

Spring Features:

■ AEM Perspective

■ Market Intelligence

■ Advocacy & Legislation

■ Standards and Regulations

Questions/comments : [asennett@aem.org](mailto:asennett@aem.org)

# Want to Find a Better Way? Ask a Farmer



**Y**ou only need to ask a farmer a single question to change the world: How can we find a better way?

Farmers are the original entrepreneurs. They are quick to identify a challenge or a need, and they can tell you exactly how to deliver on a solution to address it. It's a fact our industry can't afford to take for granted these days.

AEM recognizes the importance of agriculture and the role it plays in our society. What's more, we applaud the role of farmers in helping our members develop the equipment making it possible for food to get from the fields to our tables.

The connection between equipment manufacturers and their customers is critical to the future of the agriculture industry. Just recently, at the 2018 Commodity Classic in Anaheim, AEM helped bring manufacturers to the show floor to interact with and learn from farmers, producers, commodity groups and other industry leaders.

Everything AEM does is rooted in the goal of advancing the agriculture industry forward, and the resulting successes are due to a willingness on our part to learn from farmers and continually ask ourselves if there's a better way to serve our members and their customers.

Above all else, AEM strives to be a voice for agriculture. Everyone at the association, from our staff to our board members, works diligently to build momentum for the industry through:

- Advocacy and Legislation
- Market Data

- Thought Leadership
- Safety, Regulatory and Technical Leadership

Ag industry feedback is incredibly valuable to the work being done by our association. One recent example serves to highlight AEM's ongoing commitment to identify, influence and communicate worldwide standards on behalf of our members. As noted inside this newsletter, our association submitted five sections of the proposed new Ag braking standards to the American Society of Agricultural and Biological Engineers (ASABE) for balloting. It's been a lengthy process to get to this point, and one which has benefitted from the valued contributions of numerous industry representatives. And while we know there will be suggested revisions to the standards, we look forward to the additional insights we will receive on this important documentation.

AEM's involvement in the development of the new Ag braking standards underscores the importance of embracing feedback from farmers and equipment end users. Our industry needs to listen to what works well for them, but also to what doesn't work so well. More than anything else, though, we need to thoughtfully consider what we hear and continue the conversation by sharing any insights gained with one another.

And who knows? Maybe they'll help us find a better way. ■



*Dennis Slater,*  
AEM President

# Explore the Future of Equipment Manufacturing

From how artificial intelligence is changing innovation to how tech will reshape the industry. AEM brings the future to you.

## Next up: How Tech and Innovation will Reshape the Equipment Manufacturing Industry

May 8 ~ **mHub**, Chicago  
 Keynote Kevin Laczowski,  
 Sr. Partner, McKinsey  
 & Company

- Tour mHub's 63,000 square-foot innovation center for physical product development and manufacturing.
- Gain insights into building a strong workforce, attracting millennials, and inspiring innovation within your own communities.
- Learn how technology and innovation will reshape the construction and agriculture equipment industry based on McKinsey & Co.'s comprehensive study.

**THINKING FORWARD**  
**2018 EVENTS**

*Hear industry experts address the topics transforming equipment manufacturing at the nation's leading innovation centers.*

<p><b>APRIL 3</b>                  Carnegie Mellon University                  Pittsburgh, PA  <i>The Future of Mobility</i></p>	<p><b>AUGUST 23</b>                  Autodesk                  San Francisco, CA  <i>How AI is Changing Innovation</i></p>	<p><b>NOVEMBER 6</b>                  Penske Racing                  Mooresville, NC  <i>Using Data to Improve Performance</i></p>
<p><b>MAY 8</b>                  mHUB                  Chicago, IL  <i>How Tech will Reshape the Industry</i></p>	<p><b>SEPTEMBER 18</b>                  Vermeer                  Pella, IA  <i>Building a Culture of Creativity</i></p>	<p>▶ Learn about innovation partnerships</p> <p>▶ Discuss emerging technologies</p>
<p><b>JUNE 5</b>                  3M Innovation Center                  St. Paul, MN  <i>Creating a Culture of Innovation</i></p>	<p><b>OCTOBER 16</b>                  Purdue University                  West Lafayette, IN  <i>Growing Your Customer Base</i></p>	<p>▶ Network with industry peers</p>



Chicago



San Francisco

Visit [www.aem.org/think](http://www.aem.org/think) to learn more and register!

## AEM, ASABE Announce Inaugural 'Davidson Prize' for Ag Innovations Winners

**A**EM and the American Society of Agricultural and Biological Engineers (ASABE) presented the inaugural Davidson Prize to the top three innovative products, selected from the AE50 honorees on Tuesday at Commodity Classic in Anaheim, California.

The Davidson Prize was designed to celebrate breakthrough innovations in areas of agricultural, food and biological systems engineering.

"We're excited about the advancement of Ag engineering and the positive impacts it has on farmers' ability to work more efficiently," said AEM Senior Vice President of Agriculture Curt Blades. "These three products deliver on solutions that truly represent the spirit of J.B. Davidson and the innovative legacy of agriculture."

Winning entries included:

- Trident 5550 liquid/dry combination applicator from Case IH
- S700 Combine from John Deere
- Robovator Mechanical Weeding Machine from F. Poulsen Engineering, Denmark

The Davidson Prize is named for J.B. Davidson, the father of modern agricultural engineering. It gives a nod to the storied past of agricultural engineering and pays homage to those engineers, like J.B. Davidson, who aspire to find a better way. Winners were selected from the AE50 honorees, announced at the Agricultural Equipment Technology Conference in Louisville. ■



*From left to right are the winners of the Davidson Prize: Bartley Walker with Pacific Ag Rentals representing Robovator from F. Poulsen Engineering in Denmark, Matt Bedding with John Deere, Mark Burns with Case IH.*

# Moving the Needle: 2000+ Ag Equipment Students



The vast majority of Ag students today are focused on animal and plant sciences, not the equipment sector. AEM's Ag Sector Board decided they wanted to change that.

In order to grow awareness and enthusiasm for the equipment manufacturing industry before career choices have been made, AEM, in partnership with Equipment Dealers Association (EDA), is increasing the number of equipment-specific agriculture courses being taught in high schools.

Thirty-two Ag educators from 15 states

have been awarded partial scholarships for certification in equipment specific Ag courses through the Curriculum for Agricultural Science Education (CASE). Teachers will be certified this summer and will begin teaching the courses in the fall.

Those teachers estimate that more than 2,200 high school students will complete either an Agriculture Power and Technology or Mechanical Systems in Agriculture course in the 2018-2019 school year as a direct result of the AEM/EDA scholarships.

Manufacturers and dealers will be contacted if a teacher in their area receives the \$2,000 scholarship, which would cover about half of total costs for certification. Those companies will be asked to connect with that teacher in order to build a long term collaboration and plant the seeds to grow a local workforce. Companies may wish to:

- Invite the teacher to their facility for hands on experience, better understanding and real enthusiasm for the course content
- Invite the teacher to bring their class to visit the facility and spark deeper interest in the students
- Offer to address the students in the classroom, talking about the many opportunities that exist in our industry and within their company
- Offer a scholarship match or additional amount towards the teacher's certification to support and solidify the relationship

This is only the first piece of a broader AEM workforce development initiative supporting both the agriculture and construction sectors.

For more information, contact AEM Senior Director of Agriculture Services Anita Sennett ([asennett@aem.org](mailto:asennett@aem.org), tel: 414-298-4174). ■

## USDA Secretary Perdue and AEM Board Members

U.S. Department of Agriculture Secretary Sonny Perdue took time from his busy schedule to discuss steel tariffs, crop insurance, the renewable fuel standard and the Farm Bill with Ag Sector and AEM Board members at the AEM Spring Board Meeting.

The Secretary used the session to listen to the concerns of those in the equipment manufacturing industry and reinforce his stance on issues important to the Ag community.



When asked how equipment manufacturers could help, Perdue urged companies to have their presidents and CEOs voice their

concerns to members of Congress and even to the white house, noting that President Trump listens to the voice of business and the impact on jobs.

AEM Ag Sector Board Chair John Lagemann of Deere & Company thanked the Secretary for his time and reinforced the importance of association membership, noting "It is very strategic that we have this opportunity to come together with one voice as an industry and meet directly with policy makers and influencers."

# Commodity Classic 2018 a Huge Success!

Commodity Classic 2018 looked a lot different from the last time it was in Anaheim. Both the attendee count and exhibit space have more than doubled since that 2010 show, and attendee and exhibitor satisfaction seemed to be sky high.

Here's what some attendees had to say about this year's show:

*"A lot of the manufacturers here have their top guys that we can have the opportunity to talk to. I've been getting a lot of good information talking to a lot of really good people."* — Houston Howlett, KY Farmer

*"There's something I take away every year that we've instituted on the farm in one fashion or another – whether its buying equipment, getting into data analytics or a chemical or seed or something we need to try on the farm. It's a great opportunity to come here and learn."*

— Brandon Hunnicutt, NE Farmer

*"We enjoyed today because we like to talk and see what's new in the agricultural world. Equipment is big to see what's out there. We stay up to date with the seed and the fertilizer, but the equipment is the big thing for us to seek out."*

— Matt Mescher, NE Farmer

## 2019 Space Sold Already Matches 2018

Exhibitors were also pleased with the increase in the quality of attendees and are showing their support of Commodity Classic by signing up early for next year. The 2019 show, which will be held in Orlando, is already over three-quarters sold out. That equals a returning exhibitor commitment of more space than used for the entire show in Anaheim this year. Exhibit space sales open on May 15th for companies who were not a part of the 2018 show.

What's up next for Commodity Classic?

- Feb 28 – March 2, 2019 Orlando, FL
- Feb 27-29, 2020 San Antonio, TX
- March 4-6, 2021 San Antonio, TX
- March 10-12, 2022 New Orleans, LA
- Feb 29 – March 2, 2023 Orlando, FL

If you have questions about Commodity Classic or would like to get signed up for 2019, please feel free to contact John Rozum at [jrozum@aem.org](mailto:jrozum@aem.org) or 414-274-0647. ■



# Recognizing Excellence



**D**o you have a mentor who epitomizes sound leadership and social responsibility? Know an industry leader who has made meaningful advancements in manufacturing?

Nominate them to the AEM Hall of Fame. The AEM Hall of Fame recognizes outstanding individuals in the off-road equipment industry. Member companies and interested parties are encouraged to submit nominations.

Nominations deadline is June 7 (nominations received after that time will be considered for next year's Hall of Fame). Details and the online nomination form are at [www.aem.org/HallofFame](http://www.aem.org/HallofFame).

Inductees are announced and celebrated at AEM's November Annual Conference.

Anyone (living or deceased) who has made noteworthy and specific contributions to the manufacturing, distribution, rental or end-user sectors of the off-road equipment industry is eligible for induction. An independent panel of judges evaluates Hall of Fame candidates on five criteria: innovation, industry contributions, leadership, corporate citizenship/social responsibility and sustainability.

Winners will join the ranks of recent inductees like Ray Hagie (Hagie Manufacturing), Jon Kinzenbaw (Kinze Manufacturing), Joseph MacDonald (MacDon Industries), Dyke Messinger (Power Curbers Inc.), Agustin 'Gus' Ramirez (HUSCO International), Robert Ratliff (AGCO Corp.) and Robert Vermeer (Vermeer Corp.).

For more information, contact AEM's Pat Monroe (tel: 414-298-4123; [pmonroe@aem.org](mailto:pmonroe@aem.org)).

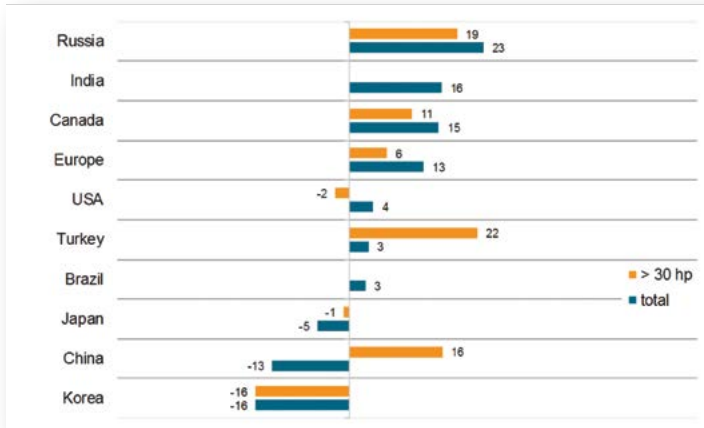
# Special Report: 2017 Global Tractor Market

Agrievolution Alliance worldwide tractor sales report



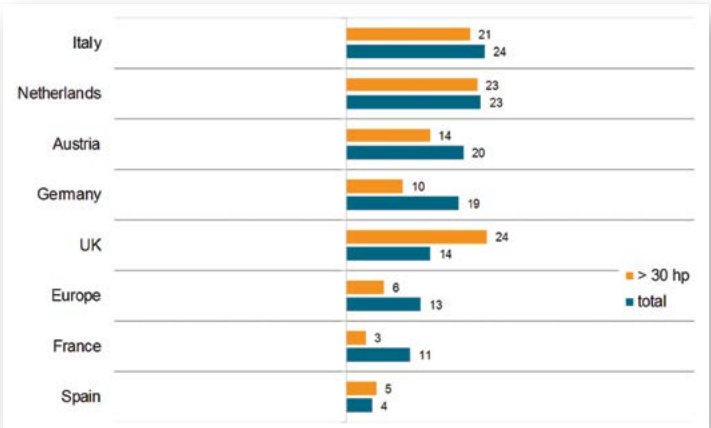
The 2017 worldwide number of new tractor sales is estimated to be 2.154 million units. Compared to the previous year, a total of 13 percent more tractors were sold on the world market. The “big volume markets” continue to be China and India, where roughly 50 percent of the units sold worldwide are registered, though most of these have a lower average power and price.

**Tractor Market Development 2017**  
% change for unit sales / registrations of tractors



Source: Agrievolution, VDMA, incl. Estimations; Brazil and India > 30 hp without value

**Tractor Market Development 2017**  
% change for unit sales / registrations of tractors



Source: Agrievolution, VDMA, incl. Estimations

## Top Insights by Region:

### U.S.

- Tractor market grew by 4 percent last year, driven by growth in sales for tractors <40hp
- 40-100hp segment remained unchanged
- Sales of tractors >100hp were down from an already weak 2016
- Business with livestock breeders and hobby farmers is still relatively good
- Arable farms are still suffering from low producer prices
- USDA forecasts the U.S. net farm income will again decrease by 7 percent in 2018
- Tractor sales could gradually rise again as investments are becoming more urgent for many farms
- Tax reform could provide a positive stimulus
- Survey results indicate the industry is currently more optimistic than it has been for some years

### Europe

- Tractor market grew by 13 percent from 2016, varying between 4 percent in Spain and 23 percent in the Netherlands.
- Main driving forces behind the upswing were:
  - a backlog in demand after a long phase of cautiousness
  - a clearly improved situation in the milk markets
  - currency-related competitive advantages
  - ‘Mother Regulation,’ which caused a strong increase of registrations by dealers

### India

- Tractor market improved by 18 percent in 2016 and by 16 percent in 2017
- A major factor was sufficient rain
- Goods and Services Tax (GST) is spreading optimism within the sector as it creates a uniform taxation scheme

### Japan

- Japan was among the worst-performing markets
- Total tractor sales decreased by 5 percent
- Larger engine classes have remained nearly stable
- Farmland consolidation continues to be supported by the state
- Trend towards increased demand for more powerful tractors and larger, mostly imported equipment
- Small farms merging into cooperatives receive Government incentives

### China

- Long-term trend is also clearly going towards medium and high-performance engines
- In 2017, total tractor sales decreased by 13 percent
- Sales of engines above 30hp increased by 16 percent
- Agriculture is becoming increasingly professional
- Due to migration to the cities, larger scale agricultural structures are emerging, which require increased mechanization
- Growing numbers of contractors and machinery co-ops are being actively promoted by the Chinese government

# AEM U.S. Export Trends and Analysis

## 2017 U.S. Farm Equipment Export growth turns positive

- 2017 Q4 exports of U.S.-made Ag equipment were up 11.86 percent year over year
- In total, about \$1.7 bn was shipped to global markets
- U.S. exports grew roughly 12 percent in 2017
- Imports grew 5.9 percent
- Reversal of 2016's trend (-10.4 percent) can be attributed to a slight softening of the U.S. dollar, making our manufacturers more competitive, and a general uptick in the global Ag equipment markets (see Special Report)
- Trade remains strongest with our main trading partners, Canada and Mexico
- Main export regions remain North America and Europe
- Main import region is Asia, led by Japan and China
- Strong growth in South America. Several of its markets are in the top 10 growth markets



THE BELOW CHARTS ILLUSTRATE A ROLLING 4 QUARTERS VS. PREVIOUS 4 QUARTERS FOR COUNTRIES WITH > \$25 MIL./YR IN EXPORTS

Regions - US Ag Equipment Imports			
Country	2017	2016	% Change
Africa	\$ 5,376,219	\$ 3,006,729	78.8%
Asia	\$ 2,743,969,840	\$ 2,596,209,144	5.7%
Australia & Oceania	\$ 108,214,087	\$ 97,876,652	10.6%
Central America	\$ 754,758,500	\$ 742,733,495	1.6%
Europe	\$ 2,942,105,249	\$ 2,840,288,449	3.6%
North America	\$ 969,131,832	\$ 773,501,912	25.3%
South America	\$ 47,427,371	\$ 44,541,148	6.5%

Regions - US Ag Equipment Exports			
Country	2017	2016	% Change
Africa	\$ 215,014,800	\$ 220,887,341	-2.7%
Asia	\$ 550,485,131	\$ 558,429,451	-1.4%
Australia & Oceania	\$ 638,279,405	\$ 546,500,238	16.8%
Central America	\$ 1,354,088,702	\$ 1,347,702,727	0.5%
Europe	\$ 1,708,432,710	\$ 1,538,826,678	11.0%
North America	\$ 2,257,268,778	\$ 1,947,814,751	15.9%
South America	\$ 670,484,107	\$ 474,630,864	41.3%

Top 10 Countries - US Ag Equipment Imports			
Country	Last 4 Qtrs	Prev 4 Qtrs	% Change
Germany	\$ 1,199,675,479	\$ 1,168,201,635	2.7%
Canada	\$ 969,131,832	\$ 790,551,145	22.6%
Japan	\$ 916,734,583	\$ 909,271,295	0.8%
China	\$ 776,570,242	\$ 641,803,421	21.0%
Mexico	\$ 752,730,442	\$ 727,426,939	3.5%
Italy	\$ 506,083,016	\$ 550,239,588	-8.0%
India	\$ 391,521,628	\$ 388,276,397	0.8%
United Kingdom	\$ 244,174,714	\$ 229,858,134	6.2%
Netherlands	\$ 203,459,065	\$ 188,288,016	8.1%
France	\$ 190,093,109	\$ 216,446,436	-12.2%
<b>Global Total</b>	<b>\$ 7,570,983,098</b>	<b>\$ 7,148,889,564</b>	<b>5.9%</b>

Top 10 Countries - US Ag Equipment Exports			
Country	Last 4 Qtrs	Prev 4 Qtrs	% Change
Canada	\$ 2,257,268,778	\$ 1,930,655,666	16.9%
Mexico	\$ 1,232,243,597	\$ 1,194,934,523	3.1%
Australia	\$ 578,312,148	\$ 472,688,195	22.3%
Germany	\$ 274,075,445	\$ 235,644,626	16.3%
Brazil	\$ 216,691,464	\$ 159,640,112	35.7%
Ukraine	\$ 193,715,642	\$ 169,745,723	14.1%
Russia	\$ 164,125,761	\$ 138,494,268	18.5%
France	\$ 161,140,273	\$ 157,109,307	2.6%
Chile	\$ 156,459,909	\$ 99,398,351	57.4%
China	\$ 154,928,153	\$ 179,549,861	-13.7%
<b>Global Total</b>	<b>\$ 7,394,053,633</b>	<b>\$ 6,600,849,644</b>	<b>12.0%</b>

Top 10 Growth Countries - US Ag Equipment Exports			
Country	Last 4 Qtrs	Prev 4 Qtrs	% Change
Argentina	\$ 113,007,845	\$ 69,254,579	63.2%
Chile	\$ 156,459,909	\$ 99,398,351	57.4%
Romania	\$ 48,687,145	\$ 32,719,197	48.8%
Colombia	\$ 58,203,987	\$ 42,335,150	37.5%
Brazil	\$ 216,691,464	\$ 159,640,112	35.7%
Denmark	\$ 50,479,595	\$ 39,108,087	29.1%
Singapore	\$ 31,685,386	\$ 25,201,183	25.7%
Lithuania	\$ 36,361,811	\$ 29,623,856	22.7%
Australia	\$ 578,312,148	\$ 472,688,195	22.3%
Ecuador	\$ 33,765,307	\$ 28,352,909	19.1%
<b>Global Total</b>	<b>\$ 7,394,053,633</b>	<b>\$ 6,600,849,644</b>	<b>12.0%</b>

Bottom 10 Growth Countries - US Ag Equipment Exports			
Country	Last 4 Qtrs	Prev 4 Qtrs	% Change
Turkey	\$ 26,636,103	\$ 48,803,276	-45.4%
Kazakhstan	\$ 17,556,335	\$ 31,844,016	-44.9%
Thailand	\$ 33,376,760	\$ 44,082,065	-24.3%
Netherlands	\$ 72,283,996	\$ 94,588,496	-23.6%
Peru	\$ 37,750,297	\$ 46,200,762	-18.3%
China	\$ 154,928,153	\$ 179,549,861	-13.7%
Guatemala	\$ 30,844,605	\$ 32,081,908	-3.9%
Hungary	\$ 34,309,083	\$ 35,333,351	-2.9%
Spain	\$ 60,849,478	\$ 60,789,667	0.1%
Japan	\$ 66,752,785	\$ 66,161,444	0.9%
<b>Global Total</b>	<b>\$ 7,394,053,633</b>	<b>\$ 6,600,849,644</b>	<b>12.0%</b>

Sourcing: U.S. Census

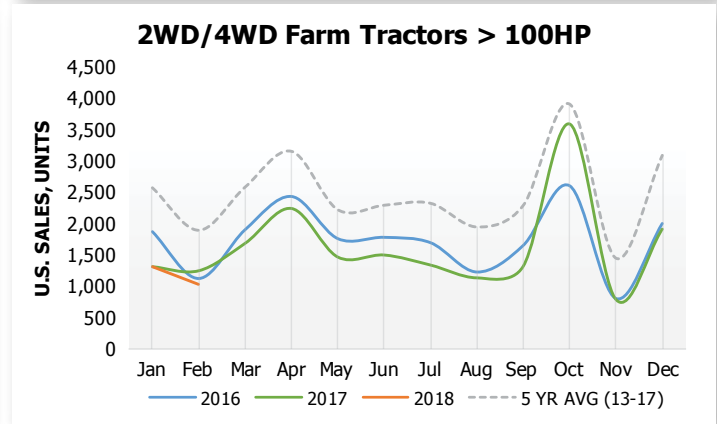
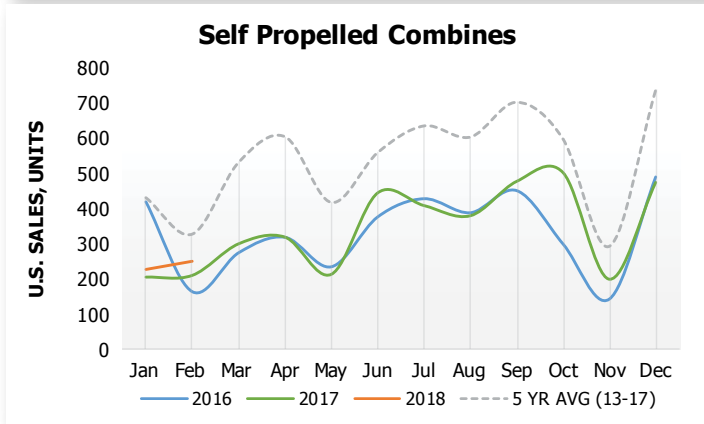
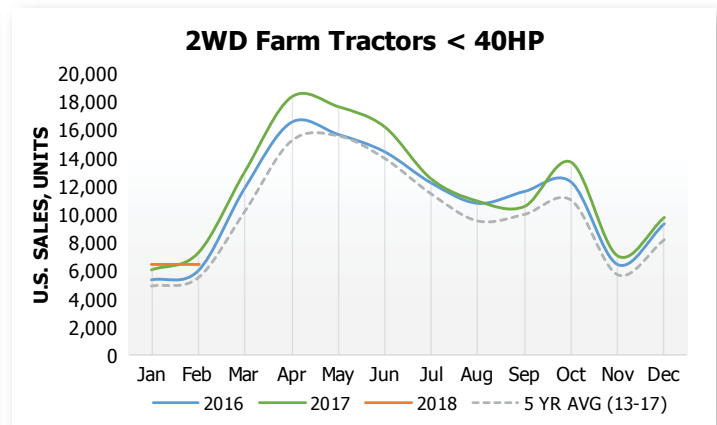
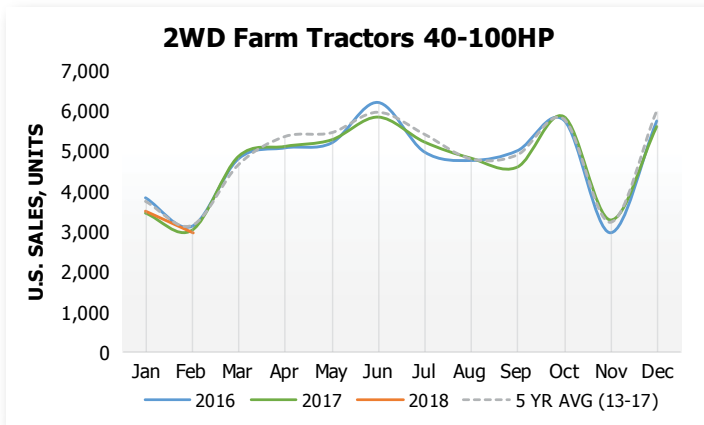
# Ag Tractor and Combine Sales

	February			YTD — February			Beginning Inventory Feb 2018
	2018	2017	% Chg	2018	2017	% Chg	
<b>2WD Farm Tractors</b>							
<40 HP	6,501	7,366	-11.7%	12,987	13,468	-3.6%	87,209
40< 100 HP	2,957	3,018	-2.0%	6,454	6,445	0.1%	31,941
100+ HP	899	1,128	-20.3%	2,078	2,325	-10.6%	7,937
<b>Total 2WD Farm Tractors</b>	<b>10,357</b>	<b>11,512</b>	<b>-10.0%</b>	<b>21,519</b>	<b>22,238</b>	<b>-3.2%</b>	<b>127,087</b>
<b>4WD Farm Tractors</b>	<b>129</b>	<b>118</b>	<b>9.3%</b>	<b>261</b>	<b>227</b>	<b>15.0%</b>	<b>601</b>
<b>Total Farm Tractors</b>	<b>10,486</b>	<b>11,630</b>	<b>-9.8%</b>	<b>21,780</b>	<b>22,465</b>	<b>-3.0%</b>	<b>127,688</b>
<b>Self-Prop Combines</b>	<b>252</b>	<b>188</b>	<b>34.0%</b>	<b>481</b>	<b>393</b>	<b>22.4%</b>	<b>720</b>

Data courtesy: Association of Equipment Manufacturers Statistics

- Total sales of 2WD Farm tractors decreased 10 percent in February, bringing the YTD growth down to -3.2 percent. 4WD Farm tractors continued their growth (9.3 percent) over the same period for a YTD total of 15 percent
- Similar to last year, smaller 2WD farm tractors <40hp trend above their 5 year average, while 40-100hp 2WD tractors trended in line and larger production Ag tractors underperformed

“We’ve been cautiously optimistic for some growth in 2018, following a somewhat bumpy 2017 and positive overall numbers in January. However, it’s too soon in the year to predict where we’re headed,” said AEM Senior VP for Ag Services Curt Blades. “A major issue is pending U.S. steel tariffs and their implications on agriculture beyond the equipment sector. Past trade wars resulting from U.S. tariffs have targeted commodities, so this is a real concern. AEM and our manufacturers will be carefully monitoring their impact on tractor and combine sales in the coming months.” ■



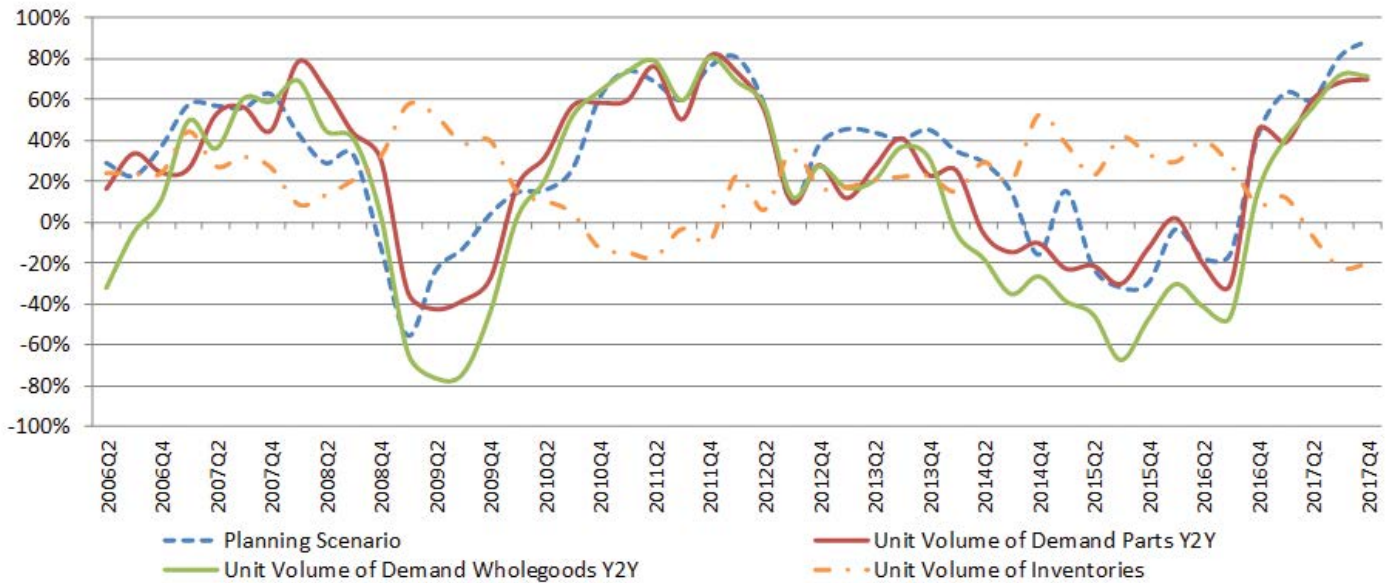
Graphs courtesy of AEM Market Intelligence



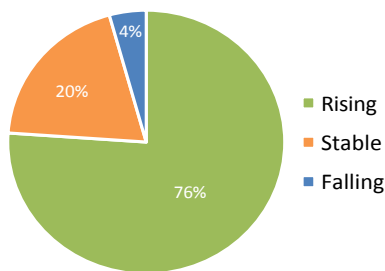
# Demand and Planning

- Per preliminary survey results, the consensus on growth remains roughly unchanged compared to last quarter
- The Net Rising Index (NRI) for Planning reached its highest points since the advent of the survey
- No responses indicated the market will decrease over the next 12 months
- New Orders continue to grow, Production is ramping up, Backlog is increasing, Inventories are considered low
- Member comments included “Growing steady” & “Markets are picking up”
- Though, some members are concerned about the new farm bill and infrastructure spending legislation. ■

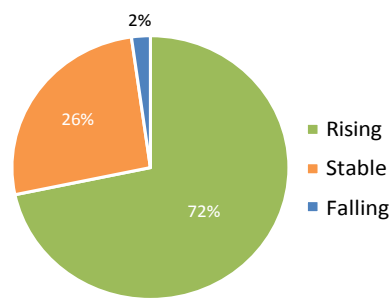
**Net Rising Index - Demand, Employment and Inventories**



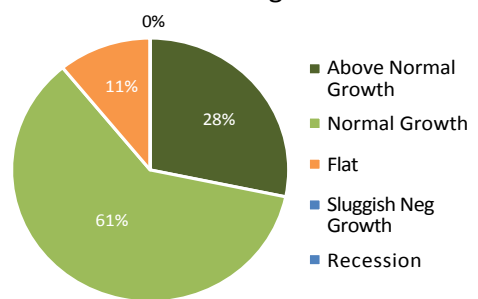
**Demand Whole Goods Y/Y**



**Demand Parts Y/Y**



**Demand 12M Planning**



**New Orders, Production & Work Backlog (Q4 2017 vs Q4 2016)**



## Survey

The North America Ag Equipment Industry Trends Report is a quarterly state of the industry report. The survey is based on Net Rising Indexes: 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](mailto:bduyck@aem.org). ■

# Key Themes for Agribusiness in 2018

Business Monitor International highlights key global views for the agribusiness sector in 2018:

KEY AGRIBUSINESS THEMES FOR 2018				
Themes	Description	Metrics	Winners	Losers
Agricultural Commodities To Outperform Other Commodities	We anticipate a tightening of global grain markets as yields will likely return towards trend-line averages after several years of exceptionally high yields.	Quantitative: S&P GSCI Agricultural Index's performance	Grains, cocoa	palm oil
Broadly Improving Performance Of Agribusiness Companies	The earnings rebound will continue, helped by accelerating EM economic growth, higher inflation in DM, and improving agricultural prices.	Quantitative: modified Bloomberg Food Index performance vs other equities	Global agricultural inputs, dairy, livestock companies	Sugar, chocolate, palm oil companies.
Global Grain Market In Deficit	For the first time in four seasons, the global grain market will see a deficit in 2017/18. This includes corn, wheat and soybean.	Our global supply and demand balances.	Upstream agribusiness companies, grain traders (if increased price volatility)	Downstream companies (meatpackers, processed food companies)
Key Policy Debates To Impact Sector Regulation	US Farm Bill, EU CAP, US marijuana legislation and environmental reform will also feature in 2018 legislative agendas.	Qualitative	Organic farming (Europe), AgTech companies, marijuana producers	Inputs companies
Trade: Expanding Globally But Disruption From US And Brexit	Trade deals including TPP, EU-Japan, EU-Mercosur, are either being revived or continuing apace, but NAFTA and Brexit are key risks.	Qualitative (deals agreed or ratified) and quantitative volume of US trader relative to ROW).	Farmers in the UK, Argentina, Brazil, Mexico	US farmers, EU farmers (livestock in particular), Mexico and UK consumers

Source: BMI

## 1) Agriculture Commodities to

**Outperform:** BMI anticipates:

- Commodities will outperform over the next 12 months, led by grains and cocoa
- Gradual gains in grain prices in the coming months after having bottomed after a multi-year slump
- Tightening global grain markets and yields returning towards trend-line averages after years of being exceptionally high
- Elevated carry-over stocks, which are the highest since 2001, will mute BMI's bullish price outlook
- Crop damage from a La Niña weather cycle in the coming months could reinforce agricultural price outperformance, particularly for grains, although this remains a risk rather than BMI's core view

## 2) Improving Performance of Agribusiness Companies:

- Global agribusiness equities will maintain their uptrend in 2018, as bottoming commodities prices, and improved global economic prospects (especially in emerging markets) lead to superior profits

- The upstream agricultural sector (including machinery, fertilizer and seed companies) will especially benefit as rising commodity prices will prevent fertilizer prices from falling further and encourage new tractor purchases

## 3) Global Grain Market in Deficit:

- For the first time in four years, a global grain market deficit in 2017/18, the result of consistent global consumption growth and reduced supply growth as yields have declined slightly compared to previous years
- A moderate deficit in particular, for corn, mainly due to a 7 percent decline in U.S. production stemming from weaker y-o-y yields and bringing only slightly higher average prices in 2018
- Despite reduced supply, BMI anticipates grain stocks to remain at elevated levels and thus, are slightly below Bloomberg price consensus on average across the grains complex for 2018

## 4) New Government Policies on the

**Horizon:** BMI believes new policies will have a notable impact in three key ways:

- Long-term regional policy - specifically a new U.S. Farm Bill and EU Common Agricultural Policy (CAP) reform, both of which will see discussions begin in 2018
- Environmental regulation
- Canada's decision to fully legalize marijuana starting in July 2018

## 5) Trade: Generally Expanding But

**Pockets of DM Disruption:** In BMI's 2017 Agribusiness key themes article, we noted that the degree of trade integration would depend on whether the country in question was an emerging or developed market. We see a similar trend happening in 2018, as emerging markets in many countries move towards liberalizing trade, including agribusiness. For example, BMI believes that the 11 remaining negotiating partners involved in the TPP negotiations following the US withdrawal will succeed in approving a modified version of the trade agreement. ■

# Ag Infrastructure Insights



President Trump recently introduced eagerly-awaited details of his infrastructure plan. Here are a few key points the agriculture sector should consider as it assesses the president's plan.

AEM continues to push on all fronts independently and in coalition with like-minded Ag sector leaders to make sure rural infrastructure priorities are reflected in this push for an infrastructure investment plan.

Most recently, AEM hosted a special panel discussion on rural broadband at Commodity Classic 2018 with representatives from the equipment manufacturing industry and broadband end-users. The panel was moderated by (right to left) AEM Ag Sector Board member and AGCO North America Vice President of Aftersales, Customer Support, & Distribution Development Bill

Hurley and also included Brandon Hunnicutt, a Nebraska corn, soybean, and seed corn producer, CNH Industrial Industry Relations Manager Dan Danford, Agri-Pulse Communications President Sara Wyant and Trimble Senior Vice President and Sector Head Natural

Resources Darryl Matthews.

Panelists pointed out several factors important to the rural broadband conversation.

Hurley noted that cropland connectivity impacts equipment uptime – from the ability to address machine health to manage machine optimization standards. Rural broadband connectivity helps producers manage equipment fleets more efficiently and environmentally friendly, for example, by reducing inputs. Although the equipment technology exists, poor connectivity means opportunities and efficiencies are lost.

Matthews raised the point that connectivity is an innovation driver for agriculture and lack thereof can make critical decision points at harvest even tougher. He pointed out that about 70 percent of combines have

field mapping/data capturing capability, but that only about 40 percent of that data is being downloaded for analysis primarily due to inefficient broadband access.

Danford reminded attendees that the advancements in agricultural equipment and autonomy are reliant on consistent connectivity, especially if agriculture is going to fully realize the benefit this technological advancement will bring.

The White House proposal is just that – a proposal for Congress to consider in crafting legislation. What might catch the eye of agriculture is the plan's \$50 billion block grant proposal for rural infrastructure projects – ranging from broadband expansion to rural roads or inland waterways.

As these panelists concluded, it remains incumbent on the agriculture industry to stay engaged so that a Congressional infrastructure legislative package does materialize with a focus on rural broadband connectivity – and does so soon.

If you have questions about the status of federal infrastructure legislation, please contact Kate Fox Wood, AEM's director of infrastructure policy at [kfoxwood@aem.org](mailto:kfoxwood@aem.org).

## AEM Launches TV Ad Urging Trump Against Tariffs

AEM launched a new television ad campaign urging President Trump against following through with new tariffs on steel and aluminum imports.

The spot, which ran on "Fox & Friends," "Morning Joe," and "Hannity" as well as on digital platforms, features manufacturing employees speaking directly to the president, urging him to "just say NO" to steel tariffs.

"It's not too late for President Trump to reverse course on steel tariffs," said AEM President Dennis Slater.

"That is why our board decided to make a substantial investment in launching this campaign to urge the president to steer away from tariffs that will ultimately hurt equipment manufacturers and cost American jobs."

You can view the ad on the I Make America YouTube channel and social platforms.

AEM has spearheaded industry efforts in recent weeks to discourage President Trump from imposing tariffs on steel imports. Steel accounts for a substantial portion of equipment manufacturers' direct costs, and steel prices had already increased in late 2017 due to speculation about tariffs.

The ad will continue to run in the coming weeks and target both President Trump, as well as Commerce Secretary Wilbur Ross and U.S. Trade Representative Robert Lighthizer.



# So How Will the New Tax Law Impact our Industry?

Here are some of the most significant components and implications of the new law that equipment manufacturers should be aware of:

- A new, permanent corporate tax rate of 21 percent is effective for tax years beginning after December 31, 2017, allowing equipment manufacturers to realize the tax reform benefits immediately.
- A first-ever 20 percent tax deduction that applies to the first \$315,000 of joint income earned by all businesses organized as S corporations, partnerships, LLCs and sole proprietorships. Because many equipment manufacturers are structured as pass-throughs, this should end up as a net positive for our industry. (Although it is important to keep in mind that the 20 percent rate only applies to about 20 percent of their pass-through business income, reducing the effective marginal tax rate to no more than 29.6 percent.)
- A complete repeal of the Alternative Minimum Tax (AMT) and the election to accelerate AMT credits in lieu of bonus depreciation. This was a big win for our industry. Keeping the AMT would have made it difficult for many equipment manufacturers to reduce their effective corporate rate lower than 21 percent.
- The Research Tax Credit was retained, and its net value was effectively increased by 22 percent; from 65 percent to 79 percent of incremental qualified spending. In addition to the credit benefit increase, the elimination of the Alternative Minimum Tax (AMT) means that more equipment manufacturers should benefit from the credit.
- A doubling of the amount (approximately \$11,200,000 per person) an individual may transfer free of tax either by gift during lifetime or at death will help many small and mid-sized family-owned equipment manufacturers manage debt, retirement and succession planning.
- The deduction for net business interest is limited to 30 percent of “adjusted taxable income” with interest that is limited



subject to an unlimited carryforward. To assist with transitioning into the new rules, equipment manufacturers will be able to add back depreciation and amortization to adjusted taxable income for taxable years beginning after December 31, 2017 and before January 1, 2022.

- Immediate expensing of cost of qualified property (including used property) placed in service after September 27, 2017, and before January 1, 2023, with provisions that provide for a phase down (20 percent per year from 80 percent to 20 percent) of expensing for property placed in service through December 31, 2026. For an industry that both manufactures “qualified property” and invests in it, the cost recovery provisions are expected to provide a meaningful investment catalyst for broader manufacturing sector.
- Like-kind exchanges (Sec. 1031) will now be limited to real property that is not primarily held for sale (personal property assets that can no longer be exchanged include machinery and equipment). This will impose greater limitations on the types of property equipment manufacturers can consider as part of a like-kind exchange.
- A significant new cost for many non-U.S. equipment manufacturers with operations in the United States, the Base Erosion Anti-Abuse Tax (BEAT) is also likely to be a cost for many U.S.-headquartered

equipment manufacturers, given the that many of them have global operations and customer bases. The BEAT targets certain related-party deductible payments (notably, not cost of goods sold) that shift income outside the United States and is imposed if a company’s modified taxable income exceeds the company’s regular taxable income after certain allowable credits.

- A one-time tax rate of 15.5 percent on cash assets and 8 percent on non-cash assets held offshore, regardless of whether or not the amounts are actually distributed. This is designed to raise tax revenue from income that has not previously been subject to U.S. tax, but it is also meant to encourage companies to invest some of their foreign profits in the United States.

Much work still remains to be done. Unintended technical glitches are likely to come to light, and Congress will have to pass legislation called “technical corrections” to fix these issues. AEM will continue to work with Congress and the White House to push for additional legislative changes to address areas that do not work well, are unfair or complex, or that disadvantage our industry. ■

*Kip Eideberg, AEM Vice President, Public Affairs & Advocacy*

## Connectivity Milestone

The Agricultural Broadband Coalition applauded bipartisan leaders in the House and Senate for introducing the Precision Agriculture Connectivity Act of 2018, a milestone piece of legislation that will help to revolutionize farming across the United States.

The legislation, which was introduced in the Senate by Sens. Roger Wicker and Amy Klobuchar and in the House by Congressmen Bob Latta and Dave Loebsack, will help to facilitate the deployment of broadband internet across rural America – including ranchland and cropland, where broadband connectivity is increasingly essential for production agriculture.

“Farm equipment manufacturers applaud Sens. Wicker and Klobuchar and Congressmen Latta and Loebsack for working to make sure the federal government evolves along with the technology that has revolutionized modern agriculture,” said Nick Tindall, senior director for AEM, and the chair of the Agricultural Broadband Coalition. “This legislation creates a clear mandate for the Federal Communications Commission (FCC) to work with other branches of government to develop a comprehensive strategy to both update our rural infrastructure, and ensure that those investments meet the needs of farmers and ranchers, and the machinery on which they rely to feed the world.”

“Bringing together the U.S. Department of Agriculture (USDA), the FCC and public and private stakeholders to address the needs of precision agriculture ensures current and future generations of farmers and ranchers will have the necessary connectivity to achieve optimal yields, lower environmental impact and maximize profit,” said American Farm Bureau Federation President Zippy Duvall. “Broadband deployment in unserved and underserved croplands and ranchlands is essential to farmers and ranchers who produce the food, fuel and fiber across the United States and around the world.”

The Precision Agriculture Connectivity Act of 2018 creates the Task Force for Meeting the Connectivity and Technology Needs of Precision Agriculture in the United States. Within a year, the task force is intended to bring together public and private stakeholders to evaluate current programs affecting broadband internet access on cropland and ranchland, identify and measure existing gaps in coverage, and develop policy recommendations to address that gap. The task force is also charged with developing specific steps the FCC, U.S. Department of Agriculture and other federal agencies can take to address gaps in coverage.

The Agricultural Broadband Coalition hopes that Congress will take up and pass the legislation so as to help facilitate greater access to broadband internet access on cropland and ranchland. ■

## Manufacturer Alert: Pending Ag Braking Standard

After countless hours of work by AEM member company experts, an AEM-led coalition of Ag industry trade associations released its proposal to update the braking system performance standard for Ag field equipment to ASABE for processing. The increasing heaviness of equipment and its transportation at higher speed spurred the decision to update the existing standard, which was last updated in 2011.

- Manufacturers of tractors and self-propelled machinery should prepare to review their design and testing processes to accommodate the new proposed ASABE Ag Braking Standards.
- Towed implement manufacturers should also heed the proposed standards to see how implement mass and allowable speeds square with the forthcoming requirements.

The biggest takeaway from the proposed standard is that manufacturers will likely have to develop a brake system for variable-mass implements that can travel at high speeds. Smaller (lower mass) implements that can only be towed at speeds less than 20 mph are unlikely to warrant changes in design though increasing that implement’s allowable speed may prompt manufacturers to consult the standards to make that determination. Still smaller implements may be allowed to be towed up to 25 mph.

Here’s a quick rundown of some of the specific updates in each part of the new proposed ASABE standard:

### Part 1 (general requirements):

- Type-0 service brake performance test has been added for tractors and self-propelled machines.
- Values used for the Type-0 test are based on maximum transport mass vs. maximum gross mass as most tests today.

**Hey, isn’t that...?** GVM Inc. President Mark Anderson, who serves as chair of AEM’s Sprayer Leadership Group, spoke at the Weed Science Society of America’s conference in Arlington, VA. The EPA’s Office of Pesticides Programs convened the symposium to learn more about pest control, and Mark’s presentation offered a great opportunity to share what manufacturers are doing to improve sprayer technology and mitigate drift.

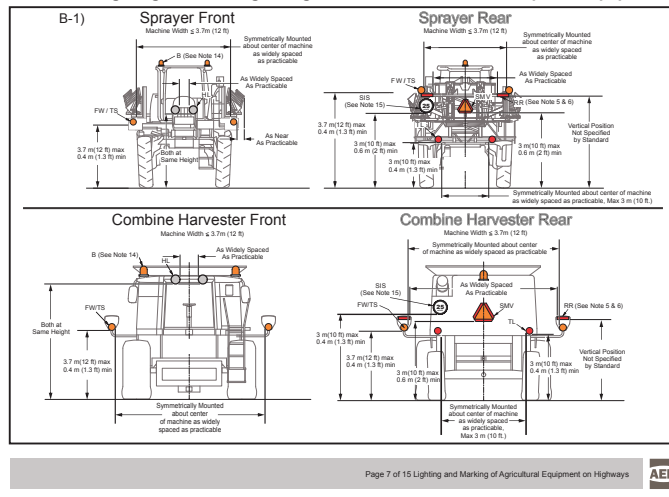


# From Vegetable Farming to Workplace Violence

The Agricultural Safety & Health Council of America (ASHCA)'s North American Agricultural Safety Summit featured a wide variety of speakers and breakout sessions covering many aspects of Agricultural Safety and Health from workforce issues to equipment safety, including vegetable farming, dairying, workplace violence, chemical exposure and abuse. During the summit, a session highlighting standards and regulations that impact operation of Agricultural equipment on public roadways was presented by a panel that included AEM members, ASABE staff and AEM staff.

The session focused on the trends in agricultural equipment and the need for updated standards. It went on to illustrate the intended use, and examples of abuse, of the SMV and SIS signs followed by a session on proposed updates to the ASABE Braking standard. The session was capped by a presentation of the new Illustrated Guide to Lighting and Marking, ASAE (now ASABE) S279.17 Standard. Copies of the guide were provided to all attendees and are available on the AEM website at: <https://shop.aem.org/en/AEM%20Safety/aem-safety-products/lighting-and-marking-of-agricultural-equipment-on-highways-guide>

ANNEX A - Lighting and Marking for Agricultural Tractors & Self-Propelled Equipment



This guide has been submitted to ASABE for possible inclusion in the ANSI/ASAE S279.17 standard as an informative annex. For more information, please contact Mike Pankonin at [mpankonin@aem.org](mailto:mpankonin@aem.org).

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## Manufacturer Alert: Pending Ag Braking Standard

### Part 2 (tractors):

- The mean fully developed deceleration rates are now aligned (two-wheel versus four-wheel braking) at lower speeds and increased for higher speeds (with four-wheel braking).
- In regards to secondary braking, there are now separate values for the various speed ranges.

### Part 3 (self-propelled and special self-propelled machines):

- For service and secondary braking performance, the mean fully developed deceleration rates for machines limited to 25 mph remain the same, but in the case of machines that travel above 25 mph, the rate increases.
- In regards to the towing of an unbraked towed vehicle (implement) with a self-propelled machine (a sprayer, for example), the mass ratio for machines limited to 20 mph remains the same, but in the case of machines that travel between 20 and 25 mph, the ratio is reduced. The new standard will allow lighter towed vehicles to be towed up to 25 mi/h.

- There were no specific requirements for the towing of an unbraked vehicle (trailer, implement) with a special self-propelled machine (combine harvester, for example).

### Part 4 (towed vehicles – fixed and variable load implements):

- Some new requirements have been added for all implements capable of being towed at speeds higher than 20 mph.
- A requirement that variable-load implements (a commodity hauler, for example) would need to be equipped with a braking system if its maximum transport mass is greater than 33,000 pounds has been added.
- The mass ratio for implements that are not capable (designed for) of being towed at speed less than 20 mph is unchanged, but in the case of implements that will travel above 25 mph, a ratio of .6 times the recommended minimum mass of towing vehicle has been established.
- A requirement to have a front and rear facing speed identification sign (SIS) has been added.



### Part 5 (interface between towing vehicle and towed vehicle):

- The interfaces for hydraulic and inertia brake systems are now included.
- The new standard does not forbid the use of other types of brake systems, but does not provide specific requirements for those systems.
- Adjustments were made in the compatibility curves to better match the braking performance of the towing and towed machines.

For more information about the Ag Braking Standards, please contact Mike Pankonin at [mpankonin@aem.org](mailto:mpankonin@aem.org).



## American Society of Agricultural and Biological Engineers (ASABE)

**ASABE announces publication of a new International Organization for Standardization (ISO) standard for speed signage used on agricultural equipment.**

ISO 20383:2017, Tractors and machinery for agriculture and forestry — Speed Identification Sign (SIS), is based on ASABE standard ANSI/ASAE S584.3, Agricultural Equipment: Speed Identification Symbol (SIS). It specifies the dimensions, characteristics, and positioning of speed identification signs. Such signs indicate the maximum equipment ground speed, based on the ground speed design capability, for self-propelled, semi-integral, and towed agricultural equipment.

**ASABE has initiated the development of five new standards for braking for agricultural equipment.** The documents could have significant impact on some manufacturers, and equipment designers are strongly encouraged to monitor progress of the projects.

The new proposed standards will replace ANSI/ASAE S365.9, Braking System Test Procedures and Braking Performance Criteria for Agricultural Field Equipment. They will provide updated braking requirements, add allowance for higher-speed, light-weight towed vehicles, and define braking interfaces between towed and towing equipment. Proposed titles are:

- Agricultural Field Equipment Braking Part 1: General Requirements
- Agricultural Field Equipment Braking Part 2: Requirements for Agricultural Tractors
- Agricultural Field Equipment Braking Part 3: Requirements for Self-Propelled and Special Self-Propelled Equipment
- Agricultural Field Equipment Braking Part 4: Requirements for Towed Equipment
- Agricultural Field Equipment Braking Part 5: Requirements for the Interface between Towing Equipment and Towed Equipment

The standards will provide minimum requirements and normative references, define terms and definitions, and establish general test procedures for the performance of braking systems used on agricultural field equipment as defined in ANSI/ASAE S390.6 (ISO 12934:2013), Tractors and machinery for agriculture and forestry - Basic types – Vocabulary.

The proposed standards are expected to improve braking performance and could result in significant changes for some manufacturers. It is strongly suggested that equipment designers remain cognizant of these projects as the content is further developed by the ASABE Agricultural Equipment Braking committee. Further press releases will be forthcoming as this work unfolds.

*For information on these or any other ASABE standard, contact Scott Cedarquist at 269-932-7031, [cedarq@asabe.org](mailto:cedarq@asabe.org). A current listing of all ASABE standards projects can be found on the ASABE web site at [www.asabe.org/projects](http://www.asabe.org/projects).*

## Ag Roadways, EPA and Implement Trains



**A**g Sector Technical Committee Chairs and Leaders met to provide guidance and direction for 2018 and 2019 AEM Ag Tech & Safety activities.

The following 2018-19 priorities were identified with specific goals for each:

- Working with other stakeholders to advocate for global engine certification acceptance
- Continued work on the Ag Equipment Roadways Initiative
- Taking the next steps on an Ag Sprayer Initiative, including EPA discussions, agitation research and development of applicable standards
- Launching an initiative to monitor and communicate Towed Equipment Regulations, including laws and standards
- Development of a white paper defining requirement for “Implement Trains”
- Initiating continued outreach to non-AEM member stakeholders at the appropriate venues
- Advocating for remote control / autonomous equipment friendly regulations and coordinating harmonized approaches among member companies
- Monitoring of global Ag Equipment braking requirements and communicating those requirement to non-AEM stakeholders to encourage industry understanding and acceptance

For more information, please contact Mike Pankonin at [mpankonin@aem.org](mailto:mpankonin@aem.org).



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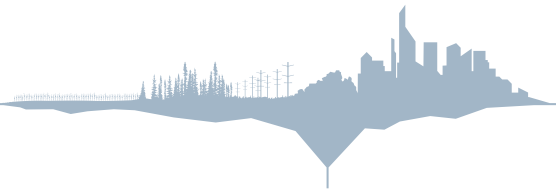


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