FCC Ag Economics

Projecting 2016-17 Farm Receipts and Equipment Sales

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Introduction

Farm equipment is an essential component in all agricultural operations. It influences the level of productivity, and impacts overall profitability. In practising efficient machinery management, producers must decide when to make upgrades or replace parts versus purchasing new equipment to leverage superior technology.

Profit maximization is driving producers' decisions to purchase farm equipment. We found that overall farm equipment sales are usually a leading indicator of farm health as higher farm equipment sales in a given year indicate stronger farm cash receipts in the next year.

This report provides an outlook of new farm equipment sales in 2016 and 2017 using projections of farm cash receipts and other economic variables. Sales of new farm equipment in Canada are expected to continue to soften in 2016 before improving in 2017, reflecting improved optimism after a period of caution in 2015 and 2016.

A note on methodology

1. For the purposes of this report, farm equipment is categorized into five groups: tractors under 40 HP, tractors between 40 and 100 HP, tractors over 100 HP, 4WD tractors, and self-propelled combines.
2. We split farm equipment into three markets: total farm equipment sales, combine sales, and 4WD tractor sales.
3. The majority of total farm equipment sales are smaller tractors (under 40 HP). These tractors are generally used on non-ag operations. These sales are driven more by the health of the overall Canadian economy, whereas the health of the ag sector drives ag equipment sales.
4. Farm equipment sales are seasonal by nature. In this report we use seasonally adjusted data to expose the underlying trends.

Farm Equipment Sales Down in 2015

The market for new farm equipment experienced a significant downturn as sales fell in all categories between 2014 and 2015:

- 4WD tractors by 34.9%
- Tractors over 100HP by 22.1%
- Tractors 40-100HP by 14.7%
- Combines by 21.0%
- Tractors under 40HP by 7.1%

Total new farm equipment sales fell by 13.8 per cent.

Lower sales in 2015 were the result of a perfect storm. Higher prices for new equipment in 2015 (as a result of a weaker Canadian dollar) reduced the demand for equipment. Strong sales prior to 2014 made sales in 2015 appear low, even though they were in line with the 10-year average. Uncertainty around Canadian agricultural production along with expectations of weaker commodity prices also dampened 2015 sales.

In 2014, total tractor sales reached a high of 23,860 units, surpassed only by sales in 2008. The large volume of sales in 2008 was sparked by the financial crisis; dealerships were looking to move inventory and offered strong incentives. High commodity prices coupled with low interest rates enticed buyers.

Year-to-date 2016 farm equipment sales are starting off slowly.[1] In the first quarter of 2016, total tractor sales are down 19.5 per cent from the first quarter of 2015. Sales of tractors under 40 HP are down 20.1 per cent, tractors 40-100 HP are down 9.5 per cent, tractors over 100 HP are down 31.8 per cent, 4WD tractors are down 5.8 per cent, and combines are down 17.7 per cent.

1. Data comes from Bloomberg

Looking into 2016, 2017, and beyond

Our projections reveal a mixed outlook in 2016 for new farm equipment sales relative to 2015:

- Total farm equipment sales to decrease by 7.1%
- Combine sales to decrease by 5.2%
- 4WD tractor sales to increase by 24.5%

4WD tractor sales make up 3.5 per cent of total farm equipment sales, so their increase will have little impact on the overall picture. We expect total farm equipment sales to strengthen in 2017:

- Total farm equipment sales increase by 7.0%
- Combine sales increase by 8.9%
- 4WD tractor sales increase by 2.4%

What does this outlook mean for farm health?

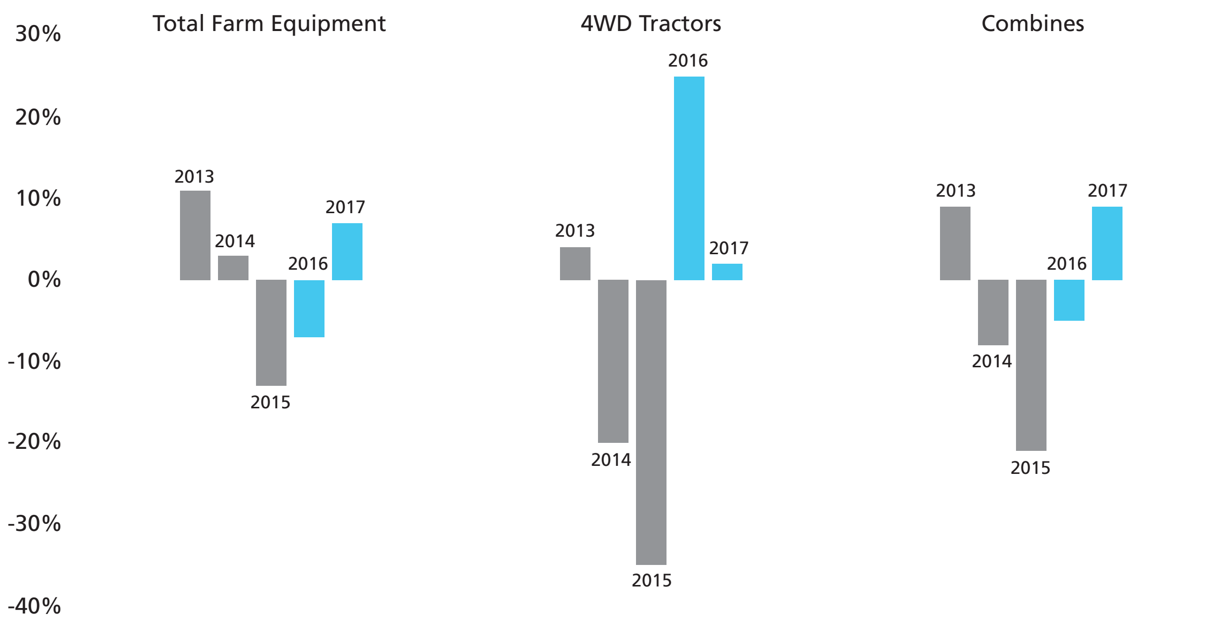
Total farm equipment sales and combine sales are usually a leading indicator of farm health (4WD tractor sales are not). Despite the 2016 declines, farm equipment sales remain in line with the 10-year average. The decline in sales in 2015 and 2016 indicates caution with respect to future farm cash receipts. But higher sales in 2017 still suggest an optimistic outlook for 2017 and beyond, with stronger cash receipts (Figure 1).

Dealer inventory increases

Inventory measures the number of units dealers have in stock. Increasing inventory could mean that sales are slower than the pace of dealer orders, suggesting a slowdown in the equipment market. Or it could mean that dealers believe a strong sales season is approaching, and so are stocking up in preparation.

Total farm equipment inventory has increased by 25 per cent through the second half of 2014 to March 2016. This is consistent with reduced sales in 2015 and 2016.

Figure 1: Farm equipment sales to increase in 2017



Sources: FCC Ag Economics calculations, Bloomberg

Drivers of Farm Equipment Sales

Farm cash receipts

Total farm cash receipts grew by 72 per cent from 2006 to 2014 (Figure 2).[2] In the same time period, crop receipts doubled, lifted by strong demand for grains, oilseeds and other crops. Even as stocks and supply started to rebuild following the 2012 production year, crop receipts remained strong.

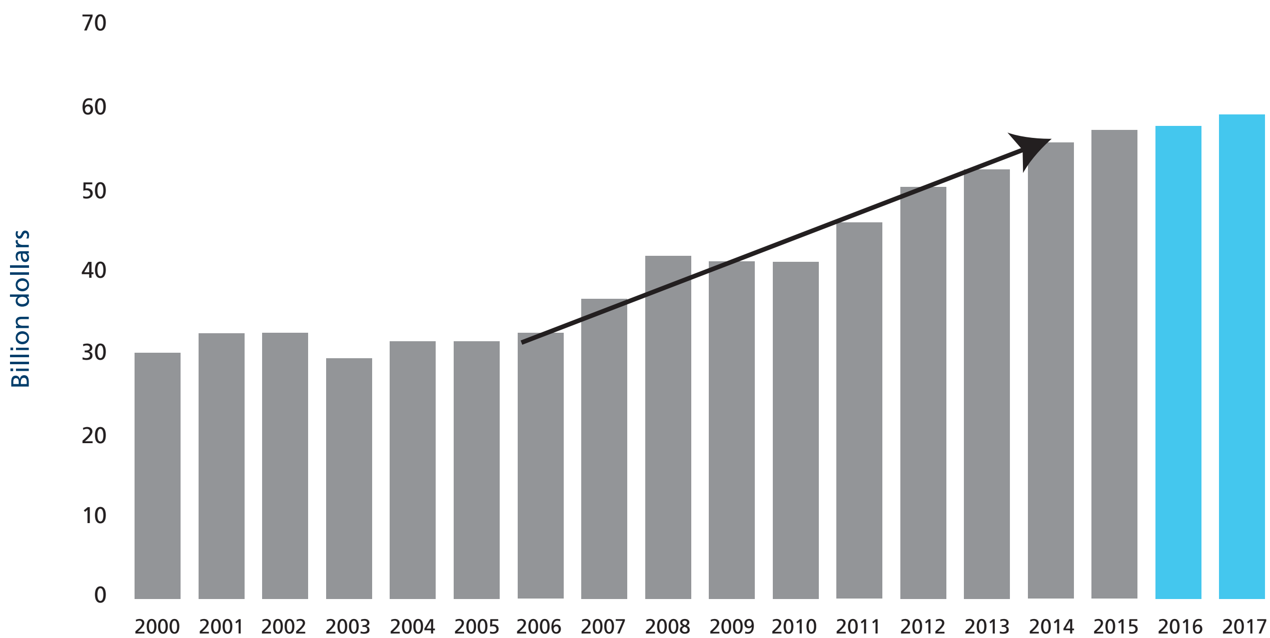
Crop receipts and overall farm cash receipts are important drivers of our projections for farm equipment sales. Crop receipts are projected to increase by 5.8 per cent in 2016 and 3.8 per cent in 2017. These projections are highly influenced by strong prices in futures markets for major grains and oilseeds as well as a Canadian dollar that is projected to remain below its five-year average.

Total farm cash receipts (including both crops and livestock) are projected to slightly increase – a 0.1 per cent rise in 2016, followed by a more encouraging forecast of a 3.3 per cent increase in 2017. Given 2016 crop receipts are projected up, a decline in farm cash receipts suggests some weakness in the livestock markets in the short-term, at least relative to the strong returns observed in 2014 and 2015. Futures prices for the remainder of 2016 suggest a decline in cattle prices which are the main reason behind the decline in livestock receipts.

Our projections for total new farm equipment sales are driven by the projections of farm receipts. In the 4WD tractor market and the combine market, crop receipts are used as 4WD tractors and combines are used almost exclusively on cropping operations. Total equipment sales are associated with total farm cash receipts since they are used on all types of farming operations.

Farm cash receipts in 2015 held up well over the 2014 level and cannot be pointed out as the primary driver behind the slowdown in equipment sales. It is rather expectations of lower commodity prices and farm income that possibly drove sales lower. This illustrates the role of expectations in determining actual sales. Realized farm cash receipts in 2015 ended strongly as the Canadian dollar shielded producers from softer commodity prices.

Figure 2: Total farm cash receipts projected to remain strong



Sources: Statistics Canada (Cansim 002-0002), FCC Ag Economics calculations

[2] Includes crop and livestock receipts; does not include government payments.

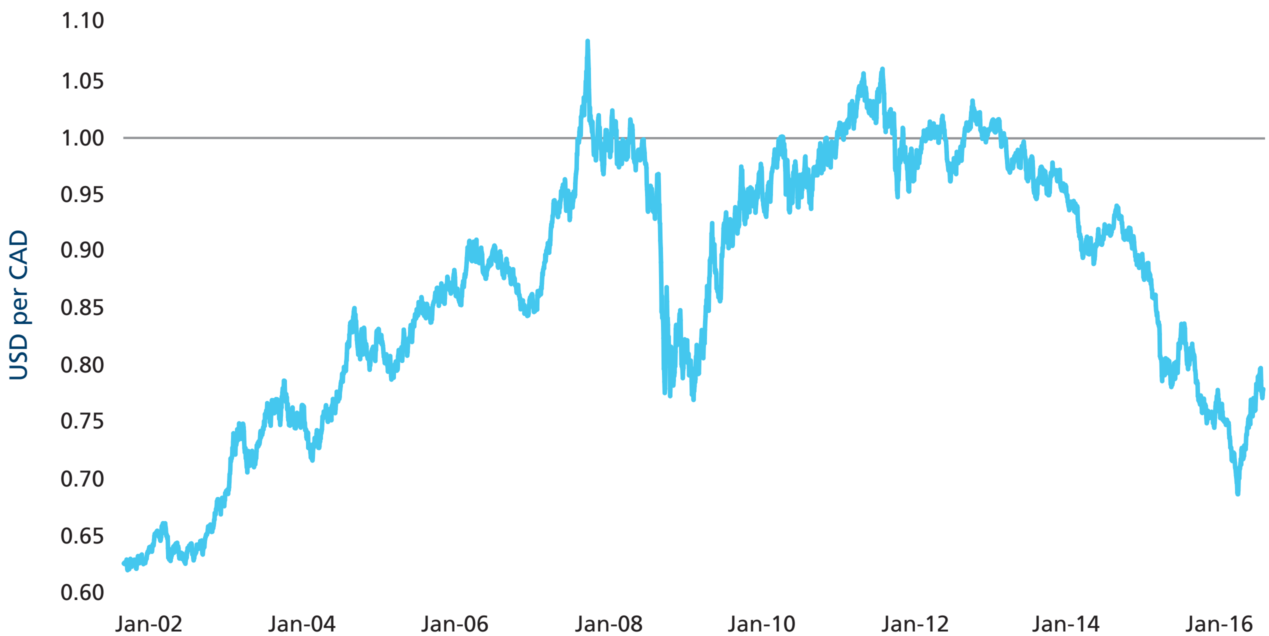
Weakness in the Canadian dollar supported farm cash receipts

The CAD-USD exchange rate has a significant impact on farm equipment sales. A significant share of tractors and combines sold in Canada are manufactured south of the border and are priced in USD. It's worth noting that Canada does manufacture world-class farm equipment, such as seeders, swathers, augers and sprayers. In this report we focus strictly on tractors and combines (most of which come from the U.S.).

A weaker CAD raises the cost of importing from the U.S., leading to lower Canadian sales.

During the mid-2000s the Canadian dollar appreciated (Figure 3). The CAD-USD exchange rate was at or near parity from 2008-2013, with the exception of a drop in 2009 triggered by the global recession. The CAD-USD exchange rate started falling in June 2013 due to low interest rates, weakness in oil prices, and sluggish GDP growth in Canada. Thus far in 2016, the loonie has increased in value by 8.7 per cent. We project the average exchange rate will remain in the USD 0.75 to USD 0.80 range in 2016, moving slightly higher into 2017.

Figure 3: Exchange rate showing strength in the beginning of 2016



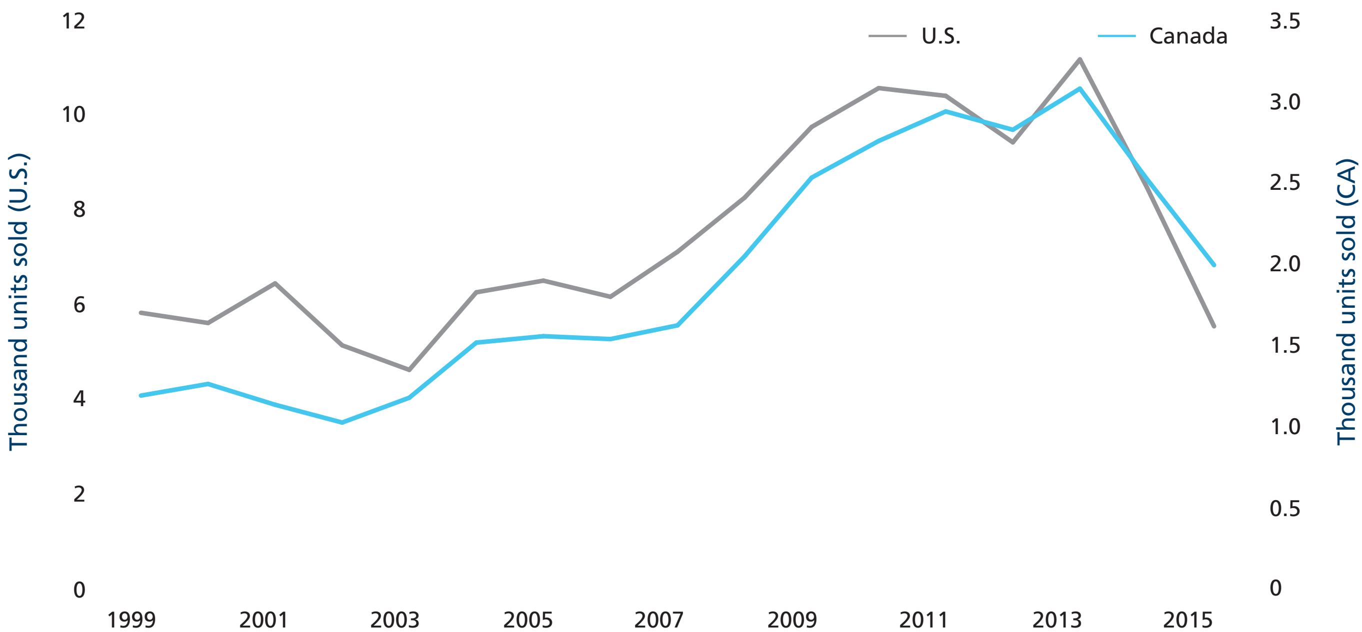
Source: Bank of Canada

Farm equipment sales in the United States have slowed

A slowdown in farm equipment sales is also occurring south of the border (Figure 4). Farm equipment sales in both the U.S. and Canada have historically followed the same trend, particularly in the larger farm equipment markets (tractors over 100 HP and combines). This is not surprising given commodity prices are determined in the larger U.S. market.

However, the CAD-USD exchange rate impacts commodity prices and crop receipts, influencing equipment sales differently between countries. A lower exchange rate shielded Canadian producers from lower U.S. commodity prices. Combine sales were down 34.5 per cent in the U.S. in 2015 while sales in Canada were down 21.0 per cent.

Figure 4: Trends in U.S. and Canadian combine sales are similar



Source: Bloomberg

Low interest rates boost equipment sales in the short term

The interest rate has both long-run and short-run effects on farm equipment sales. In the short run, it is a measure of the affordability of credit. Lower interest rates should boost sales, especially of larger equipment.

In the long run, interest rates are an indicator of the overall health of the economy. When the economy is healthy and growing with moderate to high inflation, interest rates climb. In this case, higher interest rates could indicate a healthy economy and lead to higher farm equipment sales. The opposite is also true. Lower interest rates are a reflection of muted economic growth and do not necessarily trigger more sales despite lower borrowing costs.

In the total farm equipment market, the long-run effect trumps the short-run effect. This market is made up largely of smaller tractors that don't usually require financing. The cost of borrowing money for these purchases is not a significant driver. However, in the combine and 4WD tractor markets, the short-run effect is stronger than the long-run effect. These are large purchases that require large amounts of financing, so the cost of borrowing money is important.

Farm equipment pricing

The price of new farm equipment increased faster than the overall rate of inflation for the Canadian economy in 2015 (Figure 5). Throughout 2015, the price of farm equipment increased:

- Tractors 105-130HP by 14.0%
- 4WD tractors by 15.1%
- Combines by 16.3%

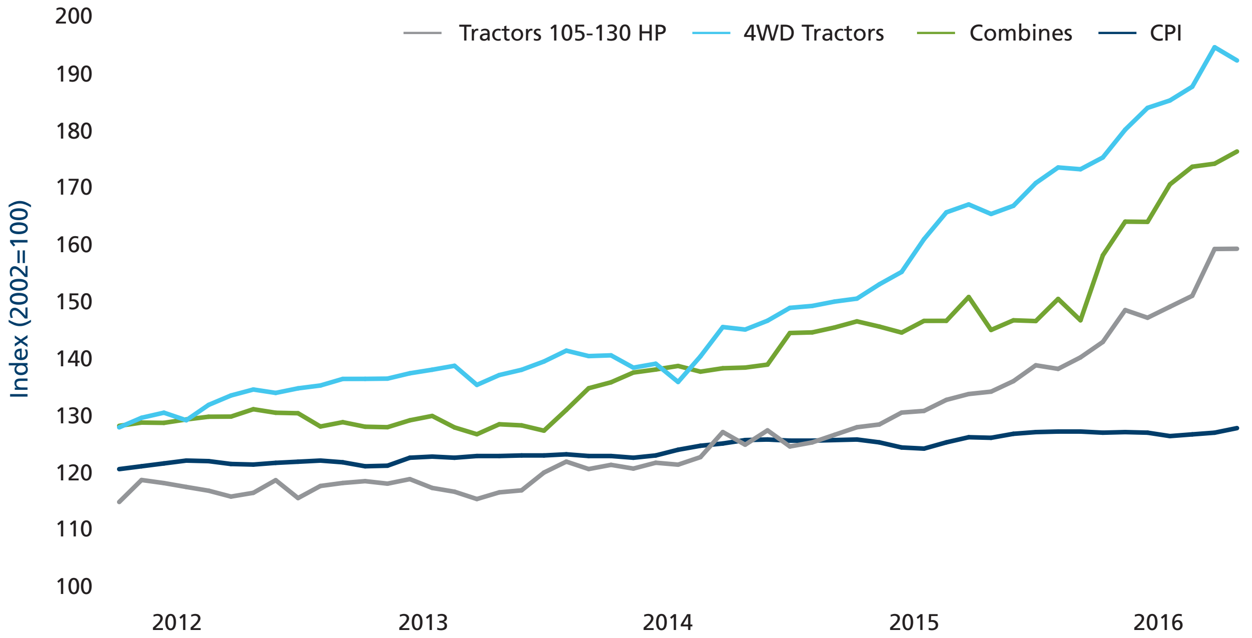
In comparison, the overall Consumer Price Index (CPI) increased by only 1.8 per cent. Over the same time period, farm product prices decreased by 0.7 per cent. Higher equipment prices led to lower equipment sales.

Equipment price inflation has continued into 2016. Through the first three months of 2016, prices of farm equipment increased:

- Tractors 105-130HP by 5.5%
- 4WD tractors by 2.5%
- Combines by 1.5%

Price inflation occurred as the Canadian dollar fell from the high reached in 2013.

Figure 5: Farm equipment prices increase



Sources: Statistics Canada (Cansim 326-0021), Alberta Agriculture and Forestry

Conclusion

Farm equipment sales are projected to decline in 2016 due to continued weakness in the Canadian dollar, and despite a relatively strong outlook for farm cash receipts and crop receipts. Softer commodity prices in early 2016 has made producers reluctant to buy new farm equipment. Projections of continued strength in crop receipts suggest farm equipment sales will improve in 2017.