



# Science for a Better Life

## Morgan Stanley Global Chemicals and Ag Conference

November 10, 2020  
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President of the Crop Science Division  
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Vice President of R&D





# Forward-Looking Statements

This presentation may contain forward-looking statements based on current assumptions and forecasts made by Bayer management.

Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Bayer's public reports which are available on the Bayer website at <http://www.bayer.com/>.

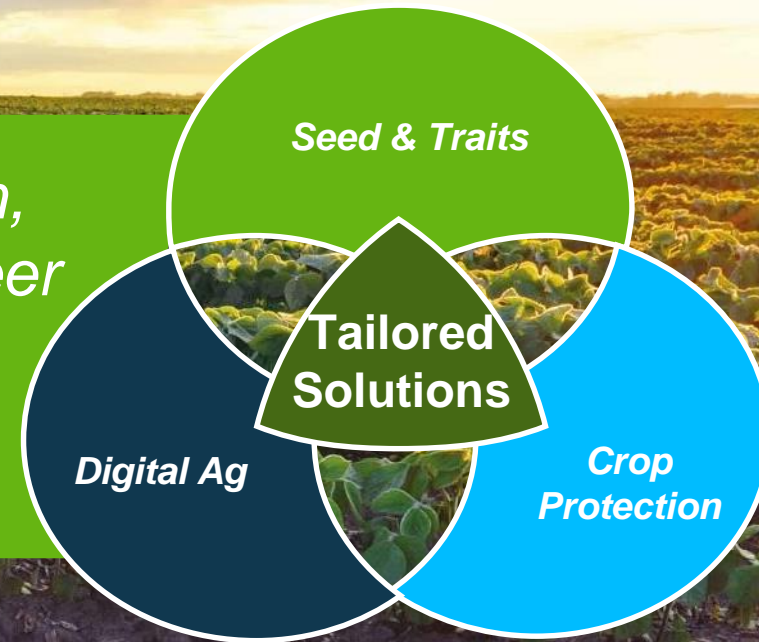
The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.



# Shaping agriculture to benefit farmers, consumers and our planet

As the industry leader uniquely positioned to create value through innovative tailored solutions

*We seek to deliver world-class innovation,  
new standards in sustainability and pioneer  
a digital transformation in agriculture  
to feed a growing global population*





# Four core pillars underpin our vision for Crop Science

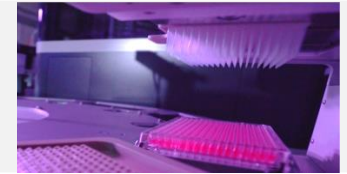
## 4 Core Crop Science Pillars



Drive operational excellence



Deliver world-class innovation



Pioneer the Digital Transformation



Set New Standards in Sustainability





# Crop year 2020: expanding our leadership in Crop Science

Strong CP performance muted by currency, pandemic effects in U.S. corn and cotton and U.S. soybean competition

	Global Market Position <sup>1</sup>	Crop Year 2020 Sales <sup>2</sup>	2020 Key Performance Indicators	
<b>Herbicides</b>	<b>#1</b>	<b>0.9%</b>	<b>1</b> new formulation launched	Increased global glyphosate volume New 5-year registration for <b>XTENDIMAX</b> <sup>™</sup> VaporGrip <sup>™</sup>
<b>Corn S&amp;T</b>	<b>#1</b>	<b>0.1%</b>	<b>200+</b> new hybrids deployed globally <sup>3</sup>	Launched <b>VITALA</b> short-stature corn in Mexico
<b>Soybeans S&amp;T</b>	<b>#1</b>	<b>0.0%</b>	<b>200+</b> new varieties deployed in NA <sup>3</sup>	<b>&gt;75m acres</b> <b>50+ m acres</b> Launched <b>XTEND FLEX</b> SOYBEANS
<b>Fungicides</b>	<b>#2</b>	<b>8.2%</b>	<b>4</b> new formulation launches	Strong growth in <b>FOX Xpro</b> Launched <b>DELARO Complete</b> Launched <b>iblon</b> (isoflucypram) for cereals
<b>Insecticides</b>	<b>#3</b>	<b>5.4%</b>	<b>3</b> new formulation launches	Launched <b>vayego</b> <sup>®</sup> (tetraniliprole) for corn, rice, horticulture and other crops
<b>Other, Vegetables, Environmental Science, Seed Growth</b>	<b>#1</b> veg seeds, cotton, E.S.	<b>-5.1%</b>	<b>120+</b> vegetable varieties commercialized <sup>4</sup>	<b>6</b> new formulation launches in seed growth Strong sales growth in Env. Science and Roundup L&G
<b>Cross-Segment</b>	Expect <b>&gt;70%</b> of <b>€870m</b> cost synergies by end of 2020		<b>Bayer Plus</b> program drives US C.P. share and sales synergies <b>~140m</b> subscribed FieldView acres	

<sup>1</sup> Internal Estimates <sup>2</sup> Sales growth, Q4 2019 to Q3 2020, currency and portfolio adjusted <sup>3</sup> Measured from Q4 2019 to Q3 2020 to align to crop year.



# Integration and synergies ahead of plan in Crop Science

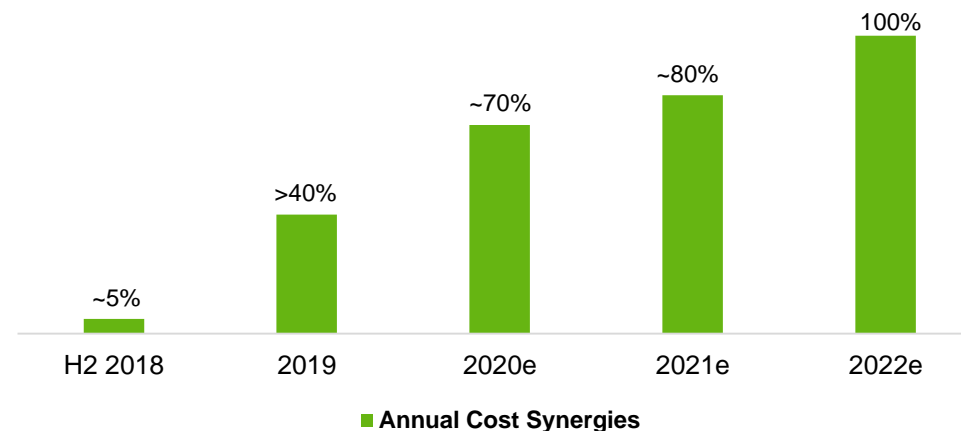
## Sales Synergies<sup>1</sup>: ~€170m (~\$200m) as of 2022

- // **Four countries** to generate >**60%** of the sales synergies
- // U.S.A., Brazil, Argentina and Mexico



- // **Bayer PLUS Rewards** program promotes integrated management solutions and multiple modes of action, while generating incremental sales in the U.S. in its first season
- // Rewards our most loyal customers
- // Sales and industry research confirm Bayer gains in market share in U.S. fungicides and herbicides in 2020
- // > 50 Bayer seed and crop protection products eligible
- // As retailers begin to order products, the trend continues; complementary Climate FieldView added for 2021

## Cost Synergies <sup>1,2</sup>: ~€870m (~\$1bn) as of 2022



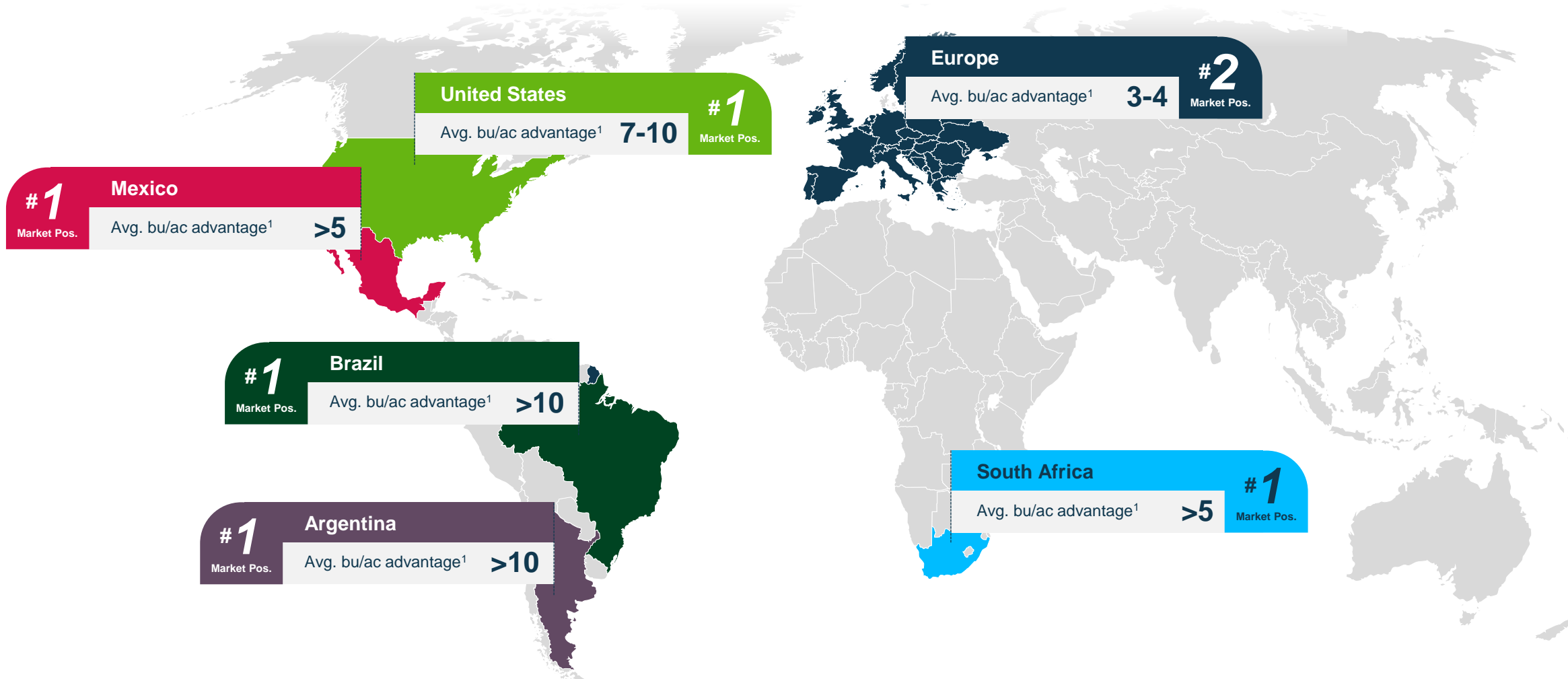
- // **Cost Synergies:**
- // Now expect ~70% of the synergy target complete by end of 2020 vs. original target of 55%
- // Focused on headcount, IT and infrastructure savings

<sup>1</sup> Net EBITDA impact before special items, net of estimated dissynergies  
<sup>2</sup> Majority of expected one time costs of ~1.3bn to achieve synergies expected to be recorded as special items  
 Applied FX rate of USD/EUR of 1.15



# Advanced breeding underpins leadership in corn seed & traits

Deployed >200 Corn Hybrids in Crop Year 2020; Well Ahead of Annual Target of 150



<sup>1</sup> Range is either less than or inclusive of the current 3-year average yield advantage based on a comparison of yield data from new Bayer Crop Science products in their year of deployment against competitive market leaders for said region or country. Averages weighted in countries/regions by hybrid market size and exclude non-grain market.



# Short stature corn offers transformational shift in production

Phase 3 technology with potential opportunity across >220m corn acres in second half of the decade

## Benefits:

### // *Reduced Crop Loss*

Improved plant stability and lodging tolerance; annual yield losses due to stalk lodging in the U.S. range from 5% to 25%<sup>1</sup>


### // *Precision of Crop Input Applications*

Extended in-season crop access due to shorter height supports tailored solutions

### // *Increased Environmental Sustainability*

Potential to optimize use of key nutrients like nitrogen, as well as reducing land and water requirements



 **VITALA** commercial beta in Mexico in 2020

## Three Development Approaches:

### // *Breeding: PHASE 3*

### // *Biotech: PHASE 3* In Collaboration with BASF

### // *Genome Editing: DISCOVERY*



Recommended **seed density** for Vitala short stature corn in the Sinaloa region is **35% above** the region's average; increasing productivity per acre and improving plant stability and lodging tolerance. This product was developed via our breeding approach.

<sup>1</sup> Purdue University (<http://www.extension.purdue.edu/ay/ay-262.html>)





# Targeting a robust transition to XtendFlex soybeans in 2021

Built on the proven performance of Roundup Ready 2 Xtend soybeans



**#1** Soybean system  
planted by farmers<sup>1</sup>



// **~50m** acres  
in the U.S. in 2020

// Proven performance,  
high-yield potential,  
strong agronomic  
characteristics



// Built on the proven performance of Roundup Ready 2  
Xtend Technology with triple tolerance to dicamba,  
glyphosate and glufosinate to provide application  
flexibility to manage tough-to-control weeds

// Targeting ~20m acres in the U.S. in 2021

// Accepting orders in Bayer brands with EU import  
approval now received

// Broadly out-licensed to seed brands in the United States

// **NEW!** Top volume XtendFlex soybeans have a **4+**  
**Bu/A advantage** vs. Enlist E3 soybeans<sup>2</sup> in germplasm  
trials



Enables  
continued use  
of conservation  
tillage and no-  
till systems  
which improve  
carbon  
sequestration  
and soil health

1. Data based on number of traited acres per Bayer internal estimates

2. Data as of October 22, 2020. 2020 Bayer Commercial Germplasm Trials (94 locations in 2020 reporting data located in IL, IN, IA, KS, MD, MI, MN, MO, NE, OH, SD, TN, and WI) Bayer Commercial Germplasm Trials = 9 of the top 10 volume forecasted XtendFlex products.



# New 5-year XtendiMax registration fully enables Xtend crop system

## 14-day soil activity<sup>1</sup> helps control weeds longer and activates with little moisture

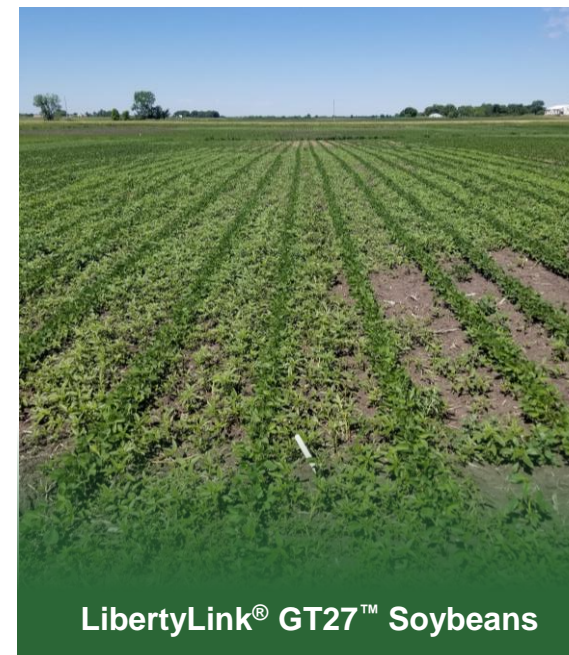
June 2020: Renville, Minnesota, U.S.A., with predominant weed species: Glyphosate Resistant Waterhemp



**PRE:** Warrant<sup>®</sup> Ultra herbicide (48 fl oz/A) + XtendiMax<sup>®</sup> herbicide with VaporGrip<sup>®</sup> Technology (22 fl oz/A)



**PRE:** Enlist One<sup>®</sup> herbicide (24 fl oz/A) + Sonic<sup>®</sup> herbicide (4 oz/A)



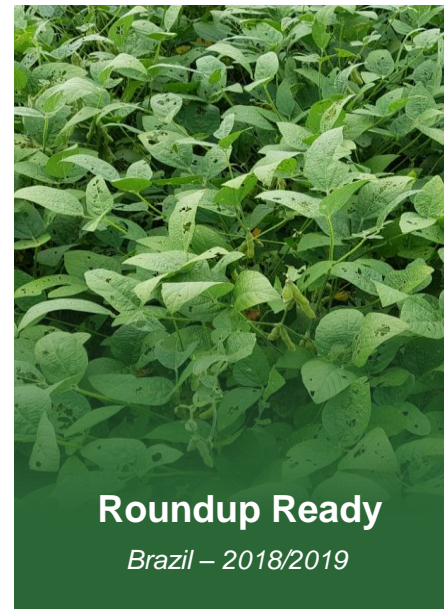
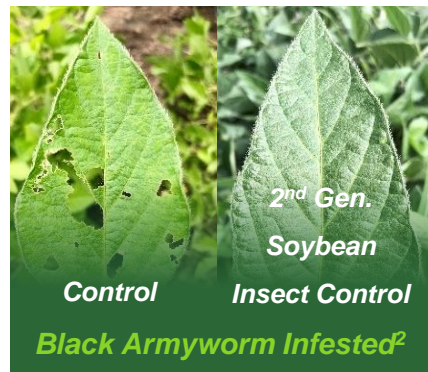
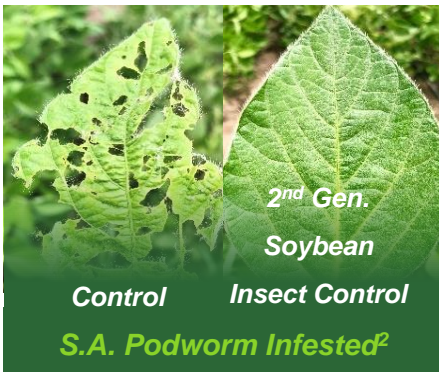
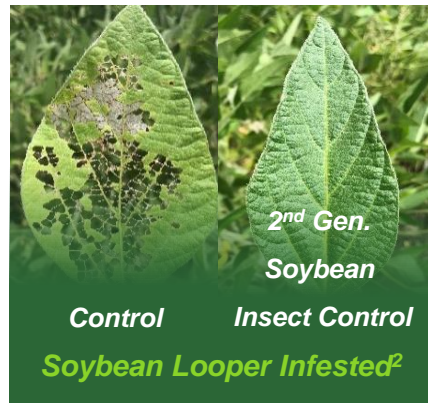
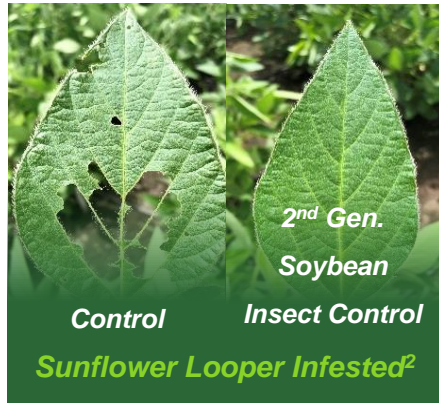
**PRE:** : Verdict<sup>®</sup> herbicide (5 fl oz/A)

<sup>1</sup> Results may vary, depending on rainfall and soil type. Always use dicamba with residual herbicides in pre-emergence and post-emergence applications that have different, effective sites of action, along with other Diversified Weed Management Practices. Photos are representative of weed control results. pending approval in MN. ALWAYS READ AND FOLLOW LABEL DIRECTIONS. PRODUCTS FEATURING XTENDIMAX<sup>®</sup> HERBICIDE WITH VAPORGRIP<sup>®</sup> TECHNOLOGY MAY NOT BE APPROVED IN ALL STATES. Contact your state pesticide regulatory agency regarding the approval status of XtendiMax herbicide in your state.



# Intacta 2 Xtend to broaden insect and weed control spectrum

Intacta RR2 PRO on >65m acres in South America in 2018/2019; Intacta 2 Xtend in phase 4



- // Intacta 2 Xtend trait technology to provide an additional mode of action for insect control and both glyphosate and dicamba tolerance for weed control
- // Stewarded trials expected in 2019/2020 and launch in 2021<sup>1</sup>



Reduces insecticide use and the environmental impact of the crop protection program

<sup>1</sup> Pending regulatory approvals  
<sup>2</sup> 2019 soybean screenhouse trials, various Bayer Crop Science Research Centers in the U.S. and Argentina  
 Always read and follow label instructions. Products not registered in all jurisdictions.



# Fox Xpro fungicide upgrades Fox franchise in Brazil

Full control of all relevant diseases in soybeans; €600m peak sales potential opportunity



**Builds on #1 position in soybean fungicides<sup>1</sup>**

- // Long-lasting solution to offer **full control of all relevant soybean diseases** including Asian Soybean Rust
- // Combines **three different actives** from different classes to provide excellent disease control and unmatched resistance management properties
- // AGROW Award 2019 “**Best Formulation Innovation**”: Optimized formulation to boost performance and minimize environmental impact by reducing off-target losses
- // **Enables use in major crop rotation systems** with cotton, corn, cereals and sunflower
- // **Next-generation** technology, Fox Supra (Indiflin<sup>®2</sup>), in Phase 4



**Industry Standard**



**Fox Xpro**



Reduces environmental impact through innovative formulation

<sup>1</sup> Internal estimates

<sup>2</sup> In collaboration with Sumitomo.

Always read and follow label instructions. Products not registered in all jurisdictions.



# iblon Fungicide for Cereals Launching in 2020<sup>3</sup> in New Zealand

Novel solution for control of leaf diseases in cereals;> €400m peak sales opportunity



**Builds on #1 position in cereal fungicides<sup>1</sup>**

- // iblon Technology is an advanced chemistry behind a new family of products powered by **Isolfucypram**, the latest and most mature compound from the highly valued class of **SDHIs<sup>2</sup>**
- // Wheat treated with iblon exceeded the standards with on average **2.2% higher yields**, at an **80% success rate**.
- // Offers the **most reliable control of the relevant leaf diseases** in cereals, along with beneficial physiological effects and activity for several weeks
- // Targeted markets: **Europe, Argentina, South Africa, Mexico, New Zealand and Australia**



**Untreated**



**Bayer's current standard**



**Latest competitor's standard**



**iblon Technology**



**Increases productivity through improved disease control**

<sup>1</sup> Internal estimates

<sup>2</sup> succinate dehydrogenase inhibitor

<sup>3</sup> Pending regulatory approvals

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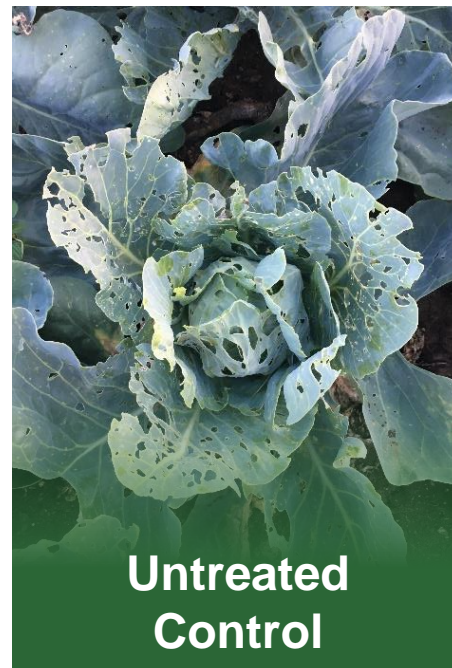
# Vayego launched; new broad-spectrum insecticide

Asia Pacific focus with initial launch in Korea in 2019; >€300m peak sales potential



**Builds on #1 position in insecticides in horticulture and #3 in both corn and soybeans<sup>1</sup>**

- // Fast-acting and long-lasting control of all important **caterpillars** and selected **beetles** and **sucking pests** with this tetraniliprole diamide insecticide
- // Regulatory submissions planned or submitted across key markets of **India, China, Indonesia, Australia, Chile, Argentina**; up to **17** launches expected in 2020 and 2021
- // Expect use in a number of key crops; **corn, rice, potatoes, fruits & nuts and vegetables** via multiple application methods, including **foliar, drone, drip & drench and seed treatment**



Increases productivity per acre through improved insect control

<sup>1</sup> Internal estimates

Always read and follow label instructions. Products not registered in all jurisdictions.



# FieldView: the leading brand & digital ag platform for growers

## Growth Fueled by Platform Advantages

**~140m Acres**

subscribed acres for 2020

**>70 Partners**

on the FieldView Platform

**#1 Brand**

in digital ag space<sup>2</sup>

**New Business Models**

enabling sharing of value and risk

**Largest Database**

of grower and field trial seed performance data in the industry

**>35 Next-Gen Projects**

in the pipeline

**Global**

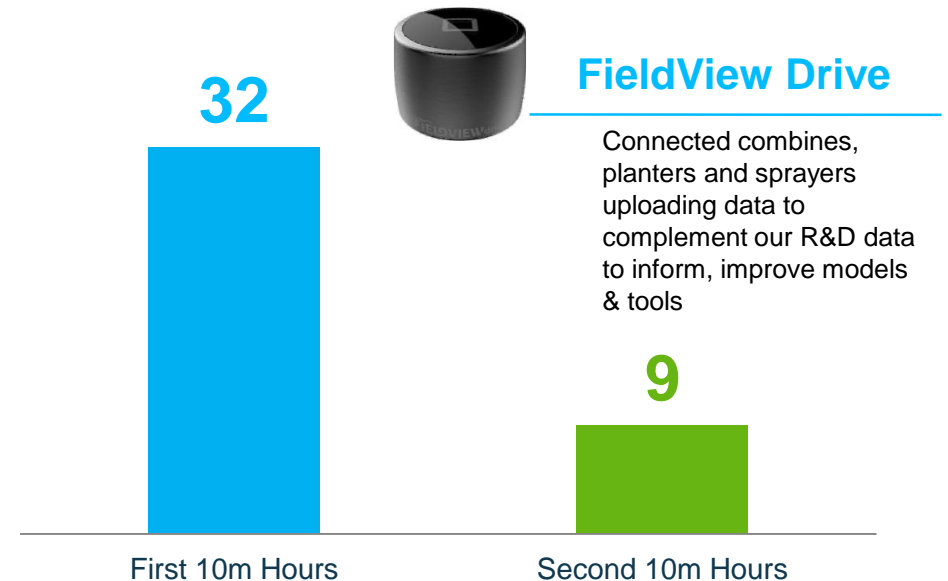
distribution footprint established

**~1bn Global Acre**

Opportunity for corn, soybean, wheat<sup>3</sup>

## Data Collection Accelerating

### Months to Collect 10m Connected Hours



<sup>1</sup> Internal estimates

<sup>2</sup> 2019 Brand Health Monitor

<sup>3</sup> Harvested acres – USDA FAS 2018-10-11, ex China



# Enhancing sustainability and biodiversity in agriculture

## Bayer's 2030 sustainability commitments

### Advancing a carbon-zero future for agriculture

through helping our customers reduce field greenhouse gases by crop production.

# 30%

Reduction in field greenhouse gases emitted per kg of crops produced

- // Climate-smart practices:
  - // No-tillage      Highly Productive Crops
  - // Cover Crops    Precision Agriculture
- // Optimize use of synthetic fertilizers through the use of microbes



### Produce higher-yielding crops with fewer natural resources and inputs

# 30%

Reduction in impact on the environment

- // Climate FieldView for precision application of pesticides /fertilizers



- // Resistant traits help to reduce pesticide use



- // Develop crop protection products with lower environmental impact

### Empower 100 million smallholder farmers

# 100m

Smallholders benefit e.g. from access to education, tailored solutions & partners

- // Enhancing social innovation (e.g. with Better Life Farming)



- // Digital transformation with FarmRise



- // Introduce new, higher-yielding, resource efficient rice hybrids







# Making carbon sequestration a new revenue stream on-farm

Program designed to help reduce Ag's carbon footprint, greenhouse gas emissions



- // Bayer Carbon Initiative rewards farmers for the adoption of climate-smart practices that sequester carbon from the atmosphere
- // Examples of these practices include no-till farming and implementing cover crops
- // As part of the Bayer Carbon Initiative, the Carbon Pilot Program was launched for 2020/2021 season and will include about 1,200 farmers in Brazil and the U.S. who are transitioning acres to sustainable farming practices
- // The future of the pilot is to expand the program in the U.S. and Brazil to other farmers and then later into other world regions
  - // Multiple enrollment windows meet a wide range of farmers and their needs



## Q&A Participants



/////////  
**Liam Condon**  
**President,**  
**Crop Science Division**



/////////  
**Bob Reiter, Ph. D.**  
**Head of R&D,**  
**Crop Science Division**



/////////  
**Laura Meyer**  
**Senior Manager,**  
**Investor Relations**



# Appendix

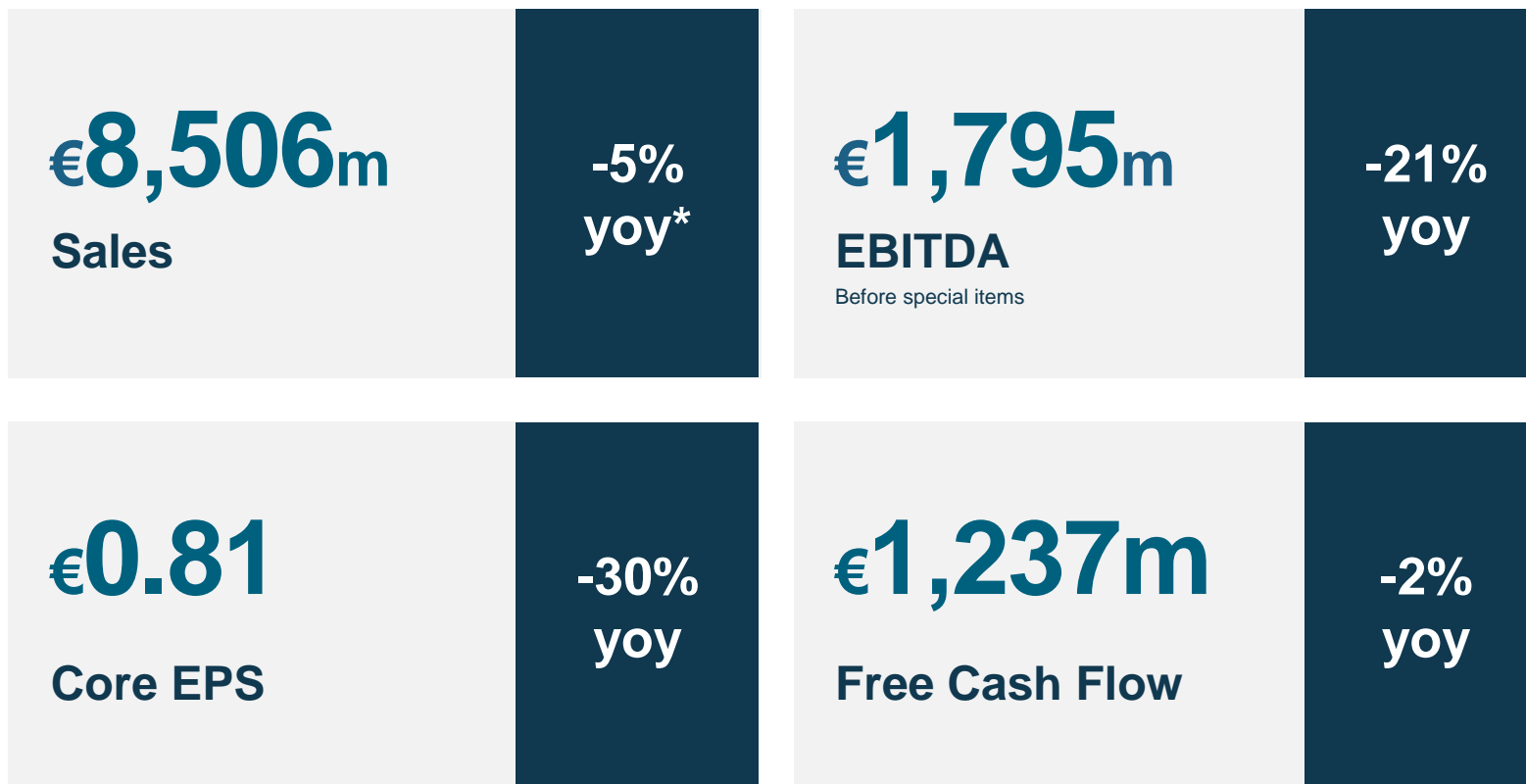
**Q3 2020 financial results**

**Guidance**





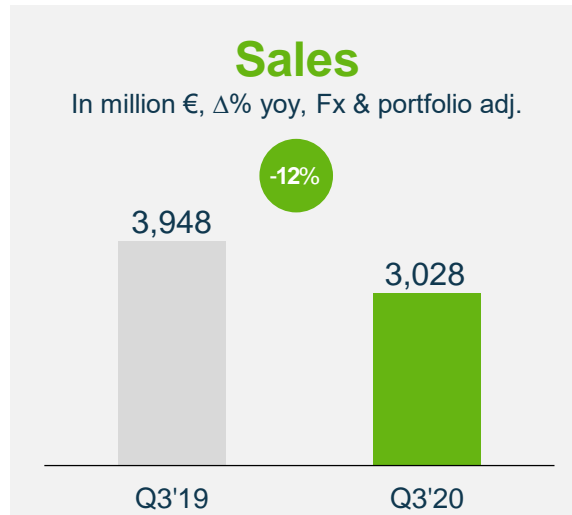
# Q3 2020: Challenging quarter – currency-adjusted group outlook confirmed



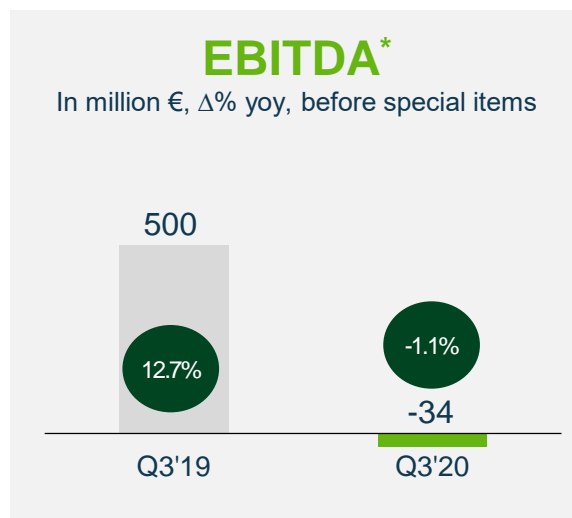
\* Δ% yoy, Fx & portfolio adj



# Q3 2020: Crop Science significantly impacted by seed returns and currency headwinds



Volume	-10%	Currency	12%
Price	-1%	Portfolio	0%

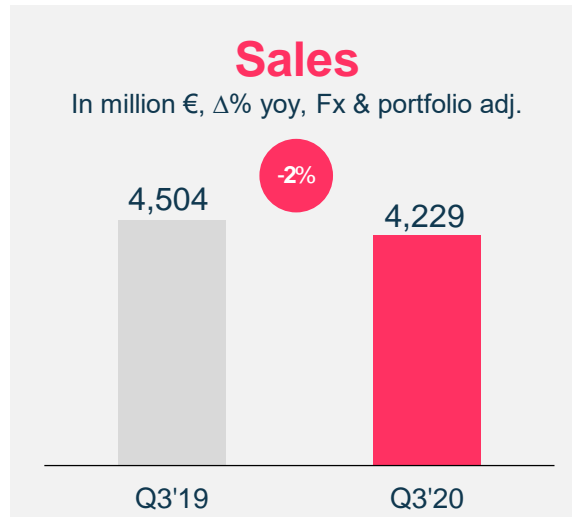


- Sales decline driven by North America (-41%) primarily due to higher corn and cotton seed returns from lower than expected planted acres
- Herbicides (-13%) impacted by phasing
- Strong sales growth in Fungicides (12%), as well as Environmental Science (24%)
- Product returns and lower licensing income (~€200m) and currency headwinds (~€120m) as well as phasing in hedging weigh on bottom-line

● EBITDA Margin before special items \*2019 figures are restated



# Q3 2020: Pharmaceuticals shows sequential improvement and significant margin uplift

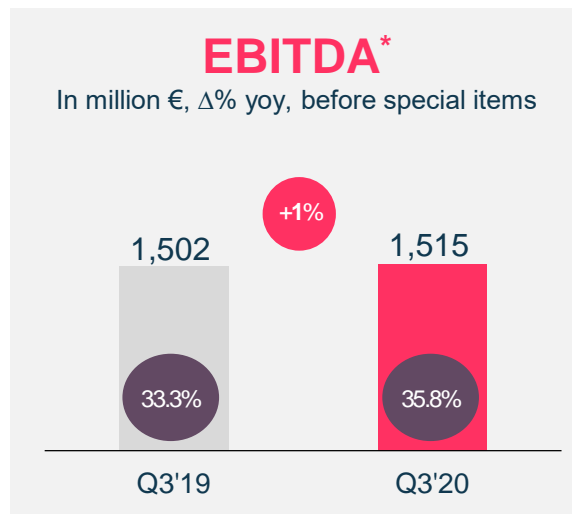


Volume  
**+5%**

Currency  
**-4%**

Price  
**-7%**

Portfolio  
**0%**

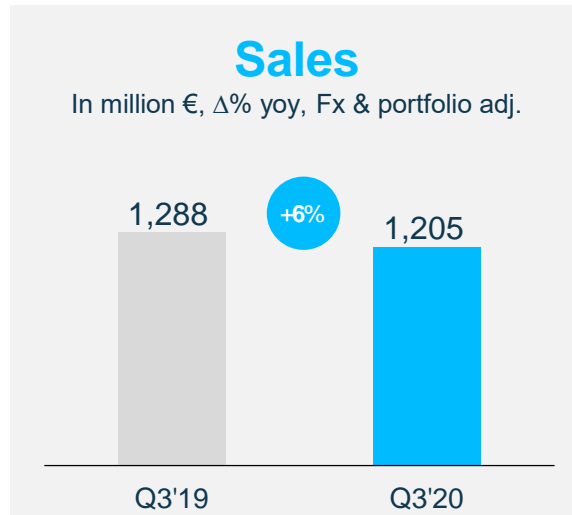


- Xarelto's growth trajectory remains intact (+14%)
- Resumption of elective treatments led to recovery of Eylea (+2%) and the IUD-franchise (+1%)
- China still impacted by volume-based procurement
- Margin uplift due to very tight expense control
- Positive study results for finerenone and for the combination of copanlisib and rituximab
- Acquisition of Asklepios BioPharmaceuticals (AskBio)

● EBITDA Margin before special items \*2019 figures are restated



# Q3 2020: Consumer Health with strong growth momentum and margin expansion

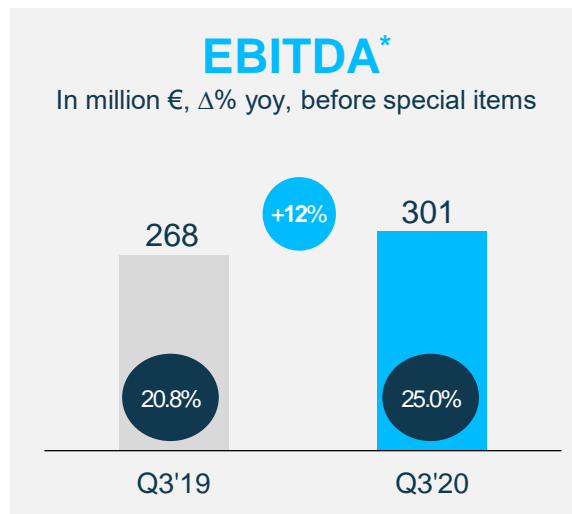


Volume  
**+6%**

Currency  
**-7%**

Price  
**+1%**

Portfolio  
**-5%**



- Sales growth across all regions driven by Nutritionals (+21%) due to continued consumer demand for preventive health solutions as well as product launches in North America
- Digestive Health with strong growth (14%)
- Allergy & Cold down -7% as protective and hygiene measures increased due to Covid-19 pandemic
- EBITDA before special items up 12% despite negative currency and portfolio effects
- Margin expansion driven by growth acceleration, efficiency program and portfolio optimization

● EBITDA Margin before special items \*2019 figures are restated



# Appendix

**Q3 2020 financial results**

**Guidance**







# We confirm our currency-adjusted Group guidance for 2020

	Currency-adjusted		Including currency impact
	Outlook as of Aug 2020	Outlook as of Nov 2020	Outlook as of Nov 2020 <sup>3</sup>
<b>Sales</b>	€43-€44bn	€43-€44bn ✓	€41-€42bn
<b>EBITDA margin (before special items)</b>	~ 28%	~ 28% ✓	~ 28%
<b>Core EPS</b>	€6.70 – €6.90	€6.70 – €6.90 ✓	€6.30 – €6.50
<b>Free cash flow*</b>	-€0.5- €0bn <sup>1</sup>	€0.5-€1bn <sup>2</sup> ✓✓	No major impact
<b>Net financial debt</b>	~€33bn	~€33bn (incl. AskBio) ✓✓	No major impact

Note: Outlook based on underlying assumption that there are no severe lockdown measures related to COVID-19 in Q4; <sup>1</sup> Assumption of settlement payouts of ~€4.5 bn;

<sup>2</sup> Assumption of settlement payouts of ~€3.5 bn; <sup>3</sup> Currency assumptions based on month-end September spot rates (1 EUR=) 1.17 USD, 6.61 BRL, 7.98 CNY, 124 JPY, 26.2 MXN, 91.8 RUB



# Updated Guidance 2020: Group and divisions

## Outlook as of Aug 2020

## Update outlook as of Nov 2020

	Sales Growth 2020 (cpa)	EBITDA-margin 2020 (before special items)	Sales Growth 2020 (cpa)	EBITDA-margin 2020 (before special items)
<b>Group</b>	0-1%	~28%	0-1%	~28%
<b>Crop Science</b>	~2%	~25%	~1%	~25%
<b>Pharma</b>	~-1%	34-35%	~-1%	34-35%
<b>Consumer Health</b>	~4%	22-23%	~5%	22-23%

\* Guidance for cEBITDA Reconciliation (FY 2020): ~ - €300