



# Purchases Report

July 2021

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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.*

### **Copyright: Railway Tie Association, 2021.**

*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

Production's 12-month moving average continued in its declining trend while the purchases growth rate was positive. In July, tie production was well below expectation as sawmills took advantage of high pallet and flooring lumber demand and pricing. Purchases were well below expectation as well.

## Long-Term Trends

Production came down at a 8.4% annual rate.

Purchases increased at a 2.3% annual rate.

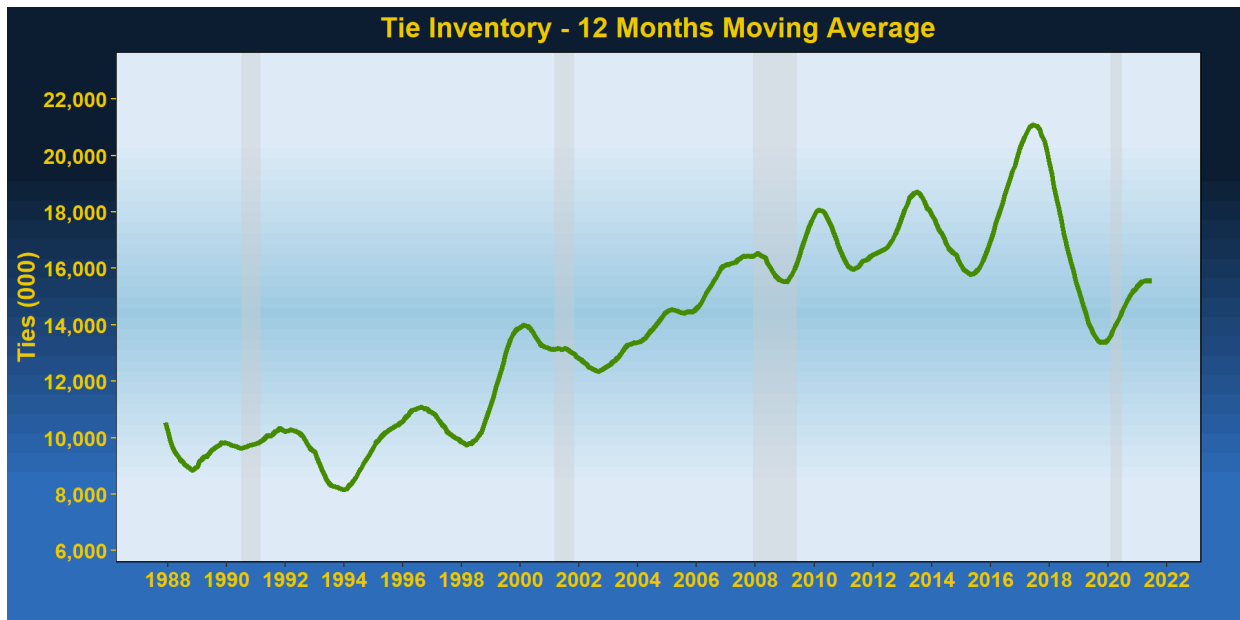
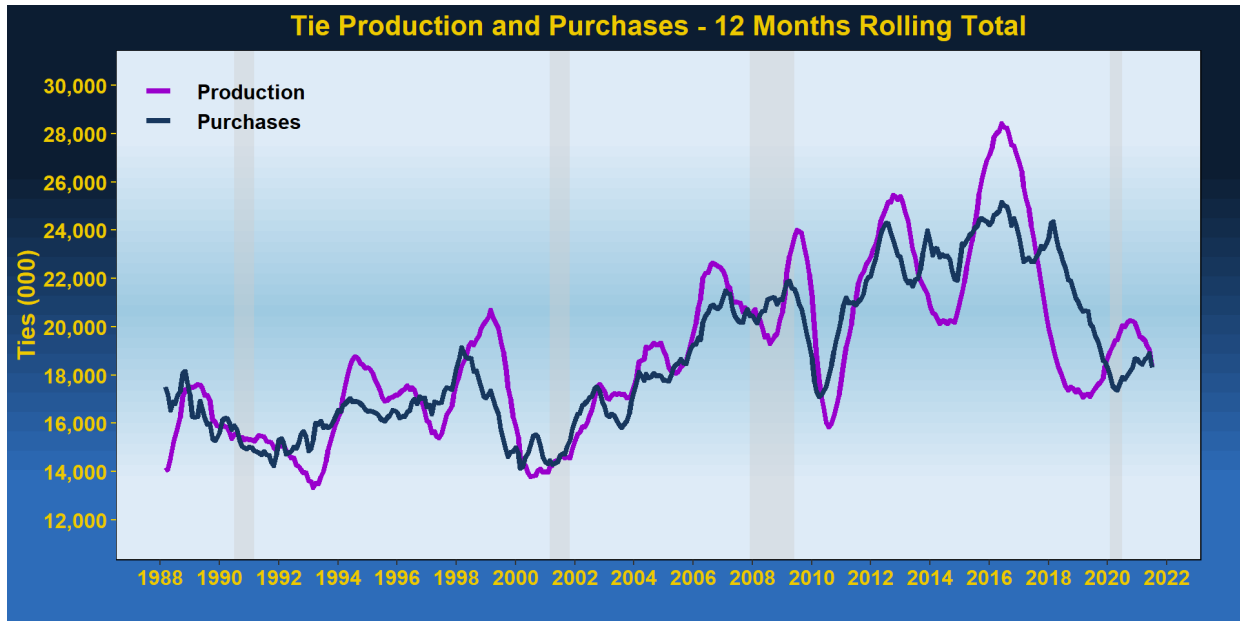
Inventory's 12 month moving average (12MMA) grew by 7.3% from year ago levels.

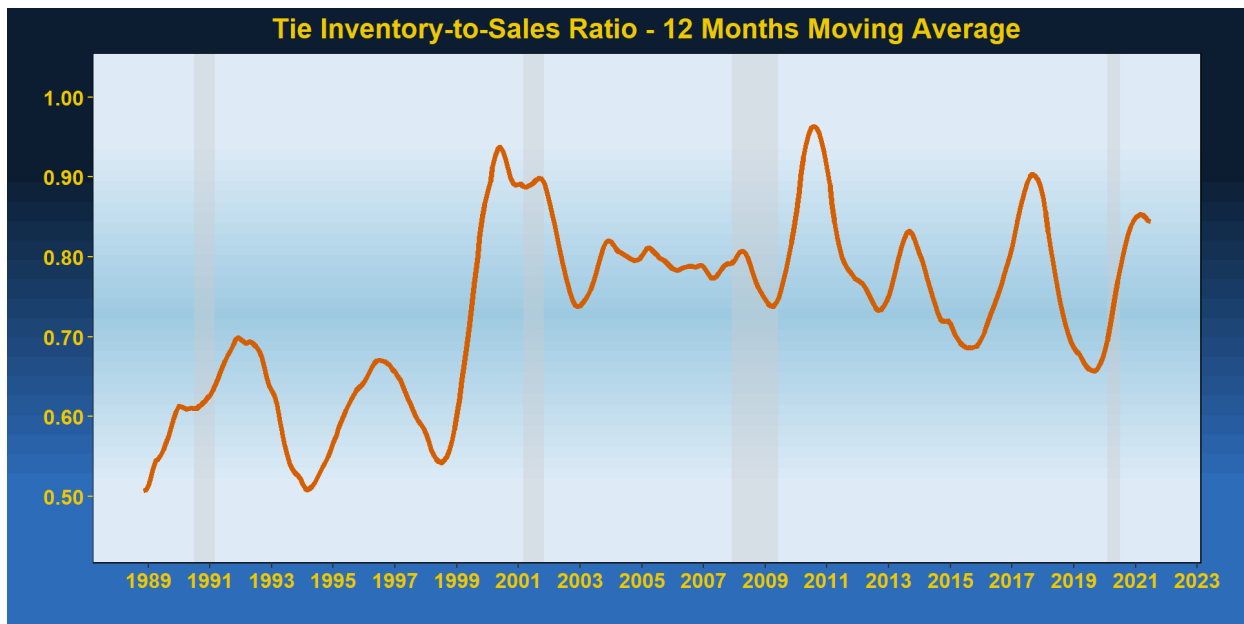
Inventory-to-Sales Ratio's 12MMA advanced from 0.79 to 0.84.

### Table of Annual Observations

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

Date	Production	Purchases	Inventory	ISR
July 2020	20,059	17,898	14,501	0.79
July 2021	18,380	18,308	15,558	0.84





## Analysis of Quarterly Data

Production in Q2 expanded by 8.8% from last quarter and declined by 9.3% from year ago.

For the same intervals, purchases grew by 66.2% and expanded by 8.7% respectively.

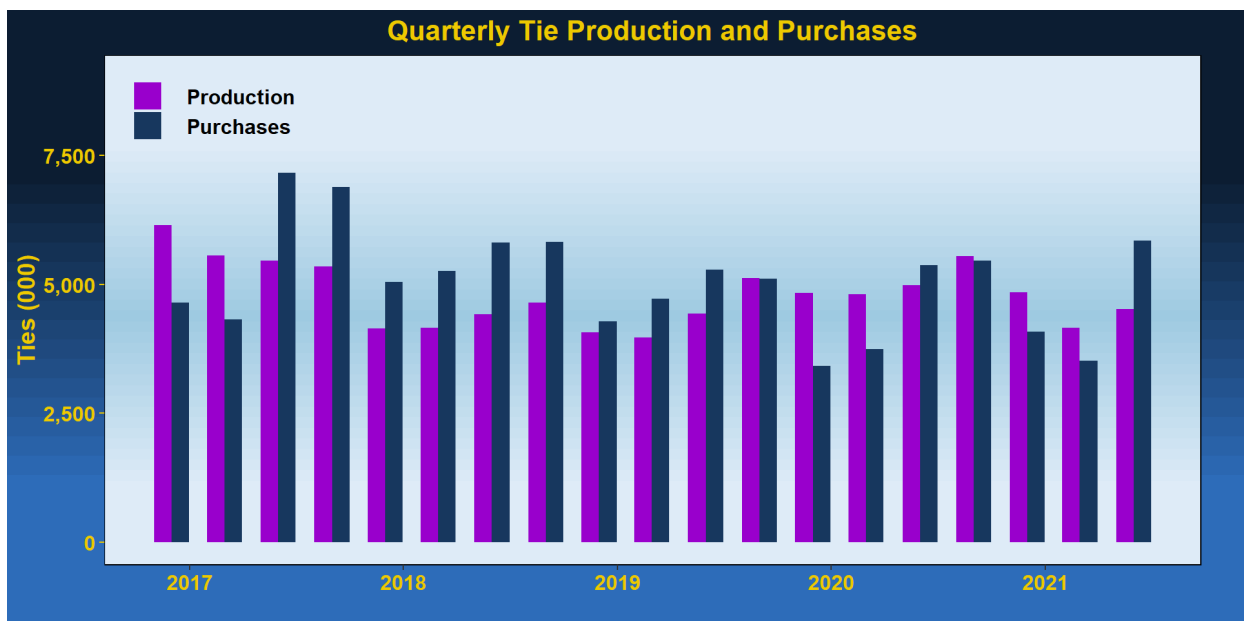
Inventory's 3MMA came down by 8.1% from last quarter and rose by 1% from year ago levels.

From Q1 to Q2 2021, the 3MMA of Inventory-to-Sales Ratio dropped from 0.87 to 0.83. Year ago, the ratio was 0.86.

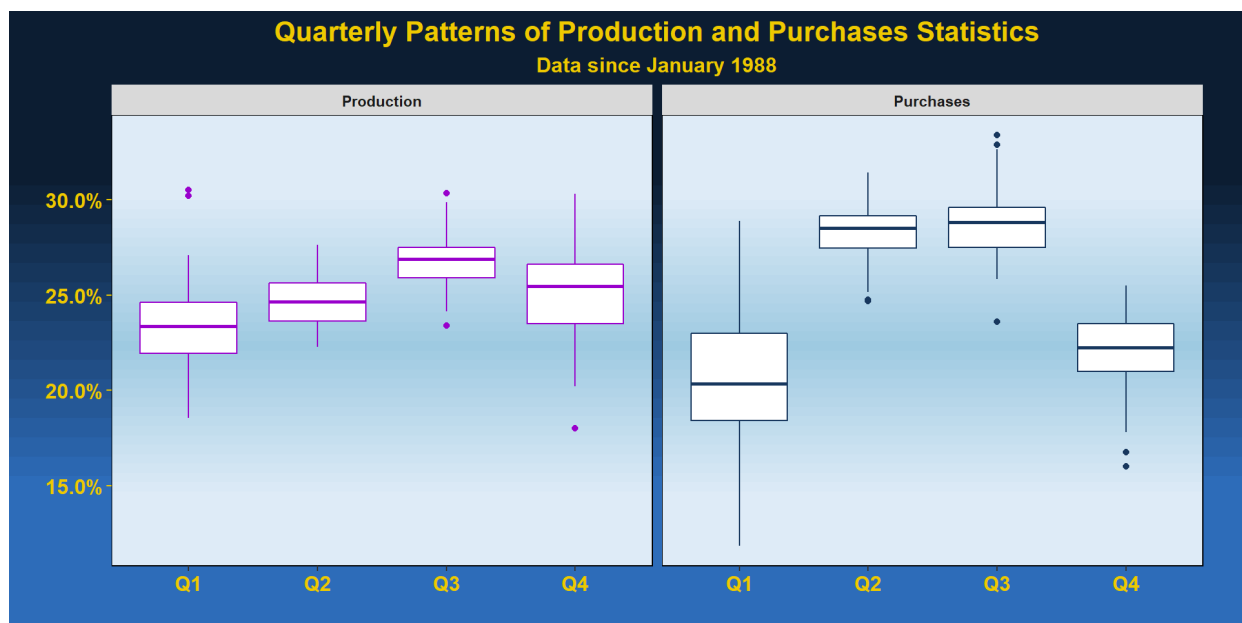
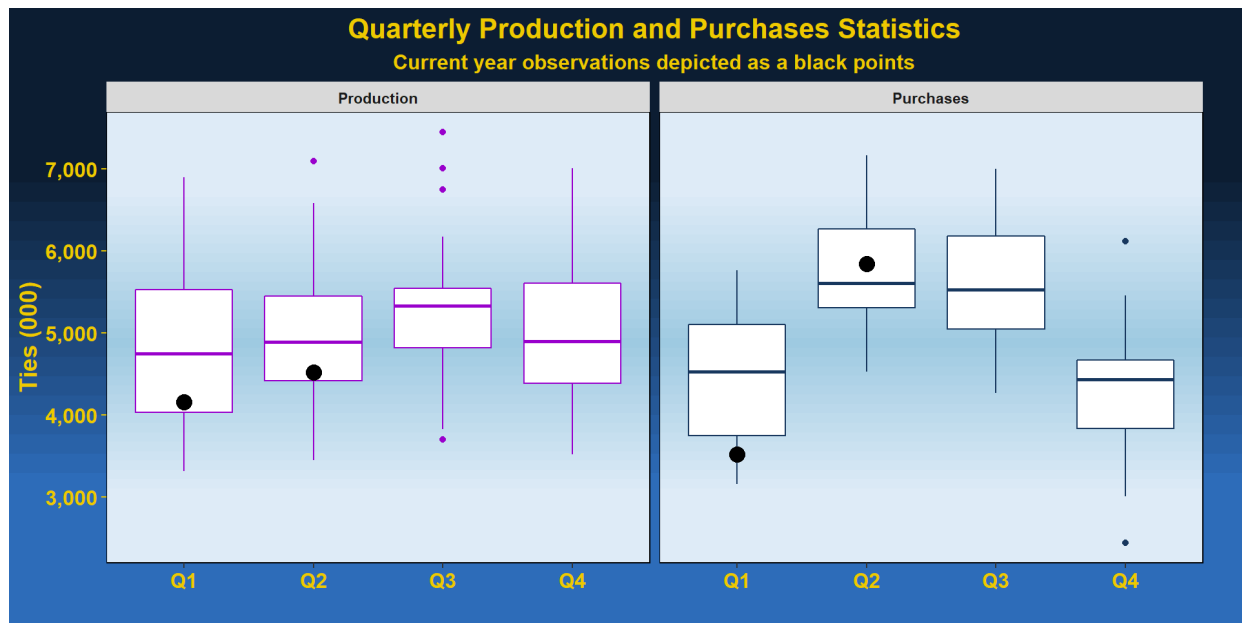
### **Table of Quarterly Observations**

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

Date	Production	Purchases	Inventory	ISR
June 2020	4,986	5,377	14,913	0.86
March 2021	4,154	3,517	16,393	0.87
June 2021	4,521	5,846	15,068	0.83



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 dwindled by 22.4% from last month and dropped by 35.9% from year ago.

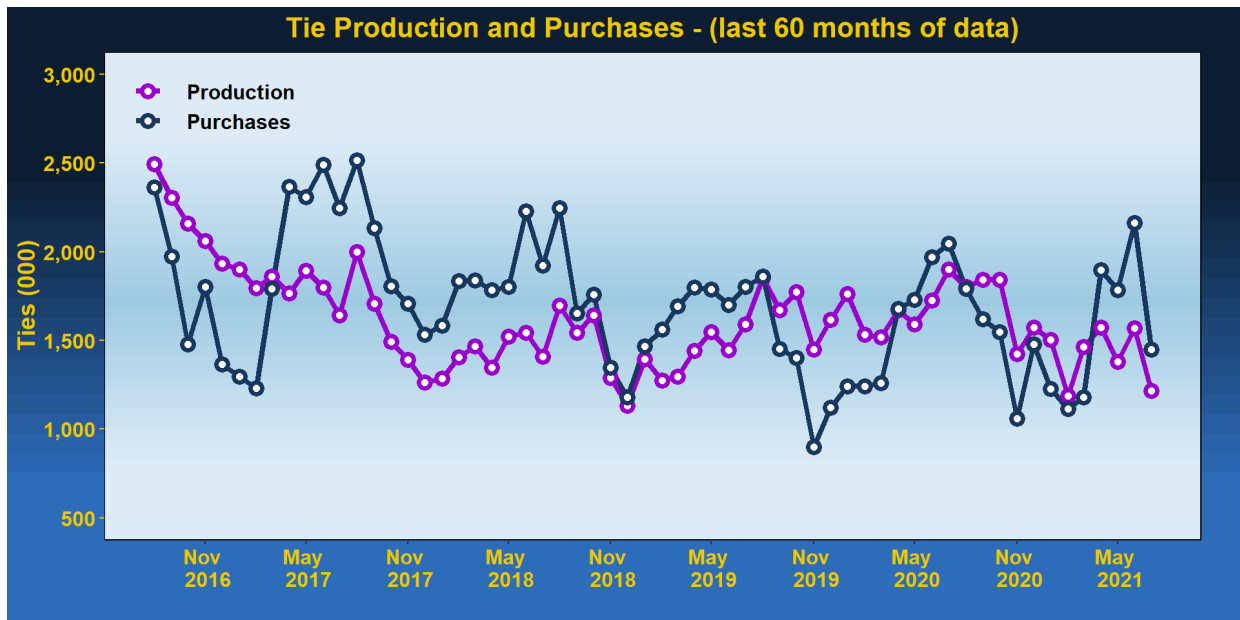
For the same time intervals, purchases decreased by 33.1% and fell by 29.2% respectively.

Inventory levels dropped by 1.5% from last month and grew by 0.5% from year ago levels.

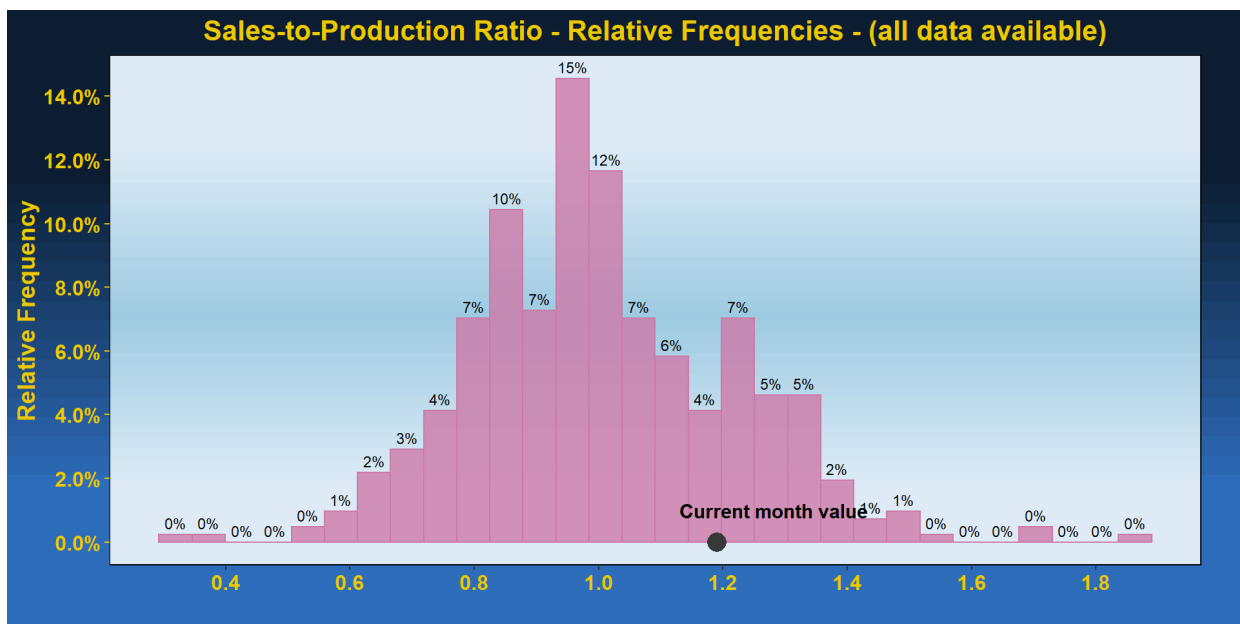
From month ago, the Inventory-to-Sales Ratio expanded from 0.8 to 0.81, and from year ago, the ratio declined from 0.82.

**Table of Monthly Observations**

Date	Production	Purchases	Inventory	ISR
July 2020	1,899	2,047	14,765	0.82
June 2021	1,568	2,164	15,068	0.80
July 2021	1,217	1,448	14,837	0.81

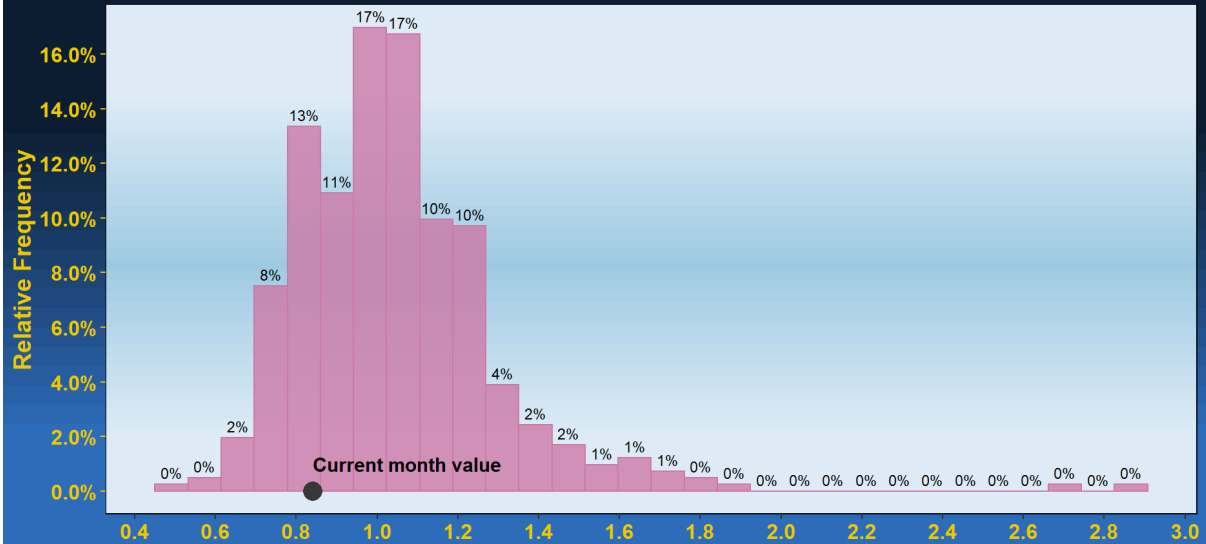


Sales-to-Production Ratio shows the replenishment/diminishment of inventory. Ratio above one signals diminishment and ratio below one replenishment of inventory stock.



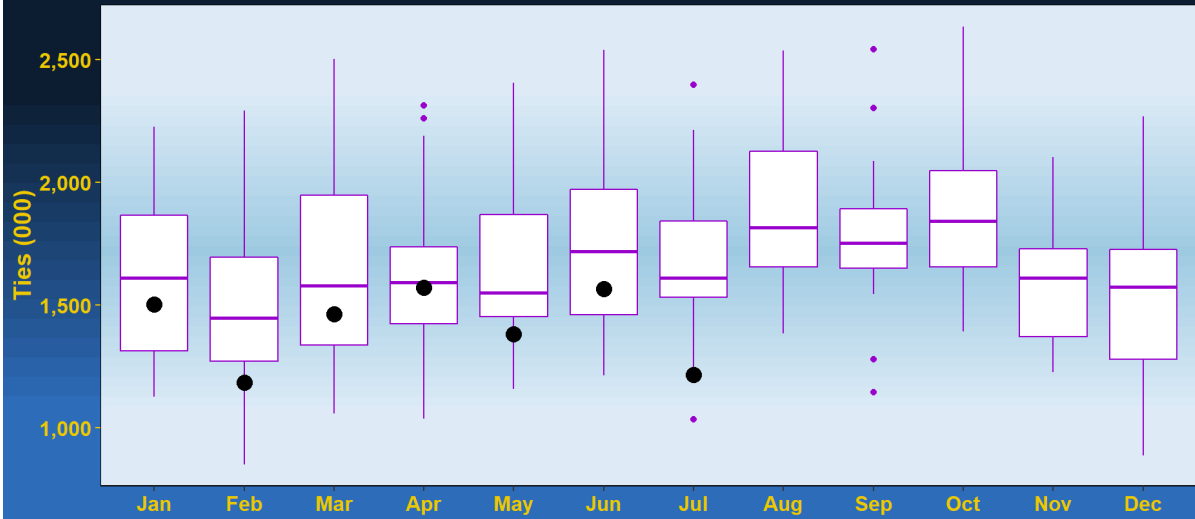
The following graph tells the same story as the graph above, just the ratio is reversed - Production-to-Sales Ratio.

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



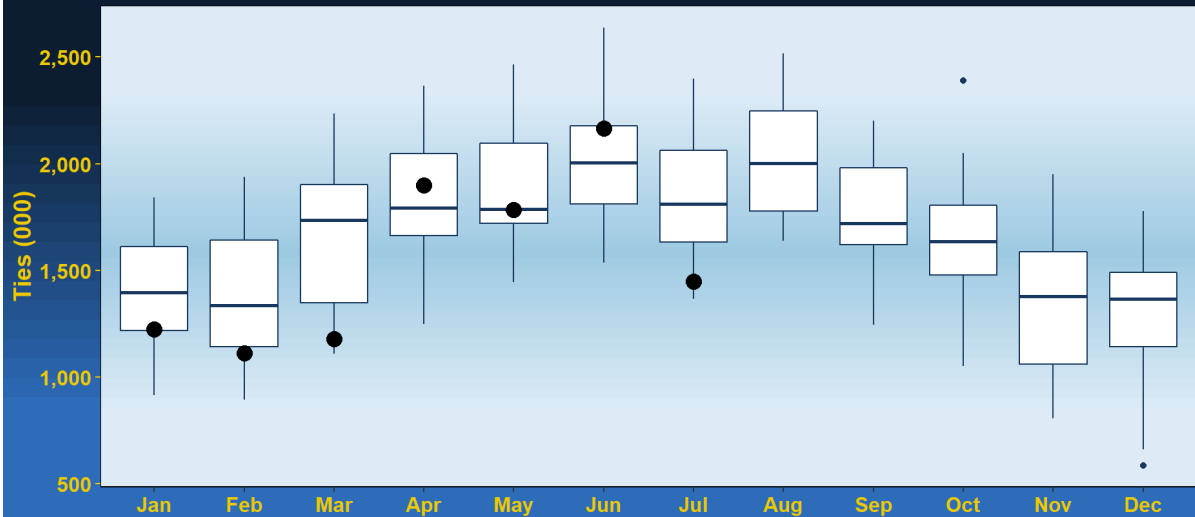
### Monthly Production Statistics - (data since 2000)

Current year observations depicted as a black points



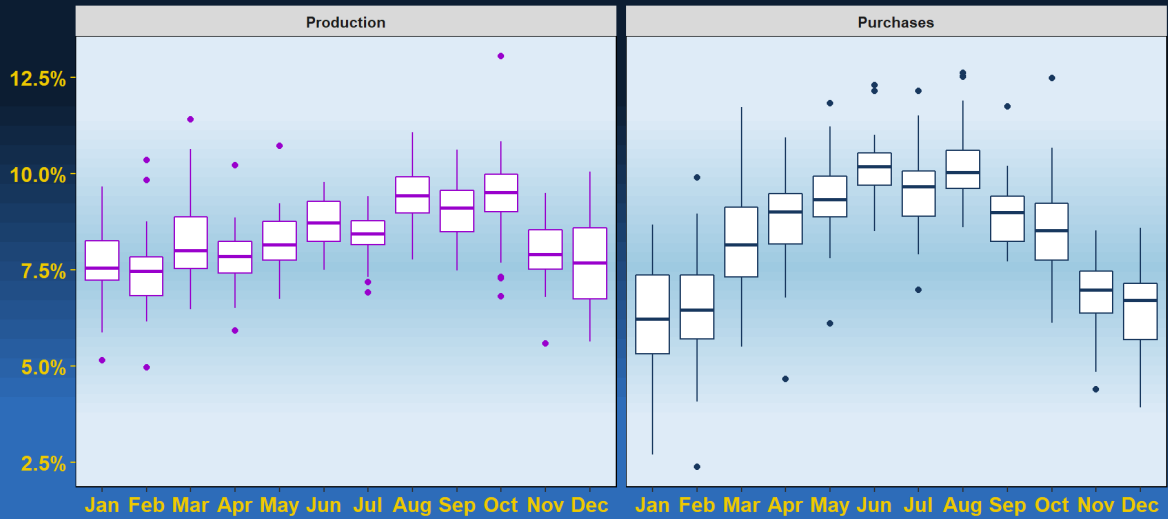
### Monthly Purchases Statistics - (data since 2000)

Current year observations depicted as a black points

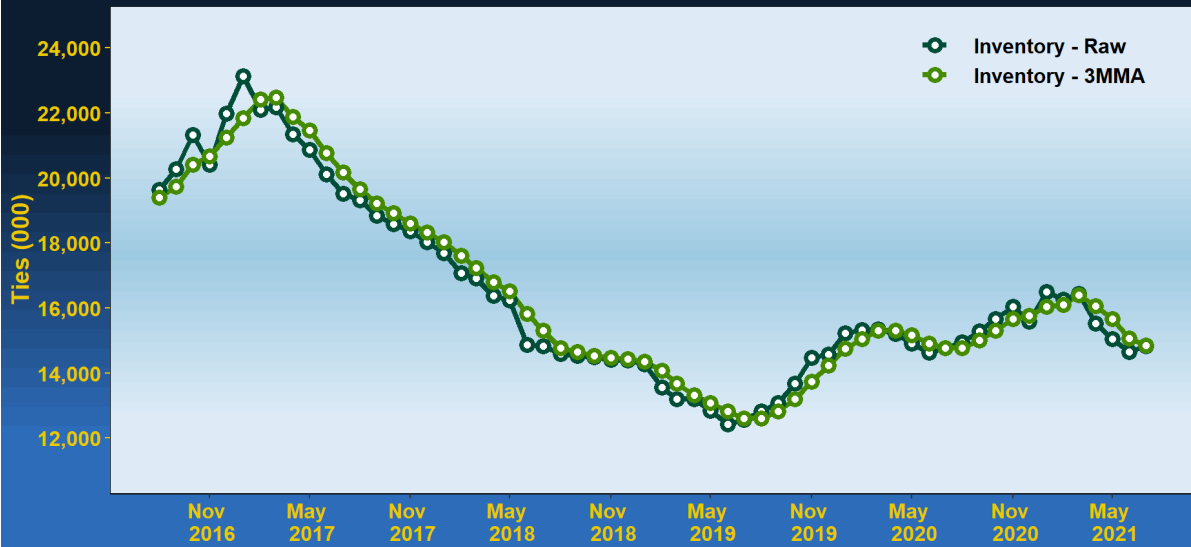


## Monthly Pattern of Production and Purchases Statistics - Percent of Annual Total

Data since January 1988

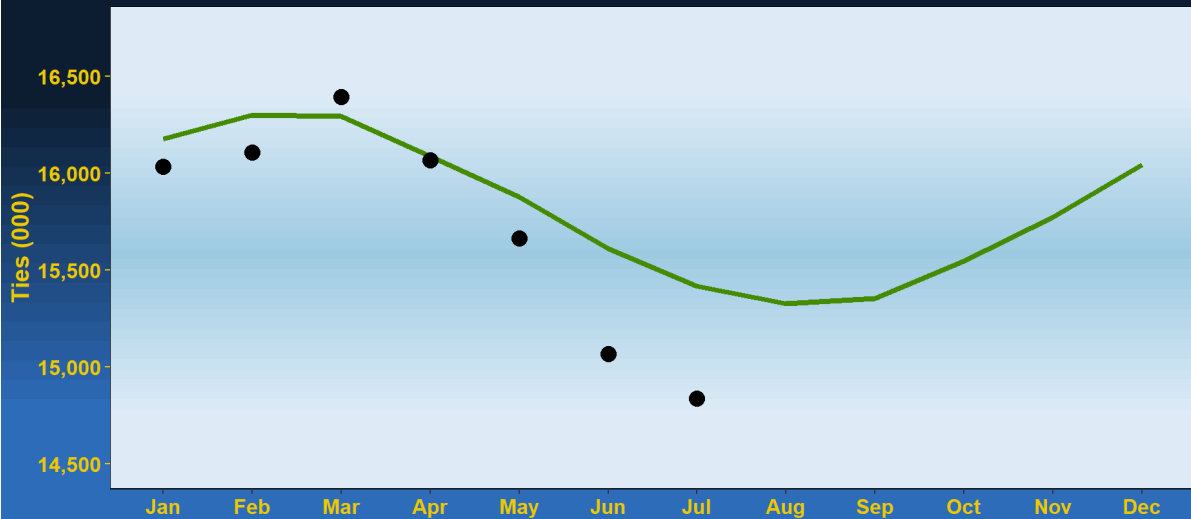


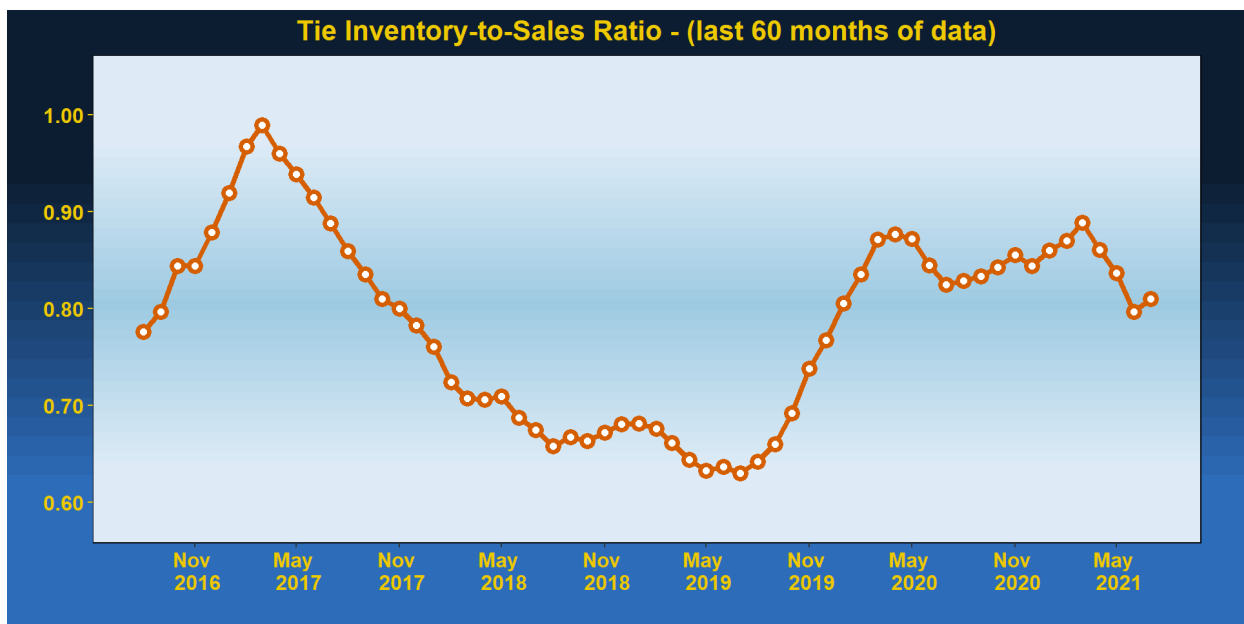
## Tie Inventory - Raw Monthly and 3MMA Data - (last 60 months of data)



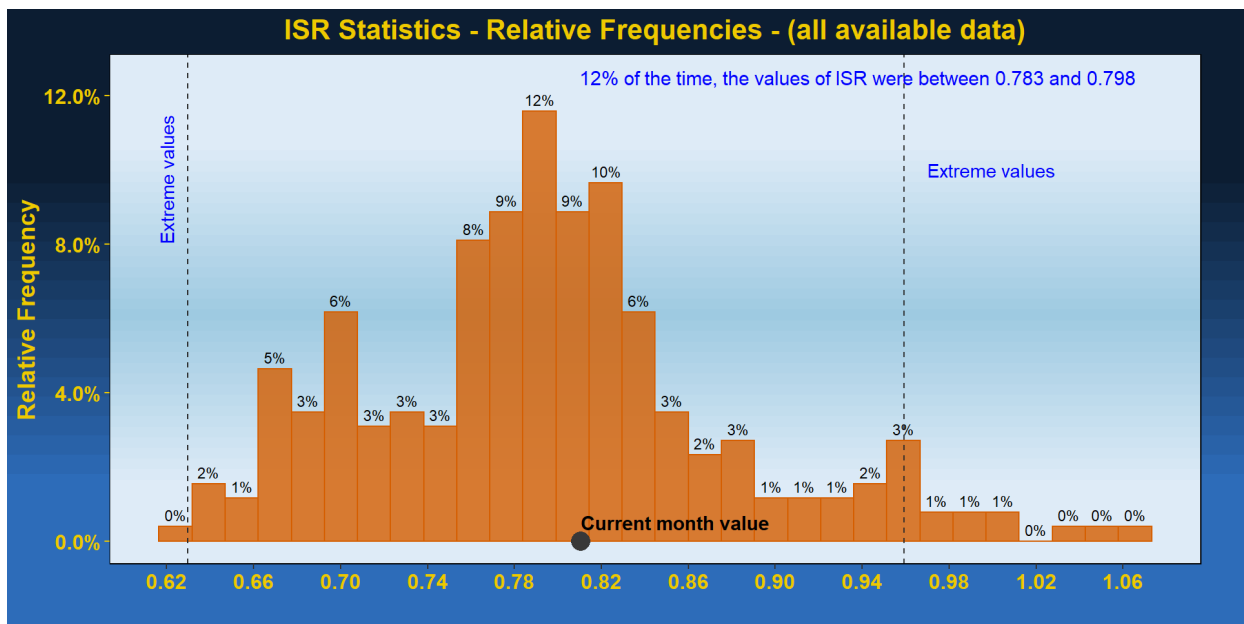
## Monthly Patterns of Inventory - (data since 2000)

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.

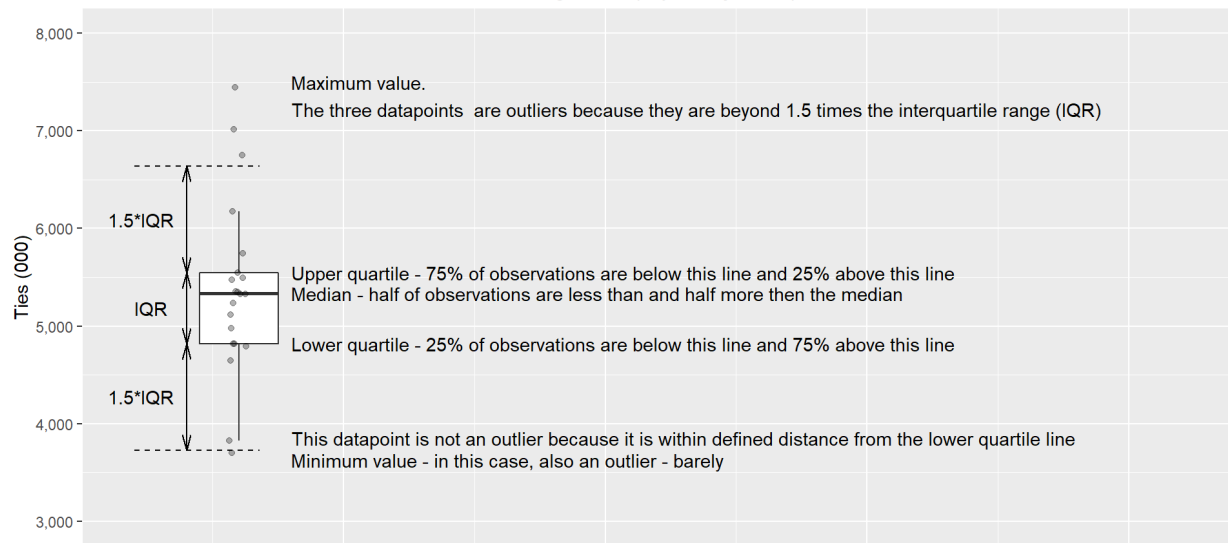




# Appendix

## Box Plot Explained

Underlying data displayed as 'jittered' points



## Histogram of Relative Frequencies Explained

