From the editors of *Farm Equipment*...

Ag Equipment Intelligence

News, Information & Analysis for the Ag Equipment Marketer

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- Tariff Impacts on Ag
- New Deutz Distributor
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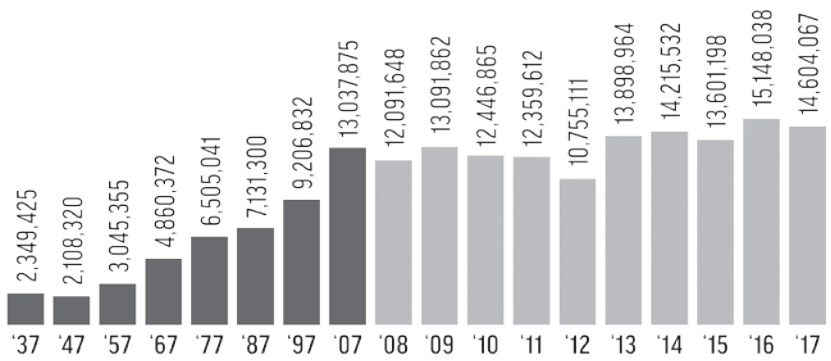
RFS Tussle with Big Oil Could Have Long Term Impact on Ag

While steel tariffs are currently grabbing most ag headlines these days, possible changes to the Renewable Fuel Standard (RFS) may produce longer term challenges for U.S. agriculture. Battle lines between oil refiners and ethanol producers and their suppliers (corn growers) have been clearly drawn.

In large part, ethanol has literally fueled much of the growth U.S. agriculture has experienced in the past dozen years because corn is the principal feedstock in producing the fuel additive. Since the use of ethanol (or biofuels) was mandated in 2005, U.S. corn production as grown from about 10 billion bushels a year to slightly over 15 billion bushels by 2016, or by about one-third. During this time, ethanol has made up about 10% of the total gasoline fuel consumption. In other words, ethanol production has been very, very good for agriculture and neither corn growers nor ethanol producers want to cede any of that growth.

U.S. Corn Production 1937–2017 *(000s bu)*



Source: USDA, NASS, Crop Production 2017 Summary, Jan. 12, 2018

Overall, of the 14.3 million bushels of corn used in 2017, 30% went into production of fuel ethanol and another nearly 9% was used for DDGS, or dried distillers grain with soluble, a co-prod-

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GKN-Dana Tie Up Would Create World's Largest Axle & Driveline Components Supplier

The off-highway powertrain activities of the U.K.'s GKN engineering group, together with its GKN Driveline automotive business unit, are to be combined with Dana Inc. in a new entity.

With pro forma sales of approximately $13.4 billion in 2017, the company will be the global leader in vehicle drive systems across all three major mobility markets — light vehicle, commercial vehicle and off-highway.

James Kamsickas, president and CEO of Dana, said, "This transformative and strategic transaction solidifies Dana as a world leader in vehicle drive systems and establishes a leading position in electric propulsion, which we see as the future of vehicle drivetrains."

The new Dana plc (public limited company) will be domiciled in the U.K. but its shares will trade on the New York Stock Exchange. Current Dana shareholders are expected to own almost 53% of the business once the transaction completes, with GKN shareholders receiving 133 million Dana plc shares to own approximately 47%. In addition, Dana is paying $1.6 billion cash to GKN plc and assuming $1 billion of net pension fund liabilities. Under the deal, the new entity will be called Dana PLC.

According to a March 9 report in the *Wall Street Journal*, Dana executives say the tax strategy is designed to take advantage of a lower tax rate and to assuage concerns about its commitment to GKN's manufacturing operations in the U.K. The U.S. recently cut its corporate tax rate to make American companies more competitive globally and keep them from seeking better tax treatment abroad. But Dana CFO Jonathan Collins said the combined company would save $600 million in a more beneficial tax environment abroad.

Hostile Suitor. The transaction arises from a hostile take-over bid for GKN

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plc from a U.K.-based business re-structuring specialist, which the *WSJ* report called "a nasty battle for the British parts maker," as the proposed takeover pits Dana against a bid from turnaround specialist Melrose Industries, which wants all of GKN in a hostile offer of £7.4 billion ($10.25 billion). According to *WSJ*, GKN, listed in London, is turning its attention to aerospace and seeking to sell its auto business.

In response to the Melrose takeover, GKN managers decided to raise cash selling off business areas identified as being non-core and floated the prospect of separating its automotive and aerospace activities. Off-highway has been a declining sector for GKN as other parts of the business — notably aerospace — have grown. In 2016, the group disbanded its GKN Land Systems division in a £14 million restructuring (*see Ag Equipment Intelligence, December 2016*).

GKN's Walterscheid shafts, couplings and gearbox operations were moved into GKN Drivelines, which is the division being combined with Dana, while GKN Wheels & Structures, which manufactures axle hub assemblies and steel rims for agricultural and construction equipment, operated as a standalone business.

This operation has been identified for disposal by the current management, headed by GKN's American chief executive, Anne Stevens. GKN Wheels & Structures has rim manufacturing operations in the U.K., Italy and Denmark, as well as in Armstrong, Iowa, Woodbridge, Ill., and Wichita, Kan.

The *WSJ* report goes on to say that representatives for Melrose criticized the terms of the Dana deal, calling it a "hasty sale" that won't benefit GKN shareholders. "Today's announcement changes nothing and is a further admission of the management failure of GKN," Melrose Chairman Christopher Miller said.

The new venture is expected to pull in $14 billion in annual revenue, with customers ranging from General Motors Co. to agricultural equipment maker Deere & Co. Truck makers, including Pacaar Inc. and Volvo AB, are also customers. **AEI**

Increasing Tire Sales Stokes Titan International's Optimism for 2018

Tire and rim maker Titan International's newest board director is optimistic that the Quincy, Ill.-based group will continue to make sales and profitability progress through 2018.

Paul G. Reitz, president & CEO, was appointed to the board of directors at the beginning of December with the support of Maurice Taylor, Titan's chairman. "Paul's leadership and vision have been well demonstrated since he joined Titan and these strengths, along with his background and knowledge of our business, will make him an excellent board member," said Taylor.

Titan has seen a turnaround in sales over the past 12 months, reporting a 14% increase in net sales revenues over the first 9 months of 2017 after a challenging 18 quarters of decline.

The fourth quarter of 2016 came in level with the year prior at $307.3 million, but the following quarters saw growth of 11%, 10% and 21% culminating in third quarter net sales of $371 million and $1.09 billion for the first 9 months compared with $958.2 million for the same period in 2016.

Reitz commented, "Our top line growth of over 21% includes improvements beyond this amount within both our agricultural and earthmoving/construction segments. We continue to see the benefits of our strategic investments over the past couple of years and to win new business in our aftermarket channels.

"In general, the North American OEM market remains challenging with lower volumes and tougher pricing, but we are encouraged by signs of stronger end markets that should provide some long awaited tailwinds heading into 2018."

Titan recorded a net loss of $33.7 million vs. $32.5 million in the year prior, for the first 9 months of 2017. The company has been working to drive down sales, general and administration expenses, which are down approximately $3 million year-over-year when a $6.5 million contingent liability relating to a legal judgement is excluded. Titan will appeal a court ruling that two subsidiaries (Dico and Titan Tire Corp.) violated rules governing the disposal of a hazardous substances.

Reitz concluded, "We saw raw material costs stabilize during the third quarter, when improving performance brought in a 14% gross profit improvement over the previous year.

"Our adjusted EBITDA for the quarter increased significantly by 64% to $18.9 million, which is encouraging when this period includes plant shutdowns and summer holidays. We expect gross profit improvement of between 25-40% and to increase EBITDA in the 50-100% range during 2018," Reitz said. **AEI**

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Chinese-Owned Pirelli Jumps Into Already Crowded Ag Tire Market

The Pirelli brand has formally returned to the agricultural tire market in Europe with the launch in Italy of the PHP — Pirelli High Performance — range of traction tires.They are manufactured in Brazil by what is effectively a new business combining the Pirelli Group's former industrial tire operations — truck, bus, off-highway and ag — with those of China's Aeolus Tire *(see Ag Equipment Intelligence July 2016)*.

Prometeon Tire Group, the new entity with headquarters in Italy, is reportedly the world's fourth largest industrial tire business, with four factories — two in Brazil and one each in Egypt and Turkey — with R&D operations in Italy and Brazil.

The business is owned 52% by TP Industrial Holdings, a wholly-owned subsidiary of ChemChina, the Pirelli consumer tire group's main shareholder; 38% by a Chinese investment company and 10% by the Chinese industrial tire manufacturer Aeolus.

Following its separation from the Pirelli group, Prometeon negotiated a €600 million ($711 million) syndicated credit facility with eight international banks to secure its financial independence and autonomy. Using the "Pirelli" brand under licence, the new business is now in the process of launching its PHP design into a market for large, premium-specification radial traction tires that is increasingly competitive.

"Positive feedback from farmers and custom operators have been encouraging..."

In the past 2 years, Titan International has entered the market with European-built Goodyear tires *(see Ag Equipment Intelligence November 2015)* and German manufacturer Continental has returned to the fray *(see Ag Equipment Intelligence December 2017)*.

All are challenging established players, including Bridgestone/Firestone, Michelin, Trelleborg and Vredestein, as well as Yokohama-backed Alliance *(see Ag Equipment Intelligence April 2016)*.

Prometeon's ag specialists say extensive comparative testing show the PHP 85, 70 and 65 section tractor tires in sizes up to 710/70R42 are at least a match for leading competitor products in most respects, with especially good wear characteristics. Positive feedback from farmers and custom operators using trial sets over the past couple of years, have also been encouraging, they say.

A €17 million ($20 million) investment in R&D and production resources spawned the new tires. It will also bring higher spec designs down the line with increases in sidewall flexibility and high load carrying capacity at lower inflation pressures for improved flotation and traction. **AEI**

FARM MACHINERY TICKER (AS OF 3/12/18)

MANUFACTURERS	Symbol	3/12/18 Price	2/12/18 Price	1-Year High	1-Year Low	P/E Ratio	Avg. Volume	Market Cap.
Ag Growth Int'l.	AFN	$54.39	$56.01	$60.63	$47.08	27.57	42,670	892.49M
AGCO	AGCO	$67.03	$68.21	$75.95	$58.00	28.89	762,150	5.34B
AgJunction Inc.	AJX	$0.55	$0.54	$0.67	$0.44	—	80,390	64.28M
Alamo	ALG	$116.91	$110.30	$120.59	$71.67	30.85	57,180	1.26B
Art's Way Mfg.	ARTW	$2.85	$2.65	$3.85	$2.00	—	11,440	11.85M
Buhler Industries	BUI	$4.10	$4.15	$4.89	$4.03	—	603	102.50M
Caterpillar	CAT	$154.50	$152.29	$173.24	$90.34	122.62	5,990,000	92.33B
CNH Industrial	CNHI	$13.21	$13.70	$15.65	$9.36	61.41	1,990,000	18.42B
Deere & Co.	DE	$164.03	$159.21	$175.26	$106.93	37.29	2,410,000	53.11B
Kubota	KUBTY	$89.72	$97.18	$107.13	$73.00	17.39	12,070	21.56B
Lindsay	LNN	$92.78	$91.59	$96.22	$79.03	38.89	99,820	994.73M
Raven Industries	RAVN	$38.90	$34.55	$40.85	$26.35	34.42	130,480	1.41B
Titan Int'l.	TWI	$13.55	$11.70	$14.53	$7.97	—	275,730	810.44M
Trimble Navigation	TRMB	$39.35	$40.00	$45.70	$30.45	83.72	1,060,000	9.77B
Valmont Industries	VMI	$147.80	$154.90	$176.35	$140.10	28.92	102,740	3.35B
RETAILERS								
Cervus Equipment	CERV	$14.26	$14.40	$15.85	$10.98	9.46	7,400	223.71M
Rocky Mountain Equipment	RME	$12.29	$12.90	$14.34	$9.20	12.30	45,980	244.31M
Titan Machinery	TITN	$21.01	$18.81	$24.19	$11.68	—	193,530	448.13M
Tractor Supply	TSCO	$63.66	$66.67	$82.68	$49.87	19.29	1,960,000	7.96B

New Deutz-Fahr Distributor Seeks to Relaunch Tractor Brand in North America

Executives at SDF Group, the manufacturer of SAME Deutz-Fahr and other tractor and combine brands in Europe, have turned to their successful distributor in New Zealand and Australia for a North American relaunch.

New Zealand's Power Farming Group, a $240 million in sales machinery distributor and dealer operation, has set up shop in Dacula, Ga., as PFG America, with a parts and service hub in Kerman, Calif. It aims to recruit dealers with promises of a well funded and stable operation that places strong emphasis on parts and service support, as well as sales and technical training.

Craig Maber, a third-generation member of the family that has been involved in machinery sales and service since the late 1940s, is president of the new PFG America business, explains, "SDF has had multiple brands and conflicting products in the market at the same time, and that makes it very hard to keep dealers happy," he says.

"Now that they've formalized the export business into one strong brand, which is Deutz-Fahr, and they've got a full line of products, that really helps because when you can offer a dealer a product that's unique, and they don't have to scrap against their neighbor with the same product in a different color."

The Deutz-Fahr brand originates from the late 1960s with the acquisition of combine and hay tools maker Fahr by Deutz when it was a manufacturer of both diesel engines and tractors. These activities separated in 1995 when the agricultural operations were bought by Italy's SAME-Lamborgini-Hurlimann Group.

Ten years prior to that, Deutz-Fahr aimed to capture a slice of the North American market by acquiring the agricultural assets of Allis-Chalmers. The US. operation was subject to a management buyout from the parent group 5 years later, which led to the formation of today's AGCO Corp.

The family owned SDF Group continues to produce its Italian brands for domestic and selected export markets, focusing mainly on orchard and sub-150 horsepower models, while the Deutz-Fahr operation in Germany has been built up as its international brand in terms of both image and product range.

Last year, Deutz-Fahr Land, an all new $100 million showpiece tractor plant, training and visitor center, was opened to improve production efficiency and increase capacity for large tractor assembly (*see Ag Equipment Intelligence, July 2017*).

The Deutz-Fahr range encompasses a full line of SDF and Deutz-powered tractors from 75 horsepower orchard tractors to 336 horsepower tillage machines, with work now starting on row-crop solutions for the North American market, says Craig Maber. Utility models for the U.S. will also follow.

Taylor Grout, former McCormick USA product and marketing manager, has been recruited to head up PFG's North American sales and marketing effort. "Deutz-Fahr has been around a long time but with a history of change," he says. "We'll be trying to take the brand to the next level in terms of parts, service and general product availability." AEI

Brandt to Acquire Kongskilde Factory to Expand U.S. Exposure

Canada's Brandt Group is stepping up its presence in the U.S. with the acquisition of a ready-made modern manufacturing facility in Illinois. The Brandt Agricultural Products division currently occupies a 110,000 square foot facility on a 40 acre site just outside Regina, Sask., where it makes grain augers, conveyors and vacuums, large flexible tine harrows and grain carts.

Some of these products will also be built at the 75,000 square foot facility in Hudson, Ill., being acquired from Kongskilde, a unit of the Danish group that makes crop driers and grain handling equipment.

The plant, opened in fall 2015, increased the covered area of the site by 60% to meet the expanding demand for Kongskilde disc harrows and tined stubble and seedbed cultivating equipment.

Those products — but not the manufacturing facility — were acquired with the Kongskilde Agriculture division by CNH Industrial for its New Holland operations in 2017 *(see Ag Equipment Intelligence, November 2016)*.

Doug Otto, special projects manager at New Holland North America, says many of the products previously produced in Hudson will be relocated to the CNH Industrial tillage plant in Goodfield, Ill., which currently produces tillage tools for Case IH.

"New Holland has launched the tillage products to our dealer network in North America, continuing with the Kongskilde brand," Otto explains. "We're continuing to evaluate the opportunity for all the products that are now available through the acquisition, with launch timing for each of the product lines based on our market need and resources."

So far, New Holland has introduced several products, including the Kongskilde 9200 Series vertical tillage, Vibro-Till 8200 primary cultivation and 800 Series 'S' tine cultivators

Kongskilde invested some $10 million in the Hudson project, installing the latest surface preparation and powder paint application facilities that brought new levels of efficiency to the assembly process.

Brandt President, Shaun Semple, says purchasing the plant augments an aggressive growth strategy. "This is a world-class manufacturing facility that gives us the opportunity to expand our manufacturing footprint directly into the American market."

It will be used to produce agricultural equipment for the corn and soybean markets in the U.S. AEI

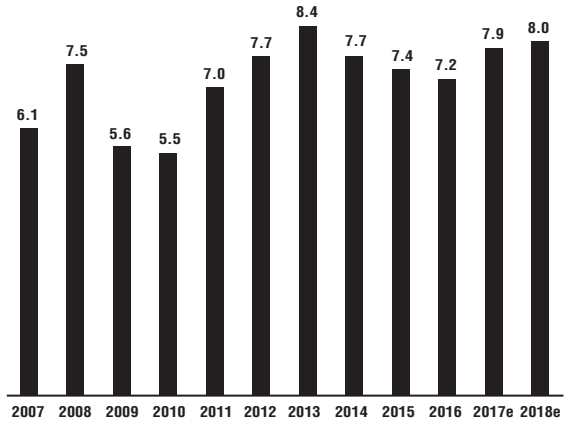
VDMA: German Farm Machinery Sales Grow by 10%, 'Second-Best Result Ever'

Agricultural machinery and tractor manufacturers production in Germany experienced an exceptionally good business year in 2017, a strong growth in turnover of 10%, to €7.9 billion ($9.7 billion). According to VDMA Agricultural Machinery Assn., this represented the second-best annual result ever achieved by the industry. "The demand for innovative agricultural machinery is greater than it has been for a long time," said Dr. Bernd Scherer, managing director of the association. Satisfactorily high milk prices, in some cases exceeding 40 cents per kilogram, are "the most important trigger for the latest surge of investment in agriculture."

VDMA reports that industry backlogs have grown based on increasing farmer demand for new equipment. "Following 3 years of crippling recession, we are feeling the effects of tremendous farmer backlog demand," said Scherer. Farmers in Europe, particularly in regions where dairy farming predominates, are currently benefiting from a considerably improved liquidity situation. On average, incomes increased by 8% in Europe last year, according to initial estimates from Eurostat, the statistical office of the European Union.

Scherer added that the current environment in agriculture provides the opportunity for the industry to take add to the momentum. "After all, in the near future we have a great deal to do. Digitization is just as pressing as structural change and the political desire for regulation. Agriculture, trade and industry — we now all face the challenge of really stepping on the gas," he said.

German Ag Tech Production — 2007-18f
(turnover in billions of euros)



VDMA is forecasting ongoing stable conditions for Germany's ag equipment sector where it expects production volumes to reach €8 billion in 2018.

Source: VDMA German Agricultural Machinery Assn.: January 2018

Eastern Europe continues to show strong growth potential for ag equipment sales, VDMA said. For the second year in a row, the region, particularly Russia and Ukraine, have performed well. In 2017, Russian business of German exporters grew 30% to €500 million ($619 million); the growth rate was at the same level in Ukraine. Business was similarly successful in the U.K., where an increase of 15% was reached due to positive currency effects.

For 2018, VDMA anticipates sustained stable conditions, where German ag machinery is expected to achieve a production volume of €8 billion ($9.9 billion) in total. "Thus, we can already expect good business at the high level of last year," summarized Scherer. AEI

Kuhn Expects 2017 Sale Upturn to Continue in 2018

After 3 difficult years, a clear recovery has taken hold in the markets served by Kuhn, the largest business unit of the Swiss engineering group Bucher Industries.

Despite the arable sector continuing to suffer from low and volatile prices and particular caution among growers in North America toward investing in new equipment, Kuhn reported increased sales, a larger order book and bigger profits. Bucher CEO Jacques Sanche reported a 13.5% gain after currency adjustments in Kuhn's net sales from the equivalent of $979 million in 2016 to $1.13 billion, and an operating profit expressed as EBITDA up from $122 million to $140 million in 2017.

"As farmers in Europe resumed investing in new machinery and dealers built up their inventories, we saw a 22% increase in order intake year-over-year and a near 16% increase — before currency adjustments — in net sales," said Sanche.

In Europe in particular, demand for hay and forage harvesting machinery, as well as for livestock bedding and feeding, increased in response to higher farmgate prices for meat and milk. Although prices for these commodities have fallen back in some European markets, Kuhn managers are still optimistic that conditions will continue to improve in the dairy and other livestock sectors.

They expect the rebound to take longer in North America due to low farm incomes, while arable sector prospects generally are marred by high equipment inventories and relatively easy harvests. Overall, continuing sales growth and increasing profit margins at Kuhn are expected in 2018.

Bucher's specialist hydraulics division, which supplies ag and other equipment manufacturers, experienced a more buoyant market in North America, along with China, India and Germany. Order intake across the construction, industrial, agricultural and materials handling sectors it serves rose 21% and sales increased by 15% — both record gains — from the equivalent of $500 million in 2016 to $575 million last year. AEI

South American Ag Equipment Intelligence

AGCO to Expand Argentine Factory

After having invested US$ 2 million in a new training center in Argentina, published reports indicate that AGCO will expand its factory in the city of General Rodríguez that was opened in 2014. The information was leaked by engineering company Linz, which also built the training center called "AGCO Academy." The U.S.-based company did not refute hiring the company for the project, but did not release further details. Prior to 2015, AGCO only assembled Massey Ferguson and Valtra tractors in the country, but added harvesters to the line at the end of that year.

Brazil's Jacto Opens New Ag Sprayer Factory in Argentina

Brazil's agricultural machinery manufacturer Jacto inaugurated a new factory in Argentina at the end of February. The 11,800 square foot plant is located in Arrecifes, province of Buenos Aires. According to Jacto, the investment was $7 million.

The new plant is designed to produce 3 models of Arbus fruit sprayers. The self-propelled sprayer has a tank capacity of 793 gallons and a 98 foot boom. The goal is to produce 200 self-propelled machines per year and 250 turbines.

Carlos Palmieri, vice president of the company, said that in-country production brings advantages like subsidized credits and the demand is likely to continue to grow. "The subsidized credit is the best incentive available in the market. The usual demand is for 1,200 sprayer units per year but he market will reach probably only 1,000 in 2018," said Palmieri in an interview with Buenos Aires newspaper *Clarín*.

Jacto has been in business for 70 years and began exporting its sprayers in 1963, initially to Argentina. Currently, the company exports to over 100 countries. Argentina is a major exporter of fruits, including apples, pears, tangerines, lemons, blueberries and grapes.

John Deere Buys King Agro

John Deere has announced the purchase of Argentinean company King Agro, a manufacturer specializing in producing carbon fiber products. The company says it intends to grow the market for sprayers, after robust sales of harvesters and tractors in Argentina, which has seen double-digit growth in the past 2 years. "The innovation, technology and fiber design of King Agro is perfect for our solutions, which combined with precision agriculture solutions help procedures like crop protection," said Gastón Trajtenberg, president of John Deere Argentina, in a press conference.

King Agro is a family-owned business with headquarters at Valencia, Spain, and a production facility in Campana, Argentina. "Carbon fiber is the steel of the 21st century, but it is five times lighter and five times more resistant," explained Guillermo Mariani, president and cofounder of King Agro. The Deere-King Agro alliance dates back to 2015 when both companies began to develop and distribute carbon fiber booms for John Deere agricultural application equipment. AEI

Amazone Sales Increased Nearly 13% in 2017; Expect More of the Same This Year

A noteworthy 12.6% increase in 2017 sales turnover was posted by German agricultural equipment manufacturer Amazone and managers say market indicators give them confidence to predict further growth this year.

Amazone tillage equipment, sprayers, spreaders and grounds care machinery raked in €457 million — equivalent to $565 million — as continued investment in product development, an expanded product range and marketing efforts continue to grow its business.

Although Amazone has twice reported larger figures than this — €460 million ($568 million) in 2012 and €468 million ($577 million) in 2014 — revenues are the highest since the group started reporting only turnover produced by manufacturing operations, which excludes some product distribution activity. Directly comparable sales figures for manufacturing only during these years were €402 million ($496 million) recorded in 2015 and €406 million ($501 million) racked up in 2016.

Marketing initiatives included a 12 week tour of Canadian and northern U.S. states with a 12 meter (40 foot) Amazone Catros high speed compact disc cultivator supported by Ogden, Ill.-based importer AMS Inc. During 92 days, demonstrator Kathrin Schmidt travelled 20,322 miles with the implement and a Claas Xerion 4WD tractor, making 40 stops in the U.S. and 18 in Canada on varying soil types and conditions from incorporating corn stover to working potato ground 7 inches deep.

On the sales front, better-than-expected performance in the currently soft ag equipment market in France, along with strong growth in some eastern and central European states, helped produce the record sales levels. Joint directors Christian and Dr. Justus Dreyer commented, "In the last months of 2017, the climate for investment in agriculture has been positive. The customers' interest in modern agricultural machinery and the demand for our innovations is so great that we anticipate a further increase in turnover in the year to come."

Amazone's confidence is also reflected in the recruitment of 130 apprentices among its 1,850 employees, an investment of more than 7% of turnover in research and development, and expenditure of more than €15 million ($18.6 million) in new production and other facilities.

Among the latter is a new factory for trailed sprayer assembly, which was started in 2017 as production of the Amazone UX range introduced in 2004 passed the 10,000 unit mark.

The factory, which represents a total spend of €16 million ($19.8 million) is on a new 59 acre site where 172,222 square feet of assembly and storage halls, plus an administrative building, is being constructed.

The factory to be vacated will become Amazone's new parts logistics center once the move has been completed in 2019. The new facilities will relieve production pressure at the group's headquarters factory, which is described as bursting at the seams following double digit growth. AEI

Combine, 4WD Sales Offset Drop in HHP

North American sales of high horsepower (100-plus HP) tractors declined in February, but part of the drop off was absorbed by higher sales of combines and 4WD tractors, according to the Assn. of Equipment Manufacturers February report on farm machinery sales.

In his analysis, Mircea (Mig) Dobre, analyst for RW Baird, noted that two underlying positives for ag machinery sales. "U.S. dealer inventory in absolute and days-sales terms continues to decline across large ag categories. Corn and soybean prices on the move — corn +11%, soybeans +8% year-to-date — as drought in Argentina has reduced yield and production expectations."

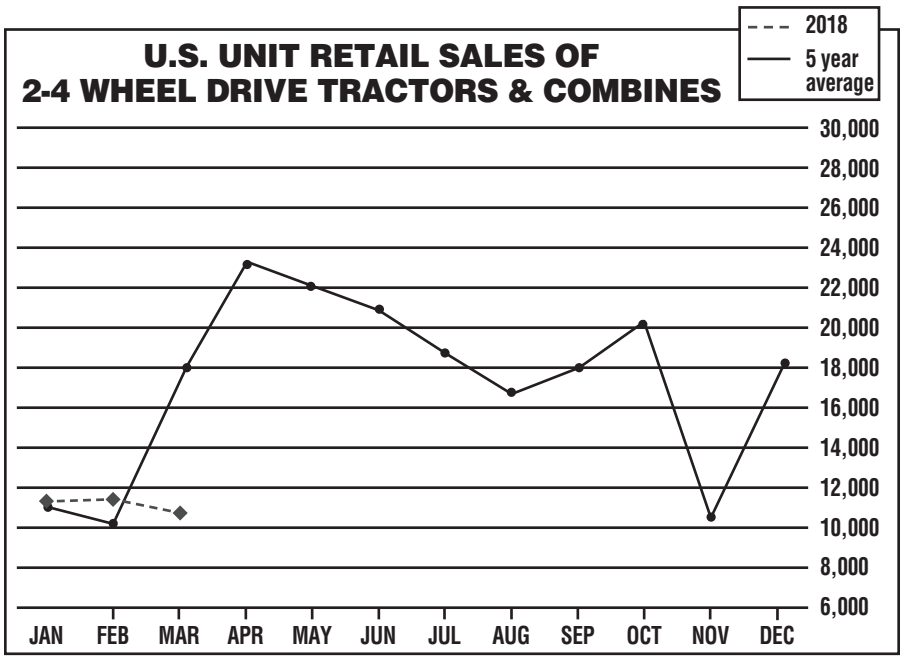
- U.S. sales decreased 5% year-over-year (4WD +9%, combines +34%, row crop –20%), while Canadian sales increased 8% (4WD +15%, row-crop +8%, combines –3%).
- Combine sales grew 24.4% in February following a 4.8% decline in January. Last 3 month (L3M) sales increased 4.8% year-over-year after a 3% L3M increase last month. U.S. combine inventories decreased 3% year-over-year in January; days-sales of inventory (64) was down from last year (72).
- Row-crop tractor sales decreased 15.8% year-over-year after increasing 2.2% in January; L3M sales were down 5.7% (January L3M -0.2%). U.S. row-crop tractor inventories decreased 15% year-over-year in January. On a days-sales basis, inventories were lower year-over-year at 170 days-sales vs. 189 days-sales in January 2017.
- 4WD tractor sales increased 11.6% year-over-year in February following the 33.3% increase in January. L3M sales increased 23.9% year-over-year after 17.6% growth in the January L3M period. U.S. dealer inventories of 4WD tractors decreased 16% year-over-year in January and days sales of inventory was 90, down from 116 during January of last year.
- Mid-range tractor sales were flat in February after increasing 3.3% last month. Compact tractor sales decreased 10.8% year-over-year after a 6.2% increase last month. AEI

FEBRUARY U.S. UNIT RETAIL SALES

Equipment	February 2018	February 2017	Percent Change	YTD 2018	YTD 2017	Percent Change	Beginning Inventory Feb. 2018
Farm Wheel Tractors-2WD							
Under 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 Plus	899	1,128	–20.3	2,078	2,325	-10.6	7,937
Total-2WD	10,357	11,512	–10.0	21,519	22,238	-3.2	127,087
Total-4WD	129	118	9.3	261	227	15.0	601
Total Tractors	10,486	11,630	–9.8	21,519	22,465	-3.0	127,688
SP Combines	252	188	34.0	481	393	22.4	720

FEBRUARY CANADIAN UNIT RETAIL SALES

Equipment	February 2018	February 2017	Percent Change	YTD 2018	YTD 2017	Percent Change	Beginning Inventory Feb. 2018
Farm Wheel Tractors-2WD							
Under 40 HP	600	593	1.2	1,397	1,328	5.2	7,989
40-100 HP	356	294	21.0	803	699	14.9	3,535
100 HP Plus	228	211	8.1	472	406	16.3	2,200
Total-2WD	1,184	1,098	7.8	2,433	2,433	9.8	13,724
Total-4WD	92	80	15.0	156	118	32.2	304
Total Tractors	1,276	1,178	8.3	2,828	2,551	10.9	14,028
SP Combines	64	66	-3.0	110	150	–26.7	408



— Assn. of Equipment Manufacturers

Horsch Scores Record Turnover in 2017; Establishes Test Site in U.S.

Following a record year for sales in 2017, tillage, seeding and planting equipment specialist Horsch has started 2018 with a buoyant order book and investment in a North American trials and demonstration site.

The 160 acre former Beck's Hybrids facility in Downs, Ill., is already providing test plots to illustrate Horsch philosophies with regard to cultivation and crop establishment. It will showcase different farming practices from around the world and relate how Horsch believes they can be beneficial to farmers in North America.

Selling the agronomy, not just metal, through demonstration farms in Germany and the Czech Republic is a long established technique for Horsch and a key factor in winning new customers to feed the company's growth.

Last year, sales turnover hit a new peak at €365 million (equivalent to $451.7 million at today's exchange rates), up 19% on the prior year. In 2003, 14 years earlier, the family-owned business recorded €28 million ($34.6 million) in net sales, breached the €100 million mark in 2008 and €200 million in 2012 before hitting €300 million in 2016.

Expansion into new markets has helped, notably North America, where the Horsch LLC operation at Mapleton, N.D., manufactures and assembles implements, as well as the markets of Eastern Europe, China and, most recently, Brazil.

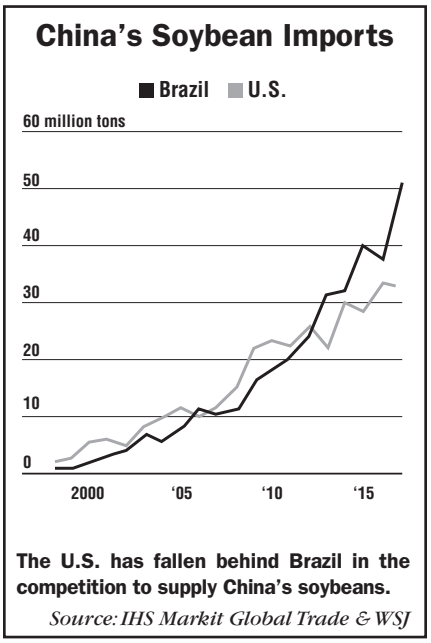
To meet accelerating demand, Horsch recently opened a new production facility at its Russian operation and the same is planned for one of two manufacturing and assembly sites for tillage machinery in Germany.

Production capacity for field sprayers will be doubled for the second time in recent years as Horsch rolls out its trailed and self-propelled product line to new markets.There are also plans to expand production capacity in Ukraine — where sales have been "outstanding," says the company — and Brazil. Exports now represent 80% of sales and employee numbers have risen to 1,600 worldwide as incoming orders for 2018 run at "a high stable level," according to Horsch. AEI

Steel Tariffs Threaten U.S. Ag Economy

President Donald Trump made waves in the ag equipment industry earlier this month when he announced tariffs on steel and aluminum imports in an effort to jumpstart the U.S. industry and protect national security. The tariffs are set to take effect March 23.

A lot of the talk since the news on the tariff broke on March 2 was that Trump was aiming the tariff at China. A Reuters report says China accounts for just 2% of U.S. steel imports, and it doesn't even make the list for top 10 sources for imported steel.According to the U.S. Department of Commerce and the International Trade Administration, Canada is the source of 16% of U.S. imports for steel. Brazil, South Korea, Mexico and Russia round out the top 5.



The U.S. has fallen behind Brazil in the competition to supply China's soybeans.
Source: IHS Markit Global Trade & WSJ

Currently, it looks as though Canada and Mexico will be excluded, as the U.S. discusses its national security relationships and the North American Free Trade Agreement with both countries, according to MarketWatch.

"The first thing you hear, and it's universal, is there's total alarm out there in our industry," says Dennis Slater, president of the Assn. of Equipment Manufacturers. "What's going to happen is you put this tariff on this, and you raise the price of steel for [manufacturers], you're going to raise the cost of their equipment at a time, when especially in the ag economy, it's pretty fragile out there. Sales are starting to improve a little bit, but not that much, and we're going to raise costs that they probably can't pass on to the farmer at this point, so that's pretty alarming."

According to Slater, steel accounts for roughly 10% of equipment manufacturers direct costs. "These 'Trump Tariffs' will put U.S. equipment manufacturers at a competitive disadvantage … The price of steel has already risen in anticipation of the administration's actions, and a 25% tariff will only further erode the progress our industry has made over the past year," he says.

Many in the ag industry fear retaliatory tariffs being placed on U.S. ag exports, particularly soybeans. The American Soybean Assn. (ASA) says retaliation by China could be devastating to U.S. soy growers. "Our competitors in Brazil and Argentina are all too happy to pick up supplying the Chinese market," says John Heisdorffer,ASA president and an Iowa soybean grower.

"Retaliation from China would add significant injury to an already hobbled farm economy. Prices are down 40% and farm income is down 50%, and we simply can't afford for those numbers to get worse," the ASA says.

Dr. Jason Grant, associate professor with Virginia Tech's Dept. of Agricultural and Applied Economics, agrees and notes that the U.S. exports $14 billion in soybeans to China annually.

China buys 100 million tons of soybeans annually, which represents about 60% of the global trade, according to a report in the Wall Street Journal. Of that, roughly 30 million tons come from the U.S. However, the U.S. is facing serious competition from Brazil, which nearly doubled its soybean exports to China from September-January. During that time, U.S. soybean exports to China dropped 20%, reports the *WSJ*. AEI

Dealers Push Parts to Pick Up Slack in Wholegood Sales

North American unit sales of new and used high horsepower farm machinery started their downhill slide in 2014 and it wasn't until late 2017 that the industry began to see some pick up. During that period, farm equipment dealers renewed their efforts to increase the sale of parts and service. They were somewhat more successful with parts sales.

According to data compiled by the Western Equipment Dealers Assn. (WEDA) and published annually in its Cost of Doing Business reports, average dealer sales of maintenance and service parts in 2007 were approximately $1.5 million, about 22.4% of the total average sales of new and used equipment. By the time WEDA published its 2017 report, average parts sales had grown to $2.4 million, a 60% increase, or about 25.5% of total sales.

North American Farm Equipment Dealers Avg. Parts & Service Sales
(millions of dollars)

Year	Avg. Sales Equipment	Avg. Sales Parts	Avg. Parts % of Equipment Sales	Avg. Service Sales	Avg. Service % of Equipment Sales
2007	$6.7	$1.5	22.4%	$633,000	6.7%
2008	$7.2	$1.7	23.5%	$743,000	7.2%
2009	$7.1	$1.8	25.5%	$726,000	7.1%
2010	$9.2	$1.5	22.0%	$643,000	9.2%
2011	$9.2	$1.5	22.0%	$643,000	9.2%
2012	$9.8	$1.9	19.3%	$785,300	9.8%
2013	$11.5	$2.1	18.3%	$835,300	11.5%
2014	$11.5	$2.0	18.3%	$792,000	11.5%
2015	$10.9	$2.1	19.3%	$818,200	10.9%
2016	$10.1	$2.2	21.8%	$914,300	10.2%
2017	$9.4	$2.4	25.5%	$886,400	9.4%

Source: Western Equipment Dealers Assn. Cost of Doing Business Studies

While dealers' average service sales dollars increased during this same period, from $633,000 in 2007 to $886,400 in 2017, its percent of total equipment sales declined. In 2008, sales of services amounted to 7.5% of dealers' total equipment sales. This dropped to 6.8% in 2017.

Gross margins on service averaged 62.7% between 2011-17, but it slipped from 65.5% in 2011 to 60.2% in 2017. During this same period, the gross margin on parts was 29.7%, less than half of that of service, and ranged from 30.3% in 2011 to 30.2% in 2017. This compares to an average gross margin of 7.3% for new wholegoods and only 4.1% for used during this 7 year period. AEI

Exel Group's Agrifac Expands into North America

The Exel Group of France is expanding its presence in the North American spray and liquid fertilizer applicator market with the introduction of the Agrifac self-propelled sprayer range built in The Netherlands.

The Dutch manufacturer is already active in the U.S. and Canada with self-propelled sugar beet harvesters and now hopes to attract growers to its high-tech line of Condor self-propelled sprayers.

Country manager Frank van Mastwijk says the seeds were sown back in 2013 when the first Agrifac sprayer was supplied to a U.S. grower after he saw it at a European farm show.

"We started marketing and demonstrating the sprayers just last year and now we're building the resources needed to service this market by hiring technicians and then sales people to cover different territories," he added.

Agrifac has grown significantly since being acquired by Exel Group in 2012, benefitting from investment in new product development and exposure to new markets through Exel's international network. Sales are said to have grown 600% to 200 units annually in the past 8 years.

In February, the business opened a new factory in The Netherlands with capacity for 500 sprayers annually, sufficient to keep pace with predicted demand over the next 3 years, according to managing director Roeland Coopman.

To avoid interrupting production, the 150,750 square foot factory was built over the existing facility. This provides 75% more floor space and a lot more headroom to cope with sprayers of increasing scale. Rainwater collected from the roof is used for tank and spray testing, and 54,000 square foot of solar panels make the plant more than self-sufficient in power.

A core feature of Agrifac's Condor sprayers is a chassis that connects the wheels fore and aft rather than across the chassis. This "walking beam" arrangement with air suspension irons out the ride to help with booms currently up to 180 feet.

Control systems provide for individual nozzle on-off section control, multi-nozzle clusters to provide wide-ranging application rates and easy switching between different spray characteristics. Output control compensates for differences in boom speed in turns.

"There's a growing appetite among North American farmers for more advanced tech solutions for crop protection and fertilizer application," says van Mastwijk. "Our wide range of features means we cater to corn growers in Iowa needing a very high clearance machine, the speciality requirements of vegetable growers in Michigan and high speed spraying for wheat growers on the prairies."

The Agrifac North America operation is based in Davenport, Iowa, in the same facility as sister company Hardi, which Exel also owns. U.S. sprayer maker ET Works in Indiana is also an Exel company. AEI

Sonalika Tractors Eyes 5 New Markets, While Aiming for 20% Growth

After receiving positive responses from farmers in Europe and Asia, Sonalika Tractors, part of International Tractors Ltd. (ITL), is looking to expand its reach in 5 more markets. Apart from expanding its reach, the company is also aiming for 20% growth in 2018 based on its Indian business and other markets it is already catering to.

Raman Mittal, executive director of Sonalika ITL, said with export demand from markets in Africa picking up due to governments encouraging agriculture mechanization, the strategy has been to focus across other horsepower segments. Among the five markets that the company is eyeing are those in African nations and South American countries for 2018. Sonalika's Solis brand is currently available in the European and U.S. markets.

"To further strengthen our presence in Europe and the U.S., we have recently unveiled Solis 30 HST (hydrostatic transmission) at Agritechnica in November 2017," Mittal said.

The company posted a sales increase of 15.8% with 63,205 units sold during April to December 2017 vs. the same period last year. Exports during the 9 month period were also up, reaching 9,233 units. During the month of December, the company sold 4,516 units vs. 4,080 units in December 2016, an increase of 10.7%.

The company recently opened its integrated tractor manufacturing facility in Punjab with a capacity to manufacture approximately 300,000 tractors annually. It also inked a strategic business partnership with Japan's ag equipment manufacturer, Yanmar. This allowed the company to expand its footprint to additional 10 countries in 2017. The company has assembly plants in Brazil, Algeria, Iran and Cameroon that produce tractors ranging from 20-120 horsepower. AEI

Perkins Engines Realigns U.S. Distribution Channels

Diesel power manufacturer Perkins Engines is re-aligning its North American distribution network with the appointment of Clarke Powered Solutions to service the Midwest and Northeast U.S.

The Clarke team is servicing and supporting Perkins customers in partnership with existing providers throughout the first quarter of 2018 before assuming full responsibility from the beginning of April. Clarke will provide sales, service and full distribution support for Perkins engines and parts to customers and original equipment manufacturers through 44 locations across its 24 state territory. This area includes north eastern states currently covered by Jacksonville, Fla.-headquartered Perkins Power Corp., which now has a territory covering the southeast.

Pacific Power Group, based in Vancouver, is the third primary Perkins Engines distributor in the U.S., covering western states from Alaska to New Mexico and Texas from 6 locations.

Commenting on the Clarke appointment, Ramin Younessi, president at Perkins Engines, said, "This is the beginning of a significant partnership as we develop our collective capabilities and align our forces to deliver a consistently excellent end-user experience to current and new customers."

Kirk Andreae, president of Clarke Powered Solutions emphasized that the company has the capabilities and demonstrated performance to service current Perkins powered fleets and provide local technical support with engineered solutions for OEM customers. "The appointment represents a great opportunity for Clarke to expand and support Perkins' customer base, having served customers in this industry for more than 50 years," he said. AEI

Lemken Records Double-Digit Growth in 2017

With particular focus on tine and short disc cultivators for fast, shallow tillage, Lemken's operations in the U.S. and Canada, based in West Fargo, N.D., and St-Hyacinthe, Que., respectively, recorded double-digit sales growth in 2017.

The German maker of tillage, seeding, planting and spraying products posted its second-best sales turnover last year, the figure of €360 million ($445 million) being 11% higher than in 2016 and falling short of the 2013 record by €3 million ($3.7 million).

Managing director Anthony van der Ley, said, "We are very happy that the economy has picked up again, and due to our factory employees' commitment we were able to produce considerably more machines than planned."

Sales also developed especially well in Eastern Europe, notably in the Czech Republic, Hungary and Poland, in contrast to France where disappointing harvests and commodity prices continued to dampen enthusiasm for investment.

"Sales developed positively across all product groups, particularly for plows and compact disc harrows," added van der Ley.

With a headcount of 1,470 staff, Lemken is employing more people than at any time in its near 240 year history, with training for internal and dealer sales and technical staff high on the agenda, mostly at the company's facility north of Dusseldorf in western Germany.

Having spent almost €60 million ($74 million) in the past 3 years extending production facilities for increased capacity, Lemken's €7 million ($8.6 million) capital spending plans for 2018 will focus on upgrades to manufacturing tools and machinery to optimize production processes.

The company is also exploring options for setting up manufacturing facilities in Russia to take advantage of "enormous demand" for modern ag machinery there and in Eastern Europe.

"The outlook for 2018 is positive," van der Ley concludes. "The excellent level of incoming orders at the beginning of the year indicates another year of growth for Lemken." AEI

uct of ethanol production used as feed rations for livestock and poultry.

Oil refiners, on the other hand, do not want to cede any more of their market to ethanol. But they have framed the current battle around the cost of RINs (Renewable Identification Numbers) and are pushing to cap its price.

What's a RIN? RINs are serial numbers used to track production, use and trading of biofuels as enacted by the Energy Policy Act of 2005 through the Energy Independence and Security Act in 2007. Every batch of biofuel produced has its own unique RIN.The laws require transportation fuels sold in the U.S. to contain minimum volumes of renewable fuels. RFS is administered by the U.S. Environmental Protection Agency, and the RIN system allows EPA to monitor compliance with RFS.

In effect, the law requires fuel refiners, blenders and importers to blend a specified volume of renewable fuels based on a percentage of the company's total fuel sales. Oil companies create RINs (38 character codes), register them with EPA and submit them on an annual basis to demonstrate they have met their RFS quota.

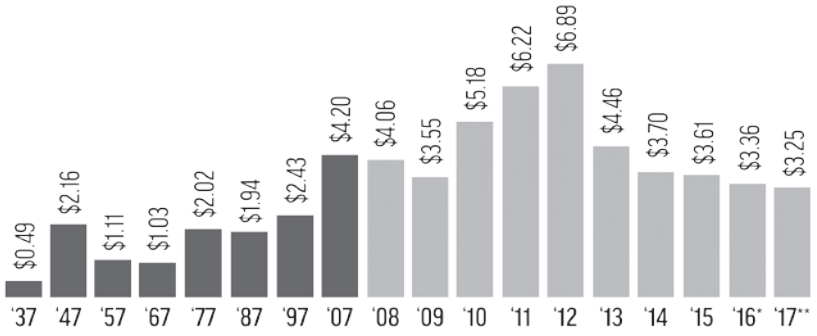
According to a study published by the Center for Agricultural and Rural Development (CARD) at Iowa State University earlier this month, every gallon of biofuel produced in or imported into the U.S. generates a RIN.The RIN is detached from a gallon of biofuel when it is blended into the U.S. fuel supply at wholesale terminals. Refiners comply with the RFS either by blending biofuels and selling them to domestic wholesale markets, thereby generating RINs in-house or by purchasing separated RINs from other parties.

The U.S. Department of Energy explains that those that fulfill their annual RFS requirements and continue to buy and blend renewable fuels can amass excess RINs.They are allowed to sell the excess to others who have not met their annual obligations. RIN prices are determined by market factors typical of other commodities.

In other words, refiners who produce more fuel but do not blend it to RFS requirements, must purchase RINs. As the demand for RINs rises, so do their prices. According to published reports, the price of credits rose from just a few

U.S. Corn Prices — 1937–2017

($/bushel)



The onset of increasing U.S. ethanol production in 2005 helped fuel a run of higher priced corn, which has declined as ethanol production plateaued starting in 2013.

*Source: USDA,, WASDE, Jan.12, 2018; *estimated; **projected for Sept. 2017–Aug. 2018*

Solid Margins Continue to Drive Ethanol Production

According to a March 6 report from the U.S. Energy Information Administration (EIA), estimated ethanol production margins at U.S. corn ethanol plants averaged 22 cents per gallon in 2017. Last year was the fifth consecutive year that margins have averaged more than 20 cents/gallon, which has helped drive consistent ethanol production growth over that period. U.S. ethanol production averaged an estimated 1,032 million barrels per day (b/d) in 2017, marking a fifth consecutive record level of annual production.

Increases in ethanol supply have outpaced increases in domestic demand in 2017, which have contributed to relatively low spot prices and margins that are about 20 cents/gallon lower than the previous 4 year average but still largely in line with levels in the previous 2 years.

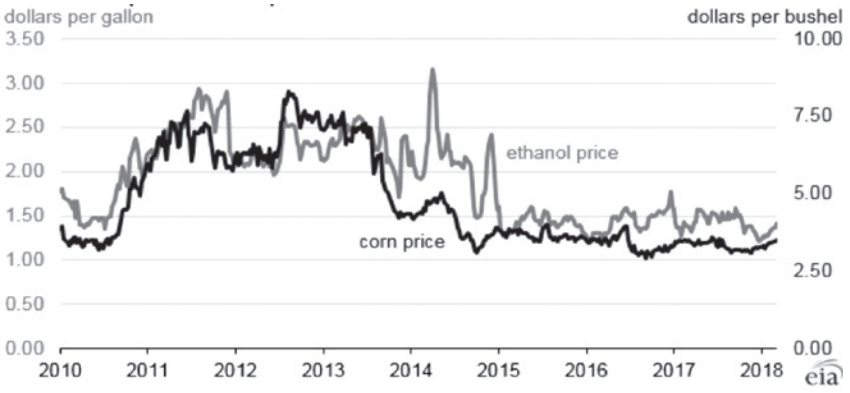
The price of corn is the largest variable cost associated with a dry mill corn ethanol plant. U.S. corn production has been at record high levels in recent years, which has kept corn prices generally stable, ranging between $3.40-$4.00 per bushel since 2015.

For most of 2017 and the first two months of 2018, ethanol production, net inputs and inventory levels have been near or above average levels in the previous 5 years (2012–16). During December 2017, fuel ethanol production set a four-week record high, averaging 1.09 million b/d, while ethanol blending into gasoline, measured by net inputs, was nearly unchanged from the previous year.

In its latest Short-Term Energy Outlook, EIA forecasts that continued growth in ethanol production and limited export growth through 2019 will lead to increases in domestic consumption of ethanol by way of limited higher level ethanol blend growth beyond E10. U.S. ethanol consumption, which increased by 1% in 2017, is expected to increase by an average of 1% through 2019, resulting in an estimated ethanol blend percentage of gasoline that increases from slightly more than 10.1% in 2017 to about 10.3% by 2019.

AEI

Iowa Ethanol & Corn Prices



Source: U.S. Department of Agriculture

cents in 2012 to more than $1 at times in 2013 and 2016. Prices for renewable fuel (D6) credits for 2018 were at 39 cents as of March 13, which is down about 40% since the beginning of the month.

Today's Situation. The Iowa State CARD study examines a Renewable Fuel Standard reform proposal currently being considered by policymakers that would allow E15 (fuel containing 15% ethanol) sales throughout the year and implement a cap on D6 RIN prices between $0.10-$0.20/RIN. (D6 is one type of RIN.)

The study goes on to says that, while year-round sales of E15 would encourage retailers to sell the fuel, capping D6 RIN prices would reduce consumption of E15 and E85. "A cap on D6 RIN prices between $0.10/gal to $0.20/gal would likely reduce the effective ethanol mandate from 15 billion gallons to about 14.3 billion gallons in 2018. Unless increased ethanol exports compensate for the reduced mandate, corn prices would decrease under the proposal's D6 RIN price cap." It estimates that such a cap could cost farmers as much as 25 cents per bushel.

That's the rub for corn farmers. And, of course, as has been demonstrated for the past 3 years, low commodity prices result in lower farm equipment sales.

Pushing Back. The National Corn Growers Assn. has led the charge on behalf of farmers in insisting that the current administration in Washington D.C. not tinker with the RFS. In an open letter to President Trump on March 9, NCGA president and North Dakota farmer, Kevin Skunes, said that changes to RFS would trigger significant losses in farm income and rural jobs. He also made it clear that NCGA is opposed to the oil industry proposal that would cap the price of RINs.

Skunes said: "Corn farmers have fought hard the past 10 years, within Congress, with the last Administration, and in the courts to protect the opportunity for renewable fuels to continue to grow as an option for consumers. The President is considering a proposal from the oil industry that could cut farm income almost $4 billion dollars per year for the next two years. It is a deal that American farmers cannot afford. My message to the Secretary [Perdue] was to ask the President not to cap future growth and opportunity in rural America by implementing a bad policy that would only serve to bailout a small handful of oil refiners."

According to NCGA, there is a win-win for farmers, ethanol producers and the oil industry. This would require adjusting current regulations to allow year-round use of fuel blends above 10% ethanol. "Unfortunately, the oil industry continues to insist those changes are not enough," said Skunes, "but we will continue to oppose any deal that includes a RIN cap or waiver credits."

EPA Concessions: One of the factors that provided the oil industry with ammunition to pressure EPA to change RFS regulations regarding RINs was the bankruptcy of the Philadelphia Energy Solutions refinery. PES says the high cost of RINs contributed to its financial problems.

In its settlement with PES, on March 14, EPA conceded that the bankrupt refiner would only need to satisfy about one-half of its $350 million in outstanding compliance obligations under the RFS. According to a Reuters report, EPA has signaled its willingness to exempt more small refineries, which would limit potential buys for the credits. The company entered bankruptcy owing 467 million credits from the past 2 years, with only 120 million RIN credits in its possession.

Ethanol groups reportedly "troubled at the precedent this sets." The RFS battle rages on. AEI

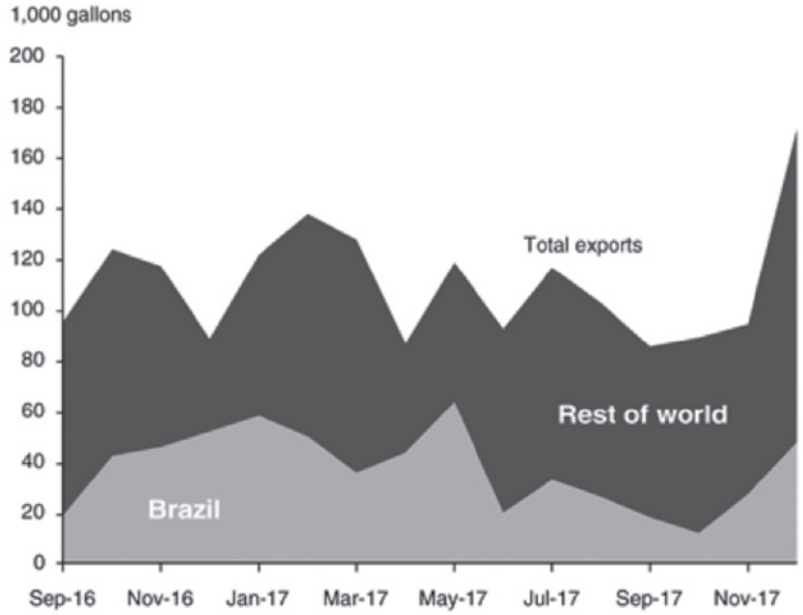
Ethanol Exports Stay Strong as Brazil Demand Grows

In its March Feed Outlook report, the Economic Research Service of USDA is reporting continued strong demand from Brazil for U.S.-produced ethanol despite trade barriers enacted last year.

In 2017, the Brazilian Government announced a tariff rate quota for ethanol imports, where imports in excess of 600 million liters are subject to a 20% tariff. "However, U.S. ethanol has been priced so low that it is still an economical alternative in Brazil. Currently, ethanol is $1.50 per gallon at U.S. Gulf Coast Ports, while ethanol in Brazil is $2.32 per gallon. Demand for ethanol in Brazil is robust because of widespread use of flex-fuel vehicles and a mandate requiring a minimum of a 27% ethanol blend in gasoline."

The report goes on to say, due to price competitiveness and strong demand, Brazil, the second largest global ethanol producer, is also the largest overseas buyer of U.S. ethanol. One contributing factor is the internal distribution of ethanol in Brazil. Ethanol mills are mostly located in the sugar producing areas of southern Brazil. Because of infrastructure constraints, it is cheaper to ship ethanol by boat from the U.S. to the northern regions of Brazil than by overland transport through Brazil. Some new ethanol mills are located in Brazil's northern corn-producing regions. An expansion of corn ethanol production in Brazil would likely make U.S. ethanol less competitive. AEI

U.S. Fuel Ethanol Exports



Source: USDA Economic Research Service using U.S. Census Bureau, Foreign Trade data.