From the editors of *Farm Equipment...*

Ag Equipment Intelligence

News, Information & Analysis for the Ag Equipment Marketer

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- EU Sentiments Improve
- Net Income Outlook
- Growth of Organics

Titan Machinery to Restructure Operations While Closing 14 Ag Retail Locations

Farm equipment dealers who cater to row-crop operations with large ag machinery and implements have been particularly affected by the downturn in the ag economy. And the beat down goes on. In January, U.S. sales of large tractor and combines fell by 34% and Canadian sales were down by 18%. This marked the 36th consecutive month of year-over-year declines.

In response to this ongoing trend and to position itself to emerge from the downturn stronger with streamlined operations, Titan Machinery announced it is closing several retail locations and introducing a new operating model that refocuses its local operations on parts and service sales.

On Feb. 9, Titan said it would be consolidating more than a dozen of its ag equipment locations during the first half of 2017. Lost in the reporting of the announcement was the fact that North America's largest farm machinery dealer group is also completely restructuring operations at its remaining locations. The company is evolving the Strong Store Manager model that it used to expand to nearly 100 stores after going public in 2007 to what it calls, the Expert Team model.

"Reorganization of dealership management will result in area managers with a focus on certain offerings (e.g., equipment sales, equipment rental, product support) rather than each location having a manager for the entire business," said Mig Dobre, analyst with RW Baird in a note to inves-

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No-Till Farmers Lowered Expenses, Improved Bottom Lines in 2016

Reduced spending resulted in improved profitability for no-till farmers in 2016, according to the 9th Annual (2017) *No-Till Farmer* No-Till Practices Survey. *No-Till Farmer* is a sister publication of *Ag Equipment Intelligence*.

Responses from 643 no-tillers during the last week of December and first 2 weeks of January indicate that, on average, they invested a total of $368,285, or $319.41 per acre in their cropping operations in 2016. This compares with an average of $452,912, or $395.21 per acre, in 2015, and $455,981, or $392.41 per acre, in 2014.

According to this year's survey results, on average, U.S. no-till farmers reduced their spending by 18.7% between 2015 and 2016, and by 19.2% in 2016 vs. 2014.

This group of producers estimates they will spend a total of $361,253, or $313.32 per acre, on their 2017 cropping operations. If this holds true to form, expenses for this year's crop will decline less than 2%.

Profit or Loss? Of the total respondents, nearly 70% said they recorded a profit on 2016 harvest, while 16.3% said they lost money last year, and nearly 14% said their net income for the year was flat vs. the previous year. This was slightly higher than the 67.2% of no-tillers who reported a profit for 2015, but well below the 81% who made money in 2014.

The farmers' bottom lines improved somewhat in 2016. On average, they reported a per-farm net income in 2016 or $46,291. This was up slightly from the $43,289 in 2015, but way down from the $73,011 no-tillers reported for net income in 2014.

Purchasing Plans. Overall, the no-tillers who responded to the 2017 survey are planning to increase their equipment spending this year slightly vs. the previous year. Slightly over 10% of this group of farmers said they intend to buy a tractor in 2017.

No-Till Farmers' Profit & Loss — 2016

	2016	2015	2014
Profit	69.8%	67.2%	81.0%
Loss	16.3%	15.9%	10.9%
Flat	13.9%	16.9%	8.1%

Source: 9th Annual (2017) No-Till Farmer No-Till Practices Survey

No-Till Farmers' Avg. Net Income Per Farm – 2016

2016	2015	2014
$46,291	$43,289	$73,011

Source: 9th Annual (2017) No-Till Farmer No-Till Practices Survey

Continued on page 8

tors. "Management expects this to have some cost savings but we understand the primary motive to be more focused with talented management in each business area."

Store Closings. The stores affected by the most recent announcement are many of the company's smaller locations. They include:

- Iowa – Anthon and Cherokee
- Minnesota – Redwood Falls and Thief River Falls
- Nebraska – Broken Bow and Wahoo
- North Dakota – Arthur, Kintyre, Kulm and Mayville
- South Dakota – Milbank and Redfield

In addition to these stores, one construction equipment store closed in Williston, N.D., in December of last year.

Before its announcement, Titan was operating 89 store locations in 11 states, as well as 20 European locations. Some of its retail locations were focused on construction equipment, but a large majority focus on farm machines. In terms of number of locations, Titan is believed to be the largest ag equipment retailer worldwide.

In an interview with *Ag Equipment Intelligence*, David Meyer, Titan's chairman and CEO, said, "This is not a knee-jerk decision. This is something we've been analyzing for a long time; how to really optimize our footprint for long term success."

"Farms are getting fewer and larger and experiencing their own consolidation. At the same time, equipment keeps getting larger, more productive and increasingly complex, and it is our job to provide better solutions. So, what we do need, are experts at our stores to serve these customers. To have these experts, we need scale in the dealerships. We need highly trained technicians, as well as parts experts and a wide breadth of parts inventory. Our Expert Team model supports these efforts."

Meyer added, "I want to emphasize that Titan is not abandoning customers in local markets who are impacted by the store closings. Some of these locations are within 20 miles of our other stores. Our sales and service will be consolidated into these neighboring stores and we will invest in field service trucks, parts drop-offs and other support in these communities."

Strong to Expert. Titan's restructuring will move the organization away from its Strong Store Manager structure, where one individual with only their local team was responsible for meeting increasing customer needs, to the Expert Team model. Under this new structure, Area Managers for both Sales and Product Support partner together to manage 2-4 store locations and pull upon the combined resources and expertise of the area to serve customers. There are 17 of these areas which are divided into 4 regions (southwest, southeast, northwest, northeast). Local Parts and Service employees will report up through the Area Product Support Manager and the Equipment Sales Consultants will report up through the Area Sales Manager.

> ***"What we need, are experts at our stores to serve customers that are getting fewer and larger. To have these experts, we need scale in the dealerships. We need highly trained technicians, as well as parts experts and a wide breadth of parts inventory. Our Expert Team model supports these efforts..."***

According to Jeff Bowman, Titan Machinery's chief marketing officer, Precision Specialists will work closely with both area sales and product support teams to deliver precision farming and support solutions. "This operating shift allows us to bring the full resources of Titan for a customer as opposed to putting all the responsibility for meeting his need on the back of one store manager working with only the expertise available at one store. Our customers will get the benefit of the complete Titan team effort."

"This restructuring will also shift more resources toward our product support business," said Meyer. "We're seeing a lot more complexity in the equipment that requires a higher level of expertise in both parts and service. The new structure emphasizes the growing importance of these areas and this requires a dedicated segment of the company. This also opens up new career paths for some of our most talented employees, who can grow from our front line service technician and parts counter roles into senior leaders."

Financial Perspective. Titan also expects to reduce overall expenses after the restructuring. "Titan aims to mitigate the revenue impact of the store closures by strategically reducing store density in selected markets and serving affected customers through adjacent locations," Rick Nelson, analyst for Stephens Inc., said in a note.

According to Nelson, the store closings are expected to reduce revenue by $40 million on an annualized basis, or about 3.5% of total company revenue. The impact to fiscal 2018 revenues is expected to be a reduction of $30 million. However, with expected cost savings, Titan's pre-tax income is expected to increase by approximately $16 million (or $0.44 per diluted share) on an annual basis and $13 million (or $0.37 per diluted share) for fiscal 2018. **AEI**

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Crop Receipts Steady, But Net Farm Income Expected to Decline

While estimates for crop receipts haven't changed much in the past few months, USDA hasn't changed its forecast for net farm income for 2017. Overall, the outlook for farm equipment sales remain largely unaffected by the most recent reports coming from USDA.

Based on the Feb. 9 World Agricultural Supply and Demand Estimates from the ag agency, major crop receipts are expected to come in at about $102 billion, up about 7% for the 2016-17 crop year. When other crops and livestock are factored in, overall farm receipts are forecast to slip by 2% for the year.

The February report showed little movement in corn prices from January, with the range still between $3.20-$3.60 per bushel. This is down slightly from a year ago. Little or no change was seen in soybeans, as prices stayed at $9.10-$9.90 per bushel.

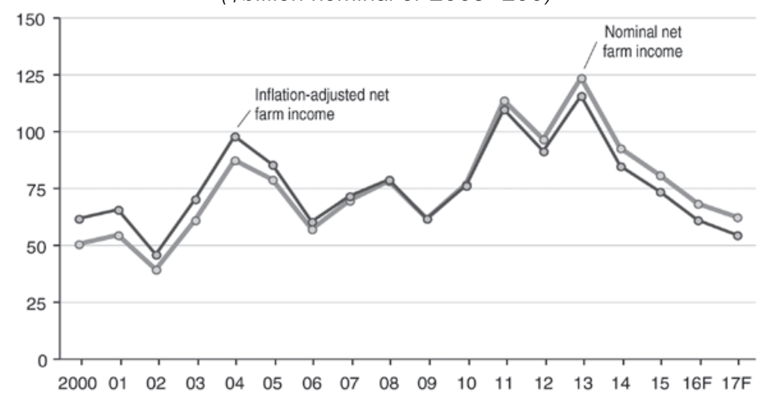
Wheat was the only one of the major three crops to demonstrate any movement. The estimated price range was $3.80-$3.90, up from $3.75-$3.85 per bushel last month.

Farm Income Dips. Following several years of record highs, net farm income trended downward from 2013-16. For 2017, USDA's Economic Research Service is forecasting that net farm income will fall to $62.3 billion ($54.8 billion in inflation-adjusted terms). If projections are accurate, this would be an 8.7% decline from the prior year and a decline of 49.6% from the record high in 2013.

The expected decline in 2017 net farm income is driven by a forecast reduction in the value of production. Crop value of production is forecast down $9.2 billion (4.9%), while the value of production of animal/animal products is forecast to decline by less than $1 billion (0.5%). AEI

Projected U.S. Net Farm Income — 2017

($billion nominal or 2009=100)



Following several years of increases, the U.S. farm sector's net farm income is forecasted to continue its decline into 2017. (Data as of Feb. 7, 2017)

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

FARM MACHINERY TICKER (AS OF 2/13/17)

MANUFACTURERS	Symbol	2/13/17 Price	1/12/17 Price	1-Year High	1-Year Low	P/E Ratio	Avg. Volume	Market Cap.
Ag Growth Int'l.	AFN	$55.00	$55.45	$57.69	$24.68	302.20	56,971	813.69M
AGCO	AGCO	$64.17	$60.65	$64.90	$43.79	32.74	915,827	5.15B
AgJunction Inc.	AJX	$0.53	$0.48	$0.74	$0.42	N/A	36,208	65.82M
Alamo	ALG	$77.15	$77.23	$79.59	$50.64	20.30	55,466	888.04M
Art's Way Mfg.	ARTW	$3.55	$3.50	$4.70	$2.46	N/A	12,077	14.54M
Buhler Industries	BUI	$4.60	$4.80	$6.00	$4.40	N/A	386	115M
Caterpillar	CAT	$98.50	$93.98	$99.46	$63.07	95.82	4,494,150	57.63B
CNH Industrial	CNHI	$9.56	$8.89	$9.67	$6.03	N/A	1,343,020	13.005B
Deere & Co.	DE	$110.75	$105.17	$112.18	$74.91	23.02	2,949,460	35.28B
Kubota	KUBTY	$82.60	$74.94	$83.48	$60.85	17.96	14,329	20.04B
Lindsay	LNN	$76.34	$74.50	$89.98	$65.78	58.45	133,819	813.29M
Raven Industries	RAVN	$24.90	$24.20	$26.90	$12.88	158.60	133,819	900.35M
Titan Int'l.	TWI	$13.30	$10.74	$13.64	$3.10	N/A	459,818	718.95M
Trimble Navigation	TRMB	$31.41	$30.59	$32.19	$21.36	60.40	1,332,500	7.87B
Valmont Industries	VMI	$144.65	$139.10	$156.05	$105.16	45.40	135,334	3.26B
RETAILERS								
Cervus Equipment	CVL	$15.20	$14.76	$16.52	$10.41	13.14	12,879	239.57M
Rocky Mountain Equipment	RME	$10.58	$10.07	$11.24	$5.61	13.99	42,681	205.08M
Titan Machinery	TITN	$13.75	$14.17	$15.93	$8.12	N/A	114,498	291.32M
Tractor Supply	TSCO	$73.16	$75.95	$97.25	$61.50	22.37	1,569,400	9.6B

Outlook of European Ag Machinery Manufacturers Turns Positive

A pessimistic business outlook among senior managers at agricultural machinery manufacturers in Europe has turned into a more optimistic view of sales prospects for 2017, according to a monthly business barometer survey. The survey of 140 senior managers is conducted for CEMA, the umbrella organization for national machinery company trade associations in the European Union.

Its latest report, published last month, reveals that the index tracking future business expectations has recorded a positive value for the first time since January of last year, with a slight majority of manufacturers expecting order intake to grow further within the next 6 months.

While the minority of respondents who described their current business levels as "good" remained consistent over the past 3 months, the proportion who considered it "unfavorable" in November has declined from 56% to 39% and fewer respondents expect turnover to decrease over the next 6 months.

Correspondingly, more were inclined to forecast that their business will at least remain unchanged — up from 33% to 55%.

While some major markets within the EU remain weak, total order intake in December 2016 showed positive signs for exports outside the EU, with incoming orders particularly strong for arable and livestock equipment in contrast to weak demand for harvesting machinery and tractors.

The survey notes high used machinery dealer inventories in Germany, have stabilized in terms of sales expectations for the next 6 months. A similar situation applies in France, where the market has improved but continues at the bottom of the European country ranking, and Poland, where there appears to be a turnaround in the machinery market.

By contrast, dealer stock levels in the U.K. and in Scandinavian countries have reportedly fallen below a 3 year average and, as a result, expectations of managers in these markets have also turned positive. AEI

EU Ag Equipment

The European agricultural machinery industry is comprised of approximately 4,500 manufacturers, with collective sales of €26 billion ($27.7 billion), according to CEMA figures.

Acquisition of U.S. Apache Sprayers Improves France's Exel Group FY16 Revenues

The acquisition of U.S. self-propelled sprayer maker ET Works in January 2016 helped the Exel Industries Group of France increase revenues in its 2016 financial year.

Without the contribution of the Mooresville, Ind.-based manufacturer of Apache sprayers, Exel Group revenues would have been slightly less than the €725.2 million ($773 million) generated in the 12 months to August 2015.

As it is, the €770.9 million ($822 million) achieved with ET's contribution during the same period last year is up €45.7 million ($48.7 million) or 6.3%, although the group notes that profitability would have been a bit better without the U.S. concern at 8.2% vs. 7%.

On a comparable 12-month basis — Exel has reported 13-month results having changed its financial year-end from August to September — net income increased 5.3% to €33.3 million ($35.5 million), pretax profit by 15.8% to €50.5 million ($53.8 million), and operating income expressed as EBIT was up 12.7% to €57.4 million ($61 million), 7.4% of sales.

The strategic acquisition of ET Works — better known as Equipment Technologies — had an impact of €62.3 million ($66 million) on group debt, which stood at €103.6 million ($110 million) at the end of September.

Guerric Ballu, CEO of Exel, said, "With the acquisition of ET Works, we have taken a significant position in the U.S. agricultural self-propelled sprayer market, which is the largest market in the world. This is in line with our strategy for an international presence in all of our markets."

The Apache line is Exel's first agricultural sprayer acquisition in North America, following a succession of purchases in Europe that brought Hardi of Denmark, several French sprayer brands — including Tecnoma and Berthoud — and the Dutch Agrifac Group into the fold.

Exel also has industrial and domestic spraying equipment divisions, which account for a little under 40% of revenues, with sugar beet harvesting machinery contributing 14% and agricultural spraying just under 50%.

The latter division grew sales by 10% last year, mainly in Russia, Ukraine, Australia and France, but the fourth quarter was down 12%, with demand in Exel's domestic market expected to continue falling.

"French farmers are experiencing a drop in their income and will therefore delay their decisions to invest in agricultural equipment," said Ballu. "The volume of activity in the U.S. agricultural machinery market has remained low but our U.S. company will benefit from the recovery expected in 2017 and from the launch of new products." AEI

Organic Farming Continues to Demonstrate Sustained Growth

Is organic farming a viable market to pursue for farm equipment dealers and manufacturers?

If nothing else, it's one of the few ag segments that has demonstrated solid, ongoing growth during the past decade. USDA's National Agricultural Statistics Survey (NASS) recently released the results of its 2015 Certified Organic Survey (latest data available) that showed a 13% increase in organic production from $5.5 billion in 2013 to $6.2 billion in 2015.

The demand for organic products has been increasing by double-digits since the 1990s. Organic crop acreage also grew from 1.3 million to 3.1 million between 2002 and 2011. More than 12,800 certified organic farms in the U.S. produce 4% of U.S. food sales.

Price or Yields? NASS survey data also illustrates the high profitability from adopting organic crop production. While conventional farming still produces higher yields than organic farming, the high price of organic products offsets the lower yields and higher production costs. According to NASS, organic corn prices were $5-$10 higher than conventional corn from 2011-2015 with the economic cost difference being only $1.92-$2.27 higher. Similarly, organic soybeans were $10-$15 dollars higher with a $6.62-$7.81 higher economic cost difference.

Crop Costs. Survey data also points to lower operating costs and operating plus capital costs per acre for organic crop production compared to conventional production. The operating cost for organic corn was $80 less and operating plus capital costs was $50 less than conventional production. Conventional crop production had higher costs for seed, fertilizer and chemicals, but lower costs for fuel, repairs, capital and labor.

These economic benefits of organic crop production resulted in increases of organic corn and soybean production between 2011 and 2014 with a 24% increase and 3% increase respectively. Organic wheat production, though drastically increasing between 2006 and 2008, has since dropped by 3% between 2011 and 2014.

Product Sectors. Of the $6.2 billion in organic commodities sold, $3.5 billion, or 57%, came from organic crops, $1.9 billion (31%) from organic livestock and poultry products (primarily milk and eggs), and $0.7 billion (12%) from organic livestock and poultry (primarily broiler chickens).

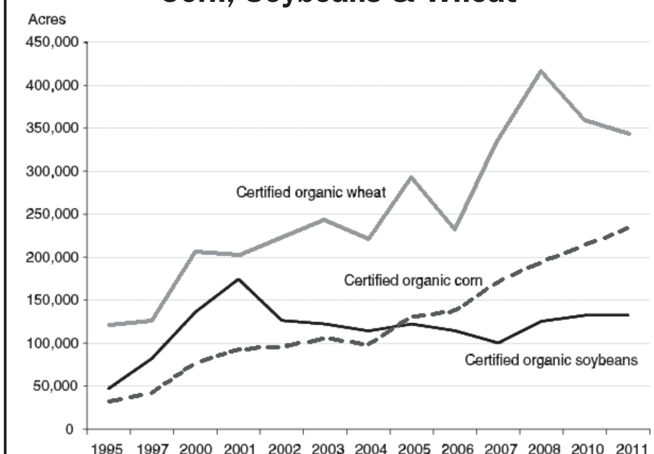
Milk and eggs were the top two commodities sold, valued at $1.2 billion and $0.7 billion, respectively, followed by broiler chickens valued at $0.4 billion. Two sectors — vegetables grown in the open and fruits, tree nuts and berries — together accounted for 42% of sales. Among crops, apples, lettuce and grapes were the top selling commodities, with $302 million, $262 million and $210 million in 2015 sales, respectively.

States & Sales. Nationally 71% of certified organic farms sold to wholesale markets, 36% sold directly to consumers and 22% sold directly to retail markets and institutions. Some farms use one or two of these sales options, while others utilize all three. Of the total, 75% of the first point of sale was within 100 miles of the farm. Now organic products are found in about 3 of every 4 conventional grocery stores.

States varied in how organic producers market and sell their goods. The percent of farms selling directly to consumers was highest in southeastern and northeastern states, and lowest in central states. In New England, the majority of certified farms sold at least part of their production directly to consumers, while in Nebraska and North Dakota, 10% or less did so.

In NASS's 2015 survey, California and Wisconsin were the two states with the greatest number of organic farms at 2,637 and 1,205 respectively. The Midwest and the Northeast regions have the highest population of organic farms in the U.S. AEI

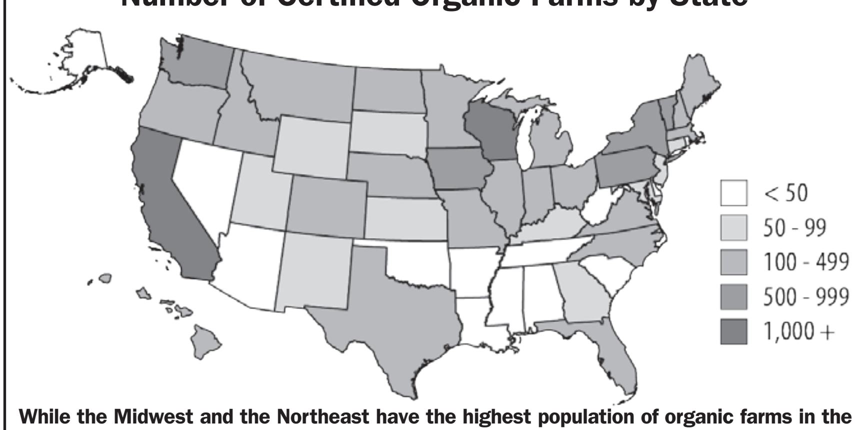
Acreage Growth of Organic Field Crops Corn, Soybeans & Wheat



Organic corn and soybean production between 2011 and 2014 increased by 24% and 3% respectively. Organic wheat production increased between 2006 and 2008, but declined by 3% between 2011 and 2014.

Source: USDA, Economic Research Service

Number of Certified Organic Farms by State



While the Midwest and the Northeast have the highest population of organic farms in the U.S., California and Wisconsin have the highest number of organic farms.

Source: USDA, National Agricultural Statistics Service

South American Ag Equipment News

Labor Demand Grows as Argentina Equipment Sales Improve

The demand for labor in Argentina's agricultural machinery industry, including manufacturing and operations, increased by 60% in 2016, according to the country's Minister of Agribusiness, Ricardo Buryaile. The minister reported that the higher demand is a result of a 30% increase in grain exports, the opening of 20 new export markets and a 22% increase in meat exports during the past year. As a result, equipment manufacturers increased hiring and workers' overall work hours.

Official data also revealed that agricultural machinery manufacturers' revenue reached AR$12.4 billion ($787 million) in the first 9 months of the past year. This is 93.9% higher than the same period of 2015.

According to the Argentina Manufacturers of Agricultural Machinery, sales of seeders jumped 166% in 2016. Tractor sales rose by 111%, harvesters were up by 65% and other implement sales increased by 74%.

On Feb. 7, AGCO reported fourth quarter 2016 South American sales of farm machinery rose by 64% compared to the same period in 2015.

Brazil's Machinery Prices to Rise in First Half of 2017

Following Brazil's deep economic recession in 2015, 2016 was expected to follow suit. Reacting to this scenario, analysts had forecast in the end of 2015 a reduction of machinery sales and production in the following year. But contrary to what was expected, sales did not decrease to the anticipated levels as signs of a recovery showed up in the second half of 2016 and dealers were able to reduced equipment inventories.

Considering the lower backlogs of farm machines, dealerships expect price increases of up to 8% in 2017. For Marcos Fertonani, commercial director at Tratorcase, a major network of dealerships in the state of Paraná, favorable weather conditions, good commodity prices and satisfactory winter crop results propped up sales last year.

"Sales in 2016 were slightly better than what we expected because we had [expected] a 10% retraction. Actually, sales have been equal to what were registered in 2014," Fertonani told local *Jornal Diario dos Campos*.

In anticipation of a price increase, dealerships made a major push to get farmers to place equipment orders early. In Paraná, special conditions could be seen at Coopavel, a major farm show held Feb. 4-10. "It is unknown if the perspective of lower interest rates throughout the year will be confirmed, so now is the time to buy," says Fertonani. Paraná is the second largest producer of corn and soybeans in Brazil.

Banco do Brasil, Abimaq Set New Agreement to Boost Sales

Brazil's state-run bank, Banco do Brasil, and the Brazilian Assn. of the Industry of Machines and Equipment (Abimaq) announced in January a new agreement that seeks to boost the volume of investments and loans for manufacturers, farmers and exporters.

One of the aspects of the agreement is to provide faster credit releases for purchases of the products of the 1,640 Abimaq associates. Besides the traditional credit lines, Banco do Brasil will offer consortium quotas for the Abimaq companies and their purchasers and suppliers. The bank will also offer farmers the opportunity to present all documents for credit release digitally through the internet. Another initiative of the financial institution is to push exports through the financing of digital marketing strategies at the promotion web portal B2Brazil. AEI

Alltech Plans to Expand Keenan's Product Lineup

Ambitious plans for new products and expansion into new export markets — including the U.S. in time — could more than double the size of Keenan, the Ireland-based diet feeder manufacturer and animal nutrition consultancy acquired from bankruptcy by Alltech (*see Ag Equipment Intelligence, May 2016*).

"At its peak in 2008, Keenan had turnover equivalent to more than $55 million selling over 1,000 diet feeders a year," notes newly-appointed CEO Robbie Walker, formerly with Alltech's crop science division. "But we see potential for more than doubling those figures through improved marketing, developing new products such as automated feeders and by entering new markets with the support of Alltech's presence."

The acquisition is part of a buying spree by cash-rich animal nutrition and crop science group Alltech that over the past 18 months has brought major U.S. and Canadian feed mills into the group and increased revenues from $600 million annually to more than $2 billion.

Keenan is seen as a logical fit given that Alltech ingredients often are included in forage-based rations and the relationships with dairy and beef farmers established through Keenan's InTouch nutrition consultancy gets Alltech closer to end users.

At present, Ireland and the UK are Keenan's best markets, with France, South Africa, New Zealand, Germany and the Scandinavian nations also significant.

He identifies Canada, where producers are making good money from beef and dairy, as well as, China and Australia as good long-term prospects. It may not be a high priority now, but he sees a launch in the U.S. as inevitable given Alltech's position in the market.

"We have plenty of sound evidence to show that a Mech-fiber ration can help lift milk yield by typically 10% and beef daily live-weight gain by 15-20%, with most improvement seen after switching from a tub mixer-feeder."

That is one reason Walker rules out Keenan building a tub-type vertical auger feeder, unless the company's engineers design one that achieves the same ration structure as the company's horizontal paddle feeders — a goal that has so far eluded them.

However, he revealed that development of an autonomous feeder is already at an advanced stage and anticipates a move into fully automated feeding systems as part of Keenan's growth strategy. AEI

January Marks 36 Months of Declines

Large ag equipment sales declines increased in January and marked the 36 month of year-over-year declines, according to Mircea (Mig) Dobre, an analyst with RW Baird. North American large tractor and combine retail sales decreased 32% year-over-year in January, down from the 22% decrease in December. U.S. sales decreased 34% year-over-year and Canadian sales were down 18%, according to the latest numbers released by the Assn. of Equipment Manufacturers.

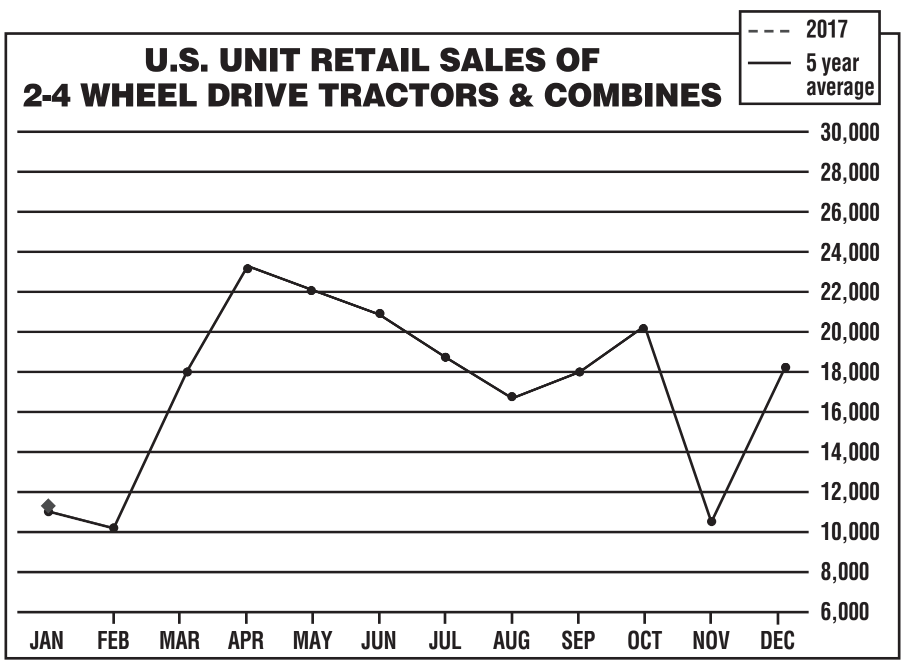
- Row-crop tractor sales were down 29.5% year-over-year, compared with the 19.3% decrease in December. U.S. row-crop tractor inventories decreased 12.2% year-over-year in December vs. a 9% decrease in November. January is typically an average month for row-crop tractor sales, accounting for 8.4% of annual sales over the last 5 years.
- North American 4WD tractor sales were down 39.5% year-over-year vs. a 36.4% decline the previous month. U.S. sales dropped 38% and Canadian sales were down 43%. U.S. dealer inventories of 4WD tractors decreased 18.9% year-over-year in December, while days-sales of inventory was 112, up from 102 during December of last year. Typically, January is a below-average month for 4WD tractor sales, accounting for 7.1% of annual sales over the last 5 years.
- Combine sales dropped 36.5% in January following December's 22.2% decline. Last 3 months (L3M) sales declined 24.4% on a year-over-year basis after a 22.8% L3M decrease last month. U.S. combine inventories were 23.4% lower year-over-year in December. January is typically a below-average month for combine sales, accounting for 6% of annual sales over the last 5 years.
- Mid-range tractor sales were also down in January, posting a 9.3% year-over-year drop after nearly flat sales (–0.8%) the prior month. Compact tractor sales increased 14.7% year-over-year after an 18.1% increase last month. AEI

JANUARY U.S. UNIT RETAIL SALES

Equipment	January 2017	January 2016	Percent Change	YTD 2017	YTD 2016	Percent Change	December 2016 Field Inventory
Farm Wheel Tractors-2WD							
Under 40 HP	6,091	5,353	13.8	6,091	5,353	13.8	73,800
40-100 HP	3,451	3,831	–9.9	3,451	3,831	–9.9	35,410
100 HP Plus	1,200	1,696	–29.2	1,200	1,696	–29.2	9,563
Total-2WD	10,742	10,880	–1.3	10,742	10,880	–1.3	118,773
Total-4WD	109	176	–38.1	109	176	–38.1	706
Total Tractors	10,851	11,056	–1.9	10,851	11,056	–1.9	119,479
SP Combines	205	418	–51.0	205	418	–51.0	733

JANUARY CANADIAN UNIT RETAIL SALES

Equipment	January 2017	January 2016	Percent Change	YTD 2017	YTD 2016	Percent Change	December 2016 Field Inventory
Farm Wheel Tractors-2WD							
Under 40 HP	730	593	23.1	730	593	23.1	7,656
40-100 HP	403	419	–3.8	403	419	–3.8	3,929
100 HP Plus	196	285	–31.2	196	285	–31.2	2,392
Total-2WD	1,329	1,297	2.5	1,329	1,297	2.5	13,977
Total-4WD	38	67	–43.3	38	67	–43.3	279
Total Tractors	1,367	1,364	0.2	1,367	1,364	0.2	14,256
SP Combines	84	37	127.0	84	37	127.0	349



— Assn. of Equipment Manufacturers

This compares to 7.8% a year ago. About 6.5% of survey responses are planning the purchase of a planter and combine this year. A year ago, 6.2% said they intended to buy a planter and only 4.2% had plans to acquire a combine.

Next on the farmers' to-buy list are drills, with 4.4% anticipating buying this type of equipment in the year ahead (vs. 3.4% last year), while 4.2% said they're planning to purchase a self-propelled sprayer (vs. 2.6% last year). Overall, no-tillers' equipment buying plans remain subdued during the year ahead.

Technology Use Growing. On the other hand, more survey respondents' plan to use technology products in 2017 than did the 2 previous years.

Asked "Which technologies will you use in your cropping operation in 2017?" more than 57% said GPS/Tractor autosteer. This compares with 49.6% in 2016 and 48.4% in 2015.

Nearly half (49.5%) of the no-tillers said they'll utilize yield monitor data analysis during the next cropping year, up from 41% in 2016 and 2015. Field mapping will be used by 48.2% of no-tillers compared to 40.3% the year before and 39.9% in 2015. Overall, most precision farming technologies will see increased usage in 2017. **AEI**

Technologies No-Tillers Will Use in Cropping Operations — 2017 vs. 2016 & 2015

	2017	2016	2015
GPS — Tractor auto-steer	57.1%	49.6%	48.4%
Yield monitor data analysis	49.5%	41.0%	41.1%
Field mapping	48.2%	40.3%	39.9%
GPS guidance — Lightbar	37.2%	40.1%	41.7%
Auto-boom shutoff	40.3%	32.2%	-------
Auto-seed shutoff	34.2%	29.9%	-------
Variable-rate fertilizing	32.5%	29.9%	31.9%
Variable-rate seeding	21.9%	19.7%	20.6%
Satellite aerial imagery	13.4%	10.1%	7.8%
GPS — Implement auto-steer	6.8%	7.0%	6.9%
Remote sensing	2.0%	1.6%	1.1%
Drones	9.5%	6.0%	2.5%

Source: 9th Annual (2017) No-Till Farmer No-Till Practices Survey

Equipment No-Till Farmers Purchased or Plan to Purchase in 2017 vs. 2016 & 2015

	2017	2016	2015
Tractor	10.3%	7.8%	10.8%
Planter	6.5%	6.2%	7.3%
Combine	6.5%	4.2%	4.4%
Drill	4.4%	3.4%	4.1%
Self-propelled sprayer	4.2%	2.6%	4.4%
Pull-type sprayer	3.0%	2.9%	2.3%
Air seeder	2.5%	1.3%	2.3%
Strip-till toolbar	1.7%	1.3%	------

Source: 9th Annual (2017) No-Till Farmer No-Till Practices Survey

Estimated Investment in Farming Operations 2016 vs. 2015 & 2014

(average per farm)

	2016	2015	2014
Fuel	$12,641	$14,953	$23,666
Land rent	$59,026	$75,615	$69,732
Seed/seed treatments	$48,869	$57,726	$63,139
Pesticides	$32,826	$33,112	$38,416
Fertilizer	$55,419	$75,555	$85,153
Lime/gypsum/bios	$4,137	$6,498	$5,968
Equipment	$36,257	$41,133	$64,938
Machinery service/parts	$20,916	$24,119	$29,617
Precision equipment	$2,412	$6,331	$3,468
Custom app./hauling	$9,046	$11,382	$8,122
Labor	$26,882	$24,662	$25,731
Crop/property insurance	$17,991	$21,946	$23,790
Loan payments/interest	$41,863	$59,880	$14,241
	$368,285	$452,912	$455,981
	$319.41/ac	$395.21/ac	$392.41/ac

Source: 9th Annual (2017) No-Till Farmer No-Till Practices Survey

No-Till Farmers Estimated Investment in Farming Operations in 2017 vs. 2016 & 2015

(average per farm)

	2017 est.	2016 est.	2015 est.
Fuel	$12,670	$13,082	$20,415
Land rent	$58,850	$71,308	$70,646
Seed/seed treatments	$51,142	$54,771	$61,831
Pesticides	$33,200	$32,628	$37,744
Fertilizer	$51,185	$68,938	$80,235
Lime/soil conditioners	$5,859	$4,962	$6,111
Equipment	$30,673	$34,141	$42,186
Machinery service/parts	$17,956	$22,362	$27,164
Precision equipment	$2,657	$3,582	$2,674
Custom app./Hauling	$9,163	$11,327	$8,208
Labor	$27,019	$24,593	$27,585
Crop/property insurance	$17,283	$21,512	$23,545
Loan payments/interest	$43,596	$60,550	$13,998
	$361,253	$423,756	$422,342
	$313.32/ac	$369.77/ac	$363.46/ac

Source: 9th Annual (2017) No-Till Farmer No-Till Practices Survey