From the editors of *Farm Equipment...*

Ag Equipment Intelligence

News, Information & Analysis for the Ag Equipment Marketer

July 15, 2017
Vol. 23, Issue 7

- Brazil, EU Sales Mixed
- Big Ag Still Slumping
- SDF Still Spending

Precision Technology Gets a Boost as Use of Strip-Till Expands

The 446 farmers who responded to the 4th Annual Strip-Till Operational Benchmark Study strip-tilled 469,425 acres in 2016, up 12% over the previous year's total of 433,004 acres. On average, farmers reported strip-tilling about 75% of their total acreage, the highest total in the history of the survey and well ahead of the last two studies, which averaged about 63%.

Farmer's use of strip-till has continued to grow as they seek to emphasize soil health along with effective soil seedbed preparation while reducing inputs and increasing crop yields. It's often referred to as a "marriage of no-till and full-width tillage." Along with strip-till's growing use is the increasing adoption of precision farming technologies.

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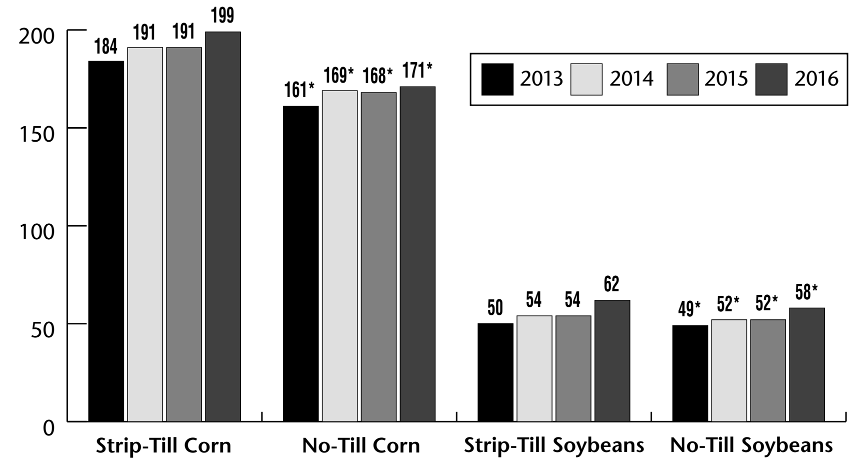
Average Per-Bushel Yields for Strip-Till vs. No-Till — 2013-16



***No-till averages according to 9th Annual No-Till Benchmark Study**

In 2016, 98.8% of respondents strip-tilled corn, consistent with the last 3 years when the average was 97.3%. However, for the first time, more than half of respondents (55.5%) said they strip-tilled soybeans in 2016, a double-digit increase over 2015 (44.1%).

Deere Shores Up Its Position in Europe with Ag Acquisitions

A policy of enabling John Deere dealers to fill out their product lines with equipment from subsidiaries and alliance partners is continuing to be pursued by Deere with the acquisition of an Italian manufacturer of self-propelled sprayers and a newly formed alliance with the German manufacturer of agricultural material handling equipment. The world's largest manufacturer of farm machinery has taken a special interest in Europe as of late.

Last year, Deere acquired majority ownership of U.S. high clearance sprayer maker Hagie Manufacturing and in 2015 announced an agreement to buy the precision planter manufacturing operations of Monosem in France and the U.S. *(see Ag Equipment Intelligence, November 2015)*.

Italian Sprayers. As with these acquisitions, Italian sprayer manufacturer Mazzotti will maintain its name and insignia but benefit from the support and commitment of John Deere to enhance its business.

Deere already produces self-propelled sprayers for the European market at a facility in The Netherlands but the front engine, mid-cab layout is at odds with grower preferences in some countries where a forward-control cab layout as produced by Mazzotti and the majority of European manufacturers is preferred.

The Italian company makes lightweight sprayers of 1,500-3,000 liter capacity, a 3,200 liter ultra-high clearance model, and the new 3,200-6,600 liter MAF high capacity range. The chassis, cab and running gear of the MAF design is also supplied to Kverneland Group for its Vicon and Kverneland sprayer lines.

Other companies owned by John Deere but which retain their identity include Kemper, a German manufacturer of forage harvester headers; the Vapormatic parts company in the UK; and NavCom Technology in Torrance, Calif.

Deere acquired majority ownership of Hagie Manufacturing, located in Clarion, Iowa, in March last year.

John May, Deere & Co. president, Agricultural Solutions, said, "High-

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clearance spraying equipment is a new market for Deere. The expertise at Hagie allows John Deere to immediately serve customers who need precision solutions that extend their window for applying nutrients."

Hagie CEO, Alan Hagie added, "We need a business model that helps us reach more customers. This partnership with Deere allows our solutions to reach customers on a global scale and ensure they are supported with the world class Deere dealer organization."

German Handlers. In a similar vein, John Deere dealers in Europe have been declared the preferred distribution channel for a range of agricultural materials handling solutions from German manufacturer Kramer.

The announcement came shortly after a key stage in the dissolution of a telescopic handler supply agreement between Kramer and Claas that allows Kramer to now promote and supply under its own name the machines supplied exclusively to Claas for the agricultural market since 2005.

The new agreement with Deere's European arm involves direct-to-dealer distribution, retains Kramer branding and covers compact wheeled loaders as well as telehandlers. An investment in Kramer-Werke, which is part of the Wacker Neuson construction and agricultural materials handling group, will cement an agreement that both parties intend to become a long term alliance.

The scope of the agreement focuses initially on Western Europe. There are plans to expand later to Russia, Ukraine, Belarus and other CIS countries, as well as to North Africa and the Middle East.

Deere has no European products of its own to capitalize on the growing demand for dedicated material handling products in agriculture but its dealers will now have access to 9 models of Kramer all-wheel steer loaders, 4 telescopic wheel loaders and 9 telescopic handlers.

Cem Peksaglam, CEO of Wacker Neuson SE, commented, "This collaboration will support our expansion plans and thanks to the additional business we will grow faster with Kramer, especially in markets where John Deere holds strong market positions."

In the U.S., Kramer loaders and handlers are supplied using the Wacker Neuson brand of its parent company, which in 2016 had revenues of €1.36 billion ($1.55 billion), down just 1% on record revenues earned in 2015.

Kramer will continue to supply Claas with Scorpion telehandlers until the end of 2017, after which Claas will introduce a new range developed with Liebherr, along with the German construction giant's wheeled loaders for agricultural use. AEI

CGS Acquisition Paying Off for Trelleborg

Trelleborg expects to realize cost savings and sales synergies equivalent to at least $46 million from the acquisition of Czech farm and specialist tire maker CGS Holding, according to the group's annual report.

During the 7 months of 2016 that CGS Holding was part of the Trelleborg group, its products — including Mitas and Cultor farm tractor and implement tires — made the biggest contribution to a 9% increase in group revenues, which hit the equivalent to $3.1 billion and offset a 5% decline in organic sales.

Apart from realizing those potential synergies as quickly as possible, managers are focused on what Trelleborg President and CEO Peter Nilsson acknowledges is a complex integration. "It was a special acquisition, partly because it was large but also because different parts of CGS fit into different business areas at Trelleborg," he explains. "In some areas, CGS complements our product offering, in others it gives us an opportunity to reach new customers, and in several cases it complements us geographically."

One notable result of the acquisition is that Trelleborg now has two farm tire production facilities in the U.S. — its own factory in Spartanburg, S.C., opened January 2016 and the Mitas plant in Charles City, Iowa.

On the question of whether it was timely to make the near $1.26 billion deal when agricultural markets are depressed, Nilsson emphasized Trelleborg's long-term view and the expectation that tractor and machinery sales, and therefore OEM demand for tires, will recover.

"We take a long term view of the opportunity to gain cost synergies and must be sure that we can handle a future rise in demand, because we know that it will eventually turn around," he says.

"In the agricultural market, where sales of machinery are down about 25% from their peak, we now see cereal production continuing to rise without sales of tractors and other machinery increasing, they are decreasing, in fact.

"This gap cannot continue to grow for too long," says Nilsson. "We do not know when it will turn around but we must be prepared when it does."

Trelleborg Wheel Systems, the group's agricultural and industrial tires business unit, recorded a 1% increase in like-for-like sales thanks to increased deliveries of farm tires, which account for 57% of the unit's revenues. Adding 7 months of Mitas farm tire operations reveals total revenues up 47% at $730 million for the year.

EBIT margin improved from 10.8% to 11.3% as the business unit works toward a target if 15%, which Mitas operations already achieve. AEI

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Deere's Path to Recovery

Following an investors' meeting with Deere & Co., Mircea (Mig) Dobre, senior analyst with RW Baird, offered his thoughts on the company's path to potential recovery when the big ag equipment market makes its turnaround.

In a note to investors, Dobre reported, "Deere is producing closer to retail demand in large ag, after meaningful underproduction last year. Management believes it is too early to call for inflexion in North America large ag demand with higher commodity prices needed to return to mid-cycle levels, yet signs of stabilization have emerged."

These include some replacement demand and progress dealers have made in clearing used inventories "which improved [their] ability to accept trade-ins from farmers."

On Deere's current capacity, Dobre noted, "Deere manages each product line with an OROA [operating return on assets] target of 12%/20%/28% at trough/mid/peak cycle. This approach has resulted in restraint on capacity additions as the ag cycle ran hot in 2012-13 and subsequently a lower need to eliminate capacity in the downturn. Large ag has seen variable cost cuts but no capacity reductions in spite of North American volume contracting more than 60%.

"This is different from many machinery OEMs we cover which have experienced meaningful cash restructuring outlays aimed at capacity reductions," Dobre explains. "We think this approach will result in differentiated performance in a future market upswing as well." **AEI**

Deere's Issues Retail Sales Comment for June

John Deere issued its monthly retail sales report for June 2017 following the Assn. of Equipment Manufacturers' release of June ag equipment sales for North America.

June 2017 Retail Sales

U.S. & Canada Ag	Industry*	Deere**
2WD Tractors (< 40 PTO HP)	Up 13%	Up single digit
2WD Tractors (40 < 100 PTO HP)	Up 1%	Down single digit
2WD Tractors (100+ PTO HP)	Down 19%	Down slightly more
4WD Tractors	Down 23%	Down slightly more
Combines	Up 5%	Down single digit

** As reported by the Assn. of Equipment Manufacturers*
***As reported to the Assn. of Equipment Manufacturers*

May 2017 Dealer Inventories***

U.S. & Canada Ag	Industry*	Deere**
2WD Tractors (< 40 PTO HP)	52%	Lower than industry
2WD Tractors (40 < 100 PTO HP)	59%	Lower than industry
2WD Tractors (100+ PTO HP)	49%	Lower than industry
4WD Tractors	31%	Lower than industry
Combines	28%	Slightly lower than industry

** As reported by the Assn. of Equipment Manufacturers*
***As reported to the Assn. of Equipment Manufacturers*
**** In units as a % of trailing 12 months retail sales, as reported to the Assn. of Equipment Manufacturers*

FARM MACHINERY TICKER (AS OF 7/11/17)

MANUFACTURERS	Symbol	7/11/17 Price	6/12/17 Price	1-Year High	1-Year Low	P/E Ratio	Avg. Volume	Market Cap.
Ag Growth Int'l.	AFN	$57.45	$58.69	$60.26	$39.10	46.22	47,230	921.65M
AGCO	AGCO	$70.41	$66.74	$68.93	$46.22	39.98	628,720	5.60B
AgJunction Inc.	AJX	$0.58	$0.66	$0.74	$0.45	N/A	54,530	72.30M
Alamo	ALG	$92.58	$91.34	$93.44	$58.30	24.62	56,150	1.07B
Art's Way Mfg.	ARTW	$3.00	$2.90	$4.70	$2.50	N/A	4,370	12.47M
Buhler Industries	BUI	$4.23	$4.21	$6.00	$4.21	58.75	749	105.75M
Caterpillar	CAT	$108.24	$106.07	$108.18	$78.30	N/A	4,940,000	63.76B
CNH Industrial	CNHI	$12.00	$11.25	$11.79	$6.49	53.33	1,770,000	16.37B
Deere & Co.	DE	$128.06	$126.00	$128.37	$76.73	23.05	2,570,000	40.76B
Kubota	KUBTY	$85.98	$85.31	$87.72	$67.07	19.34	9,390	21.90B
Lindsay	LNN	$90.26	$85.64	$92.74	$66.99	39.11	70,560	964.84M
Raven Industries	RAVN	$35.20	$36.45	$37.40	$18.81	47.12	168,460	1.27B
Titan Int'l.	TWI	$12.21	$11.95	$14.23	$5.98	N/A	407,010	728.42M
Trimble Navigation	TRMB	$37.01	$36.31	$37.37	$24.60	57.83	977,240	9.36B
Valmont Industries	VMI	$149.90	$151.85	$165.20	$120.65	18.97	139,290	3.39B
RETAILERS								
Cervus Equipment	CERV	$11.56	$11.75	$15.45	$10.98	9.27	4,680	182.69M
Rocky Mountain Equipment	RME	$9.92	$10.20	$11.25	$7.03	11.42	11,930	192.29M
Titan Machinery	TITN	$17.58	$18.56	$19.22	$8.68	N/A	165,330	374.97M
Tractor Supply	TSCO	$50.05	$57.72	$94.62	$50.92	15.45	2,510,000	6.43B

Good Weather, Push to Mechanize Signals Solid Sales for Indian Equipment Makers

With good monsoon rains expected for the current growing season and ongoing efforts to increase mechanization of farming operations, India's farm equipment manufacturers are forecasting a strong year for sales.

KU Subbaiah, CEO of VST Tillers Tractors, India's largest manufacturer of power tillers, said, "Considering the monsoon will be normal, we expect the sale of tractors and tillers should be in line with our expectations." He said the company aims to sell 11,000 tractors compared to 9,800 units sold in the 2016-17 fiscal year. Subbaiah expects VST to sell 30,000 tillers vs. 25,000 sold during last fiscal year.

The company is forecasting double-digit growth in tractor market share after launching two new models in May 2017, including a single-cylinder tractor and an upgrade to it 27 horsepower unit. VST, which claims a 59% share of the power tiller market, is also introducing several new models, which it expects to fuel organic growth.

Subbaiah is projecting growth of 15% for tractors during the 2017-18 fiscal year as various Indian states are increasing programs to raise the level of farming mechanization. The company posted an increase of 6% in tractors and power tiller sales during June 2017. Overall, VST sold 954 tractors vs. 899 in June 2016. It also increased year-over-year sales of power tillers to 4,099 units in June compared to 3,330 a year ago.

In addition to power tillers and tractors, VST Tillers Tractors also manufactures rice planters. While focusing on the domestic market, the company also exports products to Africa, Myanmar and Russia.

Government Programs. Mumbai-based credit rating agency ICRA is forecasting an overall increase in Indian tractor sales of 10% for the current fiscal year ending March 2018. In a published report, ICRA said, "Expected healthy monsoon precipitation coupled with healthy reservoir levels (except the southern region) augurs well for farm output in the current fiscal."

With the government focusing on rural investment, infrastructure creation and irrigation spending, these policies are going to push farm incomes, thereby increasing tractors sales, the report adds. Subrata Ray, senior group vice president of ICRA, said that over the long-term, ICRA continues to maintain a compound annual growth rate estimate of 8-9% for the industry.

"Although India continues to remain a medium horsepower (31-50 HP) market, over the past few years there has been an enhanced interest in the sub-30 horsepower and more than 51 horsepower segments, with most OEMs launching new products in these two sub-segments of tractor market," ICRA said.

ICRA also emphasized that the government's push for increased farm mechanization by subsidizing tractor purchases is likely to aid sales in the lower horsepower segment. And a continued customer shift toward increased usage of various agro-implements is likely to lead to a further increase in market size for high horsepower tractors over the long term, the ICRA report adds.

26,000 Tractors. Assam, a state in northeastern India, recently launched the largest farm mechanization program in the state, according to agriculture minister Atul Bora. The state is looking to buy 26,000 tractors valued at $221 million. The government will buy these tractors and distribute them to each village during the 2017-18 financial year, according to Assam finance minister Himanta Biswa Sarma.

Under the farm mechanization program, the government will provide a 70% subsidy for each tractor to a maximum of $8,500. Banks will provide 20% at a low-interest rate and the remaining 10% will be the responsibility of the farmers. The program administrators are suggesting that 8-10 adult farmers in a village form a group with a common bank account that holds a minimum balance of 10% of the price of the tractor.

The state government is also looking to distribute 100,000 shallow tube wells this year. It has already given 4,000 power tillers to the farmers. **AEI**

SDF Continues Making Major Investments in Production Facilities

Having previously focused its investments on production facilities in China and India, the SDF Group — manufacturer of SAME and Deutz-Fahr tractors — has turned its attention to Europe with major factory renewal projects.

CEO Lodovico Bussolati reports that the first phase of work started last year to renovate production lines at the SDF plant in Treviglio, northern Italy, has been completed.

A new painting plant and assembly line using automated guided vehicles instead of a conveyor will be complemented over the next 3 years with the same upgrade for a second assembly line. It will also include installation of a new line for front axle production and a new machining center.

Total investment is €22 million ($25 million) for a 3 year project that Bussolati says will equip the group with a flexible and completely renovated plant that meets high quality standards and guarantees autonomy for the production of key components, a key element in SDF's strategy.

Once completed in September 2018, the Treviglio plant will have 2 identical assembly lines, with a single painting plant for both, and a production capacity of 100 tractors per shift.

Larger tractors from 130 horsepower are now being produced in an all-new plant opened a few weeks ago in Germany. "Deutz-Fahr Land" has been 3 years in planning and construction on a plot adjacent to the existing premises at Lauingen, southern Germany.

Together with a new customer center, the new "L" shaped factory represents a total commitment of €90 million ($103 million) and was the single largest individual investment in the group's history.

In China, where SDF has 2 assembly plants, product upgrades have been the main activity, with new emissions rules requiring electronic engines to meet China 3 (equivalent to Euro Stage IIIA) compliance.

Renewal of the local Shu He product continued with a new synchro transmission for the 35-70 horsepower and 90-130 horsepower models along with a new cab and introduction of a 140-180 horsepower range. Deutz-Fahr 90-130 horsepower models were also introduced and a 210 horsepower tractor assembly line completed along with an initial batch of the large tractors.

SDF ended the year with revenues of €1.36 billion ($1.56 billion), down 1.7% on the prior year, and EBITDA of 8.7%, equivalent to €119 million ($136 million). Net profit settled at €42 million ($48 million).

"Despite a drop of about 10% in the global agricultural machinery market, SDF managed to keep its revenue stable and profitability in line with recent years," says Bussolati.

In all, the group produced 42,170 tractors and combines, with the Deutz-Fahr range contributing 62% of tractor revenues, which has the broadest selection and most powerful models in its lineup. **AEI**

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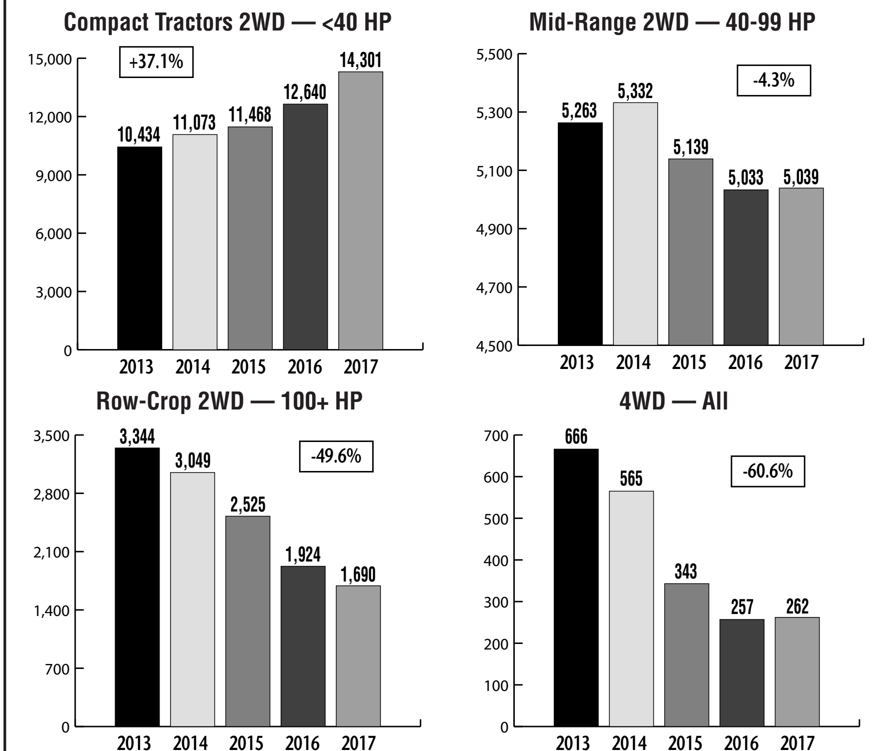
2017 Mid-Year Review of N.A. Tractor Sales & Dealer Sentiments

Since the start of 2017, farm equipment dealers' level of optimism has varied by as much as 10-11% from one month to the next. But compared to the same period last year, when their optimism level ranged from 31% "less optimistic" in January to 4% "less optimistic" in May, you could safely say that dealers are feeling better about the business prospects this year. Which is pretty interesting when you consider the charts below that plot average monthly tractor sales for the first 6 months of each year from 2013 to 2016. **AEI**

Avg. U.S. Tractor Sales/Month — January–June 2013-17



Compact tractor sales have seen continuous growth since 2013. In the last 5 years, mid-range tractor sales have held their own, while row-crop and 4WD units continue to struggle for sales.

Source: Assn. of Equipment Manufacturers

North American Dealer Sentiments Jan. – May 2016 vs. 2017

	More Optimistic	Less Optimistic	Net
Jan. 2016	11%	43%	–31%
Jan. 2017	31%	20%	+11%
Feb. 2016	13%	36%	–23%
Feb. 2017	21%	19%	+2%
Mar. 2016	17%	28%	–11%
Mar. 2017	26%	27%	–1%
Apr. 2016	15%	26%	–11%
Apr. 2017	17%	30%	–13%
May 2016	22%	27%	–5%
May 2017	19%	20%	–1%

Source: Ag Equipment Intelligence Dealer Sentiments & Business Conditions Update survey

South American Ag Equipment Intelligence

Chinese Companies Aggressively Seek South American Customers

Agrishow, a farm show held in May in the city of Ribeirão Preto in the Brazilian state of São Paulo, had several foreign exhibitors, mostly Chinese manufacturers of ag machinery and components, exhibiting products and seeking new customers. Chinese company Jinhua Hongshuo Chai makes carbon steel transmission chains and components used on harvesters and tractors. "I believe that we have a lot of opportunities with local companies," said Alex Gao, manager of the company.

Meanwhile, the government of neighboring Argentina is investigating ways to boost exports of agricultural implements and machines to China. In a recent official visit to the Asian country, the president of the government-run bank Nación, Carlos Castellani, said that Chinese officials felt very interested in that equipment to modernize Chinese agriculture. Seeders would be a major product aimed at Chinese farmers, but the sizes would have to be adjusted for the realities of farming in China.

Argentina's Ag Machinery Sector Alarmed About Rising Imports

The Argentinian Chamber of Agricultural Machinery Manufacturers has released a public statement complaining about the high level of equipment imported from other countries. According to the group, the units brought into the country are supported by subsidized credit loans and are below the market value. In the case of seeders, 61 units were imported in the first 5 months of the year compared to just 5 for the same period of 2016, an increase of 1,100%. Of those, 75% of the seeders imported came from the U.S. Raúl Crucianelli, president of the Chamber, believes government subsidies for equipment produced abroad is putting Argentina's manufacturers at a disadvantage. "This is not fair. After years of stagnation, our sector is starting to work well, but is pretty hard to come from a place with almost no imports passing to an out-of-control trade would be lamentable," he said.

Brazil Ag Equipment Sales Jump 28.7% in First Half of 2017

Sales of agricultural machinery in Brazil increased 28.7% year-over-year between the January-May 2017. In terms of units, the volume of sales jumped from 13,400 to nearly 17,300 during the same period. In May alone sales reached 4,054 units, which is an increase of 17.6% compared to the previous month, and 16.4% vs. May 2016. The data was reported by Brazil's National Assn. of Automotor Vehicles Manufacturers (Anfavea) and includes sales of tractors, harvesters, cultivators and backhoe loaders.

Brazilian exports of ag machinery also increased in May. In the first 5 months of the year exports reached 4,525 units, an increase of 30.6% compared to the same period of 2016. In May alone, the total was 1,321 machines exported, which is 39.3% more than April and 52.2% higher than May of 2016.

Production ag machinery between January to May reached 24,072 units, while during in the same period of 2016, 15,187 machines were produced. From April to May of this year, there was an increase of 13.8% in production, from 5,148 to 5,858 units.

Investment Bank Will Subsidize Argentina's Ag Machinery Producers

Authorities from Argentina's Investment and Foreign Trade Bank announced new measures that would boost production and exports of agricultural machinery manufactured in the country. For those who have an investment plan to modernize their companies, the bank offers loans with a maximum interest of 16% per year, with 7 years for repayment, and a total cap of AR$5 million (approx. $ 288,500) for each loan. (Interest rates in Argentina are currently as high as 26.25%.) In order to finance exports, the bank of Argentina is offering a finance rate of 1.5% for small businesses. AEI

Brazil, EU Tractor Sales Remain Mixed

It's difficult to identify an overall trend when it comes to tractor sales in the various regions of the world.

In notes to investors during the past 2 weeks, Michael Shlisky, analyst for Seaport Global Securities, characterized sales as "flat" in Brazil and "mixed for June as well as the quarter" in the 6 overseas markets he regularly tracks.

Brazil: Wholesale tractor shipments were flat year-over-year in June, when the industry shipped 3,490 tractors and exported an additional 906 units, up 16% year-over-year. In the second quarter of 2017, tractor production (plus imports) was 1,352 units higher than wholesale shipments (plus exports).

Germany: Tractor registrations declined 1% year-over-year in June. Tractor sales of the 6 major brands declined 1% year-over-year to 2,159 units, vs. up 7% year-over-year in May, but down 14% year-over-year in April. Registrations are up 1% year-to-date.

France: Tractor registrations declined 16% year-over-year in June to 2,348 units, vs. down 11% year-over-year in May and down 38% year-over-year in April. Registrations are down 25% year-to-date.

UK: Tractor registrations increased 3% year-over-year in June to 1,038 units vs. up 4% in May and up 5% in April. In the second quarter, tractor registrations increased 4% and are up 14% year-to-date.

Poland: Tractor registrations in Poland increased 12% in June.

Sweden: Tractor registrations were up 37% in June.

Ireland: Tractor registrations were down 8% year-over-year.

Brazil Note: In a June 22 note to investors, Mircea (Mig) Dobre, senior analyst for RW Baird, reported that machinery demand is recovering in Brazil. Incentive financing rates under Moderfrota increased to 8.5% for small farmers and 10.5% for large farmers in July, which is up from 7.5% and 9%, respectively. "Brazil domestic sales of wheeled tractors and combines have been growing on an L3M basis for nearly a year," he said. AEI

Large Ag Equipment Sales Drop Again

North American large ag equipment sales were down in June as Canadian year-over-year sales were negative, according to the latest numbers released by the Assn. of Equipment Manufacturers. U.S. sales declines narrowed to –11% in June compared to –16% in May. "Row-crop tractors and 4WD tractors were responsible for the decline with both posting approximately 20% declines year-over-year; combines grew 5% in June," Mircea (Mig) Dobre, analyst with Baird Equipment Research says in a note to investors, "Mid-range and compact tractors both continued growth trends in low single digits and low double digits, respectively."

North American large tractor and combine sales decreased 14% year-over-year in June after dropping 12% in May and increasing 1% in April. U.S. sales were down 11% (row-crop –17%, 4WD –14%, combines +19%) year-over-year for the month while Canadian sales fell 28% with row-crop tractors 4WD and combine sales all down.

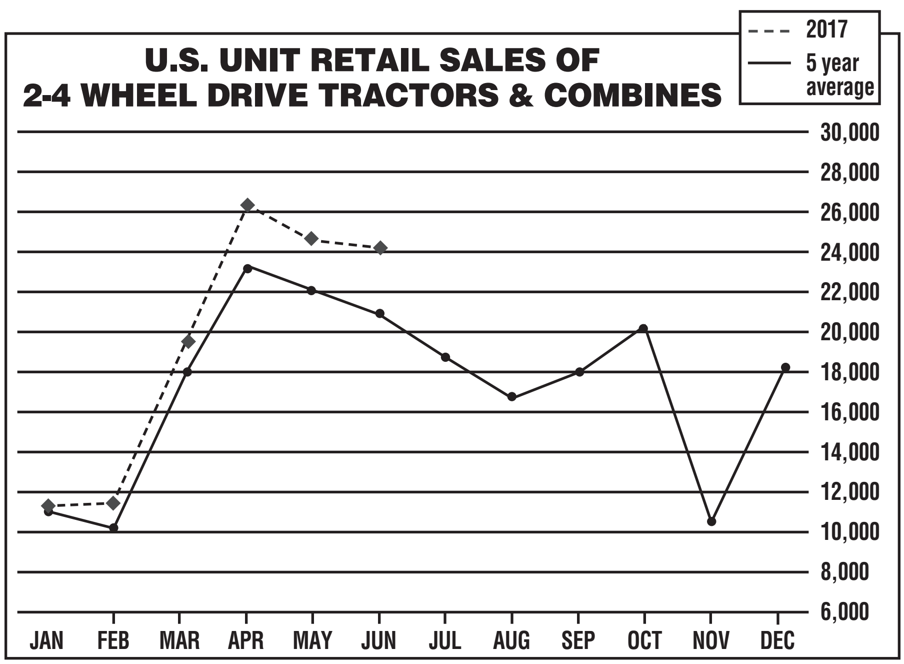
- Combine sales increased 5.3% in June following 12% growth in May. U.S. combine inventories grew 3.9% year-over-year in May. June is typically an average month for combine sales, accounting for 8% of annual sales the last 5 years.
- Row-crop tractor sales declined 19.1% year-over-year, compared with the 18.4% decrease in May. U.S. row-crop tractor inventories were 22.8% year-over-year in May. June is usually a modestly below-average month for row-crop tractor sales, accounting for 7.7% of annual sales over the last 5 years.
- 4WD tractor sales decreased 22.7% year-over-year in June vs. an 8.5% increase in May. U.S. dealer inventories of 4WD tractors decreased 12.4% year-over-year in May. June is typically a below-average month for 4WD tractor sales, accounting for 6.6% of annual sales the last 5 years.
- Mid-range tractor sales grew modestly in June, up 0.6% year-over-year after a 3.7% increase last month. Compact tractor sales increased 12.5% year-over-year after a 13.9% increase in May. **AEI**

JUNE U.S. UNIT RETAIL SALES

Equipment	June 2017	June 2016	Percent Change	YTD 20 17	YTD 2016	Percent Change	May 2017 Field Inventory
Farm Wheel Tractors-2WD							
Under 40 HP	16,270	14,795	10.0	78,843	70,337	12.61	70,957
40-100 HP	5,842	5,891	–0.8	27,556	27,882	–1.2	33,474
100 HP Plus	1,335	1,608	–17.0	8,394	9,764	–14.0	8,146
Total-2WD	23,447	22,294	5.2	114,793	107,983	6.3	112,577
Total-4WD	160	186	–14.0	1,029	1,096	–6.1	754
Total Tractors	23,607	22,480	5.0	115,822	109,079	6.2	113,331
SP Combines	445	375	18.7	1,670	1,777	–6.0	988

JUNE CANADIAN UNIT RETAIL SALES

Equipment	June 2017	June 2016	Percent Change	YTD 2017	YTD 2016	Percent Change	May 2017 Field Inventory
Farm Wheel Tractors-2WD							
Under 40 HP	1,837	1,299	41.4	7,013	5,501	27.5	8,107
40-100 HP	471	382	23.3	2,675	2,319	15.4	3,903
100 HP Plus	255	358	–28.8	1,743	1,780	–2.1	2,217
Total-2WD	2,563	2,039	25.7	11,431	9,600	19.1	14,227
Total-4WD	31	61	–49.2	540	444	21.6	231
Total Tractors	2,594	2,100	23.5	11,971	10,044	19.2	14,458
SP Combines	150	190	–21.1	801	626	28.0	616



— Assn. of Equipment Manufacturers

The survey is conducted annually by *Strip-Till Farmer*, sister publication of *Ag Equipment Intelligence*.

The average number of acres strip-tilled has grown from 877 in 2013, the first year the survey was conducted, to 1,112 in 2016. The overall average acres in 2016 included 877 acres of corn that are strip-tilled (up from an average of 707 acres in 2013) and 430 acres of soybeans (down from 444 acres in 2013).

Farmers who have adopted strip-tillage are also benefiting through increasing yields, says Jack Zemlicka, managing editor for *Strip-Till Farmer,* and author of the report, which appears in the August 2017 issue of the *Conservation Tillage Guide*. "Increasing yields isn't always the primary motivation farmers cite for adopting strip-till, but accommodating growing conditions and a cooperation from Mother Nature resulted in a nearly double-digit bump in average corn yields in 2016.

"After back-to-back years of 191 bushel per acre averages, 2016 saw respondents average 199 bushels per acre of strip-tilled corn, by far the highest total in the history of the study," says Zemlicka.

Drilling down by primary strip-tilling regions, farmers in the Western Corn Belt averaged 212 bushels of corn, those in the Eastern Corn Belt averaged 203, strip-tillers in the Great Lakes averaged 198 and those in the Northern Plains averaged 180.

Precision-Plus. Because strip-tillage requires careful placement of seed and fertilizer in a 6-8 inch strip, precision technology often plays a critical role in the process.

GPS Brands Used by Strip-Tillers — 2015 vs. 2016

Brand	2015	2016	Change
John Deere	43.1%	42.8%	–0.3%
Trimble	23.8%	22.2%	–1.6%
Ag Leader	20.4%	21.1%	+0.7%
Case IH	7.9%	10.8%	+2.9%
None	4.5%	3.4%	–1.1%
DigiFarm	2.3%	3.1%	+0.8%
Raven	2.3%	1.5%	–0.8%
AgJunction/Outback	1.4%	2.8%	+1.4%
Topcon	1.1%	1.0%	–0.1%
MyWayRTK	0.9%	0.5%	–0.4%
New Holland	0.6%	0.3%	–0.3%
TeeJet	0.6%	0.8%	+0.2%

Source: 4th Annual Strip-Till Operational Benchmark Study

While auto-steer and GPS guidance are almost considered standard on many farms, more progressive systems including variable-rate drives, implement guidance and unmanned aerial vehicles are regularly utilized by strip-tillers.

Nearly 40% of survey respondents report using variable-rate application of fertilizer in 2016. Adoption of implement guidance increased dramatically in 2016, to an all-time high of 27.5%, after a benchmark study low of 17.8% in 2015.

Use of RTK-level GPS correction for strip-till operations increased slightly to a record high of 81.3%, an 11% bump over 2013 data. Only 7% of strip-tillers did not use any type of GPS guidance in 2016.

When it comes to the most popular brands of GPS systems, John Deere maintained its stronghold at the top of the list by a nearly 2 to 1 margin over second place. Some 42.8% of strip-tillers utilize Deere systems, down slightly from 2015's 43.1%.

Trimble held the second spot at 22.2%, down slightly from the 2015 total of 23.8%, while Ag Leader was third with 21.1%, up slightly from 20.4% in 2015.

Sprayers & Drones. Two new questions were added to the benchmark study for this year. The first asked strip-tillers if they utilize an unmanned aerial vehicle system in their operation, with 22.1% saying yes. The second asked strip-tillers if they own their own sprayer and 88.3% said yes. This total was higher than the 83% of no-tillers who own either a self-propelled or pull-type sprayer according to *No-Till Farmer*'s 9th Annual Operational Practices Benchmark Study.

Additional data from the 4th Annual Strip-Till Operational Benchmark Study can be found at www.No-TillFarmer.com. **AEI**

JLG to Close Telehandler Facilities in U.S. and Belgium

JLG telehandler production is to be rationalized with the closure of assembly lines in the U.S., at a plant in Belgium, and an engineering center in England — moves that could affect up to 525 employees.

Telehandlers for construction, agriculture and industrial materials handling are big business for Oshkosh, contributing 26%, or $78 million, of the division's $3 billion net revenues earned in 2016. The business unit, which also makes mobile access platforms, contributed 48% of Oshkosh Corp.'s $6.2 billion net sales.

In addition to its own-brand machines, JLG manufactures telehandlers for Caterpillar and Same Deutz-Fahr group's ag dealers in Europe.

Rationalization plans call for a limited range of telehandlers for Europe, Middle East and Africa and transfer of production from Belgium to a JLG plant in Romania.

The North American telehandler range will continue unchanged but assembly will move from Ohio (with engineering services in Orville retained) to JLG's McConnellsburg, Pa., headquarters locations **AEI**