

NUMBERS DON'T LIE

By The RTA Economic Team

Recently, a member asked an important question regarding the way RTA graphically presents long-term trends in purchases, production and inventory data.

This member had noticed that RTA reported tie inventory through September had seen an 18.6 percent reduction since its peak at around 23 million in January 2017, yet the graphs RTA publishes in *Crossties* magazine's TieTrends' Long Term Trends section were not exhibiting that rather dramatic trend.

The answer to why the inventory line showed only a flattening of the trend is quite simple but suggested some other questions for the RTA economic team. This investigation led to the development of this article.

First, let's answer the question by presenting Figure 1, which has been aggregated in a manner that is similar to how the data appears in Long Term Trends section of TieTrends, i.e., it is presented in 12-month moving average format. In this aggregated graph, the data for production, inventory and purchases are shown for the past 10 years.

RTA has been presenting this data in this manner for 20+ years because it is a consistent way to view longer term trends rather than only producing a graph of the monthly data points (see Figure 2). It may be pointed out that TieTrends does contain all the actual monthly data points for seven years on the previous page under the heading of Short Term Trends, as well as in the online monthly Purchases Report.

As one can see from Figure 2, the reader can't really discern meaningful long-term trends by looking at monthly data graphed in raw form.

Looking at the data as 12-month moving averages, however, allows the longer-term trends picture to become more clearly defined. Nevertheless, without digging into the data tab of the RTA Purchases Report, certain short-term trends will take longer to

FIGURE 1

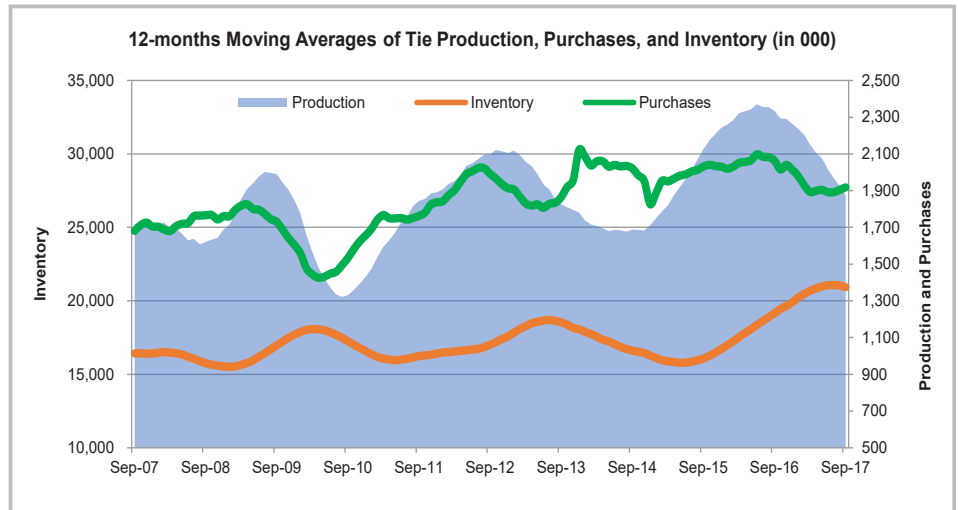
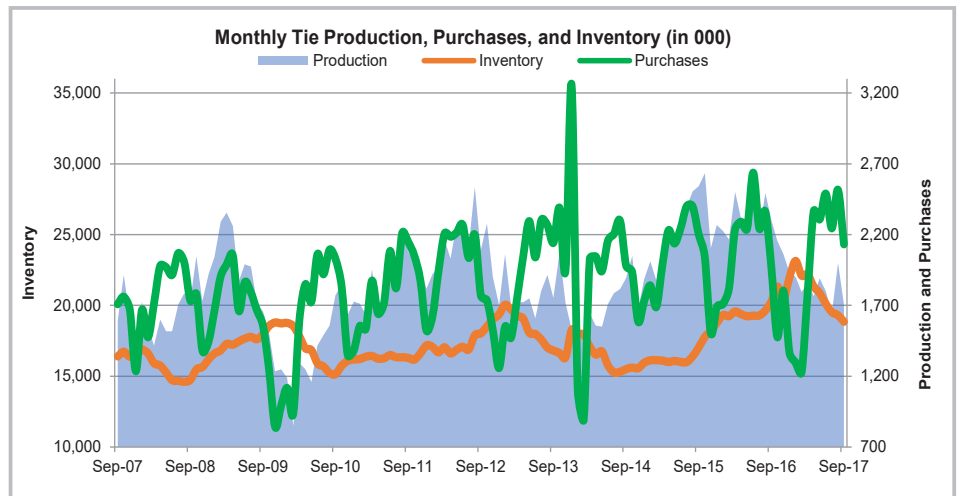


FIGURE 2



visually manifest in this way of graphing the data. This is one reason it's important for analysts to consult the online RTA Purchases Report, which presents these

data every month in three ways: short-term (monthly), mid-term (quarterly), and long-term (12-month average) in both the report and data tabs.

Producers and users alike should consider the potential consequences of this gap widening [purchases up vs. inventory down] in the context of other recent reports from the field, such as increased shipments of oak logs to China and other marketplace trends for low grade hardwood products.

The RTA economic team takes members' concerns and questions very seriously, so it took additional steps to illustrate some of the important points raised by the initial inquiry.

First, two graphs were aggregated from the Purchases Report (the 12-month moving average of purchases and production, and the 3-month moving average of inventory). In doing so, the monthly fluctuations of purchases and production are smoothed while the inventory short-term trends are preserved (see Figure 3). This graph clearly illustrates the downward trend in inventory since earlier this year.

Secondly, the team created graphs applying long term trend lines only to the purchases and inventory data in the 12-month moving average format (see Figure 4) and the additional (aggregated) way with inventory presented in 3-month moving format (see Figure 5).

In both cases, the overall gap between purchases and inventory is clearly widening, not narrowing. This is the case because the trend lines derive from the actual monthly data, not the moving averages of that data.

Producers and users alike should consider the potential consequences of this gap widening in the context of other recent reports from the field, such as increased shipments of oak logs to China and other marketplace trends for low grade hardwood products. A gap that widens as a result of increasing purchases over time, coupled with reductions in inventory, could produce pressures within the supply/demand equation. Ideally, one might hope for a trend in which purchases and inventory are more closely aligned to minimize shortages and/or over-supply situations.

This is one reason the RTA economic team produces the online reports every month along with the dashboards of procurement reports from the field. The balancing of supply and demand is never an easy task. However, by maintaining an intense focus on reporting accurate member data in many formats, RTA provides multiple tools, the use of which may make it possible for the job to be less daunting. ■

FIGURE 3

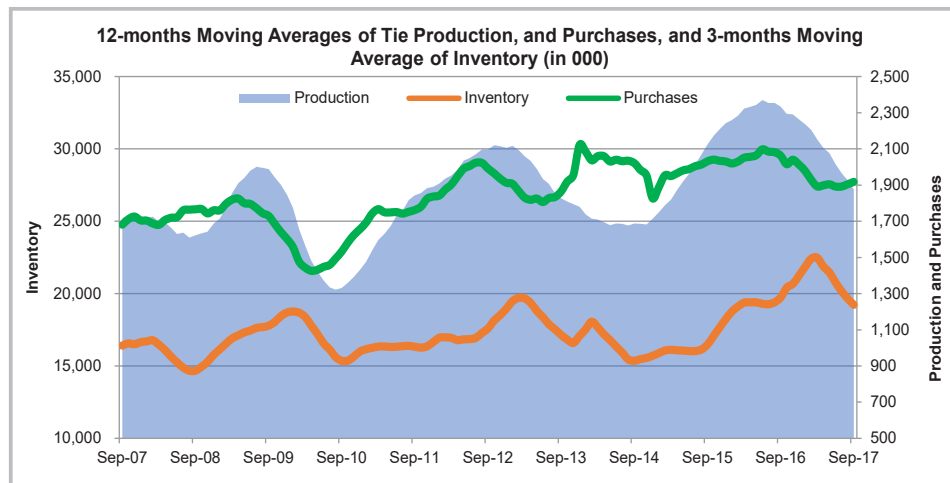


FIGURE 4

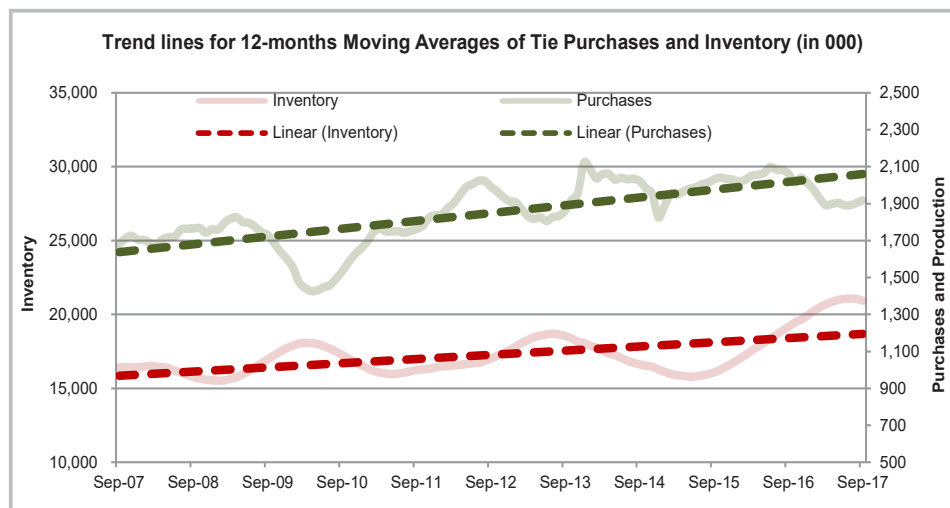


FIGURE 5

