Ag Equipment Intelligence

News, Information & Analysis for the Ag Equipment Marketer

- Deutz' Electric Buy
- Irrigation Survey
- 'Uber' Ag in India

Rising Confidence Levels Mark Dealers' 2018 Outlook for Improving Revenue

It has been nearly 6 years since North American farm equipment dealers expressed the level optimism about their revenue prospects as they have for 2018. In 2012, more than 55% of dealers expected revenues from the sales of new farm machinery to increase in 2013. By 2015, less than 20% of dealers held out hope for improved business levels for the coming year. This improved very little in the ensuing years, with only 22.4% of dealers looking for a revenue improvement for 2017.

Looking ahead to 2018, dealers' confidence is returning. For next year, more than double the percentage — 46.5% — of dealers are projecting revenues will improve by 2% or more compared to year ago. Only 17% are projecting further declines during the next 12 months vs. 33% last year

at this time.

These projections are based on the responses of 229 ag machinery dealers across the U.S. and Canada to Ag Equipment Intelligence's annual Dealer Business Outlook & Trends survey. Dealers were polled during the last week of August and first two weeks of September. Along with dealers that carry the five major equipment brands — AGCO, Case IH, John Deere, Kubota and New Holland — this year's survey also included dealers who carry Mahindra as their primary tractor brand.

Breaking down the results further, 6.6% of dealers see revenues increasing by 8% or more going into 2018 and 39.9% are projecting business levels to improve by 2-7%. A little over 36% of those responding expect revenues from new equipment sales

to be flat during the year ahead. This compares to 45% projecting little or no change for 2017.

This compares with last year's survey results when only 4.2% of U.S. and Canadian dealers anticipated an increase in revenues of 8% or more and 18.2% who were forecasting gains of 2-7%. A year ago, nearly 45% of dealers were anticipating flat sales for 2017.

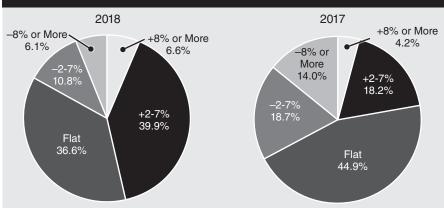
2017 Better Than Expected

Perhaps the improving outlook is due to the fact that dealers did better in 2017 than they expected to do and this is fueling their surprising level of confidence going into 2018.

New Equipment Revenues. Asked how much better or worse they expected new equipment revenues to finish in 2017 vs. 2016, 40% of the dealers responding to *Ag Equipment Intelligence's* most recent Dealer Business Outlook & Trends survey reported that their revenues were up 2% or more in 2017. This compares with only 17.5% who projected a year ago that they would see

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North American Dealers' Outlook for New Equipment Revenue 2018 vs. 2017



Nearly 47% of North American farm equipment dealers expect revenues from the sale of new equipment to increase by 2% or more in 2018. This percentage of dealers is more than double the previous year's forecast when only 22.4% of dealers projected higher revenues.

2017 New Equipment Sales

| % Increase/ Decrease | Current 2017 Estimate | Last Year's 2017 Forecast | | |
|-------------------------|--------------------------|------------------------------|--|--|
| +8% or more | 15.8% | 6.6% | | |
| +2-7% | 24.2% | 10.9% | | |
| Flat | 24.7% | 21.6% | | |
| -2-7% | 18.6% | 17.5% | | |
| -8% or more | 16.7% | 43.4% | | |

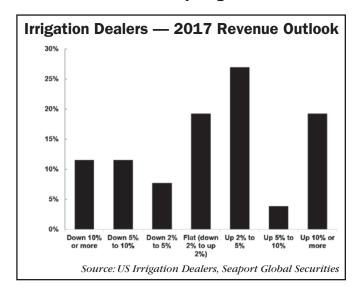
Irrigation Dealers 2017 Revenue Outlook: 'Modestly Optimistic'

A recent nationwide survey of pivot irrigation dealers conducted by Seaport Global Securities and *Ag Equipment Intelligence* shows this segment of agriculture, like farm equipment retailers, is generally optimistic about near-term revenue trends.

According to Michael Shlisky, analyst for Seaport Global, for calendar year 2017, about 50% of the dealers expect revenue growth of 2% or more for the year, including 19% who expect revenue growth of 10% or more. Approximately 31% expect revenue declines of 2% or more, including 12% who expect revenue declines of 10% or more.

"While the dealers we heard from were split regarding the growth prospects of new equipment — 35% expect growth in 2017 while 31% expect a decline — the outlook for parts and service revenues were substantially more positive, with 52% expecting an increase while 16% expect a decline," says Shlisky.

Generally, the irrigation dealers' sentiment about business conditions is leaning slightly positive. While a large majority, 62%, say they feel "about the same" as they did 3 months ago, about 23% of survey respondents indicated they were feeling "more positive about business today." The remaining



15% say they're "less optimistic" compared to 3 months ago. Most of the irrigation dealers surveyed, 85%, report that financing trends are relatively stable, and about 12% say retail financing is getting more difficult for irrigation system purchases.

As Sales Recover, Poettinger Invests in Manufacturing, Parts Distribution

Hay and tillage equipment manufacturer Poettinger continued to invest in manufacturing, parts distribution and administration resources during its 2016-17 financial year as sales recovered to exceed the prior year's performance.

In the 12 months ended July 31, the Austrian business secured €308 million in revenues — equivalent to \$366.5 million — which is 2% up on the prior period. There is still some way to go before sales get back to their €320 million (\$380 million) peak in 2014-15 or even the €314 million (\$372 million) recorded the year before that, but at least the trend is in the right direction.

Management spokesman Heinz Pöttinger says, "With our investment in our production facilities and technology, we are fit for the future and will continue to pursue our successful strategy in cooperation with our customers and sales partners."

Those investments include €14 million (\$16.6 million) on a new logistics center for spare parts opened earlier this year, after just 7 months of building and relocation work. The 8,300 square yard facility built on a 7 acre plot has improved availability of the approximately 50,000 spare and wear parts stored there.

Every day, says Pöttinger, up to 800 customer orders are processed and every year 3.5 million items of various kinds are shipped worldwide. The new facility reportedly made a useful contribution to original parts business revenues that increased 5% in the past financial year.

Another €25 million (\$29.7 million) has been spent reorganizing the production layout at the company's headquarters plant, where another 14,300 square yards of covered floor space for manufacturing and logistics

will help support future growth.

There are also plans to build a new production facility for hay equipment, with a start-up date scheduled for 2021, to support growth of Poettinger's most important lines as far as sales are concerned.

In the past financial year, sales of hay tools such as mowers, tedders, rakes and forage wagons grew 5% to account for 58% of total revenues, with the progressive roll-out of the new Impress round balers set to help build sales in this sector.

In contrast, sales of tillage equipment and seed drills recorded a slight drop as disappointing grain prices discouraged European farmers from replacing equipment at previous levels. Geographically, Ukraine provided the most positive result as Poettinger sales increased 41% to reinforce the country's position as one of the top 6 markets for the group.

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Equipment Technologies Adopts European Hydro-Drive for Its Sprayers

Apache sprayer maker Equipment Technologies is adopting a European hydrostatic drive self-propelled design to expand and broaden its North American product offering.

As part of France-based Exel Industries since January 2016, the Mooresville, Ind.-based manufacturer — also known as ET Works — is capitalizing on its access to products within the group. Exel maintains a multi-brand, multi-distribution channel business model while encouraging inter-company synergies in terms of components and some complete products.

Guerric Ballu, CEO of Exel Industries, said at the time of the acquisition, "ET Works will benefit from Exel's distribution networks in other parts of the world and from Exel's innovative technologies to enhance its product range."

Equipment Technologies posted a "very sound performance" in the third quarter of Exel's October-to-November financial year, contributing to improved revenues from North America, where Exel's Hardi division is also active, building self-propelled sprayers in Davenport, Iowa.

The healthier revenues helped offset an ongoing slump in France, the group's main European market, and lift agricultural sprayers figures by 5% in the April-June quarter and 1% for the first 9 months of the fiscal year.

Ballu reported, "Exel Industries groups' growth picked up during the third quarter. Based on our order book, the fourth quarter should far outweigh that of last year, which was remarkably low. Our sugar beet harvester sales in the fourth quarter are expected to almost double compared to the same quarter last year.

"In France, agricultural spraying equipment sales are still affected by ongoing economic difficulties, but in the rest of the world some indicators are starting to improve, with Australia, Russia and Ukraine enjoying growth and the U.S. showing signs of recovery."

It is from Exel's Berthoud unit in France that Equipment Technologies

is sourcing the Raptor as the basis of its new Bruin self-propelled sprayer, which features 4WD hydrostatic drive steering to complement the Apache mechanical 2WD steer and drive machines.

After producing more than 500 examples of the first generation Raptor, Berthoud launched a new version last October with a new "eco" version of its Bosch Rexroth transmission that takes the machine to 24 mph on the road at modest engine revs.

Equipment Technologies CEO, Matt Hays, comments, "North American farmers will appreciate the durable Bruin design and extended capabilities that they won't find on other hydrostatic drive sprayers." He adds that the machine has been re-engineered to meet the durability requirements of North American farmers and custom operators.

The Bruin will be available in 700 and 1,100 gallon sizes with booms up to 120 feet having the highest clearance of any rear-mounted design. **AEI**

| FARM MACHINERY TICKER (AS OF 10/11/17) | | | | | | | | |
|--|--------|-------------------|------------------|----------------|---------------|--------------|----------------|----------------|
| MANUFACTURERS | Symbol | 10/11/17 Price | 9/12/17 Price | 1-Year High | 1-Year Low | P/E Ratio | Avg. Volume | Market Cap. |
| Ag Growth Int'l. | AFN | \$51.83 | \$56.57 | \$60.26 | \$45.50 | 28.34 | 40,730 | 835.87M |
| AGCO | AGCO | \$74.72 | \$69.29 | \$75.58 | \$48.93 | 32.67 | 520,880 | 5.94B |
| AgJunction Inc. | AJX | \$0.50 | \$0.50 | \$0.68 | \$0.45 | N/A | 27,130 | 62.33M |
| Alamo | ALG | \$108.94 | \$91.09 | \$111.02 | \$58.30 | 28.01 | 50,230 | 1.27B |
| Art's Way Mfg. | ARTW | \$2.35 | \$2.40 | \$4.70 | \$2.00 | N/A | 9,960 | 9.78M |
| Buhler Industries | BUI | \$4.33 | \$4.49 | \$5.00 | \$4.14 | 80.19 | 342 | 108.25M |
| Caterpillar | CAT | \$128.60 | \$120.94 | \$128.29 | \$80.33 | 718.44 | 3,410,000 | 76.00B |
| CNH Industrial | CNHI | \$11.99 | \$11.52 | \$12.27 | \$7.09 | 38.68 | 1,040,000 | 16.36B |
| Deere & Co. | DE | \$127.77 | \$117.26 | \$132.50 | \$85.27 | 21.22 | 2,420,000 | 41.05B |
| Kubota | KUBTY | \$91.31 | \$88.10 | \$93.81 | \$70.24 | 17.61 | 9,660 | 22.78B |
| Lindsay | LNN | \$91.65 | \$86.51 | \$95.04 | \$69.11 | 39.71 | 76,170 | 979.70M |
| Raven Industries | RAVN | \$33.25 | \$29.40 | \$37.40 | \$20.21 | 39.54 | 164,190 | 1.20B |
| Titan Int'l. | TWI | \$9.92 | \$9.14 | \$14.23 | \$7.97 | N/A | 323,440 | 592.23M |
| Trimble Navigation | TRMB | \$40.59 | \$39.88 | \$40.87 | \$25.30 | 58.83 | 909,070 | 10.28B |
| Valmont Industries | VMI | \$159.25 | \$149.05 | \$165.20 | \$120.65 | 19.60 | 105,760 | 3.58B |
| RETAILERS | | | | | | | | |
| Cervus Equipment | CERV | \$14.30 | \$13.60 | \$16.52 | \$10.98 | 9.02 | 9,980 | 226.33M |
| Rocky Mountain Equipment | RME | \$10.98 | \$10.80 | \$11.87 | \$8.41 | 12.75 | 20,770 | 212.84M |
| Titan Machinery | TITN | \$15.62 | \$13.49 | \$19.22 | \$8.68 | N/A | 133,550 | 333.17M |
| Tractor Supply | TSCO | \$61.70 | \$53.19 | \$78.25 | \$49.87 | 18.65 | 2,450,000 | 7.82B |

increased revenues during 2016 of 2% or higher.

Nearly 16% of dealers said their revenues increased by 8% or more in the past year. Last year, less than 7% projected sales of 8% or better for 2017. More than 24% reported their sales revenues will have improved by 2-7% in the past year. A year ago, less than 11% forecast a revenue increase of 2-7%.

Last year at this time, nearly 61% of dealers said they expected revenues to decline in 2017.

As 2017 winds down, only 35% of the 229 dealers responding to the survey this year estimate sales would decrease by 2% or more. This compares with more than 43% who projected declining sales revenues 12 months ago.

Used Equipment Revenues. Generally, dealers are doing better than expected when it comes to used equipment revenues, as well. Last year, 29.5% projected their 2017 revenues from used equipment sales would increase. At this point, 42.7% of dealers expect used equipment sales to improve compared to 2016.

| Used Equipment Sales – 2017 | | | | | | | |
|---|-------|-------|--|--|--|--|--|
| % Increase/ Current 2017 Last Year's Decrease Estimate 2017 Forecast | | | | | | | |
| +8% or more | 16.9% | 4.0% | | | | | |
| +2-7% | 25.8% | 25.5% | | | | | |
| Flat | 33.8% | 46.5% | | | | | |
| -2-7% | 14.6% | 15.0% | | | | | |
| -8% or more | 8.9% | 9.0% | | | | | |

Nearly 17% estimate their revenues from used equipment will come in at 8% or higher for the year. A year ago, only 6.6% projected sales to be 8% or higher. Almost 26% say these sales will be up between 2-7% this year, almost exactly the same percentage (25.5%) who had forecast used sales in that range 12 months ago.

As for dealers who expected used machine sales to decline, 23.5% say their sales will be down this year (14.6% down 2-7%, 8.9% down 8% or more). It appears their forecast was right on the money as 24% expected declining sales a year ago (15% down 2-7%, 9% down 8% or more).

| Early Orders/Presells This Year vs. 5 Years Ago | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|--|--|
| | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | | |
| Up +10% | 1.6% | 1.0% | 0.0% | 1.1% | 0.0% | 0.0% | | |
| Up 6-10% | 2.6% | 1.0% | 0.4% | 1.8% | 7.2% | 8.2% | | |
| Up 1-5% | 10.3% | 12.3% | 6.5% | 7.5% | 20.0% | 17.1% | | |
| Same as Last Year | 24.1% | 17.2% | 29.8% | 31.2% | 45.0% | 39.8% | | |
| Down 1-5% | 12.9% | 15.8% | 10.5% | 13.9% | 16.75 | 21.2% | | |
| Down 6-10% | 16.0% | 13.8% | 12.1% | 16.0% | 11.1% | 13.7% | | |
| Down +10% | 32.5% | 38.9% | 40.7% | 28.5% | 0.0% | 0.0% | | |
| Weighted Avg. | 4.16% | 4.84% | 5.05% | 3.97% | 0.21% | 0.51% | | |

Early Orders Up Slightly

Early orders, or pre-sells, are usually considered to be a bellwether of sales for the coming year. This is not necessarily the case for 2018. In fact, it's doubtful that the level of early orders going into 2018 is a factor in the dealers' higher level of optimism for the year ahead.

At best, the improvement in the level of pre-sells is negligible. At the same time, it hasn't gotten worse than it was a year ago, which was the case for at least the past 2 years.

Results of *Ag Equipment Intelligence's* most recent dealer survey don't appear to indicate a significant increase of early orders — up 14.5% for 2018 vs. up 14.3% for 2017. The biggest difference comes on the negative side of the equation. Going into 2017, nearly 69% of dealers reported early orders were down compared to the peak of 5 years earlier; 38.9% down more than 10%, 13.8% down 6-10% and 15.8% down 1-5%.

This year 61% of dealers report their early orders for 2018 were off the pace of the peak 5 years ago; 32.5% down more than 10%, 16% down 6-10% and 12.9% down 1-5%.

In the most recent study, about onequarter, or 24.1%, of dealers say their early orders are about the same as they were 5 years ago. This compares with 17.2% who reported the same level of sales as 5 years earlier 12 months ago.

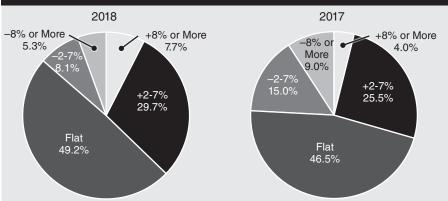
This being the case, the dealers' responses would indicate a slowing of the large and rapid fall off of early orders in 2016 when more than 73% of dealers reported a significant decline in early orders.

Used Equipment Levels Improving

Another factor that is probably also feeding dealers' improving outlook for increasing revenues in the next year is used equipment inventories

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North American Dealers' Outlook for Used Equipment Revenue 2018 vs. 2017



The percentage of dealers looking for an increase in revenues from the sale of used machinery rose by nearly 8% from 29.5% a year ago to 37.4% for 2018. Similarly, fewer dealers are projecting a decline in used equipment revenues for 2018 compared to a year ago.

are finally coming down to manageable levels. For farm equipment dealers, the struggle of the past 4 years was as much about managing excessive used equipment inventories as it was about steep declines in the sales of new ag machinery.

Moving into the new year, 45.2% of dealers say their used inventories remain "too high" or "way too high." This compares with 49.5% who echoed these same sentiments a year ago. One dealer's comment seemed to sum up the current environment: "The used equipment situation has improved, but remains an issue for us."

Looking ahead to next year, North

Breaking the numbers down further, 7.7% see revenues from sales of used machinery rising by 8% or more, while 29.7% are forecasting increases in the 2-7% range. Last year, 4% anticipated used equipment revenues to increase by 8% or more and 25.5% projected

improvements between 2-7%.

American equipment dealers are

expecting much better results than

they've seen in the past few years.

Overall, 37.4% of them expect used

equipment revenues to rise by 2%

or more in 2018. This compares

with 29.5% who were projecting an

increase 12 months earlier.

The same trend held true for the

dealers who are forecasting more declines in used machinery sales. For next year, 13.4% expect sales to fall. This compares to 24% one year ago. Some 8.1% of dealers see revenues falling by 2-7% (15% a year ago) and 5.3% anticipate a drop of 8% or more (9% last year).

Overall, about one-half of North American dealers see flat used revenues in 2018. Last year, 46.5% anticipated flat revenues.

Editor's Note: The complete 48 page 2018 Dealer Business Outlook & Trends Farm Equipment Forecast will be available to subscribers the week of Oct. 16.

Deutz Secures Electric Drives Expertise, Engines from Liebherr

Off-highway engine maker Deutz has responded to the likely adoption of electric and hybrid drive systems for future agricultural vehicles and implements by acquiring a leading German manufacturer to secure expertise in this field.

Torqeedo GmbH may currently produce only propulsion systems for leisure and commercial boats, but Deutz managers say that buying the company will bring electrification knowledge and products quicker than if starting from scratch.

Dr. Frank Hiller, chairman of the management board at Deutz, said, "This will give us a significant advantage in a very fast moving competitive environment, and marks the start of our E-Deutz strategy. This will lead to the electrification of our product range where it makes sense from

technical and financial perspectives, as well as the development of hybrid and all-electric solutions for off-highway applications."

Torquedo founder and CEO, Dr. Christoph Ballin, said his company has extensive know-how in respect to electric motors, battery management, power electronics and system integration.

"We look forward to working with Deutz's development teams to play a key part in driving forward electrification in the off-highway sector," he commented.

Deutz will initially invest around €100 million (\$117 million) — including the Torquedo acquisition — to implement the E-Deutz strategy, which the company foresees has potential for further downsizing of combustion engines to bring lower

fuel consumption and operating costs. First products are expected in about 2 years.

Meanwhile, Deutz is targeting heavy duty off-highway applications by sourcing four new large capacity engines from the power solutions arm of construction and industrial equipment manufacturer Liebherr.

The 9 liter 4 cylinder and 12 liter, 13.5 liter and 18 liter 6 cylinder motors being added to the DeutzTCD range will meet the new European Stage V emissions standards being introduced in 2019, as well as U.S. Tier 4 Final, China IV and EU Stage IIIA requirements.

Peak power outputs span 400-830 horsepower, giving the new engines potential customers among grain, beet, potato and forage harvester manufacturers.

Lely Presses Ahead with Forage Products Sale to AGCO

After positive consultation with trade unions and the company's joint works council, Lely is pressing ahead with preparations to sell selected assets in its Forage Products division to AGCO next month. The parties concerned have agreed to a social plan for employees affected by the deal, not all of whom will be taken on by AGCO.

The deal announced earlier this year (Ag Equipment Intelligence, March

2017), will enable Lely to focus its investments on robotic milking, barn automation and the use of data and other innovations on dairy farms.

The transfer to AGCO of Lely's round baler and forage wagon manufacturing facilities in Germany became effective at the beginning of October. Thereafter, both of these comprehensive product lines will likely be added to the Challenger,

Fendt and Massey Ferguson portfolios as appropriate for different markets.

Production of Lely hay mowers, tedders and rakes at the group's head-quarters plant in The Netherlands (Holland) will continue until the end of March next year. But AGCO is not buying those products because similar machines are already available from the Fella-Werke factory it owns in Germany.

South American Ag Equipment Intelligence

The following is continuing coverage from Expointer 2017, one of Latin America's largest ag equipment shows, held in early September in Brazil.

LS Tractor Looking to Expand into 'Big Ag' in Brazil

With an established presence in Brazil's small tractor sector, LS Tractors is eyeing expansion into higher horse-power equipment. The tractor maker reportedly saw a 30% increase in sales (200 units) vs. the previous year during Expointer 2017. In Brazil, LS is headquartered and manufactures its equipment in Garuva, in the southern state of Santa Catarina.

Previously, the company only offered tractors up to 100 horsepower in the country, but rolled out larger equipment, ranging from 100-150 horsepower at the show. According to the company, after having success selling tractors to farmers producing minor crops for the last 4 years, it has caught the attention of larger farmers. During the first 6 months of 2017, the company sold 91% more units vs. the same period of 2016.

"Our sales strategy started out very focused in Rio Grande do Sul because they are the most capitalized small farmers in the country. Then we decided to invest in tractors with bigger engines to get the larger farmers," explained Ricardo Killp, sales director for LS Tractor Brazil in an exclusive interview with *Ag Equipment Intelligence*.

The company says that as it grows its presence in Argentina, it plans to build a factory there. "Still, in Argentina it is hard to sell to the small farmers because they are less capitalized than in Brazil and the government does not subsidize them very much. Another thing is that large farmers are very traditional and want AGCO or John Deere. But the three new tractors introduced at Expointer 2017 will be a game-changer for Argentina," says Gerardo Tisera, export manager for LS Mtron Brazil and Argentina.

Mahindra Unveils First Tractors Produced in Brazil

Indian tractor maker Mahindra launched its S series during Expointer 2017. The 8000 S (80 HP) and 9500 S (95 HP) are the first tractors developed and made in Brazil by Mahindra. The company's Brazilian factory began production in October of 2016 in the city of Dois Irmãos, Rio Grande do Sul. The plant has capacity to produce 1,000 units per year, but the company aims to expand to 2,000 tractors by 2022.

"We have already confirmed our intention that we want to invest U.S.\$70 million in the Brazilian unit and will need to build a new factory. Our intention is to continue to be in Rio Grande do Sul, but we are considering all states for the second factory. It can be an acquisition. Today, we have dealerships in Rio Grande do Sul, Santa Catarina, Paraná and Minas Gerais, the largest markets for us," said Jak Torreta Jr., general operations director for Mahindra in Brazil.

The Brazilian operations of Mahindra were designed to export to other Latin American countries like Paraguay, Chile, Bolivia, Peru, Uruguay and eventually, Mexico. **AEI**

Indian Firm Offers 'Uber Service' for Country's Farmers

Inspired by Uber, the startup firm, EM3 AgriServices, which provides services under Samadhan FaaS (Farming as a Service) centers, is working to provide farm machinery to rural farmers who can't afford to purchase it.

The company says its goal is give access to rural and poor farmers to specialized equipment that would help to improve their earnings. The platform would enable these farms to use newer technology in an efficient and affordable manner through a network of farm centers.

Rohtash Mal, EM3 founder and managing director, says the average Indian farm holdings are 1% compared to the U.S. As a result, most rural farmers aren't able to afford even basic mechanization.

Mal said that the company works with farmers who own equipment like tractors, harvesters and other mechanical implements by allowing them to rent out their assets to help pay off the purchase or generate additional revenue. Working on a for-profit business model, farmers with limited capital and residing in remote regions can get access to implements on a pay-as-you-use basis on either an hourly or acreage pricing, Mal added.

The centers are equipped to handle a comprehensive range of basic and precision farming operations throughout the entire crop production cycle by leveraging internet technology, mobile telecom services, financial services and cloud technologies.

Mal said that farm mechanization is expected to cut cultivation cost by 25% and raise productivity by 20% and will be critical in boosting farmers' income. According to McKinsey estimates, FaaS will be a \$120 billion opportunity as over 92% of India is in need of mechanization.

Apart from this, EM3 has a technical support partnerships for its tractors and harvesters with John Deere, satellite-based technologies partnership with Trimble, a leading provider of advanced location-based navigation and online platform to sell farmers products with ITC's agri-business division.

The company was also invited to present its business model to Bill Gates, whose foundation has committed major funds to boost yields and incomes of millions of small farmers in developing countries of Africa and Asia. The startup recently partnered with the Rajasthan state to set up 300 centers that provide agricultural equipment and services on a pay-for-use basis.

EM3 recently closed a \$10 million in Series B financing led by the Global Innovation Fund and Aspada Investments for expanding into more regions, increasing its inventory and developing technology. It had previously raised \$4.3 million in Series A bonds from Soros Economic Development Fund, through Aspada Investments in 2015.

The company is competing with FarMart, Gold Farm and Trringo, a subsidiary of Mahindra & Mahindra that offer operating similar services. Headquartered in Uttar Pradesh state, the company claims to serve over 8,000 farmers with 25,000 acres under operation.

Declines Return for Large Ag Equipment

After seeing an improvement in August, large ag equipment sales returned to double-digit declines in September, according to the latest sales figures coming from the Assn. of Equipment Manufacturers.

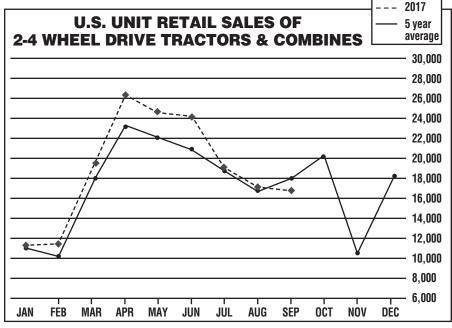
"U.S. row-crop tractor sales declined from down high single digits to down approximately 20% (similar to the declines seen from May through July), contributing to the large ag decline despite growth in 4WD and combines," Mircea (Mig) Dobre, senior research analyst with RW Baird, said in a note.

He adds that Canada trends remain better than the U.S. with last 3 month sales (L3M) for large ag equipment up mid-teens vs. the mid-teens decline in the U.S. market.

- North American large tractor and combine retail sales decreased 10% year-over-year in September after increasing 5% in August and decreasing 16% in July. U.S. sales decreased 14% year-over-year (row-crop -25%, 4WD +25%, combines +6%); Canadian sales were up 6% (row-crop +3%, 4WD up ~80%, combines +2%).
- Combine sales increased 3.7% in September following 20.8% growth in August. U.S. combine inventories decreased 5% year-over-year in August. September is typically an above-average month for combine sales, accounting for 11.4% of annual sales over the last 5 years.
- Row-crop tractor sales declined 19.9% year-over-year compared with the 7% decrease in August. U.S. row-crop tractor inventories dropped 21% year-over-year in August. September is usually a modestly below-average month for row-crop tractor sales, accounting for 8% of annual sales over the last 5 years.
- 4WD tractor sales increased 33% year-over-year in September following the 66.7% increase in August. U.S. dealer inventories of 4WD tractors increased 4.2% year-over-year in August. September is generally a below-average month for 4WD tractor sales, accounting for 7.5% of annual sales the last 5 years.

| SEPTEMBER | 是是 | | | | | | |
|-----------------------|-------------------|-------------------|-------------------|--------------|-------------|-------------------|-----------------------------------|
| Equipment | September 2017 | September 2016 | Percent Change | YTD 20 17 | YTD 2016 | Percent Change | August 2017 Field Inventory |
| Farm Wheel Tractors-2 | 2WD | | | | | | |
| Under 40 HP | 10,601 | 11,668 | -9.1 | 113,205 | 105,064 | 7.7 | 69,767 |
| 40-100 HP | 4,598 | 4,981 | -7.7 | 42,230 | 42,655 | -1.0 | 32,370 |
| 100 HP Plus | 1,101 | 1,461 | -24.6 | 11,685 | 13,973 | -16.4 | 8,224 |
| Total-2WD | 16,300 | 18,110 | -10.0 | 167,120 | 161,692 | 3.4 | 110,361 |
| Total-4WD | 214 | 171 | 25.1 | 1,501 | 1,470 | 2.1 | 795 |
| Total Tractors | 16,514 | 18,281 | -9.7 | 168,621 | 163,162 | 3.3 | 111,156 |
| SP Combines | 478 | 451 | 6.0 | 2,936 | 3,043 | -3.5 | 1,117 |

| SEPTEMBER CANADIAN UNIT RETAIL SALES | | | | | | | |
|--------------------------------------|-------------------|-------------------|-------------------|-------------|-------------|-------------------|-----------------------------------|
| Equipment | September 2017 | September 2016 | Percent Change | YTD 2017 | YTD 2016 | Percent Change | August 2017 Field Inventory |
| Farm Wheel Tractors- | 2WD | | | | | | |
| Under 40 HP | 1,012 | 996 | 1.6 | 10,313 | 8,380 | 23.1 | 7,167 |
| 40-100 HP | 484 | 468 | 3.4 | 3,934 | 3,535 | 11.3 | 4,498 |
| 100 HP Plus | 308 | 298 | 3.4 | 2,504 | 2,519 | -0.6 | 2,317 |
| Total-2WD | 1,804 | 1,762 | 2.4 | 16,751 | 14,434 | 16.1 | 13,982 |
| Total-4WD | 52 | 29 | 79.3 | 640 | 524 | 22.1 | 250 |
| Total Tractors | 1,856 | 1,791 | 3.6 | 17,391 | 14,958 | 16.3 | 14,232 |
| SP Combines | 165 | 169 | -2.4 | 1,512 | 1,160 | 30.3 | 498 |



- Assn. of Equipment Manufacturers

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Argo, Mahindra Eye Turkey for Growing Tractor Sales, Worldwide Expansion

Both Italy's Argo and India's Mahindra have struck deals in Turkey to firmly establish themselves and increase their presence in the country in recent months.

Argo's Production Deal. Argo Tractors of Italy and Anadolu Motor, the Landini distributor in the country, have agreed to a joint venture for the assembly of Landini agricultural tractors in Turkey. The agreement will establish a production facility at Sekerpinar near Istanbul involving initial investments of €10 million (\$11.8 million) with activities scheduled to start in spring 2018 and projected volumes of more than 6,000 units.

The 50-75 horsepower tractors will supply the high volume market in Turkey and also export markets outside Europe with low emissions requirements. The partners envisage adding tractors up to 110 horsepower during the first 24 months of operation.

Anadolu Motor was appointed Landini distributor 4 years ago; it is part of Anadolu Automotive Group, which builds and distributes diesel engines and distributes road and off-highway vehicles in Turkey. The wider Anadolu Group is a diverse industrial operation active in 19 countries with 80 companies, 61 production plants and more than 50,000 employees.

Valerio Morra, president of Argo

Tractors, says the joint venture will help build the position of Argo's Landini tractors in Turkey."

Argo Tractors operates a multifactory manufacturing and assembly complex in northern Italy to supply its 35-210 horsepower range worldwide and already assembles tractors in selected markets from transaxles, front axles and cabs manufactured in-house.

Mahindra Buys Erkunt. India's leading tractor and farm equipment manufacturer Mahindra is strengthening its position in Turkey by purchasing Erkunt Traktor, the fourth largest supplier in the country, whose products are exported to western markets under the Armatrac brand.

The surprise move follows the acquisition earlier this year of a majority shareholding in Hisarlar, an agricultural implement company in Turkey, as Mahindra continues to globalize and expand its ag portfolio.

Rajesh Jejurikar, president of Mahindra's farm equipment division, said, "Erkunt is a strong local brand that has grown rapidly by expanding and modernizing its product range. We look forward to collaborating with the leadership team to expand our footprint in Turkey."

The manufacturer currently owned by the Armagan family claims a 6% share of a domestic market that averaged 48,450 units between 2009-15, and which last year amounted to around 71,000 units. That made it the fourth largest tractor market in the world by volume, according to Mahindra.

The product range, which spans 55-110 horsepower, attracted around 4,700 buyers in 2016 and contributed 41% of the group's \$88 million revenues. The rest came from sales of raw and machined engine block, cylinder head and transmission case castings to the likes of JCB, truck and engine maker MAN, Ford and Deutz. These are produced in a foundry that Mahindra is also acquiring.

Mahindra's eagerness to obtain a foothold in Turkey is understandable when it has the world's seventh largest agricultural output and a farm equipment market worth some \$3.5 billion. Apart from imports of harvesters and higher horsepower tractors, ag machinery is primarily supplied from domestic production, with a number of the global majors having partnerships (AGCO's Valtra unit) or their own assembly facilities — such as CNH Industrial and Same Deutz-Fahr — that also supply export destinations, including North America.

Mahindra's earlier \$19 million investment in Hisarlar gives it around 45% of the market for cultivation implements in the country.

JLG, SDF End Deutz-Fahr Telehandler Agreement

A licensing agreement through which JLG Industries supplies compact telescopic handlers to the Deutz-Fahr agricultural dealer network worldwide is being brought to an end this month.

JLG and SDF Group have jointly announced the termination without giving a reason for the move, but it follows JLG's decision to rationalize and simplify the group's telehandler operations. (Ag Equipment Intelligence, July 2017)

In addition to moving U.S. telehandler production to its McConnellsburg, Pa., headquarters, JLG is closing the

assembly plant in Belgium where the Deutz-Fahr machines are built and plans to produce a more limited range in Romania.

Jonathan Dawson, JLG's senior commercial director for Europe, Middle East, Africa and Russia, says JLG will provide Deutz-Fahr dealers with Agrovector telehandlers until Sept. 30 and ongoing support going forward. He added that any stock machine can be sold by dealers with full service, warranty and support from JLG, and that parts will continue to be available for at least 10 years.

The initial partnership announced

in 2004 saw JLG develop a range of agricultural telehandlers for SDF's Deutz-Fahr dealer network in Europe. In 2010, a new 20 year agreement expanded the arrangement to encompass markets worldwide, with JLG providing sales and technical support direct to Deutz-Fahr dealers while withdrawing its own branded machines from the agricultural market.

In 2005, JLG forged a similar agreement of 25 years duration with Caterpillar to supply telehandlers to its agricultural and construction dealers; first shipments commenced the following year.