



# *Excellence in Commercial Integration and Execution*



**Capital Markets Day  
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# Disclaimer

## Cautionary Statements Regarding Forward-Looking Information

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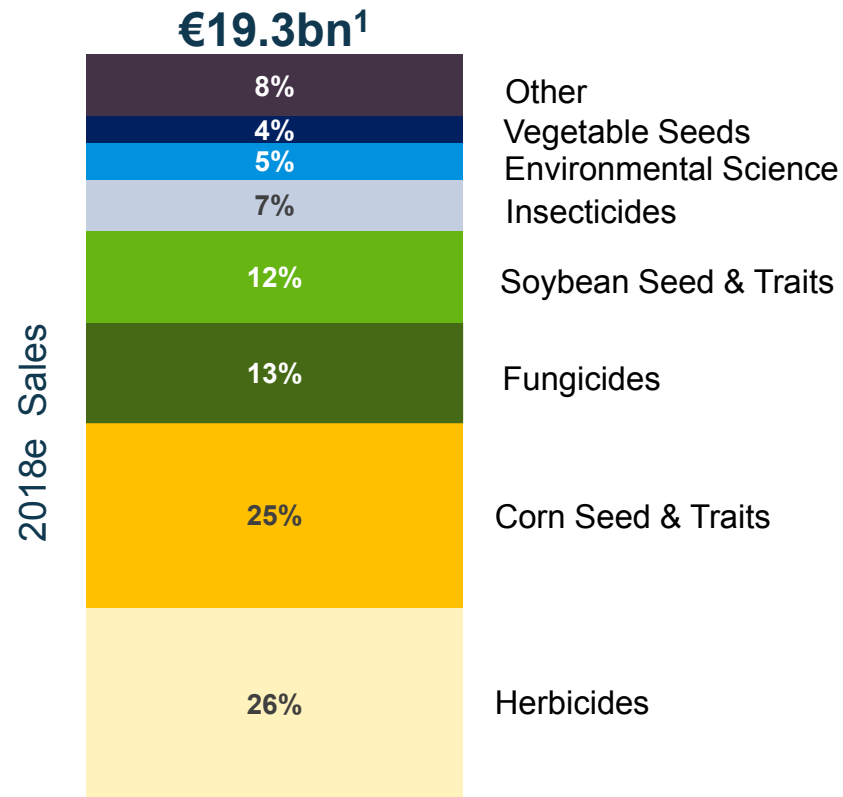
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# Target Greater than 4% Sales CAGR from 2018 to 2022

Leadership and Innovation Translate into Above Market Sales Growth



## Key Sales Growth Drivers

- // Deliver annual germplasm refresh across the seeds portfolio to drive price and share gains
- // Continue penetration of Roundup Ready Xtend crop system; transition to XtendFlex with expected U.S.A. launch in 2020<sup>2</sup>
- // Continue penetration of Intacta RR2PRO; transition to Intacta 2 Xtend with expected launch in South America in 2021<sup>2</sup>
- // Increase crop protection sales on the >400m acre seed & trait footprint; FieldView platform an enabler
- // Maximize sales synergies

<sup>1</sup> The unaudited Pro-forma data are presented as if both the acquisition of Monsanto and the associated divestments had taken place as of January 1, 2018. Sales of Monsanto are presented in periods as per the Bayer fiscal year. One-time effects of business operations, the accounting for discontinued operations and the recognition and measurement of sales from certain business transactions have been adjusted in line with our accounting. Due to this simplified procedure, they explicitly do not reflect sales according to IFRS or IDW RH HFA 1.004, meaning they have not been audited.

<sup>2</sup> Pending regulatory approvals



# Corn Seed & Trait: Leading Share Position Enhanced by Innovation

Annual Germplasm Upgrade, New Technology Launches and Digital Ag Key to Growth

## Germplasm Position and Share<sup>1</sup>

U.S.A.	<b>#1</b>	<b>&gt;50%</b>
Brazil	<b>#1</b>	<b>~45%</b>
Argentina	<b>#1</b>	<b>~75%</b>
E.U.	<b>#2</b>	<b>~20%</b>

2018 global trait acres<sup>1</sup> **~110 m**

## Sales Growth Opportunity Areas: 2018 - 2022



**INSECT CONTROL:** SmartStax Pro

**WEED CONTROL:** New herbicide tolerance traits

**DIGITAL AG:** Climate FieldView

**SEED GROWTH:** BioRise 2 corn offering and NemaStrike Technology

**SEED:** Annual launch of ~200 new higher-performing hybrids globally

NEAR TERM

2022+

<sup>1</sup> Internal estimates of branded and licensed germplasm share positions



# Annual Germplasm Upgrades Serve as Foundational Growth Driver

Leading Global Germplasm Libraries and Advanced Breeding Tools Deliver High-performing Products

## Corn



- // Deployed >200 hybrids in 2018
- // Maintain average >7 bu/acre U.S.A. yield advantage with leading hybrids

## Soybean



- // Deployed ~200 varieties in 2018
- // Maintain average ~2 bu/acre U.S.A. yield advantage with leading varieties

## Cotton



- // Deployed 20 varieties in 2018
- // Maintain lint/acre U.S.A. yield advantage with leading varieties; 2018 was 81lbs of lint per acre advantage

## Vegetables



- // Deploy ~150 varieties annually; focus in tomatoes and peppers
- // Focus on disease resistance and yield with new launches

Protect performance with NemaStrike Technology and other seed-applied solutions

Provides for annual price mix gains as growers trade up to higher-performing seeds

Digital Ag becomes proof point for performance advantage



# Leading Go-to-Market Choices Complement Product Performance

~7,800 Customer-facing Employees Meeting Customers Where They Want to Purchase our Products



<b>GO-TO-MARKET</b>	<b>Value Proposition</b>	<b>Product Performance</b>	<b>Full Season Service</b>	<b>Relationship</b>	<b>Value</b>
	<b>Multi-Brand Strategy 'Seed'</b>	// DEKALB // Asgrow // Deltapine	// Channel // Agroeste	// U.S.A Regional Brands // Agroceres	// U.S.A. Corn States // Latijereta
	<b>Multi-Brand Strategy 'Crop Protection'</b>	// Luna // Alion // Sivanto	// Velum Prime // Xpro // Movento	// Fox	// Confidor // Nativo
	<b>Channel Strategy 'Route to Market'</b>	// Direct Dealer // Retailer // Magnum	// Agency // Dealer // Direct	// Dealer // Direct	// Licensing // Indent

**Digital Ag has the potential to inform and improve our customer relationships and go-to-market strategy**



# Soybean Seed & Trait: Key Trait Upgrades Expected to Fuel Growth

New Solutions in Insect and Weed Control Provide More Options for Farmers in the Americas

## Germplasm Position and Share<sup>1</sup>

U.S.A.	<b>#1</b>	<b>&gt;40%</b>
Brazil	<b>#1</b>	<b>~20%</b>

2018 global trait acres<sup>1</sup> **~220 m**

## Sales Growth Opportunity Areas: 2018 - 2022



**INSECT CONTROL:** Intacta 2 Xtend

**WEED CONTROL:** XtendFlex Soybean

**DIGITAL AG:** Climate FieldView

**SEED GROWTH:** NemaStrike Technology

**SEED:** Annual germplasm upgrade of ~200 higher-performing varieties annually

NEAR TERM

2022+

<sup>1</sup> Internal estimates of branded and licensed share positions



# Roundup Ready Xtend Crop System Continues Record Growth

XtendFlex Soybeans Serve as Next-generation to Provide Tremendous Flexibility in Weed-control Options

Roundup Ready 2 Xtend Soybean



Greenville, MS June 2017

XtendFlex Soybean



Robersonville, NC August 2018

- // **>40m acres in 2018**; expect the Roundup Ready Xtend Crop System for soybean and cotton to grow to 60m acres in 2019
- // **EPA continues registration of XtendiMax with VaporGrip<sup>2</sup>** technology, a low-volatility dicamba formulation for in-crop use
- // Potential fit on all soybean acres in North America; **broadly licensed to U.S.A. seed companies with >90% share**

<sup>1</sup> Pending regulatory approvals <sup>2</sup> XtendiMax with VaporGrip Technology is a restricted use pesticide

- // Trait combination to provide tolerance to three herbicides; **glyphosate, glufosinate and dicamba**
  - // Aligns with the successful approach in Bollgard II XtendFlex cotton
- // Stewarded Ground Breakers trials expected in the U.S.A. in 2019, with **anticipated launch in 2020<sup>1</sup>**





# South American Soybean Trait Technologies Continue to Advance

Insect-protected Soybean Technologies Have a Fit on ~100m Acres in South America

Intacta RR2 PRO



Nao-Me-Toque, Rio Grande Do Sul, Brazil 2010

- // Exceptional performance, penetrating 60m acres in South America in just five years
- // Consistently provides yield advantage and reduces insecticide applications for the primary insect pest in tropical soybean

<sup>1</sup> Pending regulatory approvals

Intacta 2 Xtend











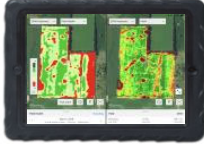


Uberlandia, Minas Gerais, Brazil 2017/2018

- // Intacta 2 Xtend trait technology to provide an additional mode of action for insect control and both glyphosate and dicamba tolerance for weed control
- // Targeting stewarded trials starting in 2019 and expected launch in 2021<sup>1</sup>



# Herbicides: Capitalize on Opportunities with Leading Portfolio

New Value Capture Concepts Around Integrated Weed Management in a Changing Weed Control Market Environment

	Global Herbicide Market <sup>1,2</sup>		Seed & Trait Footprint <sup>3</sup>		Key Growth Factors	Digital Tools
	Crop % of Mkt.	Bayer Position <sup>4</sup>	Bayer % of Planted Acres			
 <b>Corn</b>		<b>#1</b>	NA  LATAM 	<b>Corn in NA and LATAM:</b> Expand share of combined portfolio by including selective herbicides in existing grower offers		<b>In-season Field Health</b>
 <b>Soybean</b>		<b>#1</b>	LATAM 	<b>Soybean in LATAM:</b> Launch new selective herbicides to complement glyphosate business and contribute to holistic crop solutions		<b>In-season Field Health</b>
 <b>Cereals</b>		<b>#1</b>	<i>Not relevant</i>	<b>Cereals in EMEA:</b> Defend/expand industry-leading position in cereals through differentiated lifecycle management		

<sup>1</sup> Global Market: Represents the defined crop's portion of the global herbicide market. Optimas forecast for Market 2018, Status October 2018  
<sup>2</sup> Bayer Indication Position: Agrowin 2017 + estimations for DowDupont and Bayer divestments split and allocation, Status October 2018;  
<sup>3</sup> Bayer S&T Footprint: Internal estimations of percent of planted acres in the region containing at least one seed or trait technology from Bayer  
<sup>4</sup> Corn herbicide position is head-to-head with ChemChina



# Glyphosate is a Vital and Effective Tool

Every Year, as much as 40% of World's Potential Harvests are Lost to Pests, Including Weeds

Glyphosate was developed 40+ years ago and is today the most widely used, non-selective herbicide in the world. It is extremely effective in controlling weeds by blocking an enzyme necessary for photosynthesis. When used as directed, glyphosate is not harmful to people and animals.

## Benefits of Glyphosate

- // In past, farmers controlled weeds by hand
- // With mechanization, farmers moved to plowing soil, which contributes to topsoil erosion, and using multiple selective herbicides
- // Using glyphosate-based herbicides, farmers can leave soil intact, supporting soil health and reducing greenhouse gas emissions
- // Overall, more effective, more sustainable and leads to larger harvests

## History of Safe Use

- // For 40+ years, overwhelming conclusion of regulators worldwide has been glyphosate can be used safely according to label instructions, including EPA, EFSA, and ECHA
- // Extensive body of science (800+ studies over several decades) confirm that glyphosate-based products are safe when used as directed and EPA's 2018 risk assessment examined more than 100 studies and concluded that glyphosate is not likely to be carcinogenic to humans.
- // 160+ countries have approved use of glyphosate













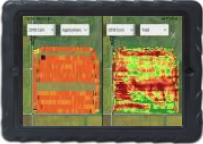
*"I need glyphosate on my farm. It helps me be more sustainable, both environmentally and economically, it helps me protect my soil from erosion and build soil health, and it helps me sequester carbon, reducing greenhouse gas emissions ..."*

Jake Leguee  
Leguee Farms, Saskatchewan



# Fungicides: Soybean and Horticulture Portfolios Expected to Drive Growth

Securing a Plentiful Supply of High Quality Produce Through Effective Disease Management

	Global Fungicide Market <sup>1,2</sup>		Seed & Traits Footprint <sup>3</sup>	Key Growth Factors	Digital Tools
	Crop % of Mkt.	Bayer Position	Bayer % of Planted Acres		
 Horticulture		#2	#1 in vegetable seed sales	<b>Horticulture globally:</b> Growth driven by innovation and portfolio breadth, e.g. Luna, with multi-crop performance and produce shelf-life benefits, and expansion of Nativo and Infinito	
 Soybean		#1	LATAM 	<b>Soybean in LATAM:</b> Growth driven by Fox and Fox Xpro with performance that addresses rust. Further synergies to capitalize upon with seeds and herbicide portfolio.	
 Cereals		#1	Not relevant	<b>Cereals globally:</b> Retaining leading position through breadth of modes-of-action and innovation for sustainable solutions	
 Corn		#3	NA 	<b>Corn NA:</b> Develop fungicide market through novel business model demonstrating the customer value of Corn fungicides	

Fungicides Trials

<sup>1</sup> Global Market: Represents the defined crop's portion of the global herbicide market. Optimas forecast for Market 2018, Status October 2018

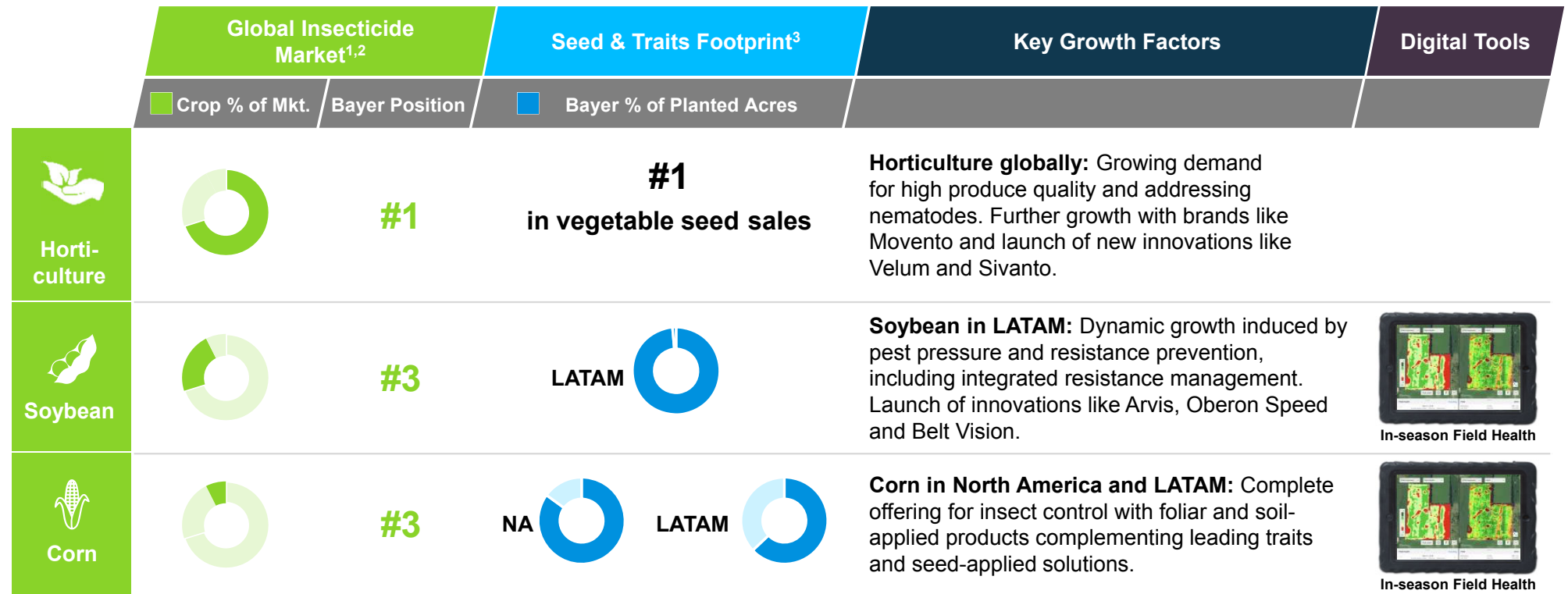
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# Insecticides: Innovation and Portfolio Enable Growth Above Market

Growing Food and Feed Demand, Pest Epidemics and Resistance Challenges Drive Demand



<sup>1</sup> Global Market: Represents the defined crop's portion of the global herbicide market. Optimas forecast for Market 2018, Status October 2018

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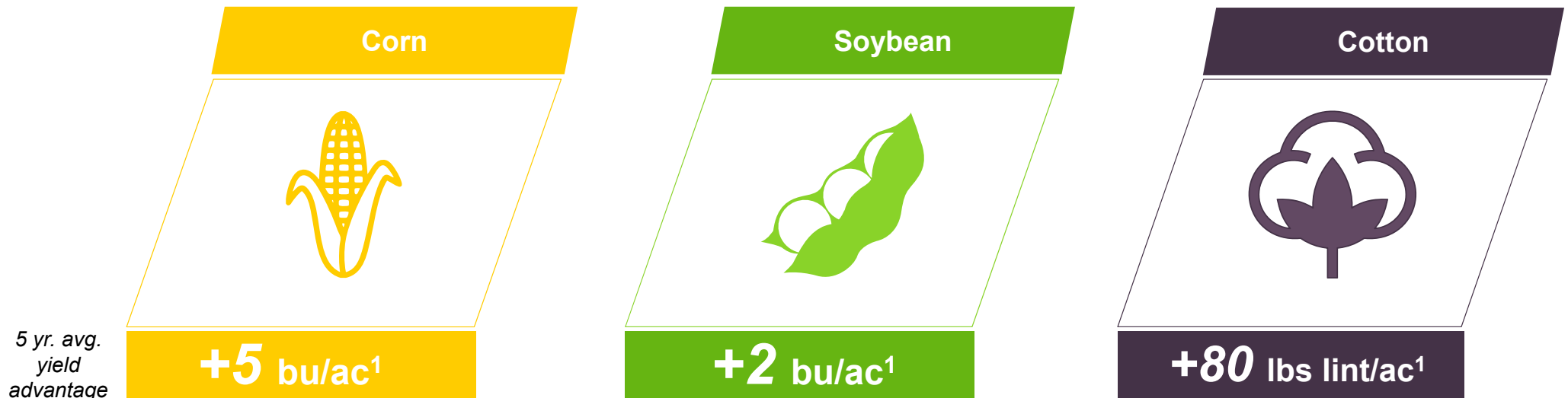
# Seed Growth: NemaStrike Technology Launching

Novel Nematicide Reaches Underserved Market in Launch Across U.S.A. Corn, Soybean and Cotton

## Successful NemaStrike Technology Ground Breakers trials in 2018

- // ~1,200 growers across corn, cotton and soybean in 2018 trials; represented >10,000 acres
- // Expected 2019 product launch across three crops on several million acres
- // Continued strong 5 year average yield protection advantage in corn, soybean and cotton

**NEMASTRIKE™**  
TECHNOLOGY



<sup>1</sup> Compared to seed treated with Acceleron Seed Applied Solutions without NemaStrike Technology. Results will vary based on nematode pressure in each field. Represents the four-year average from trials conducted in 2014 to 2018



# Seed Growth: NemaStrike Technology Launching

Climate FieldView Imagery Demonstrates the Strong Early Season Performance of the Technology

Climate FieldView imagery and corn root comparison from a NemaStrike Technology Ground Breakers trial<sup>1</sup>

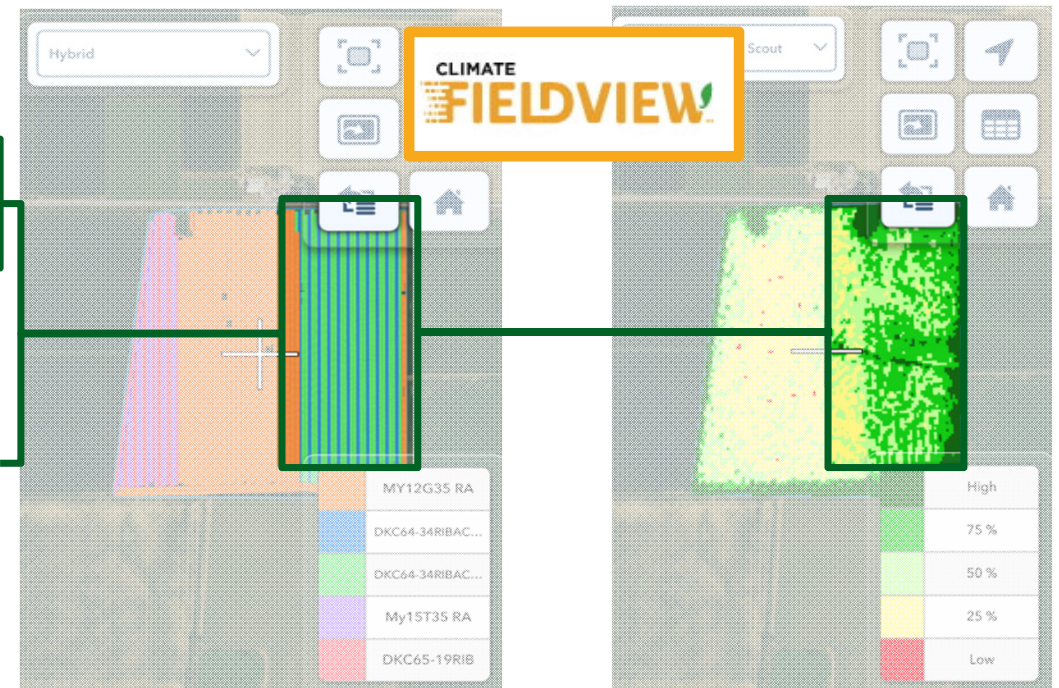
**NEMASTRIKE™**  
TECHNOLOGY



- // NemaStrike Technology delivered +12 bu/ac in this trial
- // Blue lines represent strip trials with NemaStrike Technology



<sup>1</sup> Jackson, MO, 2018





# Key Takeaways

Shaping agriculture to benefit farmers, consumers and our planet

**1**

**Deliver financial targets through operational excellence, new technologies and synergy benefits**

**2**

**Provide new value to growers from the annual germplasm refresh across the seeds portfolio**

**3**

**Advance new soybean trait technologies across the Americas**

**4**

**Seek synergistic opportunities in crop protection and for new product launches on large seed footprint**

**5**

**Pioneer the digital Ag transformation in the industry with FieldView platform**





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