WHITE PAPER



Are Auction Results a Good Source for Ag Equipment values?



The recent downturn in the Ag economy has resulted in the growing popularity of auctions.

This article examines their relationship to overall market prices.

The types of auctions for agricultural equipment have become more varied, ranging from the time-honored distressed sale to planned inventory reduction events regularly held by local dealers.

Multiple factors can impact the results of an auction sale, from the quality of the pre-event advertising to the weather on the day of the event. Thoughtful dealers are looking for assurance that the values that auctions provide reflect market prices.



Iron Solutions® examined their database to help answer this concern.

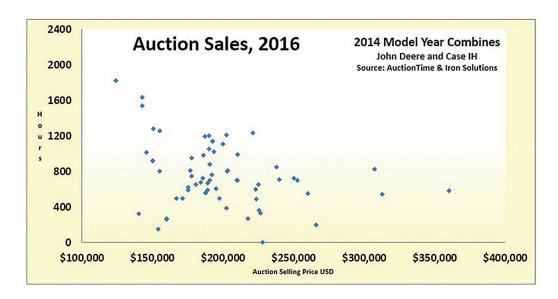
Iron Solutions holds the largest agricultural equipment database of dealer sold and auction transactions in the North American market.

Records span 30 years with over 16,000 models of equipment, totaling over \$80 billion in dealer-reported retail sold reports.

Cameron Hurnard, Iron Solutions' Director of Software Development and Data Services, compared auction results versus dealer-reported retail sales transactions for two popular recent model-year combines, a 2014 John Deere S680 and a 2014 Case IH 8230. He looked at sales reports for those two models from

January 1, 2016 to December 1, 2016, and also studied sales for all combines during that time period. In total, there were 671 transactions in the dataset.

Cameron then built a scatter-chart to illustrate the data gathered from the auction transactions alone. The chart is shown below and includes sales for the two models listed above. The transactions were sourced from Auctiontime. com and Iron Solutions' Official Guide database. Note that the machines plotted here can have different options and therefore may not be directly comparable.



He then looked at the dealer-reported retail transactions. To give an 'apples-to-apples' comparison, these results reflect sales prices after the reported sold price has been adjusted to allow for differences from the base unit. (The base unit is defined as a common configuration for a piece of equipment in a given region.)

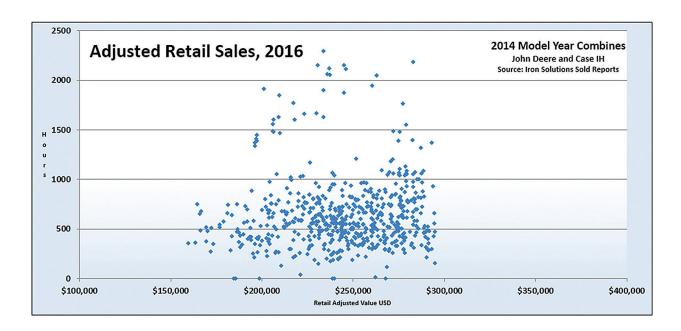
The steps that Iron Solutions goes through for every sold report submitted by a dealer, to assure comparability

to assure comparability between transactions, is shown in this diagram.

Adjusting Sold Pricing to Set Baseline

STEP 3 STEP 1 STEP 2 STEP 4 Set a base model Set average use **Normalize Sold** Weight Reports Reports Determine a Weight adjusted Determine average Adjust reported common reports based on hours/acres/bales sold price to allow configuration for a age and region to etc. for differences from piece of equipment determine their hase unit in a given region influence on final value

A scatter plot of those retail transactions was then created and is shown here:



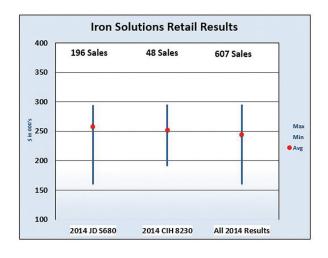
Many more retail sales transactions are available due to the fact that auctions account for only a fraction of the sales of agricultural equipment during the year.

The next step is to compare your high, low and average selling prices for the equipment. These results are charted below and the format makes it easy to see the differences between the two data sets.

When you compare the retail versus auction results, you find sales prices from dealer retail transactions are significantly higher for both the Case and John Deere models, with the average dealer retail price for the Case combine 27% over that at auction. The

Deere combine's average dealer retail price was 25% over the average auction value. Overall, for all combines sold in 2016 in the database, the auction results showed much more variance, ranging from \$125,000 to \$359,000 on only 64 sales. Meanwhile, dealer retail transactions, on a much larger volume of sales, 607 transactions, varied between \$155,000 and \$295,000.







Why do auction results alone give an unpredictable estimate of value?

The most common reasons are:

- The auction environment can be erratic, making comparability of the values by specific model questionable.
- · Accurate option detail can be unavailable.
- Condition evaluation can be subjective.
- Auction data alone fails to provide sufficient data points alone for a particular make, model and year.
- The auction environment itself can be erratic and impact the final value assigned to the piece of equipment.

Dealer sold reports are the best valuation source. They represent a price determined at arms-length between a willing buyer and a willing seller.

Iron Solutions' careful review of each dealer retail transaction assures the data points are comparable. Finally, a database of dealer retail transactions assures that there are sufficient data points to make a reasonable conclusion as to the value of the machine.

For the thoughtful dealer, review of dealer retail sales transactions is a wise step prior to valuing a machine.



Contact Iron Solutions today for more information on our data and the tools we provide to help dealers turn trusted data into profitable decisions.

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