



# Purchases Report

May 2020

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### ***Important notes:***

*As of November 2016, unless explicitly specified otherwise, RTA uses 3-month moving average for reporting on inventory (including historical data), hence, affecting calculated values of purchases and Inventory-to-Sales Ratio. In this way, any exaggerations that might be manifest in monthly purchases data, due to regular inventory counts by members, are not emphasized.*

*Highlighted areas in the graphs represent time of recessions.*

*Explanation about how to read box plots and histograms can be found in the Appendix section.*

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*Disclaimer: The data and report presented herein are based solely on RTA member monthly reports on production and inventory. Occasionally, members send corrections to previously submitted data. If and when these corrections are received they are incorporated at that time. Users of this report should note while all care is taken to accurately compile the data submitted by member companies, that no warranty is made as to the accuracy of any RTA member reports.*

## Highlights

May data provided a spark of hope for the purchases' long term trend. While still in decline, the rate is slowing. Production, inventory and the inventory-to-sales ratio had increasing trends. From a monthly perspective, production was slightly above its mean while purchases were a little below its mean of Mays' observations. Inventory and ISR declined marginally compared to last month's numbers.

## Long-Term Trends

Production expanded at a 13.1% annual rate.

Purchases fell at a 15.8% annual rate.

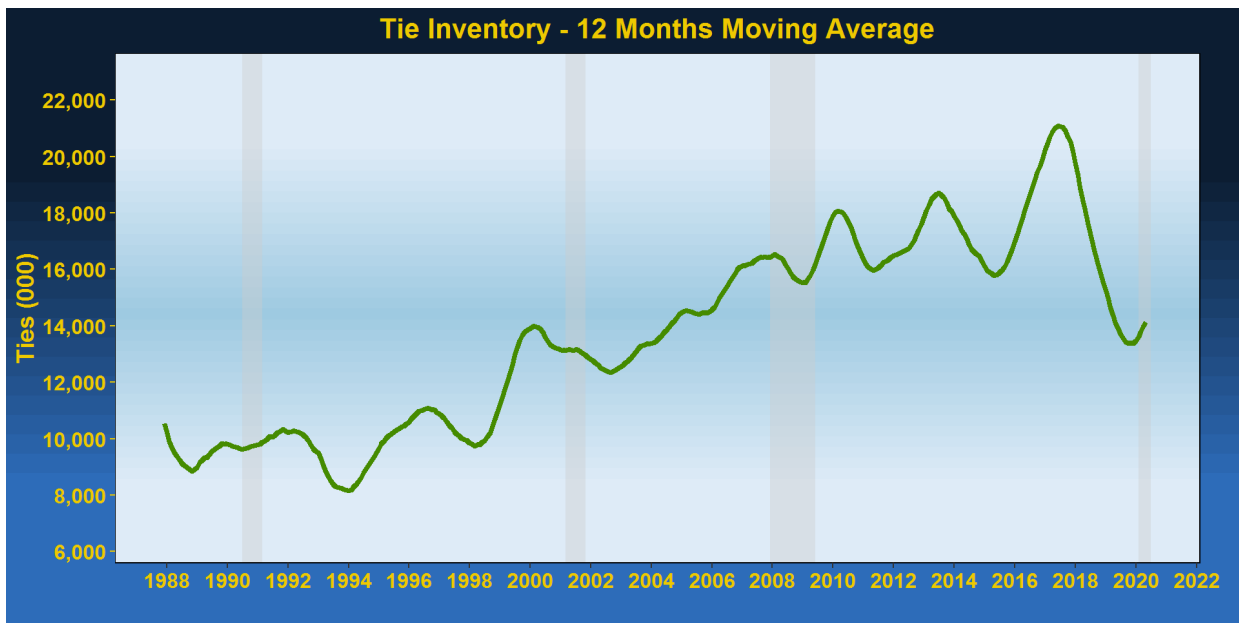
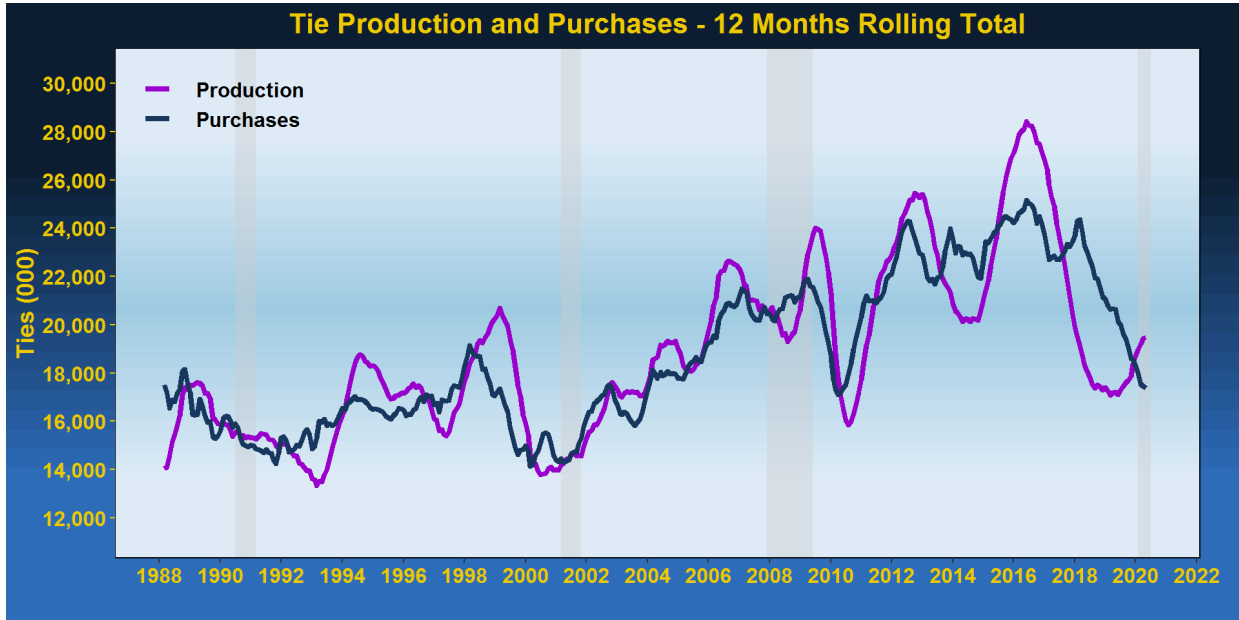
Inventory's 12 month moving average (12MMA) expanded by 0.3% from year ago levels.

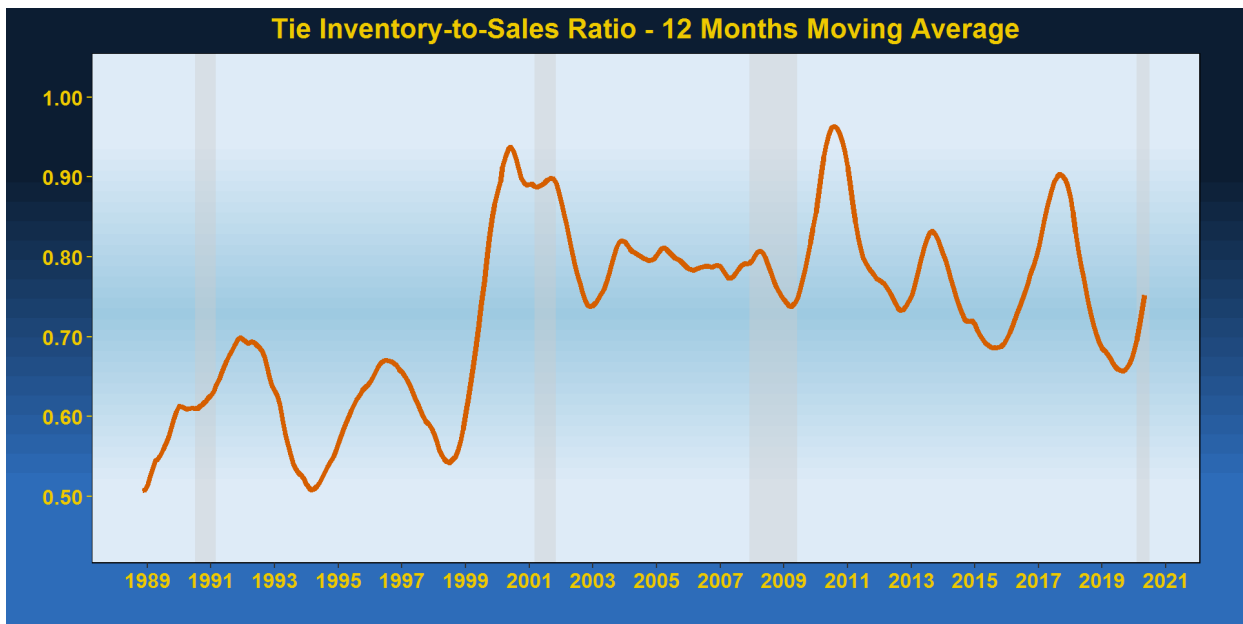
Inventory-to-Sales Ratio's 12MMA increased from 0.67 to 0.75.

### Table of Annual Observations

Production and Purchases are 12 months rolling totals, Inventory and ISR are 12MMA

Date	Production	Purchases	Inventory	ISR
May 2019	17,209	20,650	14,093	0.67
May 2020	19,469	17,383	14,134	0.75





## Analysis of Quarterly Data

Production in Q1 came down by 0.5% from last quarter and advanced by 21.4% from year ago.

For the same intervals, purchases increased by 9.3% and came down by 20.8% respectively.

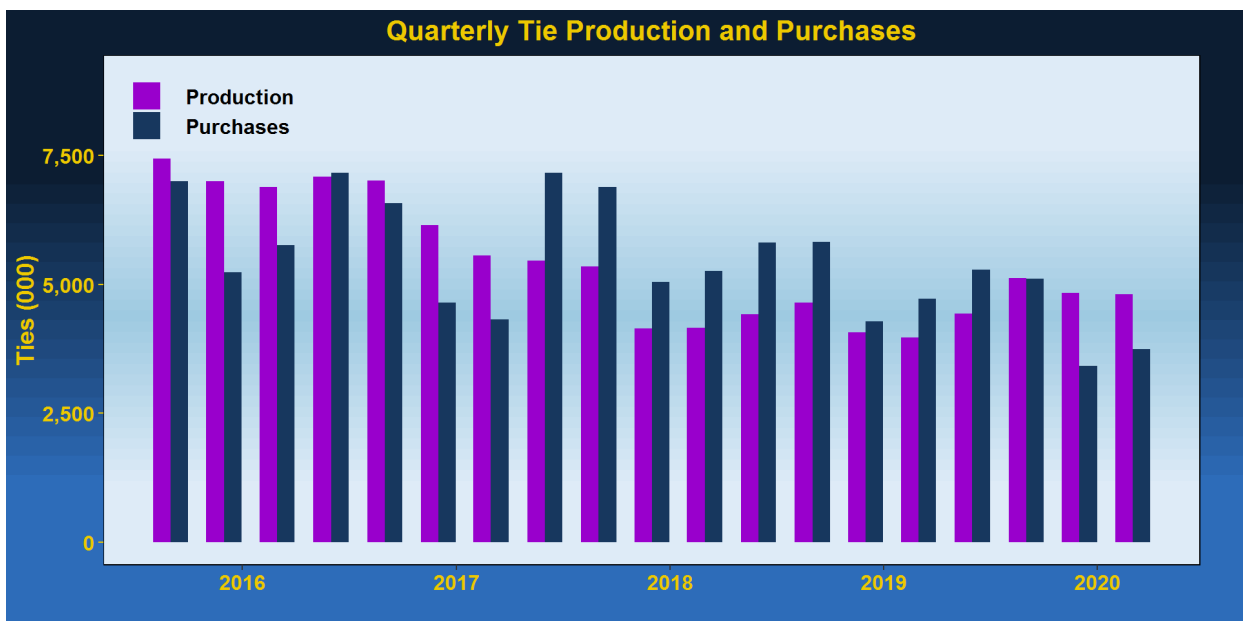
Inventory's 3MMA grew by 7.5% from last quarter and grew by 12% from year ago levels.

From Q4 2019 to Q1 2020, the 3MMA of Inventory-to-Sales Ratio advanced from 0.73 to 0.84. Year ago, the ratio was 0.67.

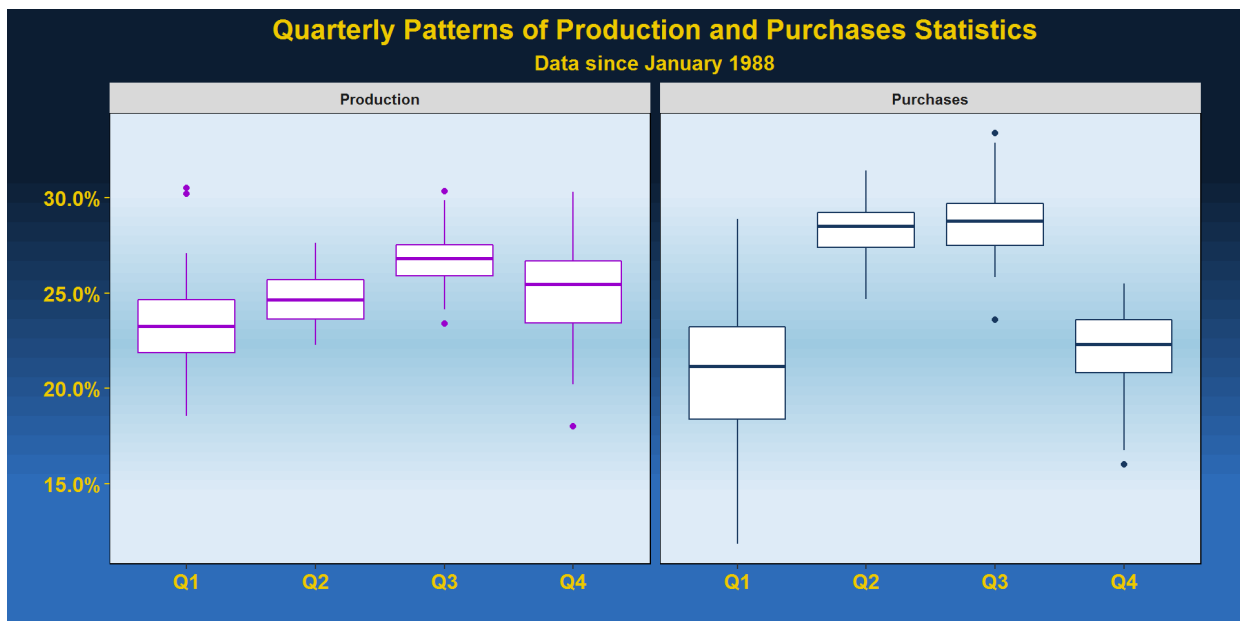
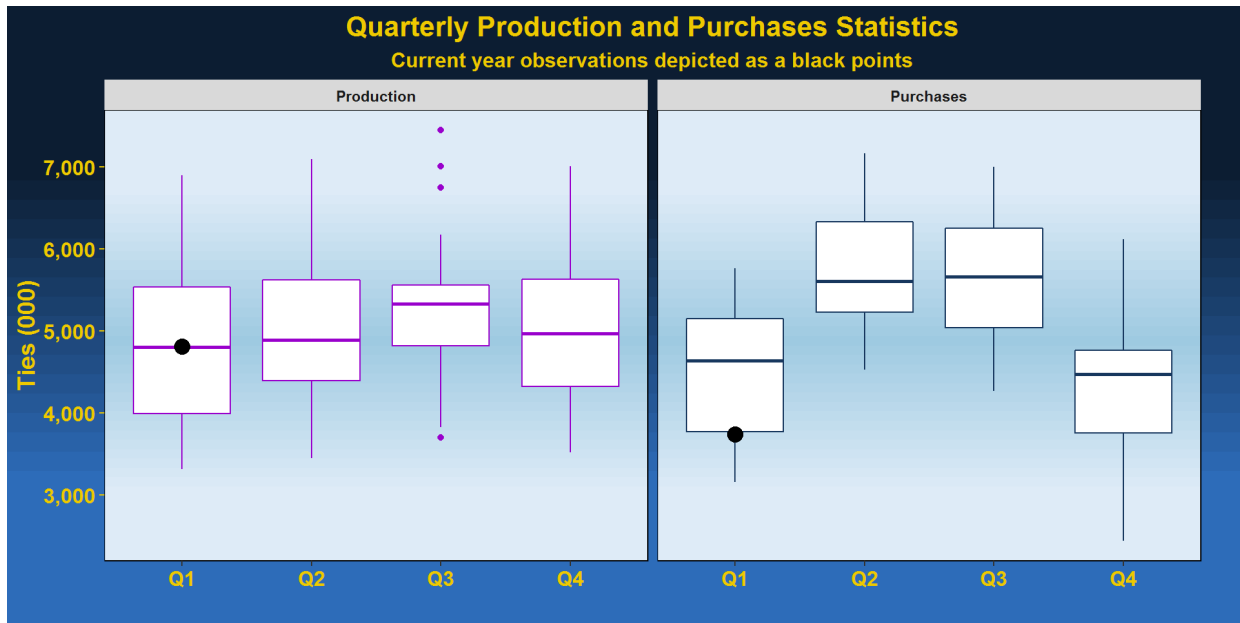
### Table of Quarterly Observations

*Production and Purchases Quarterly Sum, Inventory and ISR - 3MMA*

Date	Production	Purchases	Inventory	ISR
March 2019	3,962	4,723	13,668	0.67
December 2019	4,837	3,423	14,233	0.73
March 2020	4,811	3,741	15,303	0.84



Quarterly pattern of production and purchases uses data from January 2000. The top graph shows data analysis within each quarter. It shows the median, upper quartile and lower quartile boundary (a more detailed explanation is available in the Appendix section). It also displays what the production and purchases were in each quarter of reporting year represented by black points in relation to quarterly statistical values. The second graph shows the contribution of each quarter to the total annual production and purchases.



## Analysis of Monthly Data

Production dropped by 4.9% from last month and increased by 2.6% from year ago.

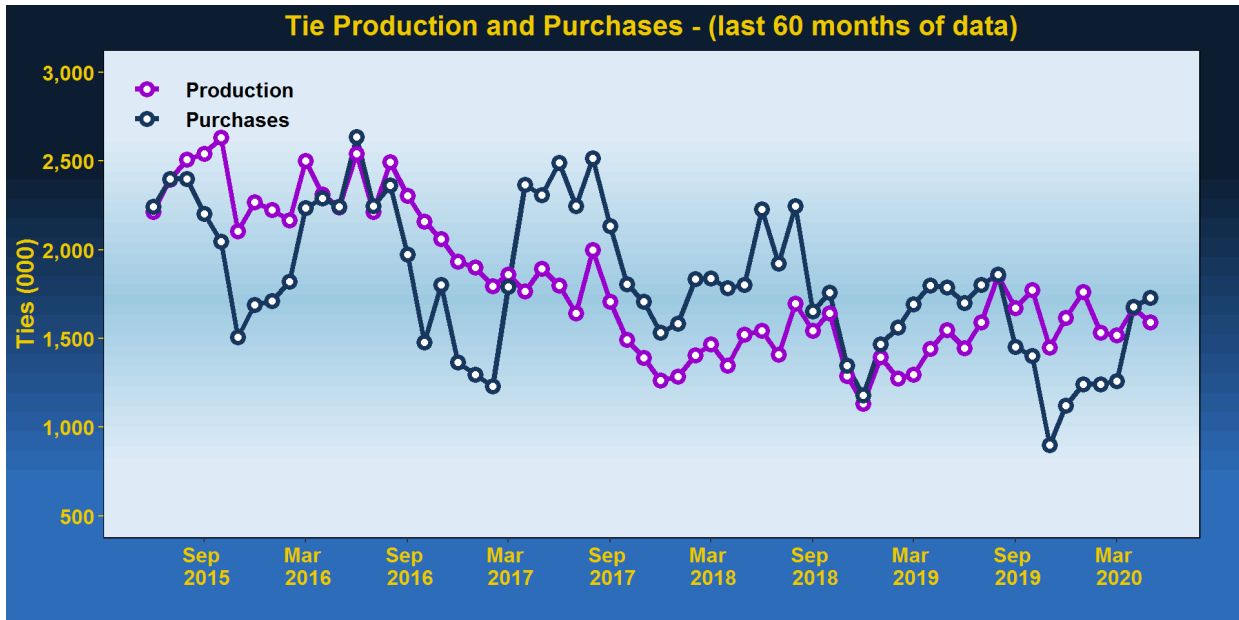
For the same time intervals, purchases expanded by 2.9% and came down by 3.3% respectively.

Inventory levels declined by 0.9% from last month and rose by 16% from year ago levels.

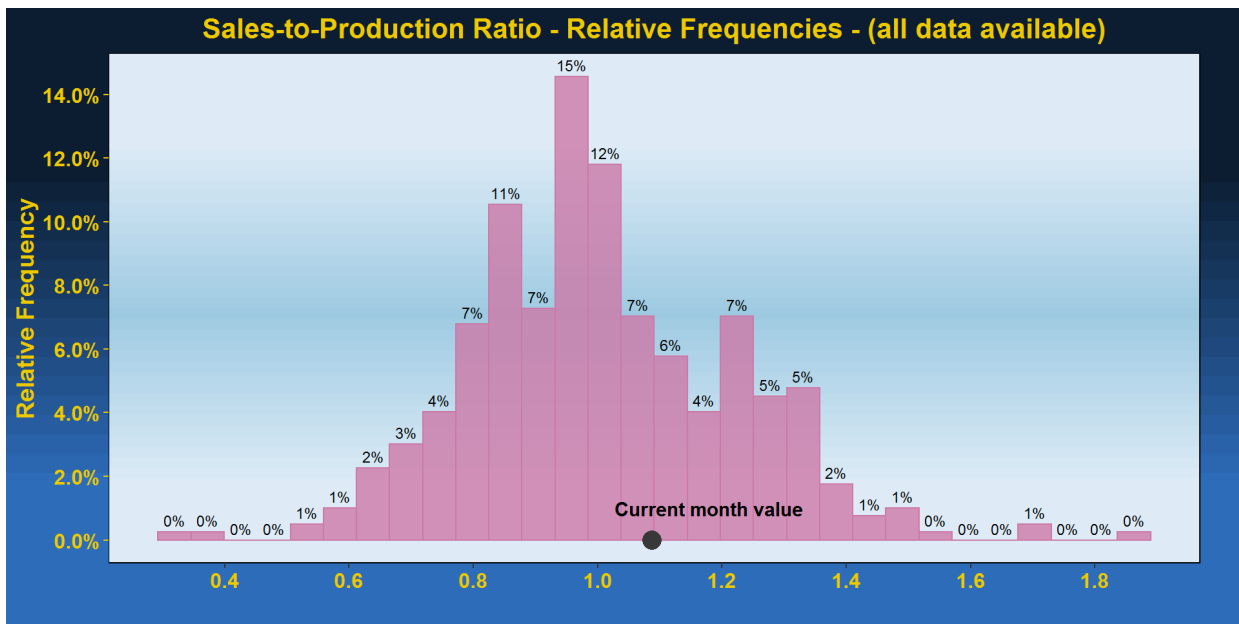
From one month ago, the Inventory-to-Sales Ratio fell from 0.88 to 0.87, and from year ago, the ratio grew from 0.63.

**Table of Monthly Observations**

Date	Production	Purchases	Inventory	ISR
May 2019	1,549	1,787	13,071	0.63
April 2020	1,672	1,679	15,296	0.88
May 2020	1,589	1,728	15,157	0.87

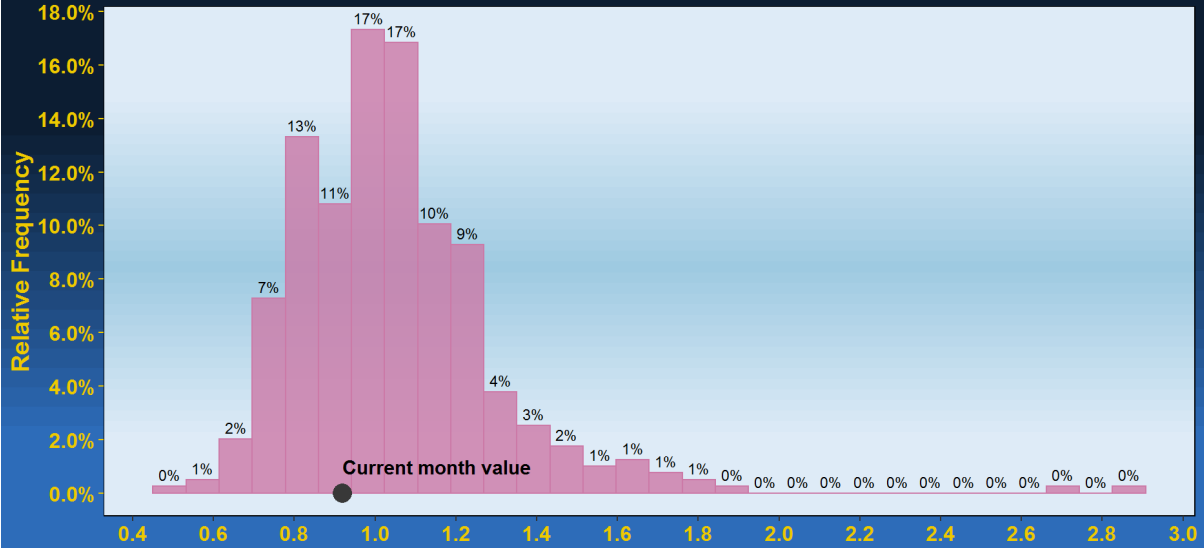


Sales-to-Production Ratio shows the replenishment/diminishment of inventory. Ratio above one signals diminishment and ratio below one replenishment of inventory stock.



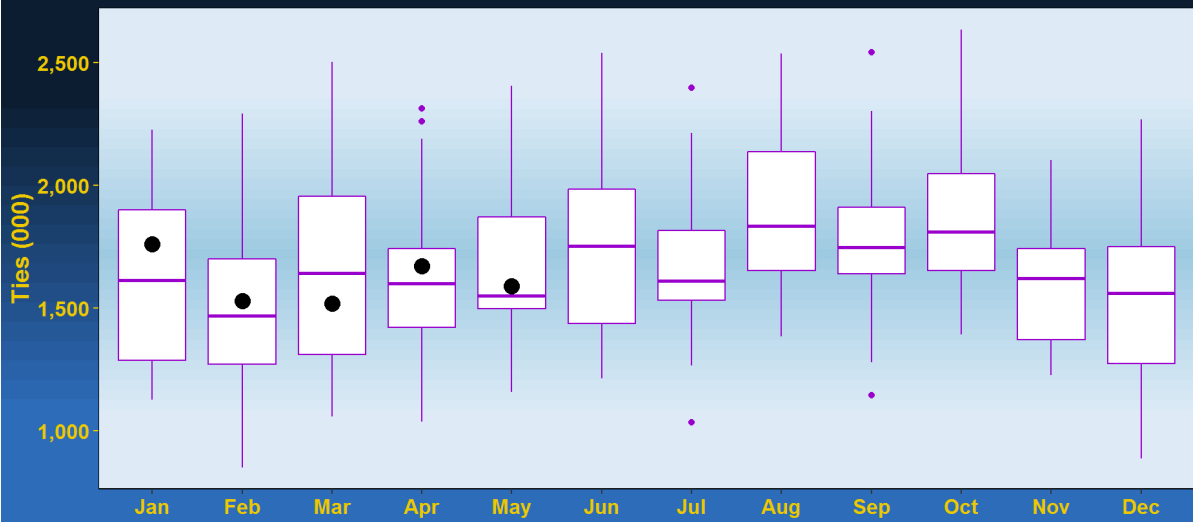
The following graph tells the same story as the graph above, just the ratio is reversed - Production-to-Sales Ratio.

### Production-to-Sales Ratio - Relative Frequencies - (all data available)



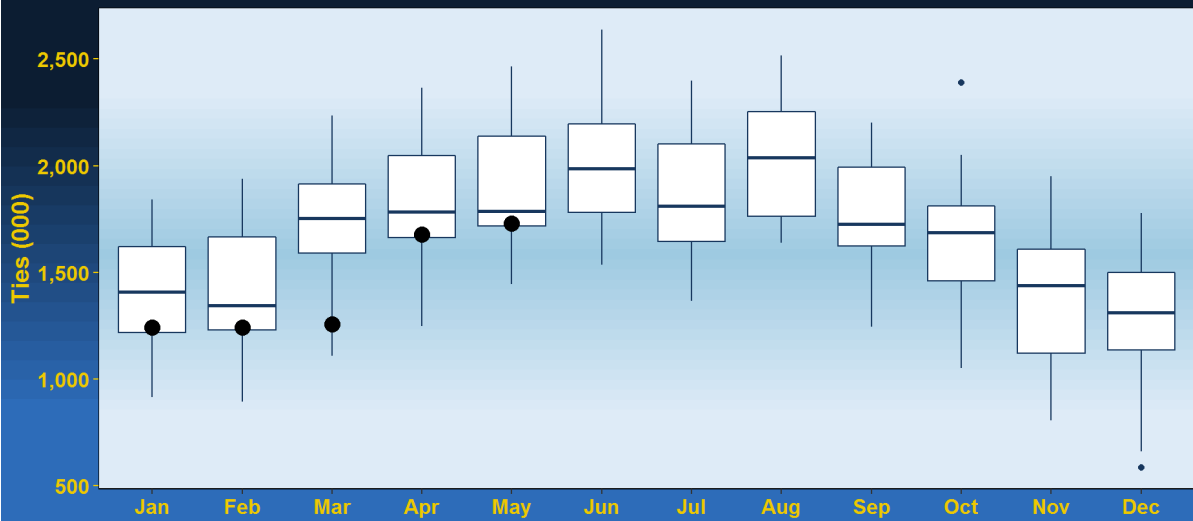
### Monthly Production Statistics - (data since 2000)

Current year observations depicted as a black points



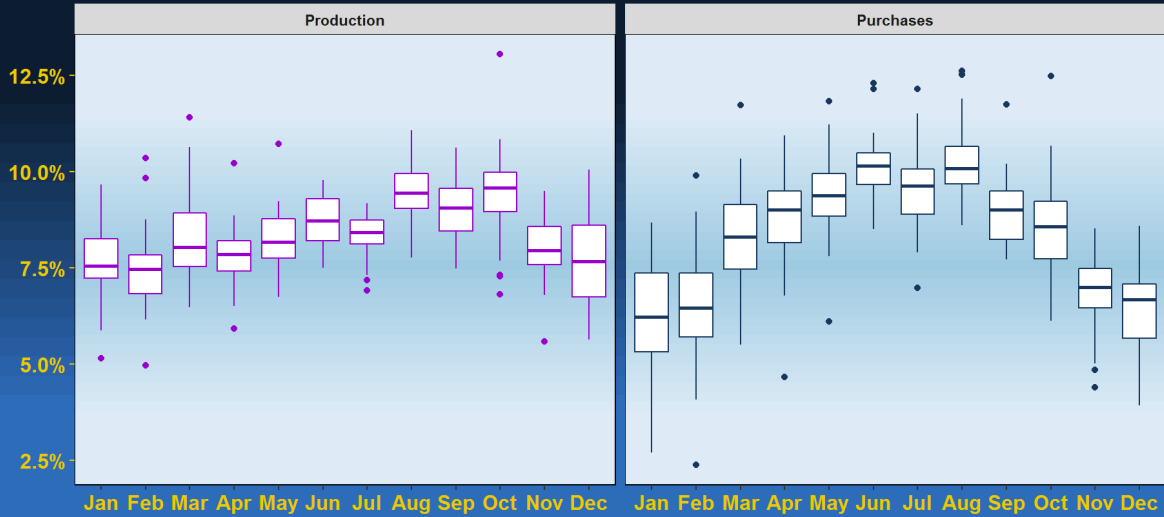
### Monthly Purchases Statistics - (data since 2000)

Current year observations depicted as a black points

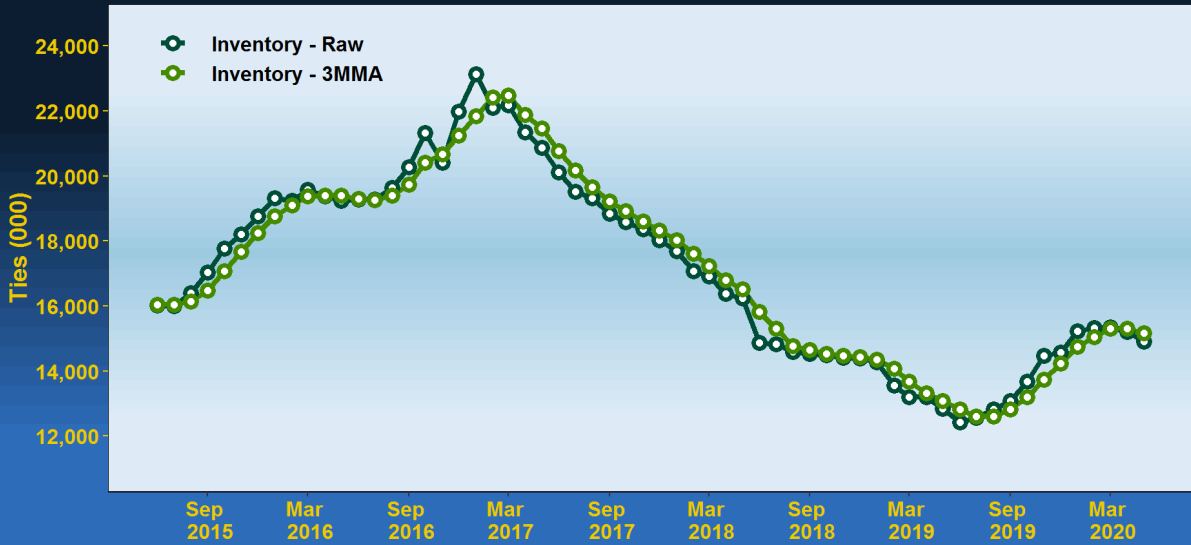


### Monthly Pattern of Production and Purchases Statistics - Percent of Annual Total

Data since January 1988

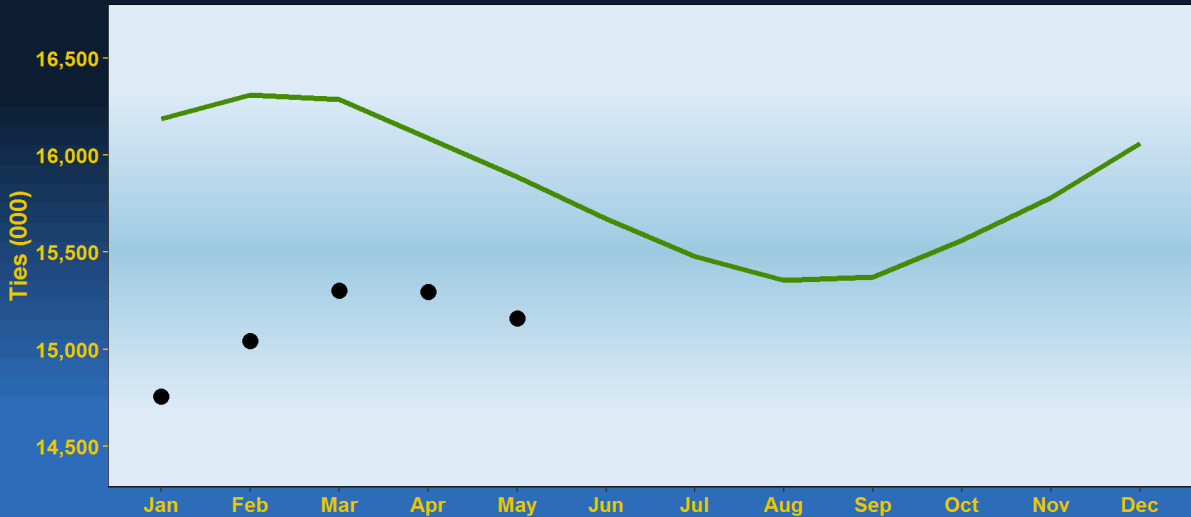


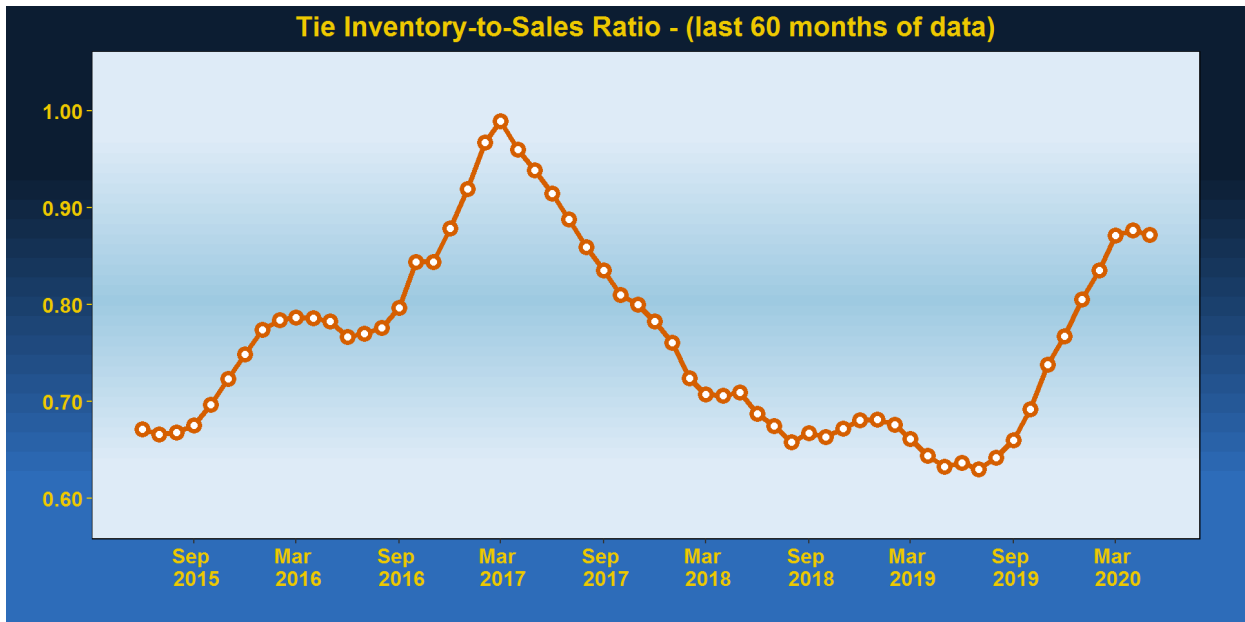
### Tie Inventory - Raw Monthly and 3MMA Data - (last 60 months of data)



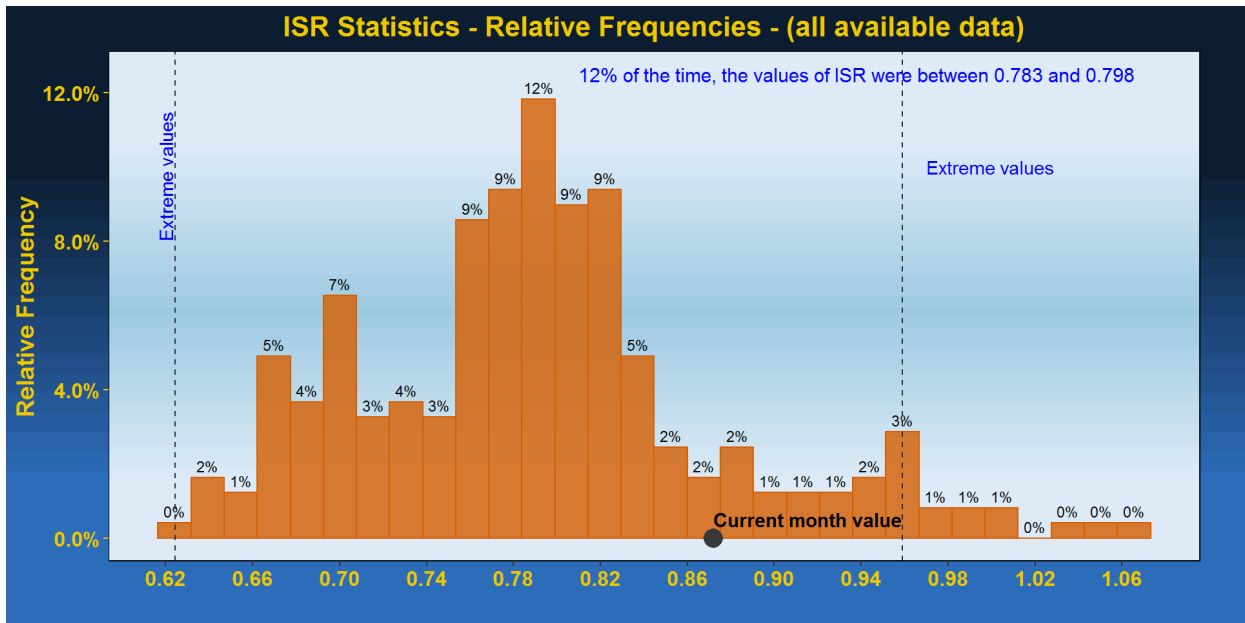
### Monthly Patterns of Inventory - (data since 2000)

Monthly average depicted with solid green line, current year observations depicted as a black points





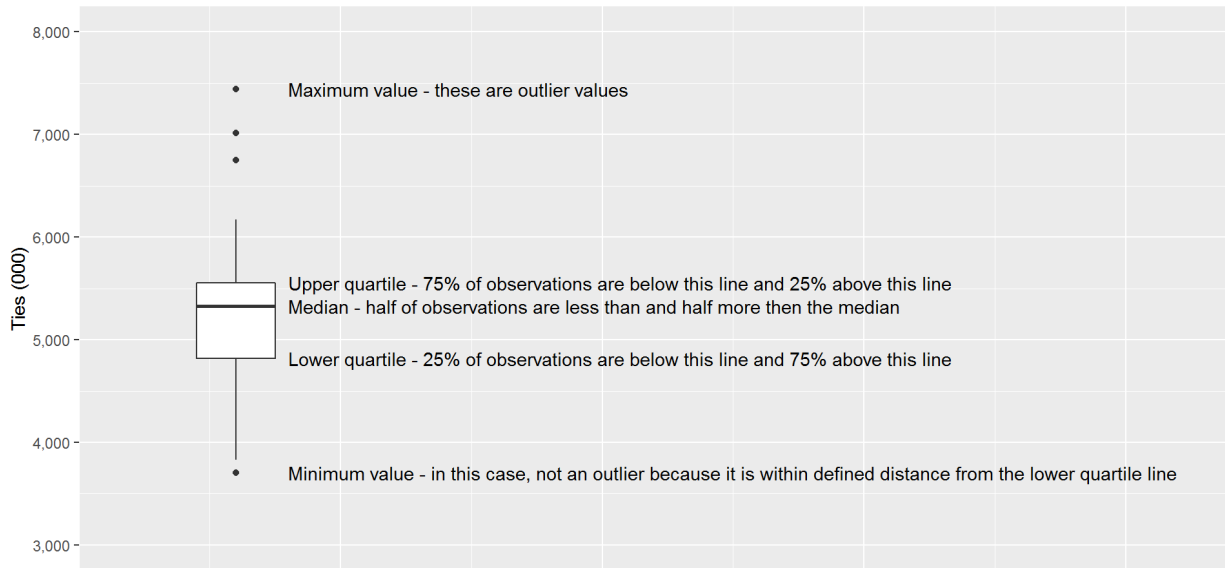
Inventory-to-Sales Ratio (ISR) histogram of relative frequencies shows the monthly ISR data distribution and the black point represents the value for the current reporting month.





# Appendix

## Box Plot Explained



## Histogram of Relative Frequencies Explained

