Thank you for participating in the Q1 2017 Agricultural Industry Conditions Survey for North America.

As you may have noticed, we have changed the way we structure our analysis in the last year. Instead of writing a narrative on every page, we wanted to provide you with a more in-depth narrative up front, focusing on the most important areas of the survey, followed by the actual survey results. We hope that this allows you to analyze the results more efficiently. If you have any comments or concerns regarding this new approach, please email Benjamin Duyck at bduyck@aem.org.

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.

Summary

The survey results indicate a strong boost in optimism in our industry. Demand is up. Planning for next year has improved. New orders are higher, production is increasing, work backlog is down and inventories are being reduced. This survey represents member perceptions and as such the responses are influenced by optimism. Based on the broader increases in U.S. business confidence, it would be prudent to assume that this newfound positivity is partly tied to the current Administrations’ ability to deliver on regulatory and tax reform. Here is what some of our members are saying:

"Consumer segment is strong Farm segment is showing a few signs of recovery"

"Demand is very high. Outlook for the next 12 months remains positive."

"Farmer & Rancher sentiment improving - as noticed at recent trade shows"

Field inventory levels in much better position than recent past which is justifying new ordering by dealers"

"Ag has picked up."

"Flat but optimistic"

"It appears dealers are more optimistic presently than they were one year ago."

"Optimistic that the market will move into a period of sustainable growth."

"Positive feelings coming from the market. Less negativity than previous"

"Seeing some positive buying attitudes that are surprising given current ag projections."

"Since January, we’re experiencing increased demand for hay & combine service parts."

"Dealer inventories for service parts appear to be lower than normal."
Demand

The Net Rising Index (NRI) for Unit Volume of Demand (Whole Goods) year over year came in at 40.9, up from 14.9 in Q4 2016 and -30.2 in Q4 2016. Last quarter was the first time that the NRI entered positive territory after 11 consecutive negative readings. In Q1 2017, it was up considerably more. The NRI for Unit Volume of Demand (Parts) year over year decreased slightly to 38.6 in Q1, down from 44.4 in Q4 2016, but still up from 1.6 in Q1 2016. Overall 56 percent of survey respondents indicated that they saw demand increase over the last 12 months. It is important to note that included in demand can also be the new orders that have not yet been filled. Member commentary (see previous page) indicates stability.

While the Ag Producer confidence is up (Purdue) and anecdotal information indicated the market is heating up again, we caution to take a conservative approach. This survey represents member perceptions and is naturally tied to optimism. Based on the broader increases in U.S. business confidence, it would be prudent to assume that this newfound optimism is tied to the current Administrations’ ability to deliver on regulatory and tax reform.

As we previously explained, the NRI’s only measure member consensus on the market direction. For more detailed information, we should look at the individual product categories.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Last 12 Months*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wholegoods</td>
</tr>
<tr>
<td>Components</td>
<td>N/A</td>
</tr>
<tr>
<td>Equipment for soil working, &amp;</td>
<td>↑ 1-5%</td>
</tr>
<tr>
<td>Harvesting equipment</td>
<td>Stable</td>
</tr>
<tr>
<td>Irrigation &amp; sprayers</td>
<td>N/A</td>
</tr>
<tr>
<td>Lawn and Garden</td>
<td>↓ 1-5%</td>
</tr>
<tr>
<td>Livestock equipment</td>
<td>↑ 11-15%</td>
</tr>
<tr>
<td>Loaders / material handlers</td>
<td>↓ 1-5%</td>
</tr>
<tr>
<td>Other</td>
<td>↑ 1-5%</td>
</tr>
<tr>
<td>Tractors</td>
<td>↑ 6-10%</td>
</tr>
<tr>
<td>Trailers / transportation equipment</td>
<td>↑ &gt;20%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>↑ 1-5%</td>
</tr>
</tbody>
</table>

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New Orders, Production and Work Backlog

To get a better understanding of what the manufacturers are experiencing, AEM started asking the survey respondents for more information regarding demand, such as New Orders, Production and Backlog of Order levels. In the last two quarters we have seen an increase in the backlog of work, new orders and production. While this might be partly due to perception (this survey deals with member perception) and optimism, the information fits together. Demand is assumed to have increased over the last 12 months. New orders, which has a 6-9 month lead on the market, is increasing. Production is ramping up, but lagging creating an increase in work backlog. At the same time, inventories are decreasing meaning that this might not have been as expected.

### New Orders, Production and Work Backlog

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<thead>
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<tr>
<td>Production 2015 Q4</td>
<td>50%</td>
<td>45%</td>
<td>40%</td>
<td>45%</td>
<td>40%</td>
<td>35%</td>
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<tr>
<td>Production 2016 Q1</td>
<td>50%</td>
<td>55%</td>
<td>41%</td>
<td>45%</td>
<td>35%</td>
<td>12%</td>
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<tr>
<td>Production 2016 Q2</td>
<td>50%</td>
<td>55%</td>
<td>25%</td>
<td>41%</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Production 2016 Q3</td>
<td>7.14%</td>
<td>21.43%</td>
<td>71.43%</td>
<td>30%</td>
<td>15%</td>
<td>6%</td>
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<tr>
<td>New Orders 2016 Q4</td>
<td>45%</td>
<td>55%</td>
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<td>New Orders 2016 Q1</td>
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<td>New Orders 2016 Q2</td>
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<td>6%</td>
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<tr>
<td>New Orders 2016 Q4</td>
<td>10.33%</td>
<td>21.43%</td>
<td>71.43%</td>
<td>42.11%</td>
<td>21.43%</td>
<td>71.43%</td>
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<td>New Orders 2017 Q1</td>
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<td>21.43%</td>
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<td>71.43%</td>
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<tr>
<td>Backlog of Work 2015 Q4</td>
<td>55%</td>
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<td>15%</td>
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<tr>
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<td>Backlog of Work 2016 Q4</td>
<td>10.33%</td>
<td>20.57%</td>
<td>57.89%</td>
<td>31.58%</td>
<td>20.57%</td>
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<tr>
<td>Backlog of Work 2016 Q1</td>
<td>71.43%</td>
<td>21.43%</td>
<td>71.43%</td>
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Inventories

The NRI for inventories for manufacturers compared to the previous quarter came negative for the 3rd consecutive quarter, coming in around -12.2, down from -2.9 in Q4 2016 and 8.2 in Q1 2016. 63.4 percent of respondents indicated they remained stable. When asked regardless of the current trend, whether inventories were still too high or too low, 22 percent of respondents felt they were too high. The vast majority, 68.3 percent, felt they were about right.

According to the manufacturers, the inventories at the dealership also continued to decrease somewhat as the NRI reached -4.9, up from -34.3 in Q4 2016. However, that NRI, combined with the knowledge that 65.9 percent of respondents said dealer inventories remaining the same compared to last quarter, indicates stability. About 61 percent felt dealer inventories were about right vs 12.2 percent that felt they were too high.

Employment

The Net Rising Index for Employment year over year came in at 29.3, up from -2.7 in Q4 2016 and -21.7 in Q1 2016. About 41.5 percent of respondents felt that the employment levels had remained the same. Similarly to demand, members are now feeling that employment levels are on the rise. About half of the respondents also felt that skilled labor remained the number one shortage.

Understanding members optimism regarding future demand, the increases in production, work backlog, new orders, the lower levels of inventory, the uptick in employment levels and the shortage issues regarding the skilled workforce, it is no wonder that 29.3 percent of survey respondents felt wages had increased in the last three months. Even with the recent ag downturn, the NRI for wages quarter over quarter has been positive for the past 7 years.

Exports

The NRI for exports year over year came in at 26.8, up from 15.2 in Q4 2016 and -21.7 in Q1 2016. This marks the 2nd quarter of positive NRI’s for Exports year over year.

Exports of U.S.-made agricultural equipment were up 15.5% year over year compared to the first quarter of 2016. The first quarter of 2017, $1.8 billion shipped to global markets. Growth was led by trade in North America ($574 million, up 26.49%), Central America ($356 million, up 19.76%), South America ($160 million, up +39.63%) and Australia and Oceania ($136 million, up 58.48%). Trade to Europe ($466 million) remained stable, while trade with Asia ($117 million) declined 12.29%.

While the small reversal in exports is positive, it waits to be seen whether this is the beginning of a new trend. A strong dollar continues to hamper our nation’s competitiveness and we can expect that to continue as the Federal Reserve continues to increase rates.
Planning Scenario

Looking towards the future, the consensus planning for the next 12 months came in at 63.4 in Q1 2017, up from 42.4 in Q4 2016 and -3.3 in Q1 2016. In the last two months we have seen a very strong uptick in optimism, similar to the uptick following the Great Recession of 2008. It remains to be seen whether this uptick will translate into improved performance in 2017 and a potential reversal of the current ag downturn. When we study the AEM Ag Tractor and Combine report, we can tell that large equipment continues to lag behind in favor of growth in smaller equipment. While farm income appears to have stabilized according to the USDA, it feels as if the current uptick in planning might be tied to an improved business optimism regarding our administrations plans to reduce regulations and tax reform. While many analysts believe 2017 will mark the reversal of our farmers’ economic malaise, a large proportion of the optimism is irreversibly tied to the ability of our current administration to deliver on promises made to the American people.

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.

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### Overview of NRIs

<table>
<thead>
<tr>
<th>Net Rising Indexes (NRIs)</th>
<th>2017Q1</th>
<th>Q/Q 2016Q4</th>
<th>Y/Y 2016Q1</th>
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</thead>
<tbody>
<tr>
<td>Credit Customers</td>
<td>7.3</td>
<td>↓</td>
<td>15.2</td>
</tr>
<tr>
<td>Credit Suppliers</td>
<td>2.4</td>
<td>↓</td>
<td>6.1</td>
</tr>
<tr>
<td>Exports Q2Q</td>
<td>26.7</td>
<td>↑</td>
<td>23.1</td>
</tr>
<tr>
<td>Unit Volume of Inventories Dealer (too high/low)</td>
<td>-14.6</td>
<td>↓</td>
<td>-5.7</td>
</tr>
<tr>
<td>Capital Spending Q2Q</td>
<td>22.0</td>
<td>↓</td>
<td>23.5</td>
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<tr>
<td>Employment Q2Q</td>
<td>36.6</td>
<td>↑</td>
<td>-2.7</td>
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<tr>
<td>Unit Volume of Demand Parts Q2Q</td>
<td>47.7</td>
<td>↑</td>
<td>24.4</td>
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<td>Unit Volume of Demand Q2Q</td>
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<td>↑</td>
<td>26.7</td>
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<tr>
<td>Unit Volume of Demand Parts Y2Y</td>
<td>38.6</td>
<td>↓</td>
<td>44.4</td>
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<tr>
<td>Employment Y2Y</td>
<td>29.3</td>
<td>↑</td>
<td>-2.7</td>
</tr>
<tr>
<td>Exports Y2Y</td>
<td>26.8</td>
<td>↑</td>
<td>15.2</td>
</tr>
<tr>
<td>Unit Volume of Inventories Q2Q</td>
<td>-12.2</td>
<td>↓</td>
<td>-2.9</td>
</tr>
<tr>
<td>Unit Volume of Inventories Dealer Q2Q</td>
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<td>↓</td>
<td>-34.3</td>
</tr>
<tr>
<td>Exhibition Participation</td>
<td>-9.8</td>
<td>↓</td>
<td>-3.0</td>
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<tr>
<td>Planning Scenario</td>
<td>63.4</td>
<td>↑</td>
<td>42.4</td>
</tr>
<tr>
<td>Prices Charged Q2Q</td>
<td>14.6</td>
<td>↓</td>
<td>29.4</td>
</tr>
<tr>
<td>Prices Paid Materials Q2Q</td>
<td>41.5</td>
<td>↑</td>
<td>35.3</td>
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<tr>
<td>Profit Margins Q2Q</td>
<td>7.3</td>
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<td>0.0</td>
</tr>
<tr>
<td>Unit Volume of Demand Y2Y</td>
<td>40.9</td>
<td>↑</td>
<td>14.9</td>
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<tr>
<td>Unit Volume of Inventories (too high/low)</td>
<td>12.2</td>
<td>↓</td>
<td>8.6</td>
</tr>
<tr>
<td>Wages Q2Q</td>
<td>29.3</td>
<td>↑</td>
<td>21.6</td>
</tr>
</tbody>
</table>
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:

- Rising: 54.5% ± 14.7%
- Staying about the same: 31.8% ± 13.8%
- Falling: 13.6% ± 10.1%

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

- Rising: 59.1% ± 14.5%
- Staying about the same: 31.8% ± 13.8%
- Falling: 9.1% ± 8.5%

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

- Rising: 50.0% ± 14.8%
- Staying about the same: 38.6% ± 14.4%
- Falling: 11.4% ± 9.4%

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

- **54.5% ± 14.7%** Rising
- **38.6% ± 14.4%** Staying about the same
- **6.8% ± 7.4%** Falling
Unit Volume of Inventories

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

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


Unit Volume of Inventories
Unit Volume of Inventories Dealer
Unit Volume of Inventories Dealer Q2Q
Unit Volume of Inventories Q2Q

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

63.4% ± 14.7% Staying about the same
24.4% ± 13.1% Falling
12.2% ± 10.0% Rising

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

68.3% ± 14.2% About right
22.0% ± 12.7% Too high
9.8% ± 9.1% Too low

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

61.0% ± 14.9% About right
26.8% ± 13.6% Too low
12.2% ± 10.0% Too high

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

65.9% ± 14.5% Staying about the same
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:

- **43.9% ± 15.2%** Rising
- **41.5% ± 15.1%** Staying about the same
- **14.6% ± 10.8%** Falling

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

- **48.8% ± 15.3%** Staying about the same
- **43.9% ± 15.2%** Rising
- **7.3% ± 8.0%** Falling
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:

- **70.7% ± 13.9%** Staying about the same
- **29.3% ± 13.9%** Rising
Capital Spending

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

53.7% ± 15.3%  Staying about the same
34.1% ± 14.5%  Rising
12.2% ± 10.0%  Falling
Over the past three months, the prices my company charges for its goods or services output have been:

- **75.6% ± 13.1%** Staying about the same
- **19.5% ± 12.1%** Rising
- **4.9% ± 6.6%** Falling
Prices Paid

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

- **53.7% ± 15.3%**  Staying about the same
- **43.9% ± 15.2%**  Rising
- **2.4% ± 4.7%**  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:

- **36.6% ± 14.7%** Rising
- **26.8% ± 13.6%** Staying about the same
- **26.8% ± 13.6%** We do not export
- **9.8% ± 9.1%** Falling

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

- **73.3% ± 15.8%** Staying about the same
- **26.7% ± 15.8%** 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:

- **48.8% ± 15.3%** Staying about the same
- **29.3% ± 13.9%** Rising
- **22.0% ± 12.7%** Falling

Shortages

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

- **48.8% ± 15.3%** Skilled Labor
- **24.4% ± 13.1%** No shortages have been experienced
- **19.5% ± 12.1%** Unskilled Labor
- **12.2% ± 10.0%** Intermediate Inputs (partially processed goods components)
- **9.8% ± 9.1%** Don’t know
- **9.8% ± 9.1%** Raw Material Input
Planning Scenario

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

Planning Scenario

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

- **Normal Growth**: 53.7% ± 15.3%
- **Flat**: 22.0% ± 12.7%
- **Above Normal Growth**: 17.1% ± 11.5%
- **Sluggish Negative Growth**: 7.3% ± 8.0%

Credit

Are you hearing of problems with obtaining credit from customers?

- **No**: 92.7% ± 8.0%
- **Yes**: 7.3% ± 8.0%

Are you hearing of problems with obtaining credit from suppliers?

- **No**: 97.6% ± 4.7%
- **Yes**: 2.4% ± 4.7%
Exhibition Participation

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

Planned Participation in Trade Shows

Compared with the same quarter last year, my company’s level of planned participation as an exhibitor at trade shows has been:

- **85.4% ± 10.8%** Staying about the same
- **12.2% ± 10.0%** Falling
- **2.4% ± 4.7%** Rising

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5% increase in Q1
As we are relatively new market entrant our outlook is different but we see a willingness to buy from producers. With that there is a growing trend towards multi purpose equipment so that investment in new is there but it must perform multiple functions
Construction is flat Ag has picked up On-Road has picked up
Consumer segment is strong Farm segment is showing a few signs of recovery
Demand is very high. Outlook for the next 12 months remains positive.
Farmer & Rancher sentiment improving - as noticed at recent trade shows
Field inventory levels in much better position than recent past which is justifying new ordering by dealers
Flat but optimistic
It appears dealers are more optimistic presently than they were one year ago.
Optimistic that the market will move into a period of sustainable growth.
Our product is consulting services. Our market is driven by Ag Equipment Companies and dealers need for special projects. Our market is flat
positive feelings coming from the market. less negativity than previous
Seeing some positive buying attitudes that are surprising given current ag projections.
Since January, we're experiencing increased demand for hay & combine service parts. Dealer inventories for service parts appear to be lower than normal.

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

Any information regarding levels of dealer service parts & components versus previous year would be beneficial for our planning department.
Equipment manufacturing data by volumes and manufacturers
Future trends, Sales forecasts
It would be beneficial to know the overall trends in other products besides tractors and combines. Perhaps there could be a way to share positive or negative values for all products, and only share values on tractor and combines.
Market share data.
Outlook for future
Specialty use equipment intelligence.
UTV and Turf
We need more timely information in the Canadian market with respect to all statistical measures. Stats Canada seems to lag significantly and does not provide indepth crop details

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which makes validating trends more difficult.

**Demographics**

44/44 My company is primarily:

- **52.3% ± 14.8%** Ag Components and/or attachments
- **36.4% ± 14.2%** Ag Wholegoods
- **4.5% ± 6.2%** Ag Publisher/Service provider
- **4.5% ± 6.2%** Other
- **2.3% ± 4.4%** Publisher/Service Provider

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