

SUSTAINABILITY

IMPACT REPORT

—
BRAZIL



JOHN DEERE

Supplemental to the 2024 Business Impact Report

A LETTER FROM LEADERSHIP

From our earliest recorded exports to Brazil in 1903 to our first joint manufacturing production in 1979, John Deere continues to recognize the value of opportunity in our country, Brazil.

Despite using just 8% of our land for crop production¹, we lead the world in exporting soybeans, cotton, and sugarcane (and we're No. 2 in corn).² We are a leading contributor in the renewable fuel space and one of the top ethanol producers³, positioning Brazil as a major exporter of food, energy, and fiber.²

Brazil's climate unlocks double and even triple crop rotations in a year's time. This climate helps to situate Brazil as an ag superpower positioned to help ensure food security for an expanding global population.

But good weather is not our only differentiator. That would be selling our resilience and ingenuity short.

We believe Brazil's continued investment in infrastructure and technology will enhance our competitive advantage. And with the average age of the Brazilian farmer in their mid-40s, we project the early adoption of tech solutions to only increase — meaning the opportunity here continues to grow.⁴

We want to take this opportunity to recognize and capture that growth with stories highlighting the solutions our customers have been asking for while aligning them to our Leap Ambitions and overall company strategy.

Within these pages we showcase the hours of dedicated work, innovation, and analysis that create alignment to a unified goal: Helping our customers do more with less.

This is most evident in our technology stack and its integration throughout our model farm's production systems. We believe it is here where our corn, soybean, and sugarcane growers expect productivity gains through automation and operational performance.

In Brazil, 30% of rural producers — many of whom are our customers — have access to internet connectivity.⁵ JDLink™ Boost can expand the opportunity for more rural producers to connect their network of machines and benefit from our John Deere Operations Center™.

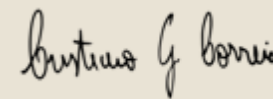
This cloud-based platform — driven by increased automation and autonomy — is designed to enhance productivity and efficiency. Insights from John Deere Operations Center can support informed decision-making, which may help farmers address narrow crop windows, the complexities of fleet management and labor shortages, and other steps associated with sustainable practices.

At John Deere, we seek to continually demonstrate how to maximize every plant on every acre by doing more with less, with solutions like See & Spray™ that can reduce inputs and costs.

Finally, we would be missing an obvious example of what opportunity and growth in Brazil looks like. Our newly constructed **John Deere Research & Development Center — Indaiatuba** is a cutting-edge facility that brings nearly 200 professionals — from various engineering disciplines and our Intelligent Solutions Group — under one roof. Its aim is to design and deliver innovative products and solutions tailored to the unique needs of our tropical ag customers.

In the end, we hope you'll see Brazil the same way we do. And we hope you'll see all that John Deere is doing to bring out the best in our customers, dealers, employees, and home communities.

Respectfully,



Cristiano Correia
Vice president,
Production Systems,
A&T Latin America



Antonio Carrere
Vice president,
Marketing & Sales,
A&T Latin America



Joaquin Fernandez
Vice president,
Manufacturing,
A&T South America

¹ Embrapa, *Análises do Cadastro Ambiental Rural*, <https://www.embrapa.br/en/car/sintese>, (2025).

² Per USDA as of March 2025. Brazil is among the top exporters of crops such as corn, soybeans, cotton, and sugar. For more information see consolidated charts at Economic Data- Agriculture & Turf <https://investor.deere.com/fact-books/default.aspx>.

³ USDA, *Biofuels annual*, <https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Biofuels%20Annual>.

Brasilia_Brazil_BR2024-0022.pdf (2025).

⁴ ABMRA, *The profile of the Brazilian producer*, <https://abmra.org.br/pesquisa-abmra-habitos-do-produtor-rural-abmra/> (2025).

⁵ ABIMAQ SINDIMAQ, *Event promoted by ABIMAQ and CNA discussed the main challenges to boost connectivity in the field*, <https://informaq.abimaq.org.br/evento-promovido-pela-abimaq-e-cna-debateu-os-principais-desafios-para-impulsionar-a-conectividade-no-campo/> (2025).

LEAP AMBITIONS

JOHN DEERE is uniquely positioned to deliver both **ECONOMIC** and **SUSTAINABLE VALUE** for our customers through **ADVANCED TECHNOLOGY** and **SOLUTIONS**.



INCREMENTAL ADDRESSABLE
MARKET OPPORTUNITY

> \$150
BILLION USD

CONNECTING MACHINES AND ENGAGING ACRES: THE PATH TO SUSTAINABLE GROWTH IN BRAZIL

In 2022, we launched our Leap Ambitions — focused, measurable goals designed to deliver financial and sustainable outcomes for our customers and stakeholders. Success in Brazil is integral to our progress on these ambitions. With Brazil's climate allowing multiple crops to be harvested in a year, we believe there is a great opportunity for our solutions to help our Brazilian farmers do more with less.

To begin with, connected machines provide a critical link to our customers and their businesses, which is essential for creating a value proposition through the use of our technology solutions. Our Leap Ambition to connect 1.5 million machines by 2026 is foundational to our strategy, and expanding access to connectivity is vital to our success.

To achieve this, we launched JDLink™ Boost, a satellite-based solution that enables remote monitoring and data transmission, even in areas where traditional cellular or internet services may be limited or unavailable. This will allow farmers to stay connected regardless of location, unlocking access to our technology stack. Those operating in remote locations like Brazil will be able to access automation and sensor reading with machine data captured by JDLink. JDLink Boost is essential to connect new and existing equipment, allowing for broader adoption in the short and mid-term.

Furthermore, while a connected machine, like a tractor or sprayer, is more likely to utilize our precision ag solutions like See & Spray™ or Harvest Settings Automation, creating an engaged acre¹ helps us understand the breadth of utilization of Deere technology across farms.

Our other Leap Ambitions — to increase highly engaged² and sustainably engaged³ acres — are designed to provide insights to further unlock economic and sustainable outcomes. We believe, increased engagement with John Deere Operations Center™ can help create insights that drives agronomic decisions and highlights the impacts of sustainable practices with input reduction (for example, fuel and herbicides) that may lead to bottom-line savings.

With Brazil's growth and potential it's not difficult to link the success of our Leap Ambitions in Brazil to achieving our overall goals as a company. John Deere is working toward broader adoption and benefits to customers by offering JDLink Boost at competitive prices to connect older equipment too. By connecting machines and engaging acres, we seek to provide farmers with the tools they need to improve efficiency and sustainability. As we continue to expand our presence in Brazil, we strive to deliver lasting value to our customers and stakeholders through innovative solutions and sustainable practices.

¹ Engaged acres reflects the number of unique acres with at least one operational pass documented in the John Deere Operations Center in the past 12 months.

² Highly engaged acres is the documentation of multiple production steps and the use of digital tools to complete multiple, value creating activities over a 12-month period.

³ Sustainably engaged acres is the documentation of the number of Deere & Company engaged acres that include incorporation of two or more sustainable John Deere technology solutions or sustainable practices over a 12-month period. This is a dynamic

definition as new technologies and sustainable practices are developed. Current examples of sustainable technology solutions include AutoTrac™, Section Control, Harvest Smart™, and See & Spray™ solutions. Sustainable practices vary by region but include practices such as cover cropping and conservation tillage methods. We updated the methodology in 2023 for more accurate measurements of acres.

⁴ Bolded figures represent Leap Ambition targets for 2026 or 2030. Figures shown below in white (Global) and yellow (Brazil) correspond to final results as of 2024.



2024 LEAP AMBITION PROGRESS⁴

CONNECT
1.5M MACHINES
BY 2026

775K connected
machines globally

→ 73K connected
machines in Brazil

REACH
500M ENGAGED ACRES¹
BY 2026

455M engaged
acres globally

→ 67M engaged
acres in Brazil

ENSURE
50% ENGAGED ACRES ARE HIGHLY
ENGAGED ACRES² BY 2026

125M highly engaged
acres globally

→ 16M highly engaged
acres in Brazil

ENSURE
75% ENGAGED ACRES ARE SUSTAINABLY
ENGAGED ACRES³ BY 2030

197M sustainably
engaged acres Deere

→ 36M sustainably
engaged acres in Brazil



To see more on the 2024 Leap Ambitions progress click here: [Business Impact Report: Sustainability Disclosures and Metrics](#).

Customer Outcomes



MORE TECH MEANS MORE OPPORTUNITY FOR PROFITABILITY AND SUSTAINABILITY IN EVERY PRODUCTION PHASE

The journey of growing a crop is laden with variability. And each year — based on the stresses of weather and timing — our precision technology helps farmers reduce the impact of that unpredictability while allowing them to do more with less.

In Brazil, where the tropical climate allows for double and even triple cropping, the optimal turnaround windows—from planting to harvest and back to planting—can be delayed by wet fields and local climate conditions.

It's here where getting that second crop into the ground is imperative for full yield potential. For example, in the Mato Grosso region, delays in planting second crop corn can have significant implications especially if delays stretch beyond mid-February.¹

This is where our solutions can help offset barriers and help maximize yields.

To demonstrate this, we have highlighted the precision ag technologies that are designed to drive productivity and efficiency with each pass and have showcased their value by modeling potential savings results. The outcomes are based on a model farm analysis, which is built to represent a 7,400 acre row crop farm — producing soybeans in the first crop and corn in the second crop — in Mato Grosso State, Brazil.

Economic and Sustainable Outcomes from the Model Farm²:

- Potential \$115 per acre in value add to John Deere customers²
- Potential 7 kg per acre in CO₂e Savings²

PRODUCTION PHASES AND THE GROWING SEASONS

Our connectivity and digital tools allow farmers to monitor their business, make tactical decisions, and create strategic plans based on data unique to their operation, lending credence to the concept of no two farms, two fields, or two rows of crops are the same.

We believe that John Deere Operations Center™ allows farmers to maximize every acre and optimize each pass in the field by creating work plans based on guidance lines, monitoring field progress and machine performance, analyzing data for future use, and unlocking carbon emission insights from fuel usage.

Furthermore, we are dedicated to developing solutions that provide the opportunity to enhance our customers' profitability and sustainability. We demonstrate this by remaining committed to delivering continuous value through precision technology that can be more affordable, accessible, and adaptable.



PRODUCTION CYCLE PHASES



M4040DN SPREADER

PREPARE

With Brazil's fast and widespread adoption of no-till practices, this phase often centers on making sure the right nutrients are available at the right time and right rate.

- **M4040DN:** Our nutrient applicator is equipped with advanced precision technology, including John Deere Operations Center and GPS-enabled Section Control which prevents overlapping of inputs. This technology applies two sections rather than one and can deliver exceptional performance and uniformity in nutrient application. It also includes a dry box for potassium, phosphorus, and urea.



3100FT SERIES PLANTER

PLANT

Once equipment and fields are ready following nutrient application, it's time to put seed into the ground. Keys to successful planting include optimal weather, seed placement (depth/spacing), clean furrow, and fertilizer application. But they are not alone. Tractor features (air supply and cooling package) can help improve fuel savings.

In addition, the 9R 590 Tractor with the new 13.6L JD14 engine with 590 HP, paired with the new 3100FT Series Planter, equipped with ExactEmerge™ technologies, has the potential to unlock more value for customers by allowing faster planting speeds and more uniform emergence, which can positively impact yield.

- **3100FT Series Planter:** Designed for corn, soybean, and cotton growers, the 3100FT Series is a new seed and fertilizer machine that brings narrow transportability and high-quality technology to the market while offering our full package of performance, uptime, and cost of operation efficiencies.
 - **ExactEmerge** electrical transmissions, row unit, and fertilizer opener new design will provide optimum seed singulation and fertilizer depth control.
 - **Section Control** reduces fertilizer input, while its row-by-row shut off for seeds will prevent overlap.
 - The 3100FT's **Narrow Transport Feature** may help farmers get to the fields quickly by reducing the time to prepare the planter for truck transport.



M4030 SPRAYER

56% REDUCTION ON AVERAGE CONTACT HERBICIDE USAGE²

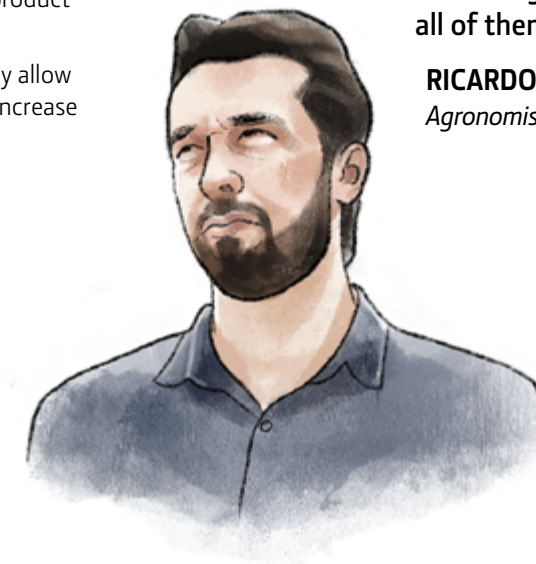
APPLY

When the crop begins to take root and emerge, it battles weeds for soil nutrients, sunshine, and moisture. That's when this phase becomes critical, and our See & Spray™ technology is designed to save time and money. Aiding See & Spray for our Brazil customers is the M4030 sprayer.

- **M4030 sprayer:** The M4030 is a machine with 3,000-liter solution tank capacity. It is designed to enhance spraying quality, improve performance, and reduce costs. This sprayer is a versatile machine, offering three boom configuration options to meet diverse operational needs. Its high underframe clearance enables late-season applications, while integrated tools and advanced technologies ensure precise control and consistent application quality. Additional highlights for this sprayer include:

- **See & Spray Select** continues to advance the precision agriculture landscape by using sophisticated camera and nozzle-control technology to transition from managing by field to zone to row and, eventually, to individual plants. With See & Spray Select, there can be a reduction on average contact herbicide usage by 56%, while still achieving the same weed hitting rate as broadcast application.³

- **Pressure recirculation and product reclaim** can help save up to 10 gallons of chemical solution per cleaning operation or product change by helping to recirculate after rinsing to help achieve uniform product distribution and reduce cleaning times to keep nozzles clear.⁴
- **Individual Nozzle Control** compared to traditional sections may allow for less spraying overlaps with broadcast applications and can increase overall efficiency.



“What I’ve found is it doesn’t matter the size of the weed — small or large — See & Spray’s technology is able to control all of them,”

RICARDO WALKER
Agronomist, Sorriso-MT

S7 800 COMBINE



\$115

POTENTIAL PER ACRE IN
VALUE ADD TO JOHN DEERE
CUSTOMERS²

Throughout the production cycle, a Deere customer farming 7,400 acres of a first crop of soybeans and a second crop of corn could result in the following sustainable outcomes²:

Potential Input Cost Savings: \$43/acre

Fuel: \$1/acre

Seed: \$5/acre

Fertilizer: \$11/acre

Chemicals: \$26/acre

Potential Additional Revenue: \$72/acre

Potential CO₂e savings: 7 kg /acre

HARVEST

The idea of a “short window” doesn’t only impact planting. It is critical during all phases, including the final phase of the production cycle, harvest. Because our customers can experience a second, or even third cropping cycle, getting started again as quickly as possible is essential. In this model, the S7 800 and S5 500 combines can help make that happen.

- **Predictive Ground Speed Automation** on the S7 800 combine is available in our ultimate technology package, uses cameras and satellite images to predict crop conditions and adjust harvesting speed automatically. This helps maintain peak feed rates, increase harvesting capacity, and minimize grain loss. It can boost productivity by up to 20%⁵ and adjusts for weed detection and terrain, reducing operator stress and improving efficiency.
- **Active Terrain Adjustment™** on the S5 500 combine can help mitigate losses in both corn and soy by adjusting key features depending on crop type and machine pitch when harvesting on uphill or downhill terrain.

¹ Second crop implications based on following studies:

Nóia Jr., R. de S., & Sentelhas, P. C. (2019). Soybean-maize succession in Brazil: Impacts of sowing dates on climate variability, yields and economic profitability. *European Journal of Agronomy*, 103, 140-151. <https://doi.org/10.1016/j.eja.2018.12.008>

Fiorini, I. V. A., Pereira, C. S., Pereira, H. D., Medeiros, A. L., & Pires, L. P. M. (2018). Yield and its components according to maize sowing times at offseason in the Northern of Mato Grosso state, Brazil. *Journal of Bioenergy and Food Science*, 5(2), 54-65. <https://doi.org/10.18067/jbfs.v5i2.195>

² All results are internal estimates, will vary, and have not been verified by a third party. Results are calculated based on data gathered from various industry sources and will vary based on the source, year, and region. Modeled results are based on weighted averages on total planted area based on an 8 season crop cycle on a 7400 acres farm located in Mato Grosso State, Brazil, with a double cropping system of soybeans as the first crop and corn as the second crop. Over this period, the average yield was 52 bushels per acre for soybeans and 98 bushels per acre for corn. These figures reflect the influence of climatic variability throughout the cycle, including years marked by severe drought, which impacted overall productivity compared to seasons with more favorable weather conditions. Comparisons are based on typical Deere equipment used on an average operation for this region compared to newest models of equipment and solutions available for region in 2025. Assumptions include market prices for corn, soybeans, fertilizer, herbicide, pesticide, and fungicide all based on 3-year averages (2022-2024) from Agroconsult, Diesel price based on National Agency of Petroleum, Natural Gas and Biofuels price surveys. Savings are based on solutions used in each step of the production cycle for soy and corn double cropping system. AutoTrac™, as a foundational base technology with more than 20 years of grower adoption, is not a technology solution factored as differentiator to these modeled outcomes.

Fertilizer savings is based on using Drybox nutrient distributor M4040DN M25 with two sections in comparison to one section with M4040DN. For planting, savings is based on increased efficiencies/ productivity from two 3131FT planters compared to two 2130 planters, due to increased seed and fertilizer sections, higher seed capacity that is also more balanced with fertilizer capacity, ExactEmerge™ technology, and time reductions due to setup and transport with the narrow design. Two M4030 30m sprayers, with Individual Nozzle Control (INC), pressure recirculation and product reclaim, with and without See & Spray Select. Increased savings can be attributable to product recirculation and recovery system allowing for nearly 10 gallons of chemical savings. (<https://www.deere.com.br/pt/tratos-culturais/pulverizador-m4030/>). Other benefits include more sections, decreasing overlap with broadcast applications and increasing overall fuel efficiency. During harvest applications savings are attributable to updates and efficiencies of four S7 800 compared to four S780 combines and S5 500 to a S550 combine. Efficiencies can be attributable to the new 13.6L engine in

the S7 800 and the ultimate technology package with Predictive Ground Speed Automation. Additional efficiencies are included in the Active Terrain Adjustment solution in the S5 500 reducing harvest losses.

Estimated CO₂e emissions savings are based on herbicide savings, fertilizer savings, and diesel fuel savings with calculations based on the 2022 Argonne Greet National Laboratory's GREET FD-CIC Model for average corn and soybean fields with no-tillage practices and nitrogen fertilizer applications. The majority of estimated emissions savings are derived from corn acres.

Our model farm demonstrated an estimated and potential 51,000 kilograms of CO₂e savings compared to conventional practices driven by using Deere's solutions. This figure represents a potential savings estimate based on a model farm scenario. It does not reflect company-wide Scope 1-3 CO₂e emissions reductions. The per acre in potential CO₂e savings is the total of 51,000 kilograms of CO₂e savings divided by the 7400-acres. Figures rounded to the nearest kilogram for simplicity; rounding may slightly affect proportional representation of smaller values.

Additional potential revenue is based on potential benefits from planter solutions on corn and soybeans yields and additional yield impact on corn from optimization of harvest and planting windows. University studies cited in footnote 1 were used to understand and model corn's yield potential impact based on the optimization of timing of soybean harvest and planting corn attributable to Deere's solutions.

Per Acre in Value Add to John Deere Customers is the sum of the \$43 in Potential Cost Savings per Acre and the \$72 Potential Revenue per Acre and reflects the estimated and potential economic benefits delivered by Deere solutions for each acre farmed, supporting customer productivity and cost efficiency. Figures rounded to the nearest dollar for simplicity; rounding may slightly affect proportional representation of smaller values.

³ Weed control, effectiveness and economy results based on studies conducted by John Deere in the Brazilian Cerrado region, in soybean, corn and cotton crops, in the 2023/2024 and 2024/2025 seasons. Results may vary depending on the stage of crop development, level of infestation and size of invading plants, weather conditions at the time of application, machine setup and adjustments. The results did not show statistical differences between See & Spray™ Select selective application technologies and full area application technology in terms of effectiveness and control of invasive plants. However, See & Spray™ Select selective application technology has shown significantly higher non-residual herbicide savings rates.

⁴ Deere, *M4030 sprays-pressure recirculation and product recovery*, <https://www.deere.com.br/pt/tratos-culturais/pulverizador-m4030/> (2025).

⁵ <https://johndeere.widen.net/s/tpvlfzpxcf/4592208-s-series-combines>.

TWO-ROW CH950 CAN BOOST EFFICIENCY, SUSTAINABILITY OF SUGARCANE HARVEST

As the world's leading producer of sugarcane, Brazil certainly understands the crop's importance as a global food source. But as the country sharpens its focus on greenhouse gases, sugarcane is becoming equally — if not more — valuable in the production of renewable fuels.

Case in point, more than 90% of new cars sold annually within Brazil are considered “flex fuel” while just 5% are battery-electric making ethanol a relevant alternative commodity for the greenhouse gases emission reduction goals of the country.^{1,2}

When compared to more widely visible crops — like corn and soybeans — sugarcane is unique as it regrows off its own stubble or remaining stalk. This regrowth means one sugarcane plant can provide up to five years of harvest opportunity.³ But if the stalk is ripped from the ground, that yield potential is gone for good, which means a clean cut of the plant is critical.

Given the significant role that harvest plays in the sugarcane production system, any lost opportunity throughout this phase can have a potentially

outsized impact on growers. Those challenges include high input and transportation costs for fuel, overall logistics, soil compaction, and yield impacts.

DOUBLING THE HARVEST EFFORT

In 2021, Deere launched the CH950, the first mass-produced independent two-row sugarcane harvester in the industry. Previous models allowed for harvesting only one row of sugarcane at a time because of the sheer weight of the crop.

For context, an average sugarcane yield is about 32-41 tons per acre with a one-row sugarcane harvester netting 40 tons per hour while operating 3,000 hours per year.⁴

By comparison, this means the volume of material processed in a single season by a one-row sugarcane harvester is six times more than an average corn harvester processes. And by adding a second row that sugarcane volume nearly doubles.

When creating the two-row CH950, John Deere engineers addressed the challenge of increased volume of sugarcane processed by utilizing the existing SmartClean™ system and the new RowAdapt™ technology. This technology allows the sugarcane harvested from the dual rows to merge in the machine right after the plant is cut. The harvester then conveys the sugarcane up into a narrow shaft, which enables control of the crop, allowing SmartClean to clean it more effectively. SmartClean is also designed for less sugarcane loss, lower fuel consumption, and reduced debris within the crop.⁵

While nearly doubling the intake of crop is an impressive and welcome outcome, the impact of the CH950 goes beyond productivity.

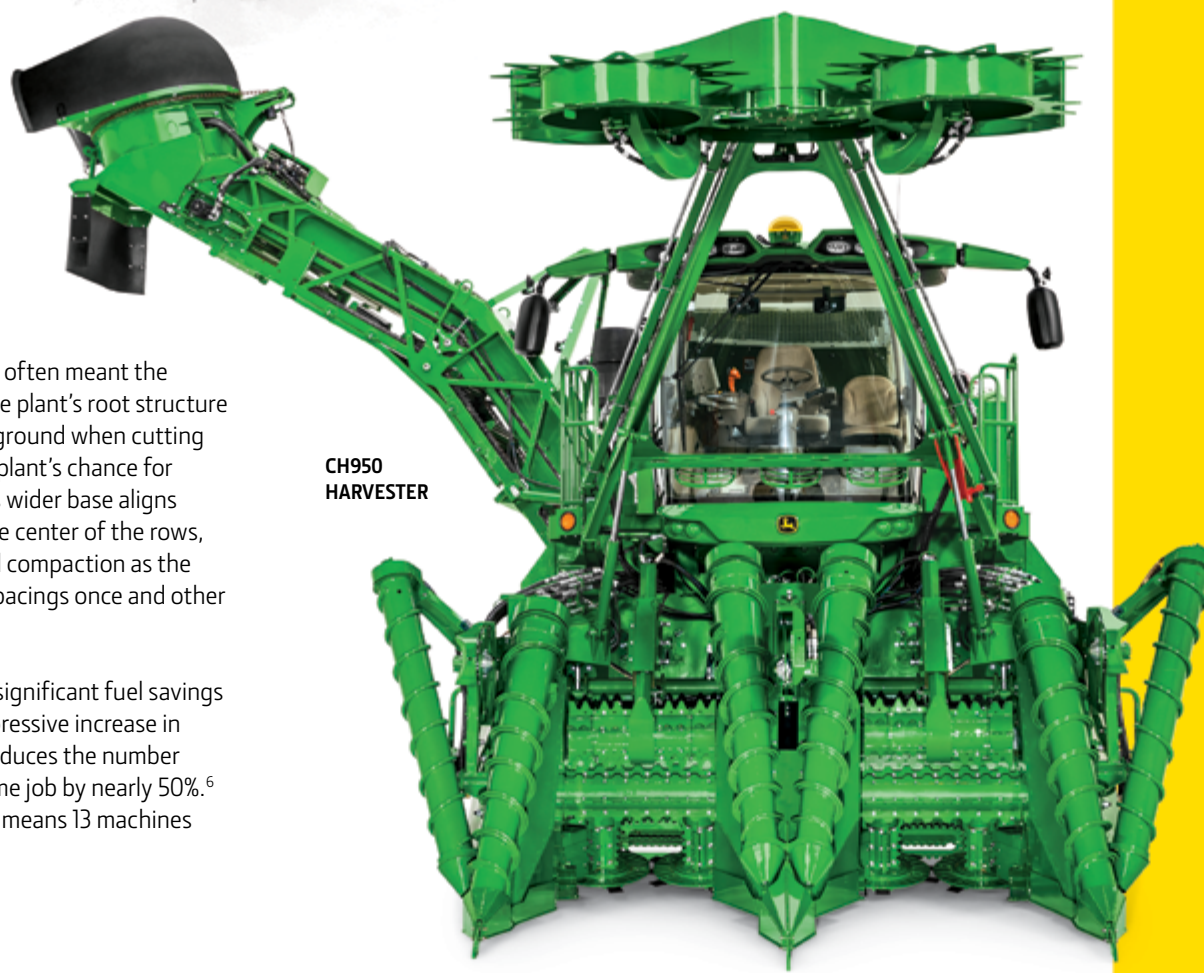
Previous single-row models meant a six-foot-wide harvester had to work in a five-foot-wide row spacing. The challenges associated with this mismatch were multiple. The CH950's solution did not go unnoticed by customers.



"Harvesting two rows simultaneously reduces crop impact, as the machine navigates alternating inter-rows. This minimizes soil compaction, increases yield, and extends the longevity of the cane field."

FELIPE DIAS

*Production Systems
Manager for Global Sugar*



CH950
HARVESTER

The width of the previous machine often meant the harvester's tracks rode up along the plant's root structure and would lift the stalk out of the ground when cutting the plant. This often hindered the plant's chance for regrowth. The rebalanced CH950's wider base aligns the harvester's tracks directly in the center of the rows, allowing for a 60% reduction in soil compaction as the machine only travels certain row spacings once and other row spacings not at all.⁵

We believe that the CH950 offers significant fuel savings and logistical advantages. This impressive increase in productivity of a single machine reduces the number of harvesters needed to do the same job by nearly 50%.⁶ For our model farm operation, this means 13 machines instead of 23.

POTENTIAL SUSTAINABLE OUTCOMES ACROSS PRODUCTION SYSTEM⁷

The CH950 can increase the likelihood that the typical five-year growth cycle for the plant can be extended to at least one year. By extending the replanting cycle, there are benefits beyond increased yields; this also delivers savings in input costs like seed and fuel, which also reduces the overall environmental impact of the production cycle. Because of the multi-cut nature of sugarcane, fuel savings and other outcomes are measured over the lifetime of the crop before it has to be replanted.

Potentially, **181,000 additional metric tons** of sugarcane crushed in season due to reduced harvest loss and yield increase⁷

Nearly **312,000 gallons** of diesel fuel saved

Around **6,000 metric tons** of CO₂e savings

Which may lead to **\$215,000 USD** income estimated from decarbonization credits (CBIOs) generated for RenovaBio Program

\$68/acre Potential Cost Saving

\$77/acre Potential Additional Revenue⁸

42% LOWER CARBON EMISSIONS
IN ETHANOL COMPARED TO
NUMBER 2 DIESEL⁹

SUGARCANE'S ROLE IN RENEWABLE FUELS

The production and distribution network for ethanol is already mature in Brazil. With ethanol's upside, it is no surprise that we are developing a 9-liter ethanol-burning engine, showcased in 2023 at Agritechnica. We believe this concept engine exemplifies our dedication to exploring diverse energy and fuel sources based on customer demand.

While we aim to advance ethanol technology, our current engines are already compatible with renewable diesel¹⁰, which offers a 50-80% reduction in carbon intensity compared to petroleum-based fuels.¹¹

RenovaBio, specifically, provides a viable program for our Brazilian customers. RenovaBio is Brazil's National Biofuels Policy aimed at reducing transportation carbon intensity by expanding biofuel usage and developing a carbon credit market. Mills that produce ethanol and ethanol producers can increase their revenue by producing certified biofuels, benefiting from the sale of decarbonization credits (CBIOS).

We will continue to support our customers as they scale their businesses with new revenue streams from programs like RenovaBio and others as Brazil looks to promote renewable fuels.

"Sugarcane offers a circularity story, where farmers cultivate the sugarcane, which is then processed into ethanol. This ethanol fuels our agricultural machinery, which, in turn, is utilized by producers to grow even more sugarcane. This creates a remarkable cycle of sustainability and efficiency, enhancing productivity while significantly reducing carbon emissions."

ALFREDO MIGUEL NETO

*Director, Corporate Affairs,
Communications & Citizenship, Latin America*



¹ Estimations based on ANFAVEA Anuário Digital 2024. Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA). <https://www.scribd.com/document/747591364/ANFAVEA-ANUARIO-DIGITAL-2024-NOVOATUALIZADOalta-compressed>

² According to ANP (Brazilian Petroleum National Agency), around 50% of the total fuel sold in Brazil in 2024 was ethanol. <https://www.gov.br/anp/pt-br>

³ Goes, T., Marra, R., de Araújo, M., Alves, E., & de Souza, M. O. (2011). Sugarcane in Brazil: Current Technologic Stage and Perspectives. Embrapa. <https://www.alice.cnptia.embrapa.br/alice/bitstream/doc/901051/1/SugarcaneinBrazil.pdf>

⁴ Based on typical sugarcane operation of 104,000 acres in Brazil.

⁵ Deere, CH950 Sugar Cane Harvester. <https://www.deere.com/en/harvesting/ch950-sugar-cane-harvester/> (2025).

⁶ 50% increase in productivity is based on the comparison of a fleet 13 double row sugarcane harvesters to 23 single row harvesters.

⁷ All results are internal estimates, will vary, and have not been verified by a third party. Results are calculated based on data gathered from various industry sources and will vary based on the source, year, operation, and region. Modeled results are based a sugarcane farm operating in Brazil on 104,104 acres, 3.5 million tons of sugarcane produced. These figures represent the outcomes realized within the farm operating only CH950 Sugarcane Harvesters across the entire operation in comparison to the outcomes of a single-row harvester across the entire operation. This considers at least 8 cuts of sugarcane. Diesel price is based on average of monthly diesel prices from 2024-January to 2024-December from National Agency of Petroleum, Natural Gas and Biofuels. Fuel savings is based on the lower consumption of diesel

fuel per ton of cane harvested when compared with single row machine, CH570. Estimated hours of labor saved is based on reduction of harvesters needed, reduction of tractors hauling and thus employees needed. Additional amount of sugarcane produced is based on a reduction of 30-50% cane loss reduction and yield increase from key features like the cleaning system and controlled traffic via tread matching row spacing (<https://www.deere.com/en/harvesting/ch950-sugar-cane-harvester/>). CO₂e savings is based on diesel fuel, chemical (herbicide, pesticide, fungicide), and fertilizer savings per ton of sugarcane crushed from base scenario with calculations based on RenvaBio's RenovaCalc.

⁸ Total additional revenue includes estimated additional income from decarbonization credits (CBIOS) from Renavbio.

⁹ Based on Argonne National Laboratory's GREET model

¹⁰ John Deere engines are compatible with biodiesel blends up to B20, provided they meet ASTM D6751 or EN 14214 specifications. Biodiesel blends above B20 can harm the engine's emission control systems. Their use must follow the technical manual's recommendations, such as using fuel conditioners, frequently monitoring the engine oil level, and addressing potential compatibility and maintenance issues. While biodiesel use may reduce power and fuel economy, it significantly enhances sustainability by lowering carbon intensity. For further details, please refer to the technical manuals. Additionally, using blends above B20 requires specific conditions and considerations to ensure safe and effective operation.

¹¹ CA.gov, Renewable diesel is increasingly used to meet California's Low Carbon Fuel Standard, <https://www.eia.gov/todayinenergy/detail.php?id=37472> (2024).

¹² Equivalencies based on U.S. Environmental Protection Agency Greenhouse Gas Equivalencies Calculator, Greenhouse Gas Equivalencies Calculator | US EPA

Sustainable Practices



DOING MORE WITH LESS: INNOVATIONS IN BRAZILIAN AGRICULTURE

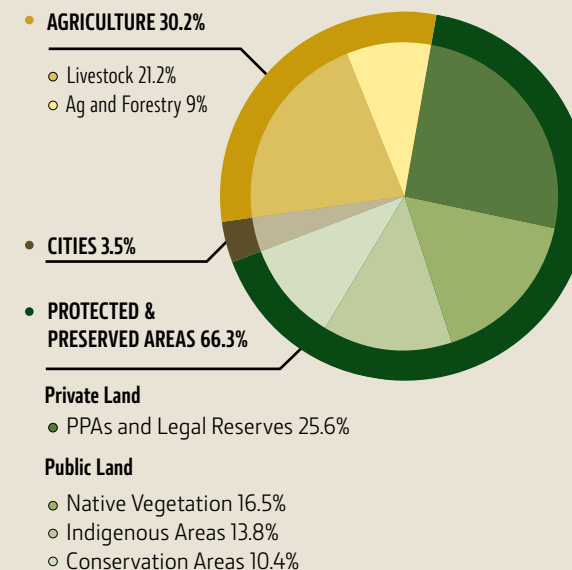
As an agricultural powerhouse, Brazil plays a critical role not only in sustaining its own population but also in ensuring global food security as a leading exporter.

Brazil's innovative agricultural practices have helped make the country one of the top producers of sugar, corn, soybeans, cotton, and livestock. By integrating key technologies, Brazil also has been able to increase productivity while minimizing resources.

These actions are essential as Brazil looks to fully harness the power of its tropical climate to grow and harvest multiple crops annually.

Between 1990 and 2024, grain production in Brazil grew by nearly 415% while the planted area increased by nearly 110%.¹ According to Embrapa, technological advancements in agriculture have significantly increased productivity, allowing Brazil to achieve high production levels without a proportional increase in the planted area.²

BRAZILIAN LAND USE BREAKDOWN³: AGRICULTURE, LIVESTOCK, AND PROTECTED AREAS



In addition to the productivity gains already achieved, it's important to highlight that, according to Brazil's Rural Environmental Registry (CAR), 25.6% of the country's territory is preserved within private rural properties as Permanent Preservation Areas (PPAs) and Legal Reserves.³ These are legally protected areas under the responsibility of landowners, where deforestation and agricultural use are not permitted.

This reality underscores the importance of investing in technology to do more with less. With John Deere solutions, it's possible to maximize the potential of the available productive land while maintaining a strong commitment to sustainability and environmental preservation.

SOIL COMPACTION IN BRAZIL

When soil compacts, pores — or waterways for rainfall and irrigation — can be closed off, meaning roots can struggle to grow properly, and vital nutrients are not transferred to the plant. This eventually can reduce yields and increase erosion.

Even in Brazil, a country that embraces no-till farming practices, compaction remains a challenge. Clay-rich soil, heavy machinery, and minimal soil disturbances are leading causes for compaction.

And the country's tropical climate both aids and hinders farmers' yield potential. Double and triple cropping means machines are in fields multiple times over the course of a growing season and frequent rains mean machines are often entering fields when the ground is wet.

Farmers work to offset these effects by utilizing cover cropping, controlled traffic farming, and subsoiling.

John Deere technology also can reduce the impact large machines create by limiting unnecessary trips over already worked ground. Guidance systems like AutoTrac™ and AutoPath™, can help implement controlled traffic farming which can reduce soil compaction.

Subsoiling with a rotary soil decompaction solution, recently released by Deere, helps keep straw coverage in no-till farming while using rods to break up the soil evenly, improving soil aeration and water and nutrient infiltration.⁴

BRAZIL'S INNOVATION: NO-TILL FARMING

The rapid expansion of agriculture in Brazil in the 1970s was based on conventional soil preparation. This may have caused soil losses of up to 4 tons per acre of grain produced.⁷

Farmers, governmental and international support programs, research institutions, rural extension initiatives, universities, cooperatives, farmers' associations, and agricultural industries all participated individually and collectively to combat the problem. A viable solution based on these collective efforts was the integration of no-till farming.

By the 1980s and 1990s, a myriad of factors, including the energy crisis, reduction in the

cost of the herbicide glyphosate, hybrid development, and the availability of no-till technology and machinery, led to the further expansion of no-till farming.⁸

Unique to Brazil is the "Sistema Plantio Direto" or No-Till System, where seeds are planted without ploughing the soil, maintaining ground cover, and managing soil organic matter. This system minimizes the interval between the harvest of one crop and the sowing of the next.⁹

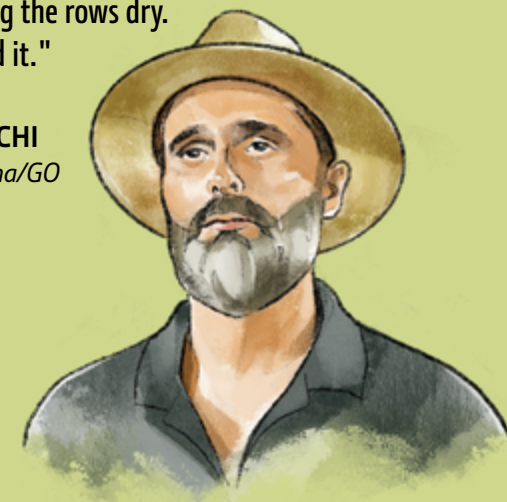
Around 80% of the total physical area used to produce corn and soybeans in 2025 practices no-till farming.¹⁰



When asked about the Rotating Soil Decompactor, Cristiano Zavaschi, Agronomist said the following:

► "The soil became looser and more porous, improving water retention during the grain filling phase. After heavy rains, we found that the soil absorbed most of the water, leaving the rows dry. I highly recommend it."

CRISTIANO ZAVASCHI
Agronomist, Cristalina/GO



13% INCREASE IN CROP PRODUCTIVITY⁵

75% INCREASE IN SURFACE RESIDUE COVERED COMPARED TO CONVENTIONAL SOIL MANAGEMENT⁶

BENEFITS OF DOUBLE CROPPING PAIRED WITH NO-TILL PRACTICES

Pairing crop rotation with no-till practices can facilitate the incorporation of organic matter and cycling of nutrients, leading to economic and environmental benefits such as reduced fertilizer usage.¹¹

Reducing fertilizer usage and increasing organic matter in the soil can reduce the carbon intensity of agricultural production.¹² In 2024, nearly 80% of the area in Brazil used to produce corn is under a double cropping system, typically soy-corn.¹⁰

From the beginning of the crop cycle with planting — with our new 3100FT Series Planter — through harvest — with our S7 Combine — we're helping farmers unlock efficiency gains.

For example, the S7 can help increase harvest productivity by up to 20% with technologies like Predictive Ground Speed Automation and Harvest Setting Automation.¹³

And the 3100FT allows for narrow transportability, which is designed to save time and increase operational capacity while also reducing input costs from its updated row unit and fertilizer opener designs.

In sum, Brazil's sustainable agricultural practices, supported by innovative technologies and collaborative efforts, offer a model for increasing productivity while minimizing environmental impact. From no-till farming to double cropping to the ICLF partnership, Brazil demonstrates how to do more with less, ensuring long-term agricultural success and contributing to global food security.



Click here to see how [John Deere's model farm](#) for soy and corn demonstrates how our equipment can help increase efficiency and yield.



"The world expects two things from Brazilians: food in both quantity and quality. At the same time, consumers increasingly want transparency — they want to know the environment in which the food was grown, how it was produced, who harvested it, how it was transported, and how it ultimately reached the supermarket shelf."

MARIZE PORTO

Rural Producer, Santa Brígida Farm

ICLF: INTEGRATION OF CROPS, LIVESTOCK, AND FORESTRY

The Integration of Crops, Livestock, and Forestry (ICLF) is a comprehensive initiative aimed at enhancing agricultural productivity and sustainability in Brazil.

This innovative program promotes the recovery of degraded pastures while targeting the improvement of soil fertility, allowing for additional land use without impacting forests. By leveraging degraded pastures, ICLF intends to increase Brazil's total potential arable land area.

ICLF is a key tool in Brazil's Nationally Determined Contributions under the Paris Climate Agreement goals.¹ ICLF aims to sustainably intensify land use in agricultural areas, increase production efficiency, and address the need to reduce deforestation and greenhouse gas emissions.

John Deere has been a founding member of the ICLF organization and has worked in partnership with Embrapa, Brazilian Agricultural Research Corporation, for over 15 years to promote this system to Brazilian farmers.

For example, the Santa Brígida Farm, an ICLF farm, began adopting ICLF practices in 2006 and has become one of ICLF's Technological Reference Units, producing beef cattle, soybeans, corn, and maintaining eucalyptus trees.² Deere's support for this initiative further underscores its support of sustainable agriculture and environmental stewardship.

Brazil's ICLF initiatives consider approximately 69 million acres of degraded pastures for crop cultivation. This represents a nearly 35% increase in Brazil's total planted area compared to the 2022/2023 crop year.³

¹ Grain-By Product Historical series of Crops, Conab, <https://www.conab.gov.br/info-agro/safras/serie-historica-das-safras/itemlist/category/908-graos-por-produtos> (2025).

² Pereira, P.A.A., Martha, G.B., Santana, C.A. et al. The development of Brazilian agriculture: future technological challenges and opportunities. *Agric & Food Secur* 1, 4 (2012). <https://doi.org/10.1186/2048-7010-1-4>

³ Embrapa Satellite Monitoring, with data from IBGE, CNA, MMA, FUNAI, DNIT, ANA, MPOG (2017). Accessed on May 22, 2025, from <https://www.embrapa.br/en/car/sintese>.

⁴ Deere, Rotating Soil Decompactor, <https://www.deere.com.br/pt/tratos-culturais/descompactador-de-solo-girat%C3%B3rio/> (2025).

⁵ Resulting from studies performed by John Deere in Campo Verde, MT, soy crop, yield 2023/2024, comparing no-till with the utilization of the soil decompactor.

⁶ Igor Dilly Martins, "Influência de manejos de solo sobre as propriedades físico-hídricas do solo," Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul - Campus Ibirubá, 2023. <https://dspace.ifrs.edu.br/xmlui/bitstream/handle/123456789/1464/1234567891464.pdf?sequence=1&isAllowed=y>.

⁷ AMADO, T. J. C.; ELTZ, F. L. F. Plantio direto na palha: rumo à sustentabilidade agrícola nos trópicos. *Ciência e Ambiente*, v. 27, p. 49-66, 2003.

⁸ Evolution of NTS in Brazil, Embrapa, <https://www.embrapa.br/en/agencia-de-informacao-tecnologica/tematicas/sistema-plantio-direto/fundamentos/historico/evolucao-do-spd-no-brasil> (2025).

⁹ No-Till System, Embrapa, <https://www.embrapa.br/en/agencia-de-informacao-tecnologica/tematicas/sistema-plantio-direto/fundamentos/conceitos/semeadura-direta-e-plantio-direto> (2025).

¹⁰ Based on the analysis from the COGO Consulting report, the FEBRAPDP data (<https://febrapdp.org.br/download/14588evolucao-pd-no-bbrazil-2021-jpg.jpg>), and Deere's calculations using a fixed growth rate between 2006 and 2018, as well as a 2% fixed growth rate, it is estimated that 80% of the total physical area of corn and soybeans grown in Brazil practices no-till farming (2025).

¹¹ Rodrigues, R. de A. R., & Pugas, J. (2021). O Sistema Plantio Direto (SPD) e a conservação do solo. In K. Barcelos (Ed.), *Matopiba: perspectivas sobre a sustentabilidade da soja* (pp. 75-77). Embrapa. <https://www.alice.cnptia.embrapa.br/alice/bitstream/doc/1135504/1/O-Sistema-Plantio-Direto-SPD-e-a-conservacao-do-solo-2021.pdf>

¹² Based on the 2022 Argonne Greet National Laboratory's GREET FD-CIC Model

¹³ Deere, S7 Combines, <https://johndeere.widen.net/s/tpvlfzpxcf/4592208-s-series-combines>, (2025)

¹ Brazilian Government, *Brazil's NDC National determination to contribute and transform*, https://unfccc.int/sites/default/files/2024-11/Brazil_Second%20Nationally%20Determined%20Contribution%2028NDC%29_November2024.pdf (2025).

² CNA Brazil, *ICLF: four letters that transform inside the gate*, <https://www.cnabrazil.org.br/noticias/ilpf-quatro-letras-que-transformam-dentro-da-porteira> (2025).

³ Embrapa, *Brazil has 69 million acres of degraded pastures with potential for agricultural expansion*, <https://www.embrapa.br/en/busca-de-noticias/-/noticia/87076753/brasil-possui-28-milhoes-de-hectares-de-pastagens-degradadas-com-potencial-para-expansao-agricola> (2025).

REPORTING SCOPE AND ISSUANCE

Except where specifically noted otherwise, the reporting period of the Sustainability Impact Report- Brazil covers subject matter and data from Deere & Company's fiscal year 2024 (November 2023- October 2024) and is limited

to operations owned or operated by Deere & Company. References to "John Deere," "our," "we," or "the company" mean Deere & Company and its subsidiaries, unless the content indicates otherwise. This report was published on June 10, 2025.

FORWARD-LOOKING STATEMENTS

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Statements in this report that relate to future events, expectations, and trends involve factors that are subject to change, and risks and uncertainties that could cause actual results to differ materially. These risks and uncertainties are difficult to predict and often are outside of the control of the company.

When used in this report, the words "may," "could," "anticipate," "target," "plan," "continue," "goal," "commit," "achieve," "project," "intend," "estimate," "believe," "expect," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such words.

Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our present expectations or anticipated results. Forward-looking statements are neither historical facts nor assurances of future performance.

Instead, they are based only on the company's current beliefs, expectations, and assumptions regarding the future of its business, strategic objectives, projections, anticipated economic changes and trends, and other conditions. Forward-looking statements in this report may include, but are not limited to, equipment designs that optimize performance outcomes for customers; efforts regarding energy, water, and emissions; and the development of mechanisms for tracking sustainability metrics. Important factors that could cause the company's actual results to differ include, among others, the following: (i) the agricultural business cycle, which can be unpredictable; (ii) uncertainty of government policies and actions with respect to global trade, tariffs, trade agreements, and the uncertainty of our ability to internationally sell products based on these actions and policies; (iii) the ability to understand and meet customers' changing expectations and demand for the company's products and solutions; (iv) ability to execute business strategies including our Smart

Industrial Operating Model and Leap Ambitions; (v) political, economic, and social instability of the geographies in which we operate; (vi) changes in climate patterns, unfavorable weather events, and natural disasters; (vii) availability and price of raw materials, components, and whole goods; (viii) dealer practices and their ability to manage inventory and distribution of our products and to provide support and service for precision technology solutions; (ix) connectivity to our technology and changes to governmental communication channels; and (x) compliance with a variety of U.S., foreign, and international laws, regulations, and policies relating to, but not limited to the following: cybersecurity and data privacy, environmental, farming, import/export and trade, tariffs, telematics, and telecommunications.

The forward-looking statements speak only as of the date of this report, and undue reliance should not be placed on these statements. Goals, targets, intentions, ambitions, or expectations described in this report, including our Leap Ambitions, are

aspirational and subject to change and are not guarantees or promises that all goals, targets, intentions, ambitions, or expectations will be met. Certain information contained herein has been obtained from third parties, and in certain cases has not been updated through the date hereof. We have not independently verified the data from these third-party sources in every instance and make no representation regarding the verification of third-party data, unless explicitly otherwise indicated. Further information concerning the company and its businesses including factors that could materially affect the company's financial results, is included in the company's filings with the Securities and Exchange Commission (SEC) (including, but not limited to, the factors discussed in Item 1A, Risk Factors of the company's most recent Annual Report on Form 10-K, and quarterly reports on Form 10-Q).