Allow me to introduce myself as the new senior vice president of Agriculture for the Association of Equipment Manufacturers following the retirement of Charlie O’Brien. It is truly an honor to serve AEM members and partners as the new lead for the agriculture sector. AEM has a rich history of leadership in the agriculture industry on behalf of equipment manufacturers and I look forward to working with you to build on this legacy.

My passion for agriculture is strong. I grew up on a multi-generational family farm in Shelbina, MO where we raised corn, soybeans, wheat and cattle. Aside from still being a part of the farm today, almost my entire extended family is involved in the agriculture industry in one form or another. Having lived and worked in agriculture my entire life, I know first-hand the potential barriers that could challenge our ability to continue to feed the world.

In today’s hyper-sensitive, social media-driven, soundbite-sparked society, it is increasingly important for agriculture to have a unified voice. With agriculture representing an increasingly smaller percentage of the population and the rest being now several generations removed from a farm, most consumers do not understand the role of modern farming practices in food production. This lack of understanding can lead to unnecessary and burdensome regulations placed on our industry.

Prior to joining AEM, I spent the past 15 years in the ag media market with Successful Farming and Meredith Corporation. In this role, I worked with many AEM members as well as their ag counterparts in crop production, seed, grain marketing, livestock and finance. This background provides a perspective that the issues facing one part of our industry eventually impact all of us.

Until recently, much of the heated conversation around food and farming practices has focused on the crop production side of our industry—specifically around GMOs and the use of pesticides. This debate is also finding its way into the machinery side of the business. Recent pushes around right to repair, robotic milking, renewable fuels standards, data privacy, and others are clear indications that manufactures and machines are not immune.

In the November AEM Ag Sector Board meeting, we identified key priorities for 2018. Among the highest priorities is for AEM to continue to use our leadership in agriculture to establish a unified voice for the industry. We have a rich history of working with various farm organizations, crop production groups, and peer groups in the ag equipment space, some of which include:

- National Corn Growers Association
- American Soybean Association
- National Association of Wheat Growers
- National Sorghum Producers
- National FFA Organization
- Farm Equipment Manufacturers Association
- Agricultural Manufacturers of Canada
- Crop Life America
- Equipment Dealers Association
- American Farm Bureau
- Ag Council of America

continued, page 2
AEM Ag Executive Advisor  |  Industry Insights for the Ag Executive

One Voice for Agriculture

• American Society of Agricultural and Biological Engineers
• National Milk Producers Federation
• Agricultural Retailers Association
• Ag Gateway
• Agricultural Safety and Health Council of America
• Progressive Agriculture Foundation
• Growth Energy
• State Ag and Rural Leaders
• National Grain and Feed Association

In addition to speaking with one voice in North America, AEM’s voice for modern agriculture may be heard on a global stage with our leadership roles in the Agrievolution Alliance and Agricultural Industry Electronics Foundation.

As we turn our sights to 2018 and beyond with optimism for our industry, AEM will continue to use its strong voice to advocate on behalf of our members and the ag equipment manufacturing industry. In addition, as approved by the board of directors, AEM will continue to exercise our leadership role in the industry to act as a unifying force on issues important to agriculture.

I look forward to meeting many members and partners over the next few months. If AEM can ever be of any assistance to you, please do not hesitate to contact us. The success of agriculture depends on our ability to work together, and I for one am committed to work with you on behalf of the ag equipment industry.

Curt Blades
AEM Senior Vice President and Ag Sector Lead

Advocacy & Legislation

A record number of elected officials visited AEM member companies across the country this year through the I Make America campaign themed initiative “Our Products, Our Jobs.” With a new Congress and a new administration, it was crucial for us to educate and inform elected officials about the importance of policy issues such as infrastructure investment, tax reform, free trade and a strong agriculture economy.

In addition to our member companies hosting elected officials at their facilities, I Make America organized its first-ever fly-in. Forty AEM member executives gathered in Washington D.C. for two days of advocacy. Together they met with 100 congressional offices to discuss the industry’s key policy priorities. The fly-in also featured a briefing at the White House and an AEMPAC fundraiser.

Mark your calendars: Next year’s I Make America fly-in will take place in Washington D.C. September 12-14.

We look forward to another successful year in 2018. If you are interested in getting involved with I Make America in support of the manufacturing industry and to educate our elected officials on its importance, please reach out to Abby Lannoye, public affairs manager, (alannoye@aem.org, 414-298-4746).

Concerned about how insufficient infrastructure is affecting you and your customers? AEM’s Infrastructure Vision 2050 initiative will host a panel discussion at Commodity Classic on February 27, 2018 about ways Congress and stakeholders can set a national strategy for deploying rural broadband infrastructure that supports U.S. agriculture operations and the unique requirements of U.S. farmers and ranchers.

Visit www.aem.org/IV2050 for further details and updates or email Kate Fox Wood, AEM director, infrastructure policy, at kfoxwood@aem.org.
NAFTA: 
What to Watch

With the fifth round of talks concluded in Mexico City, and a new round on deck in January in Montreal, the Trump administration’s bid to renegotiate NAFTA has hit midair turbulence.

U.S. and Canadian negotiators have been publicly sniping over the terms of a new agreement. So far, few parties – including U.S. business – are satisfied with the U.S. negotiators’ proposals to change NAFTA.

Here are a few issues to watch:

- **Rules of Origin:** The U.S. proposal to change NAFTA’s Rules of Origin Chapter could negatively impact equipment manufacturers. Rules of origin are criteria used to determine a product’s country of origin for purposes of trade treatment. Currently, a product is allowed duty-free access to NAFTA member nations if it meets certain thresholds of North American content. (Right now, most products in our industry must produce 60 percent of the total value of the product in North America to qualify.) However, some products have to hit 62.5 percent. The new U.S. proposal ups that requirement to 85 percent North American content, and demands that 50 percent comes from the United States or face a tariff. Given the current supply chains for many U.S. equipment manufacturers, this would be a difficult or costly change to stomach.

- **Sunset Provision:** U.S. negotiators have also floated the idea of introducing a clause in which NAFTA would terminate every five years unless the U.S., Canada and Mexico all agree to extend the agreement. This proposal would discourage foreign direct investment in the United States, especially if they risk losing preferential access to customers in Canada or Mexico every five years.

- **Ending NAFTA Altogether:** President Trump has made references (at varying levels of specificity) to the U.S. withdrawing from NAFTA altogether. Regardless of whether this is a negotiating tactic, U.S. withdrawal from NAFTA would be cataclysmic for our industry. Canada and Mexico are the two largest export markets for equipment manufactured in the United States. The penalty would be especially tough in Mexico, where U.S. manufacturers would be forced to pay Most Favored Nation (MFN) duty rates on their products exported to Mexico. It is not pretty. Applied rates on many products in our industry range up to 25 percent, with some products even hit with duties much higher.

If the U.S. is serious about updating NAFTA to benefit U.S. manufacturing, it should listen to actual manufacturers. Earlier this year, AEM submitted its priorities to the Office of the U.S. Trade Representative and Global Affairs Canada. Updating NAFTA is possible to benefit U.S. manufacturing and reach consensus with all three trading partners. Prior to offering future proposals, negotiators should ask:

- How can we update NAFTA to increase the global competitiveness of U.S. manufacturing?

---

**A Look Ahead**

Five priorities were established for 2018 by the Ag Sector Board at the November meeting:

- Customer connections
- Workforce development
- Unified industry messaging
- Right To Repair
- Dealer and manufacturer relationships

**WELCOME TO OUR 2018 AG SECTOR BOARD**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Vice Chair</th>
<th>Grant Adolph</th>
<th>Wayne R. Buchberger</th>
<th>Mark Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Lagemann</td>
<td>Jerry Johnson</td>
<td>Buhler Industries Inc.</td>
<td>Hardi NA, Inc.</td>
<td>Vermeer Corporation</td>
</tr>
<tr>
<td>Deere &amp; Company</td>
<td>Blount International, Inc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leader</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matt Daley</td>
<td>GEA Farm Technologies</td>
</tr>
<tr>
<td>Richard Fox-Maars</td>
<td>JCB Inc</td>
</tr>
<tr>
<td>Gene Fraser</td>
<td>MacDon Industries, Inc.</td>
</tr>
<tr>
<td>Bill Hurley</td>
<td>AGCO Corporation</td>
</tr>
<tr>
<td>Mani Iyer</td>
<td>Mahindra USA</td>
</tr>
<tr>
<td>Tommy Jones</td>
<td>Krone NA</td>
</tr>
<tr>
<td>Bret Lieberman</td>
<td>New Holland Agriculture</td>
</tr>
<tr>
<td>Leif Magnusson</td>
<td>CLAAS Americas, Inc.</td>
</tr>
<tr>
<td>Darryl Matthews</td>
<td>Trimble Navigation, Inc.</td>
</tr>
<tr>
<td>Brian McKown</td>
<td>Kinze Manufacturing, Inc.</td>
</tr>
<tr>
<td>Brian A. Nelson</td>
<td>HHC, Inc.</td>
</tr>
<tr>
<td>Greg Potras</td>
<td>Kuhn NA</td>
</tr>
<tr>
<td>Todd Stucke</td>
<td>Kubota Tractor Corporation</td>
</tr>
<tr>
<td>Dale Szuminski</td>
<td>Alo USA</td>
</tr>
<tr>
<td>Jim Wessing</td>
<td>Kondex Corporation</td>
</tr>
</tbody>
</table>

---

continued, page 11
In October 2017, Agrievolution Alliance members around the world participated in a survey directed at senior management of the global agricultural machinery industry where we asked them about the most relevant topics today, such as the general evaluation of business, order intake, turnover, employment, mood and more.

The Agrievolution business climate index rose by 11 points to 41 points in October 2017, continuing the recovery that started in October 2016. While the current situation continues to improve, the perception of the next six months, though still high, has slightly tempered. In October 2014, the current and future climate index diverged as the industry entered the ag downturn. Now it seems that expectations of the next six months have caught up to the current perception. On a global average, 48 percent of agricultural machinery manufacturers regard their situation to be good or better, while only 10 percent describe it as unfavourable.

Regarding the market development in the next six months, for the second time in a row a majority of survey participants for all global regions expect the sales performance to be above the previous year’s level. However, Russia, India and Brazil seem to have already reached their peak, with Russia and India likely to continue at a high level, but Brazil declining again since summer. Despite state support and increasing crop yields, the outlook for Turkey appears rather gloomy. On the other hand, in the U.S. a recovery from the deep recession of recent years seems to be perceived as only a matter of time. Europe is already in the midst of the upswing. In Japan, the bottom also seems to be overcome, as clear stabilization can finally be seen. China appears to continue gaining stability at a good growth level.

The Agrievolution Alliance is a global coalition of 15 agricultural equipment manufacturing organizations that works to advance agricultural interests worldwide through collaborative action on industry issues. The alliance’s economic committee conducts this biannual survey, released in May and November. This edition had 282 participants from Western Europe, India, Brazil, Russia, Turkey, China and the United States. Participants receive the full survey results. To sign up for the survey, please contact Benjamin Duyck at bduyck@aem.org.
U.S. Farm Equipment Exports Continue to Recover

YTD Q3 2017 exports of U.S.-made agricultural equipment were up 11 percent year over year compared to the first nine months of 2016. In total, $5.6 billion was shipped to global markets. While exports continued to grow, imports remained stable at roughly $5.7 billion. Strong growth was experienced in exports to Canada, Australia, Brazil and Russia, while exports to China declined by almost a quarter. Improvements in exports are driven by a pickup in the global markets and a slight softening in the strength of the U.S. dollar. Russia, India and Brazil seem to have peaked, while Europe is in the midst of an upswing. Regardless of the softening, the strong dollar continues to hamper our nation’s competitiveness and we can expect that to continue as the Fed continues to increase rates.

Recently, international trade agreements key to the U.S. competitive position in global markets have been a hotly debated topic. While U.S. trade continued to be led by partners in the western hemisphere, trade with Pacific Rim countries has accounted for roughly $1.00 billion in exports and $900 million in imports monthly over the past decade, with the biggest trading partners in this region being China and Australia. After 10 years of talk to set new terms for trade and business investment among the U.S. and 11 other Pacific Rim nations that represent roughly 1/3rd of world trade, the Pacific Rim nations have agreed on core elements of a new regional trade pact (the Comprehensive and Progressive Agreement for Trans-Pacific Partnership or CPTTP) without the U.S. due to its withdrawal in favor of bi-lateral agreements.

The below charts illustrate a rolling 4 quarters vs. previous 4 quarters for countries with > $25 mil./yr in exports.
As our members are indicating a revival in the ag equipment industry, <40HP 2WD farm tractors continue to trend well above their 5 year average, while mid-size 40-100HP tractors are tracking in line. Larger production ag such as 100HP+ 2WD and 4WD tractors and self-propelled combines continues to underperform its 5 year average, but is doing better than 2015 and 2016, the years the ag downturn hit the hardest.
The Net Rising Index of Demand for Ag Wholegoods and Parts (year over year) continues to improve into the 3rd quarter of 2017. There has not been a recovery like this seen since 2009. The Great Recession might have been more intense across the economy, but the recent ag downturn was of much longer duration. There is almost complete consensus as most respondents are indicating growth, not only over the last 12 months, but for the next 12 months also.

**Demand and Planning**

Demand is growing, new orders are increasing, production is gearing up and the workload continues to rise, survey results indicate. More and more respondents state their inventories are falling or remaining the same. About 41 percent of respondents are indicating that their inventories are now too low.

Comments provide good insight in the boost of optimism across survey participants:

- “2018 is shaping up to be a strong year for agriculture. Our open orders are stronger than normal. Hay equipment will be in strong demand in 2018.”

- “Dealer inventories are lower, new equipment orders are up, but will the retail to the end user increase? Not Yet...”

- “Heating up.”

- “New orders and backlog have been much better than anticipated.”

- “Outlook for next 12 months looks better than the past 3 years.”

- “The market for attachments has been fairly steady.”

- “We are generally expecting things to trend upwards, although these days you can’t count on anything.”

- “We feel confidence is up higher than the data to back it up.”

**AEM’s Survey Process**

The North America Ag Equipment Industry Trends Report, formerly called Ag Industry Conditions Survey, is a quarterly state of the industry report for the agriculture industry. The survey is based on Net Rising Indexes, we take the positive answers and detract the negative ones. Anything below zero means a market contraction, anything above growth. The stronger the contraction or growth, the stronger the market consensus. To receive the full results of this survey, please sign up by contacting Benjamin Duyck at bduyck@aem.org.
Market Intelligence

Country in Review — India

Business Monitor International holds a positive view on the outlook for India’s agribusiness sector, as the country will remain an agricultural powerhouse and should be able to maintain high levels of self-sufficiency for major food crops. Production growth of various commodities will be driven by strong government support and robust demand growth for manufactured foodstuff. We see significant growth opportunities in sub-sectors such as dairy, coffee and livestock. However, India will be increasingly vulnerable to exceptional weather phenomena and serious water shortages, and the country’s grain and sugar output will remain highly volatile. This, coupled with erratic government interventions, will often keep domestic supply tight, suggesting India will remain an unstable international provider of grains, sugar and milk powder.

Key Forecasts

- **Milk production growth to 2020/21**: 19.3% to 190.8mn tons. Cattle management improvement, government support to the sector, dynamic investment in the downstream and supply chain segments and robust consumption growth will support milk output. India will further consolidate its position as the world’s largest producing country.

- **Palm oil consumption growth to 2021**: 26.2% to 11.7mn tons. Domestic palm oil consumption will be propelled by strong demand for domestic food use, which makes up about 80% of total domestic palm oil demand.

- **Beef & veal production to 2020/21**: 17.8% to 5.0mn tons. Growth will be driven by the improvements in breeding techniques and by the robust expansion of the milk sector. Export demand for Indian beef will also support investment in the sector.

- **Agribusiness market value**: USD264.7bn in 2017, up from USD244.0bn in 2016; forecast to grow annually by 5.9% on average from 2017 to 2021.

- **2017 real GDP growth**: 6.4%, down from 7.1% in 2016; predicted to average 6.5% from 2017 to 2021.

- **2017 consumer price inflation**: 3.5% y-o-y ave, from 4.5% in 2016; predicted to average 4.1% from 2017 to 2021.

In the longer term, ongoing reforms to the agricultural sector will support gradual yield improvement. After a weak start for investment in agriculture at the beginning of his mandate, Prime Minister Modi has enacted a number of new schemes and allocated more generous funds to the sector aiming at increasing farm income and modernizing agriculture.

Budget allocated to the sector grew strongly in 2016/17 and will remain on an uptrend under the new 2017/18 budget. The government has made progress on several fronts as it introduced a new insurance crop scheme and a reform of the marketing system, which will help support farmers’ income. However, the government has also failed to initiate some key reforms. For example, it has pushed back the important reform of fertilizer subsidy policy this year, which is a major drag on the country’s large fiscal deficit.
**Dynamic Changes in China**

Major initiatives are underway to elevate China’s agriculture industry. While there are 2,300 agriculture equipment manufacturers in China, the need for increased mechanization remains great. Chinese government officials, industry executives and academics shared insights and facts on regional agriculture practices, government policies and the equipment market with about 600 stakeholders at the recent Agrievolution Summit, Sixth World Summit on Agriculture Machinery held in October in Wu Han, China.

It was noted that reform towards whole process mechanization, innovation and research, ag machinery service and improvement of operations, best practices and infrastructure are required. It was also stated that government initiatives focusing on spare parts, providing service platforms and increasing the quality and reliability of domestically manufactured equipment are in the works.

Local engineering experts cited the need for China to focus on developing an engineering workforce with increased capabilities, including the ability to develop and create their own plans from the ground up as well as the aptitude to produce higher end product domestically rather than relying on imports.

A key takeaway for the 150 international attendees (of 600 total) was that China is a rapidly changing region with a quickly evolving sector. Executives and industry speakers from other world regions also shared knowledge and experiences from their own world regions and regarding their technologies.

Jerry Johnson, President, Farm, Ranch & Agriculture Division, Blount International and Vice Chair of AEM’s Ag Sector Board shared tips and pitfalls learned through Blount’s entry into the Brazilian market. Tips included moving deliberately — utilizing resources, conducting research, learning not only the marketplace, but the culture and finally hiring in-country staff before actually entering the market.

The latest advances in precision agriculture technologies for planters, sprayers, manure spreaders and harvesters were shared by executives from Japan and throughout the EU. Technologies and best practices for limiting soil impaction were also explored by academics and executives from European tillage equipment and tire manufacturers.

A local farm tour and admission to the China International Agriculture Machinery Exhibition (CIAME) were included as part of the event hosted by the Chinese Agriculture Machinery Distribution Association (CAMDA).

Presentations will be posted soon at [www.agrievolution.com](http://www.agrievolution.com). Stay tuned for details on the next Summit to be held in Spain in 2019, hosted by Agrievolution Alliance member ANSEMAT. For more on the Agrievolution Summit, contact Anita Sennett at asennett@aem.org.

---

**Commodity Classic Heads to Anaheim**

AEM is proud to again join farmers from around the country for the only farmer-led, farmer-focused conference and trade show, the 2018 Commodity Classic. As the annual convention for the National Corn Growers Association, American Soybean Association, National Association of Wheat Growers and National Sorghum Producers, it is the official meet up for America’s best farmers.

This year’s Classic is heading west to Anaheim, California, February 27-March 1, and will feature over 360 of the industry’s leading suppliers, including many AEM members. If you haven’t yet signed up for a booth at the upcoming Commodity Classic, there is still time to be part of the show.

To learn more about AEM’s involvement in Commodity Classic, or to request a personal tour of the show floor to see what you’re missing, contact John Rozum at the AEM office at 414-274-0647.
AEM Perspective

AEM Perspective

Technical Innovation

Tractors Talking to Cars?

Everyone today is interested in more and better communication. Every other commercial on TV has something to do with communication, different phone providers, updates or new phone models. The same changes are going on in the agriculture world of connectivity. Farmers, seed and chemical providers, and equipment manufacturers want to connect with equipment and with the farm office. These advances in communication are happening faster than anyone would have thought.

What if cars could be warned when a tractor or combine is on the road ahead of them? The Agricultural Industry Electronics Foundation (AEF), a global foundation initiated in 2008 by agricultural technology companies and associations like AEM, has been selected by the Equipment Telecommunications Standard Institute (ETSI), a leading organization for developing information and communication technology (ICT) standards, to help establish just such a communication package. The package would warn people driving newer cars with communication centers about slow-moving machines on roadways by utilizing wireless networks. This collaboration will require developing standards for machine–to–machine communication between automotive vehicles and agricultural equipment.

Today tractors and combines are already broadcasting information, the idea here is to develop the communication networks necessary to provide connectivity between automotive and Ag equipment and at the same time make our equipment safer on roadways. A win-win for all.

For more information on AEF or AEM, contact AEM Technical Director Mark Benishek (mbenishek@aem.org, tel: 414-298-4118)
ASABE has revised:


- one of its often-used safety standards, ANSI/ASAE S318.18, Safety for Agricultural Field Equipment, to update the reference section and standard format, incorporate provisions for operator presence control and over-speed requirements in power take-off systems as well as guarding definitions, design requirements, and fabrication guidance contained in ANSI/ASAE S493.1, Guarding for Agricultural Equipment, which is in the process of being withdrawn.


- its adoption of ISO 5673-1:2005, ANSI/ASABE AD5673-1:2005, Agricultural tractors and machinery — Power take-off drive shafts and power-input connection — Part 1: General manufacturing and safety requirements, to include Type 4 PTOs and associated increases to power.

ASABE has adopted without modifications four ISO standards for roll-over protective structures:

1. ASABE/ISO 3463:2006, Tractors for agriculture and forestry — Roll-over protective structures (ROPS) — Dynamic test method and acceptance conditions
2. ASABE/ISO 5700:2013, Tractors for agriculture and forestry — Roll-over protective structures — Static test method and acceptance conditions

The original ISO documents were developed with US participation and are being used by US tractor manufacturers.

ASABE announces the publication of the fourth in a series of standards to improve the air-quality systems of agricultural cabs: ANSI/ASABE S613-4, Tractors and self-propelled machinery for agriculture—Air quality systems for cabs — Part 4: Performance test of a cab.

For information on these or any other ASABE standard, contact Scott Cedarquist at 269-932-7031, cedqrm@asabe.org. A current listing of all ASABE standards projects can be found on the ASABE website at www.asabe.org/projects.
AEM's Thinking Forward initiative offers a mix of learning events and content to help our members explore trends and emerging technologies that are transforming the equipment manufacturing industry. We’re taking a look at topics like additive manufacturing, big data analytics, connected jobsites and farms, and a changing workforce. Visit www.aem.org/think for more information.