ To identify the trend of the market arrivals and prices of the selected cereals in Mysore region

Hypothesis:
- $H_0$: There is no relationship between Market Arrivals and Price of the selected cereals in the region
- $H_1$: There is relationship between Market Arrivals and Price in the selected cereals in the region

### III. MATERIALS AND METHODOLOGY:

The information is provided in this study is purely based on the secondary data. The information on the market arrivals and wholesale prices of the selected cereals of the selected markets are extracted from KrishiMarataVahini website (i.e. www.krishimaratavahini.kar.nic.in). The data pertained to the time period 2007 to 2017 is comprised. The inconsistent pattern of the market arrivals and price of the selected cereals over the period of 2007 to 2017 was analyzed by basic descriptive statistics viz. mean value and trend is identified by the percentage change to know the variation among the selected cereals in the region. The relationship between the market arrivals and price of selected cereals are identified by using the Karl Pearson's correlation coefficient method between the market arrivals and prices and to check the feasibility probable error is also used to gain clear picture on the statistics as well as to test the hypothesis.

### IV. RESULTS AND DATA ANALYSIS

Behaviour of the Market Arrivals and Price of Jowar Crop in the market:

The behaviour of market arrivals and prices of Jowar crop is projected in table 1. The arrivals of the crop are pretty high in the market during the year 2009-10 i.e. 30998 quintal with the maximum price of Rs. 1012. During the year 2014-15 market has experienced very less arrival in the market i.e. 1732 quintal with the maximum price of Rs. 2000. The average value of the arrivals in the market is 10903 quintal for last ten years of the study whereas the price is concern the average is Rs. 1002.45.

Trend: considering 2007-08 as the base year, there is a nice drift in the change of market arrivals and pricewith the opening of 118.2 percentage changes in the year 2008-09. The trend has taken great swing during 2016-17 with 277.5 percentage change in this market. In view of this trend we can able to forecast that there will be more and consistent change can be expected in this market for Jowar Crop.

**Table 1: Percent Market Arrivals and Price (Rs/Qtl) of Jowar In Mysore Region**

| Year | Arrivals | Unit | Min. (In Rs.) | Max. (In Rs.) | Mean | Trend |
|---|---|---|---|---|---|---|
| 2007- 08 | 26583 | Quintal | 306 | 821 | 563.5 | ----- |
| 2008- 09 | 14776 | Quintal | 351 | 982 | 666.5 | 118.2 |
| 2009- 10 | 30998 | Quintal | 301 | 1012 | 656.5 | 116.5 |
| 2010- 11 | 16966 | Quintal | 200 | 1362 | 781 | 138.6 |
| 2011- 12 | 4233 | Quintal | 201 | 1230 | 715.5 | 127.0 |
| 2012- 13 | 2178 | Quintal | 850 | 2055 | 1452.5 | 257.8 |
| 2013- 14 | 1955 | Quintal | 401 | 2459 | 1430 | 253.7 |
| 2014- 15 | 1732 | Quintal | 401 | 2000 | 1200.5 | 213.0 |
| 2015- 16 | 1801 | Quintal | 400 | 1590 | 995 | 176.6 |
| 2016- 17 | 7808 | Quintal | 777 | 2350 | 1563.5 | 277.5 |
| Source: www.krishimaratavahini.kar.nic.in | | | | | | |
| Mean and Trend is from author's compilation. | | | | | | |

Behaviour of the Market Arrivals and Price of Maize Crop in the market:

Table 2 portrays the behaviour of market arrivals and prices of maize crop. The arrivals of the crop are maintaining the consistent ups and downs in the market. During the year 2009-10 the arrivals were 154214 quintal with the maximum price of Rs. 936, as the arrivals are more in number price decreases. During the year 2011-12 market has experienced very less arrival i.e 14399 quintal with the maximum price of Rs. 1336. The average value of the arrivals in the market for the crop is 58340.7 quintal for last ten years of the study whereas the price is concern the average is Rs. 1239.35.

Trend: considering 2007-08 as the base year, there is a rise in the next year and change of market arrivals and price with the opening of 19. 8 percentage change in the year 2008-09. The trend has taken constant ups and downs on every year. The percentage change reached to 33.8 during 2016-17 which is 1.5 times more than 2008-09 in this market. In view of this trend we can able to forecast that there will be alternate change (i.e. ups and downs) in every year in this market for Maize Crop.

**Table 2: Percent Market Arrivals and Price (Rs/Qtl) of Maize In Mysore Region**

| Year | Arrivals | Unit | Min. (In Rs.) | Max. (In Rs.) | Mean | Trend |
|---|---|---|---|---|---|---|
| 2007- 08 | 58689 | Quintal | 333 | 7341 | 3837 | ----- |
| 2008- 09 | 46292 | Quintal | 386 | 1132 | 759 | 19.8 |
| 2009- 10 | 154214 | Quintal | 100 | 936 | 518 | 13.5 |
| 2010- 11 | 38641 | Quintal | 200 | 1629 | 914.5 | 23.8 |
| 2011- 12 | 14399 | Quintal | 100 | 1336 | 718 | 18.7 |
| 2012- 13 | 17477 | Quintal | 501 | 1490 | 995.5 | 25.8 |
| 2013- 14 | 44972 | Quintal | 401 | 2000 | 1200.5 | 31.3 |

| 2014- 15 | 146105 | Quintal | 301 | 1701 | 1001 | 26.1 |
| 2015- 16 | 29997 | Quintal | 606 | 1700 | 1153 | 30.1 |
| 2016-17 | 32621 | Quintal | 706 | 1888 | 1297 | 33.8 |
| Source: www.krishimaratavahini.kar.nic.in | | | | | | |
| Mean and Trend is from author's compilation. | | | | | | |

Behaviour of the Market Arrivals and Price of Paddy Crop in the market:

Mysore region market for the behaviour of arrivals and prices of the selected crop is mentioned in the Table 3. The arrivals of the crop are started with good opening with 33567 quintal in the year 2007-08. Slightly change in the arrivals which got increased relatively in the next year. There was a great drop in the arrivals in the year 2010-11 as compare with the previous year. The crop has risen to 42868 quintal in the year 2009-10 which was a peak after the year there is no favourable arrivals can be considered. During the year 2009-10 market has with the maximum price of Rs. 835 as supply was more. In the year 2016-17 market received very less arrivals with the 5461 quintal that pushed the price more to Rs. 2380. The market arrival has recorded 19318 quintal whereas price was Rs. 4400which was pretty high in the market during the year 2015-16. The average value of the arrivals in the market for the crop is 23781.2 quintal for last ten years of the study whereas the price is concern the average is Rs. 1193.45.

Trend: considering 2007-08 as the base year, there is a rise in the next year and change of market arrivals and price with the opening of 143.2 percentage change in the year 2008-09. The trend has taken constant ups on every year. The percentage change reached to 472.8 during 2015-16 which is 4.7 times more than the base year 2007-08 in this market. In view of this trend we can able to forecast that there will be alternate change (i.e. ups and downs) in every year in this market for Paddy Crop. The benchmark was created in the year 2015-16 consequent year has no proper shift hence in coming year the arrivals would be fewer compare to that of 2015-16

**Table 3: Percent Market Arrivals and Price (Rs/Qtl) of Paddy In Mysore Region**

| Year | Arrivals | Unit | Min. (In Rs.) | Max. (In Rs.) | Mean | Trend |
|------|----------|------|---------------|---------------|------|-------|
| 2007- 08 | 33567 | Quintal | 0 | 1016 | 508 | ----- |
| 2008- 09 | 34101 | Quintal | 0 | 1455 | 727.5 | 143.2 |
| 2009- 10 | 42868 | Quintal | 310 | 1360 | 835 | 164.4 |
| 2010- 11 | 19390 | Quintal | 200 | 1662 | 931 | 183.3 |
| 2011- 12 | 25614 | Quintal | 231 | 1306 | 768.5 | 151.3 |
| 2012- 13 | 13703 | Quintal | 416 | 3400 | 1908 | 375.6 |
| 2013- 14 | 19471 | Quintal | 355 | 2151 | 1253 | 246.7 |
| 2014- 15 | 24319 | Quintal | 400 | 2026 | 1213 | 238.8 |
| 2015- 16 | 19318 | Quintal | 400 | 4400 | 2400 | 472.4 |
| 2016-17 | 5461 | Quintal | 401 | 2380 | 1390.5 | 273.7 |
| Source: www.krishimaratavahini.kar.nic.in | | | | | | |
| Mean and Trend is from author's compilation. | | | | | | |

Behaviour of the Market Arrivals and Price of Ragi Crop in the market:

The statistics of market arrivals and the price of Ragi crop are defined in the Table 4. The arrivals of the crop are maintaining the inconsistent ups and downs in the market. During the year 2016-17 the arrivals were 11555 quintal with the maximum price of Rs. 3200, as the arrivals are less in the market price for the crop increased. During the year 2013-14 market has experienced very less arrival i.e.7217 quintal with the maximum price of Rs. 2419. The highest arrivals of the crop in the region were 22622 quintals during the year 2009-10. The average value of the arrivals in the market for the crop is 13763.2 quintal for last ten years of the study whereas the price is concern the average is Rs. 1188.55.

Trend: considering 2007-08 as the base year, there is a rise in the next year and change of market arrivals and price with the opening of 119. 2 percentage change in the year 2008-09. The trend has taken irregular changes during the selected period. The percentage change reached to 344.5 during 2016-17 which is 2.5 times more than 2015-16 in this market. In view of this trend we can able to forecast that there will be more change and it could reach always upside of the trend every year in this market forRagiCrop.

**Table 4: Percent Market Arrivals and Price (Rs/Qtl) of Ragi In Mysore Region**

| Year | Arrivals | Unit | Min. (In Rs.) | Max. (In Rs.) | Mean | Trend |
|------|----------|------|---------------|---------------|------|-------|
| 2007- 08 | 12286 | Quintal | 386 | 775 | 580.5 | ----- |
| 2008- 09 | 17059 | Quintal | 403 | 981 | 692 | 119.2 |
| 2009- 10 | 22622 | Quintal | 307 | 1077 | 1230.5 | 212.0 |
| 2010- 11 | 18181 | Quintal | 0 | 1026 | 513 | 88.4 |
| 2011- 12 | 12343 | Quintal | 386 | 1080 | 733 | 126.3 |
| 2012- 13 | 7217 | Quintal | 500 | 2419 | 1459.5 | 251.4 |
| 2013- 14 | 6237 | Quintal | 969 | 2109 | 1539 | 265.1 |
| 2014- 15 | 14872 | Quintal | 866 | 1950 | 1408 | 242.5 |
| 2015- 16 | 15260 | Quintal | 960 | 2500 | 1730 | 298.0 |

| 2016-17 | 11555 | Quintal | 800 | 3200 | 2000 | 344.5 |
|---------|-------|---------|-----|------|------|-------|

Source: www.krishimaratavahini.kar.nic.in
Mean and Trend is from author's compilation.

The relationship between the market arrivals and prices of selected cereals:

The relationship between the two variables i.e. Market Arrivals and the Prices of Jowar, Maize, Paddy and Ragi Crops are defined and presented in the table 5. This table shows that the relationship and the change of the selected crops in the region. In view of the statics/calculation it is found that the market arrivals and prices for Jowar Crop has the relationship with the correlation (r) value of -0.69 followed by the probable error (P E$_r$) value is 0.1. In case of Maize Crop, there is a relationship between Market arrival and price in the region with the correlation (r) value of -0.10 followed by the probable error (P E$_r$) value is 0.2. In this region Paddy crop market arrivals and prices are related with each other with the correlation (r) value of -0.10 followed by the probable error (P E$_r$) value is 0.13. Even for the Ragi crop in the selected region market arrivals and prices are related with each other with the correlation (r) value of -0.33 followed by the probable error (P E$_r$) value is 0.18. By looking to the statistics and the ranges we can conclude that there is a relationship between Market arrivals and price of the selected cereals in the region. Hence Null hypothesis is rejected and Alternate hypothesis is accepted in this study.

**Table 5: Market Arrivals and Price Correlation of selected cereals in Mysore Region for the period 2007 to 2017**

| Sl. No. | Cereal | Market Arrival | Price | Correlation (r) | Probable Error (PE$_r$) |
|---------|--------|----------------|-------|------------------|--------------------------|
| 1. | Jowar | 10903 | 1002.45 | -0.69 | 0.1 |
| 2. | Maize | 58340.7 | 1239.35 | -0.10 | 0.2 |
| 3. | Paddy | 23781.2 | 1193.45 | -0.60 | 0.13 |
| 4. | Ragi | 13763.2 | 1188.55 | -0.33 | 0.18 |
| *Significant at 5 percent level of Significance | | | | | |
| Source: Author Compiled from existing data. | | | | | |

## V. CONCLUSION

In this study it is revealed that the influence of market region makes a huge impact on the market arrivals and price differs from the arrivals come into the market. A constant market arrival makes very less change in the price if the market arrivals are more than the usual appearance price is often decrease. For Jowar Crop there will be consistent change, for Maize crop might increase at a minimal pace as compare to the other crops as the acceptance is very fewer in coming years. In case of the Paddy crop demand for this is pretty good accelerating with fair pace in the region and Ragi Crop, demand is increasing at the constant momentum in the region. Finally all the selected crops for the study have its own demand in the region by the market and excellent profit can be anticipated from this market.

## VI. LIMITATIONS

Considering the four selected cereals (vizJowar, Maize, Paddy and Ragi) is one of the major limitations of this research.Location wise: This is restricted only to the Mysore city no other markets are measured.The existence of the natural errors while conducting the research.

Scope for further research

Future research can be carried out to various crops in this region. An analogous research can be considered in discern crops of various other regions. The relationship between trend change arrivals and trend change in price can also used as scope for the research.

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