Thank you for participating in the Q4 2019 North American Agricultural Industry Conditions Survey. The survey is based on Net Rising Indexes. We take the positive answers and detract the negative ones, creating a net rising index. Anything below zero means a market contraction, anything above growth. The stronger the contraction or growth, the stronger the market consensus. Please email Benjamin Duyck with any comments or questions at bduyck@aem.org.

Summary
This is the third consecutive quarter that the consensus for market optimism in the ag equipment industry has turned negative, but it is showing some improvement, especially when we compare the survey results quarter over quarter. Regardless, members indicated that the positive outlooks that occurred in 2017 and 2018 have almost fully evaporated. Generally, we do need multiple quarters of negative Net Rising Indexes before we can say definitively that we are in an ag downturn. Sometimes these trends merely indicate sideways movement.
We do want to reiterate that these results are not forecasts of the industry. They are member perceptions. What is the difference you may ask? Well, simply put, forecasts are statistical calculations to figure out future sales through the impact indicators have had on sales in the past. Member perceptions do not include these statistical calculations. However, they do avoid the trap where the past dictates the future.

Some of the member commentary included: “Market has potential to rise in 2020 but modestly”; “Market performance is mixed - there is still not clear idea of demand and whether it is sustainable”; “Our market performance is steadily growth but uncertainty continues to rise”; “Some slight positives in multiple areas, however, still uncertainties and debt from sustained downturn causing caution from customers”; “We do expect a flat 2020 and move our focus to new markets such as South America and Asia”; “We had a tough H-1 in 2019 and we are coming back in 2020 but slowly”; “We have been in an Ag recession since 2015 with slight improvement expected for Livestock producers”.

When we further explore the demand equation and break it down into New Orders, Production and Work Backlog we can identify an improvement for both Wholegoods and Ag Components and/or Attachments. The signing of the Phase One trade agreement with China seems to have positively influenced the market perceptions.

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2020 USA Farm Income Forecast

Net farm income, a broad measure of profits, is forecast to increase $3.1 billion (3.3 percent) to $96.7 billion in 2020. In inflation-adjusted 2020 dollars, net farm income is forecast to increase $1.4 billion (1.4 percent) from 2019. In inflation-adjusted terms, net farm income in 2020 would be 30.5 percent below its peak of $139.1 billion in 2013 but 5.4 percent above its 2000-18 average ($91.7 billion), if realized. Net cash farm income is forecast to decrease $10.9 billion (9.0 percent) to $109.6 billion. Inflation-adjusted net cash farm income is forecast to decrease $13.1 billion (10.7 percent) from 2019 and would be 0.6 percent below its 2000-18 average ($110.2 billion).

Cash receipts for all commodities are forecast to increase $10.1 billion (2.7 percent) to $384.4 billion (in nominal terms) in 2020. Total animal/animal product receipts are expected to increase $8.2 billion (4.6 percent) following growth in receipts for hogs, milk, cattle/calves, and poultry/eggs. Total crop receipts are expected to be largely unchanged, increasing $1.9 billion or 1 percent from 2019 levels in nominal terms but declining 0.9 percent when adjusted for inflation. Direct government farm payments are forecast to decrease $8.7 billion (36.7 percent) to $15.0 billion in 2020 (in nominal terms), with the decrease caused by lower anticipated payments from the Market Facilitation Program.

Farm business average net cash farm income is forecast to decrease $8,100 (8.7 percent) to $85,200 per farm in 2020. Every resource region is forecast to see farm business average net cash farm income decrease by 4.4 percent or more. All categories of farm businesses except hogs and dairy farms are expected to see average net cash farm income fall in 2020.

The terms, if realized is key here. As we are analyzing the survey results, the impact of COVID-19 on farm income is unknown. We expect new third-party forecasts to come out as Q1 2020 unwinds, but it is safe to assume that if the crisis turns into a pandemic affecting the USA, we would be looking at a significant shift in the 2020 outlook.
**Forecast by Scenario (pre-COVID-19)**

According to Oxford Economics, for 2019, the Agricultural Machinery Industry grew a better-than-expected 3.2 percent to $15.6 billion in 2019.

Bad weather, trade protectionism, and slower growth around the globe were the main impediments to further growth in 2019. Future global slowdowns could reduce food production, putting downward pressure on farmers’ incomes. Escalation in the U.S.-China trade dispute could also cause concerns for ag equipment manufacturers. However, despite its limited scope, the recently-passed Phase One deal should provide relief, both for the soybean market as well as overall capital expenditures.

Researchers at Oxford Economics believe ag machinery is looking at a down year for 2020, however, they forecast that slip will turn back around for 2021. Overall, their most likely scenario of a 2.5 percent drop looks to be just a one-year event and not the start of a trend. Projected 1-2 percent annual growth over the following years would put manufacturers more than 2 percent above their 2019 performance by 2023.

The worst-case scenario, according to Oxford, is an escalation in global protectionism, which their researchers believe has a 20 percent probability. In that scenario, ag equipment sales would slide for each of the next four years, with 2023 sales being more than 6 percent lower than 2019. However, they also assign a 15 percent probability of expanded growth occurring if global governments ramp down trade tensions, cutting 2020’s forecast loss in half, and putting 2023’s performance more than 5 percent above 2019.

All forecast models show a drop in 2020 of varying sizes, but Oxford Economics feels chances are better than not that the medium-term trend will be positive. With the USMCA having passed in Washington and the Phase One agreement stuck by President Trump and Chinese President Xi, we believe one of the more positive scenarios to be increasingly likely, not including any unforeseen shocks. While some of the environmental and global economic concerns remain question marks, the trade concerns that were modeled into some versions of the forecast seem to be relaxing.”
Key Agribusiness Themes for 2020
Written by Fitch Solutions

**Key View:** Agricultural commodity prices will edge slightly higher on average in 2020 as markets are tightening. Emerging market governments will look to boost farm incomes to bolster political support, while an emphasis on sustainability will see developed market governments increase regulatory scrutiny. The agriculture start-up space will begin to undergo a period of consolidation. Ongoing negotiations over regional and bilateral trade deals along with the outbreak of African swine fever in Asia will lead to increased agriculture trading. Finally, agribusiness equities will continue to underperform benchmark equities.

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<td>Stable Commodity Prices</td>
<td>Agricultural commodity prices will edge slightly higher on average in 2020 as markets are tightening.</td>
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<td>Increased Government Intervention</td>
<td>Emerging market governments will look to boost farm incomes to bolster political support, while an emphasis on sustainability will see developed market governments increase regulatory scrutiny on domestic agriculture.</td>
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<td>Next Phase Of Agribusiness Disruption</td>
<td>The agriculture start-up space will begin to undergo a period of consolidation as legacy agribusinesses adjust strategies to compete with the disruptors.</td>
<td>Aggregate deal volume, average deal size</td>
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<td>Trade Opportunities On The Horizon</td>
<td>Ongoing negotiations over regional (EU-Mercosur, US-Mexico-Canada Agreement - USMCA) and bilateral trade deals (US-China) along with the outbreak of African swine fever (ASF) in Asia will lead to increased agriculture trading over the coming quarters.</td>
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**Source:** Fitch Solutions
Unit Volume of Demand

Net Rising Index (% Rising minus % Falling): Above Zero = Rising, Below Zero = Falling

Compared with the same quarter last year, the unit volume of demand for my company's whole goods/capital equipment has been:

- **46.9% ± 17.3%**  Staying about the same
- **34.4% ± 16.5%**  Falling
- **18.8% ± 13.5%**  Rising

Compared with the previous quarter, the unit volume of demand for my company's whole goods/capital equipment has been:

- **50.0% ± 17.3%**  Staying about the same
- **34.4% ± 16.5%**  Rising
- **15.6% ± 12.6%**  Falling

Compared with the same quarter last year, the unit volume of demand for my company's parts and supplies has been:

- **46.9% ± 17.3%**  Staying about the same
- **28.1% ± 15.6%**  Rising
- **25.0% ± 15.0%**  Falling

Compared with the previous quarter, the unit volume of demand for my company's parts and supplies has been:

- **46.9% ± 17.3%**  Staying about the same

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Rising: 28.1% ± 15.6%
Falling: 25.0% ± 15.0%
Unit Volume of Inventories

Net Rising Index (% Rising minus % Falling): Above Zero = Rising, Below Zero = Falling

-100%
-50%
0%
50%
100%

Dec-05 Dec-06 Dec-07 Dec-08 Dec-10 Dec-11 Dec-12 Dec-13 Dec-14 Dec-15 Dec-16 Dec-17 Dec-18 Dec-19

Over the past three months, my company's unit volume inventory has been:

- 53.3% ± 17.9%  Staying about the same
- 30.0% ± 16.4%  Falling
- 16.7% ± 13.3%  Rising

At the present time, my company's unit volume of inventories is:

- 70.0% ± 16.4%  About right
- 20.0% ± 14.3%  Too high
- 10.0% ± 10.7%  Too low

At the present time, my dealers' unit volume of inventories is:

- 76.7% ± 15.1%  About right
- 13.3% ± 12.2%  Too low
- 10.0% ± 10.7%  Too high

Over the past three months, my dealers' unit volume inventory has been:

- 76.7% ± 15.1%  Staying about the same
- 13.3% ± 12.2%  Falling
- 10.0% ± 10.7%  Rising
Employment

Net Rising Index (% Rising minus % Falling): Above Zero = Rising, Below Zero = Falling

Compared with the same quarter last year, my company's employment has been:

- **43.3% ± 17.7%** Staying about the same
- **33.3% ± 16.9%** Falling
- **23.3% ± 15.1%** Rising

Compared to the previous quarter, my company's employment has been:

- **63.3% ± 17.2%** Staying about the same
- **20.0% ± 14.3%** Rising
- **16.7% ± 13.3%** Falling

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Wages

Net Rising Index (% Rising minus % Falling): Above Zero = Rising, Below Zero = Falling

Over the past three months, the wage rates and salaries my company pays have been:

- **83.3% ± 13.3%** Staying about the same
- **16.7% ± 13.3%** Rising

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Capital Spending

Over the past three months, measured in constant dollars, my company’s capital spending has been:

- **63.3% ± 17.2%** Staying about the same
- **20.0% ± 14.3%** Falling
- **16.7% ± 13.3%** Rising
Over the past three months, the prices my company charges for its goods or services output have been:

- **63.3% ± 17.2%** Staying about the same
- **26.7% ± 15.8%** Rising
- **10.0% ± 10.7%** Falling
Prices Paid

Net Rising Index (% Rising minus % Falling): Above Zero = Rising, Below Zero = Falling

Over the past three months, the prices my company pays for materials used as inputs have been:

- **70.0% ± 16.4%** Staying about the same
- **20.0% ± 14.3%** Rising
- **10.0% ± 10.7%** Falling
Exports

Net Rising Index (% Rising minus % Falling): Above Zero = Rising, Below Zero = Falling

As compared with the same quarter last year, my company's exports have been:

- 53.3% ± 17.9% Staying about the same
- 23.3% ± 15.1% Falling
- 16.7% ± 13.3% We do not export
- 6.7% ± 8.9% Rising

As compared with the previous quarter, my company's exports have been:

- 64.0% ± 18.8% Staying about the same
- 28.0% ± 17.6% Falling
- 8.0% ± 10.6% Rising

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Profit Margins

Net Rising Index (% Rising minus % Falling): Above Zero = Rising, Below Zero = Falling

Over the past three months, my company's profit margins have been:

- **56.7% ± 17.7%** Staying about the same
- **26.7% ± 15.8%** Falling
- **16.7% ± 13.3%** Rising

Shortages

Over the past three months, my company has experienced shortages in the following items:

- **46.7% ± 17.9%** Skilled Labor
- **43.3% ± 17.7%** No shortages have been experienced
- **13.3% ± 12.2%** Intermediate Inputs (partially processed goods components)
- **6.7% ± 8.9%** Don’t know
- **6.7% ± 8.9%** Raw Material Input
- **6.7% ± 8.9%** Unskilled Labor
Planning Scenario

Net Rising Index (% Rising minus % Falling): Above Zero = Rising, Below Zero = Falling

32/36  Planning Scenario Which of the following scenarios now best describes the outlook underpinning your firm's business plan for the next 12 months?

- **Flat**: 46.9% ± 17.3%
- **Normal Growth**: 28.1% ± 15.6%
- **Sluggish Negative Growth**: 21.9% ± 14.3%
- **Above Normal Growth**: 3.1% ± 6.0%

Credit

30/36  Are you hearing of problems with obtaining credit from customers?

- **No**: 80.0% ± 14.3%
- **Yes**: 20.0% ± 14.3%

30/36  Are you hearing of problems with obtaining credit from suppliers?

- **No**: 100.0% ± 0.0%
Miscellaneous

Comments:

Market has potential to rise in 2020 but modestly
Market performance is mixed - there is still not clear idea of demand and whether it is sustainable
Our market performance is steadily growth but uncertainty continues to rise.
Some slight positives in multiple areas, however, still uncertainties and debt from sustained downturn causing caution from customers.
We do expect a flat 2020 and move our focus to new markets such as South America and Asia
We had a tough H-1 in 2019 and we are coming back in 2020 but slowly
We have been in an Ag recession since 2015 with slight improvement expected for Livestock producers
Wear and tear of downturn, now in its 6th year, is showing up on dealers, farmers, etc.

What market intelligence would you like AEM to provide, that we aren't providing now?

2020 Outlook for ag equipment industry
I like these Survey Results
In general, we need to understand where we are in the demand cycle in Ag and where we have to be careful
Market share data.
We do our own Market Intelligence research internally at this point and use various sources, but mainly the USDA

Demographics

My company is primarily:

55.6% ± 16.2% Ag Components and/or attachments
36.1% ± 15.7% Ag Wholegoods
5.6% ± 7.5% Other
2.8% ± 5.4% Ag Publisher/Service provider

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