

2019 Inventory Study

Combines/4WD levels and turns – part 2

By TRENT HUMMEL

This study revealed some surprises along with a few well-known issues

In part 1 of this series, we shared the 2019 WEDA Inventory Study findings of current comfort levels, dealership equipment turnover, number of used units in a series and, if new unit sales levels are sustainable.

In part 2, we will dig into historical sales of combines and 4WD's, acres/combine usage and Canadian/US ratios. This will lead to exposing the annual quantity of new combines and 4WD's needed to replace retiring units.

A 2019 OEM's study revealed the industry has 4.2x more farm machinery capacity than needed. This factor hovered at 3.7x for a number of years, but why the jump to 4.2x? Speculation on the increase is related to combines. Accelerated depreciation, increased capacity units, healthy farm incomes and dealerships overselling are a few of the factors that increased customer equipment overcapacity from 3.7x to 4.2x.

The sources for new unit data are flash reports from the Association of Equipment Manufacturers.

4WD

New 4WD	U.S.	From Prior Year	From Peak	Canada	From Prior Year	From Peak
2010	5,784			1,342		
2011	5,977			1,364		
2012	6,933	Market Peak		1,589	Market Peak	
2013	6,903	0%		1,567	-1%	
2014	5,102	-26%		1,227	-22%	
2015	3,114	-39%		879	-28%	
2016	2,315	-26%	-66%	823	-6%	-48%
2017	2,427	+5%		1,020	+24%	
2018	2,741	+13%		886	-13%	
2019	2,889	5%		570	-36%	-64%

I. 4WD – Sold Units

1. 4WD retails had a considerable drop from the 2012 market peak.
2. During 2014-2015, both U.S. and Canada experienced high decreases.
3. In 2016, the U.S. market bottomed out, declining 66.6% from the 2012 peak. It took three more years for the Canadian market to match the U.S. decrease.

New 4WD	U.S.	Canada	Total	Canadian Percentage Target 20%
2010	5,784	1,342	7,126	18.8%
2011	5,977	1,364	7,341	18.6%
2012	6,933	1,589	8,523	18.6%
2013	6,903	1,567	8,470	18.5%
2014	5,102	1,227	6,329	19.4%
2015	3,114	879	3,993	22.0%
2016	2,315	823	3,138	26.2%
2017	2,427	1,020	3,447	29.6%
2018	2,741	886	3,627	24.4%
2019	2,889	570	3,459	16.5%

II. North American 4WD Balance

1. The Canadian 4WD sales should be close to 20% of North American sales or the U.S. should be about 80%. When Canadian 4WD retails are < 20%, there is seldom a buildup of trades.
2. When the percent of Canadian retails is above 20%, which happened from 2015-2018, the Canadian dealerships are taking high levels of used 4WD units. From part 1 of this series, a few dealerships were indicating concern with used 4WD inventory levels.
3. Versus combines, used 4WD units are marketed into non-agricultural markets. This provides options when selling used 4WD inventories and maintains used 4WD levels at a manageable level.

COMBINES

“The combine business has hurt more dealerships than its helped,” has been an industry comment for decades. Many dealerships would have more money or possibly survived if they had stayed out of the combine business.

New Combines	U.S.	From Prior Year	From Peak	Canada	From Prior Year	From Peak
2010	10,678			2,701		
2011	9,898			2,880		
2012	9,807			2,904		
2013	10,753	Market Peak		2,940	Market Peak	
2014	7,974	-26%		2,243	-24%	
2015	5,376	-33%		1,946	-13%	
2016	3,972	-26%	-63%	1,791	-8%	-39%
2017	4,104	3%		2,202	23%	
2018	4,849	18%		2,114	-4%	
2019	4,807	-1%		1,695	-20%	

I. Combines – Sold Units

- Both countries peaked in 2013. Similar declines in 2014. This is where it stopped. In 2015 and 2016, the U.S. experienced large decreases while Canada had modest reductions.
- From the 2016 low to 2019, the U.S. increased combine retails +20%.
- During the same time frame, Canada had about a 6% decline. But from the 2016 bottom, 2017 and 2018 saw about a 20% increase.

New Combines	U.S.	Canada	Total	Canadian Percentage Target 20%
2010	10,678	2,701	13,379	20.2%
2011	9,898	2,880	12,778	22.5%
2012	9,807	2,904	12,711	22.8%
2013	10,753	2,940	13,693	21.5%
2014	7,974	2,243	10,217	29.4%
2015	5,376	1,946	7,322	26.6%
2016	3,972	1,791	5,763	31.1%
2017	4,104	2,202	6,306	34.9%
2018	4,849	2,114	6,963	30.4%
2019	4,807	1,695	6,502	26.1%

II. Balance – Total Combine Retails

- Canada farms about 24% of North America’s cropland, which is adjusted for the acres in both countries that are not harvested with a combine.
- For new combine sales, a healthy balance is having the Canadians retail about 20% of North America’s total retails. When this balance is off, the dealerships generate too many trades for the used customers to absorb.
- From 2014-2019, Canada sold 26%-35% of North America’s combines. This has led to the abundance of used combines at Canadian dealerships.

New 4WD Turnover	U.S.	Canada
2015	3.5x	3.1x
2016	3.1x	3.1x
2017	3.1x	3.5x
2018	2.9x	2.6x
2019	3.3x	1.8x

III. New 4WD Turnover

- Using AEM’s beginning year and year-end inventories, we were able calculate new 4WD turnover. Using inventories does not provide an exact measurement but it provides a picture to this importance measurement.
- The industry target for new equipment turnover has been 3x-4x/year. Since 2015, new 4WD turnover has primarily tracked industry benchmarks.

New Combine Turnover	U.S.	Canada
2015	5.0x	4.9x
2016	4.7x	5.4x
2017	6.0x	6.3x
2018	6.6x	5.4x
2019	4.3x	2.8x

III. New Combine Turnover

- It is remarkable that new combine turnover has mostly held between 5x-6x. We speculate this is due to preselling large quantities.
- Due to the 2019 combine carryover, we have about one-third of 2020 new combine requirements in stock at dealerships.

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2017-18-19 Average	4WD	Combines
2017-18-19 New Retail Yearly Average	3,511	6,590
Average Number of Trades	2.5	3.3
Trades That Will Need to be Retailed	8,778	21,747
Aged out Hours	8,000+	4,000+

IV. Trades to Sell

1. Prior to 1999, for every 1 new combine sold, dealerships sold 1 new 4WD. As we came out of the Dark Ages (1999-2001) market correction, this ratio changed. It has primarily held at 2 new combine retails to 1 new 4WD sold.
2. As the study participants shared, there is a small percentage of dealerships heavy in used 4WD units but not at concerning levels
3. The inventory study revealed with new 4WD retails there are 2.5 trades in a series and 3.3 trades to washout a new combine sale. With this, along with the difference in new retail volumes between combines and 4WD, we understand why the combine business generates more trades compared to 4WD retails.
4. A 12-year-old study estimated North American used combine buyers purchased an average of 25,000 used combines yearly. This was from dealerships, auctions and private sales.
5. With many reasons, one being combine capacity, the 25,000 yearly used combines could be reduced by 33%. The new estimate for North American combine retails could be 17,000 used combines annually.
6. From the following chart, it is easy to understand why we are able to manage our used 4WD levels. We sell about half as many 4WD units, take less trades in a 4WD series and customers use 4WD units for twice as many hours.

Estimated 20-year Average Combine Usage	Average 2,750 acres/year
U.S.	85,455
Canada	27,273
Total	112,728
Annual North American Replacement	5,636

V. Combines needed to replace retiring units

1. Everyone can argue these estimates but with our investigative homework, we guesstimate a 20-year average combine life, 2,750 acres/year average and North America has 310 million acres harvested with combines.
2. With these guesstimates, the new North American combine replacement needs are presenting at 5,600. We had a few dealers suggest the average number of acres/ combine is closer to 2,500/year. This could be correct as we will never know the exact number. At 2,500 acres/year, replacement needs are 6,200 units.
3. Many dealerships shared the problem that large-acreage customers have the combine capacity to add 10% more acres without adding machines to their fleet. With 17% of North America's farmers classified as "small farms," in time, their acres will be absorbed by neighbors. We are going to do more acres with the same or less equipment as the machines become larger, more efficient and customers experiment with crop types and rotations.

The data provided is by country or by North American totals. Every geographic region or area of the state/province is unique. It is up to individual locations/dealerships to calculate their Area of Responsibility in crop acres, combines/acre usage and age of the combine fleet.

This concludes the two-part 2019 WEDA Inventory Study. Hopefully, this information will be used by your dealership as you begin planning for success in a new decade... as it's just good business. **WED**

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