

BoAML Global Agriculture and Materials Conference

Delivering World Class

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

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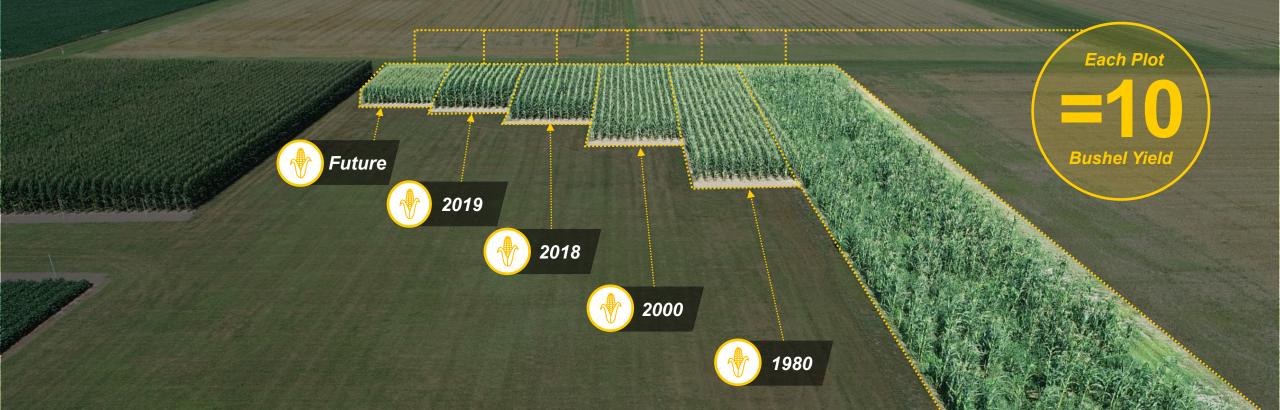
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Shaping Agriculture to Benefit Farmers, Consumers and Our Planet

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





Producing Better

The history of corn production plot demonstrates the great strides we have made in producing more with less, and the opportunity we have to continue to "produce better" through tailored solutions that drive us toward our reduced environmental impact commitment while meeting the needs of a growing population on an increasingly hotter planet. 1940

BAYER E R

BAYER Enhancing Sustainability and Biodiversity in Agriculture

Bayer's Sustainability Commitments by 2030

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**

F

Cover Crops Precision Agriculture

Optimize use of synthetic fertilizers through the use of microbes 🐽 BIO

Produce higher-yielding crops with fewer natural resources and inputs

30% Reduction in impact on the environment

Climate FieldView for precision FIELDVIEW application of pesticides /fertilizers

Resistant traits help to reduce pesticide use

INTACTA RR2 PR0

BETTER LIFE

FARMING

Arize

Develop crop protection products with lower environmental impact

Empower 100 million smallholder farmers

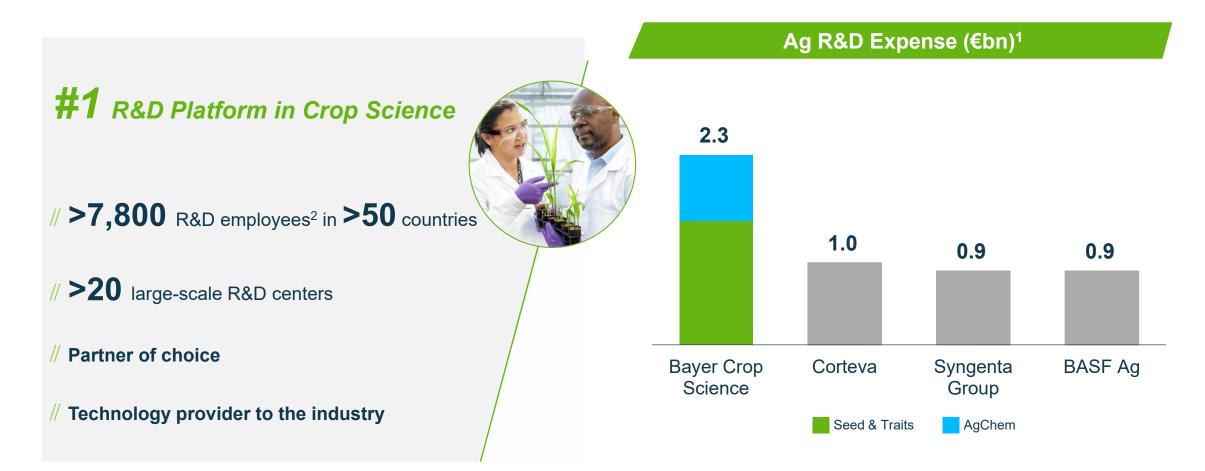
100m Smallholders benefit e.g. from access to education. tailored solutions & partners Enhancing social innovation (e.g. with Better Life Farming)

- Digital transformation with FarmRise
- Introduce new, higher-yielding, resource efficient rice hybrids



Unmatched Investment in R&D Powers Industry-Leading Profitability

Shaping the Future of Agriculture with Most Productive Innovation Platform in the Industry



¹ Bayer and Corteva based on 2019 reported R&D and there is an internal proforma estimate derived from company reports for the newly formed Syngenta Group. Proforma estimate for the SYT group includes the 2019 reported R&D expense for Syngenta – not including capitalized R&D of \$344M– to be comparable to peers in the chart. The Syngenta Group estimate does not consider Sinochem R&D. BASF is based on 2018 reported R&D expense. ² Includes permanent and temporary employees

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Leveraging Open Model for Incremental and Disruptive Innovation

Enabling Innovation and Effective Delivery on Industry-Leading Pipeline

Incremental Innovation

- // Annual germplasm upgrades
- // New modes of action in weed, insect and disease control through biotech and crop protection
- // New formulations and uses in crop protection to expand spectrum and crops

Disruptive Innovation

- // Genome-editing
- // Next generation biological science
- // Precision breeding
- // Drone application technology
- // New modalities for crop protection

Technology Collaborations Certhbío Atomwise PAIRWISE elemental enzymes (SECOND GENOME 2BLADES targenomix MeiogeniX leaps Venture Capital FARMLEAD UNDER<mark>STORY</mark> APOLLO CoverCress Inc. AgBiome PAIRWISE **JOYN** BIO > PIVOT BIO

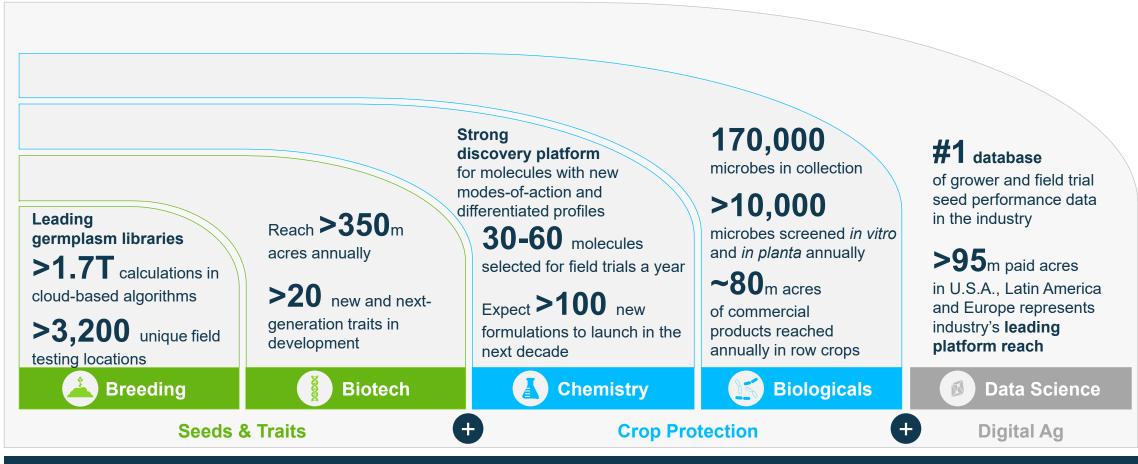
Open Innovation Model



Customer-sponsored Research

Next Growth Opportunity: Convergence of Leading R&D Platforms

Continued Investment in Data Science and New Technologies are Driving Future Opportunity



Best positioned to discover, combine and tailor solutions for growers

Driving the Largest and Most Valuable R&D Pipeline in Ag

Converting Investment into Meaningful Products for Farmers

Value of Up to €30bn in Peak Sales¹ **Productive and Prolific Pipeline in 2019** ~45% Incremental Breeding Seeds & **Traits** Advancements² **Biotech** Corn 35 Horticulture ~€11-14bn generated by projects ~€3-4bn in seed & traits, crop Chemistry Crop protection and digital ag Cereals **Protection** pipelines **Biologicals** & Other ~€3-4bn **Data Science Digital Ag** Soybean ~€6-8bn New hybrids and varieties New crop protection commercialized formulations advanced

¹ Represents non-risk adjusted estimated peak sales for the combined breeding, biotech, crop protection and environmental science pipelines.
² Includes 8 biotech, 4 breeding, 5 chemistry and 18 data science advancements.

Advancing Agriculture with a Decade of Transformative Products

Key Product Highlights Featured Represent >€22bn³ of Peak Sales Potential

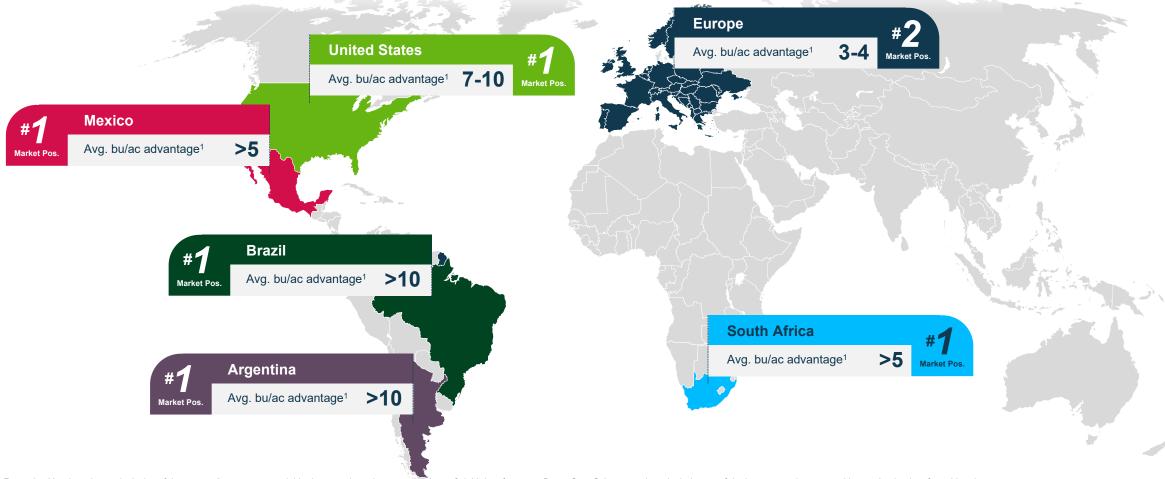
Select Planned Product Launches¹

	Expected Ongoing Refreshment	2020 ······ 2021 ····· 2022 ····· 2023 ···· // ··· 2027 ····· 2028 ····· 2029 ····· 2030
Herbicides	35+ New Formulation Launches in the next Decade	New Soybean SelectiveNew Non-SelectiveNew Mode ofHerbicide MixturesPPO Herbicide2Action HerbicideNew Autumn Herbicides for CerealsNew Soybean SelectiveNew Mode of
Corn	150+ New Hybrids Commercialized Annually	FieldView Advanced Seed Scripting 3 rd , 4 th and 5 th Generation Herbicide Tolerance Traits FieldView Seed Advisor SmartSta PRO trait Short Stature Corn Hybrids/Short Stature Corn Trait
Soybeans	150+ New Varieties Commercialized Annually	PLATAFORMA INTACTA25 SOTENDFLEX FieldView Seed Placement 4 th and 5 th Generation Herbicide Tolerance Traits
Fungicides	20+ New Formulation Launches in the next Decade	DELATO Fox Supra (Indiflin®) for Soybeans ² New Fungicide for iblon v (isoflucypram) for Cereals Asian Soybean Rust
Insecticides	20+ New Formulation Launches in the next Decade	(tetraniliprole) for Corn, Rice, Horticulture and Other Crops
Other, Vegetables, Environmental Science, Seed Growth	 ~150 Vegetable Hybrids/Varieties Commercialized Annually 20+ New Formulation Launches in the next Decade 	3 rd Gen BioRise Microbial Seed Treatment Thryvon TECHNOLOGY Lygus & Thrips Control Cotton Trait

¹ Subject to regulatory approvals and pending registrations. Represents a subset of the pipeline. Launches are all approximates.
² In collaboration with Sumitomo. ³ Internal estimate; ~45% of the peak sales potential is incremental

Advanced Breeding Underpins Leadership in Corn Seed & Traits

Expect to Commercialize >150 Corn Hybrids a Year to Drive Growth in €4.8bn² Corn Seed & Traits Sales



¹ 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.
² 2018 proforma sales

XtendFlex Soybeans Advancing to Launch Phase Spring 2020¹

Built on the Proven Performance Roundup Ready 2 Xtend Soybeans



Soybean system planted by farmers



PowerMAX HERBICIDE

Glyphosate

XTENDIMAX* www.vap.or.Grip. Low-Volatility Dicamba **SOYBEANS**

Provides exceptional weed control and yield with a triplestack herbicide-tolerance trait providing growers with the flexibility of three over-the-top herbicide options:

	Low-Volatilit
hosate	Dicamba

Glyp

y Glufosinate

- Increases spectrum of control from 350 to 375 weed species; Enlist E3[™] system only controls 260²
- # Average 2019 yield and agronomic performance consistent with Roundup Ready 2 Xtend soybeans³
- # Acres in the U.S. expected to be limited in first year



Enables continued use of conservation tillage and notill systems which improve carbon sequestration and soil health

¹ Commercial availability pending regulatory approval
 ² Based on EPA labels for the chemistries.
 ³ Derived from 26 site locations in SC, NE, IN, IL, WI, MO, IN, AR, IA, NC, KS, SD, OH & GA

Xtendimax with VaporGrip Technology is a Restricted Use Pesticide. Always read and follow label instructions. Products not registered in all jurisdictions. Enlist E3[™] is trademark of Corteva

Three Generations of Soybean Herbicide Tolerance Traits Advance

Industry-Leading Pipeline: Expect Tolerances to Six Herbicide Classes in Soybeans by 2030









Demo trial, Monmouth, Illinois, July 2018 2x applications of dicamba and 2,4-D at V3, followed by glufosinate at V6, followed by mesotrione at R1



 ¹ Commercial availability pending regulatory approval
 ² In collaboration with Sumitomo Always read and follow label instructions. Products not registered in all jurisdictions.

Two Approaches to Short Stature Corn Advance

Genome Editing Reveals Promising Third Option

Three Development Approaches to Short Stature Corn Provide Options to Access Multiple Markets

// Breeding: ADVANCED TO PHASE 3

Advanced breeding used to introgress naturally occurring short stature characteristic into elite germplasm.

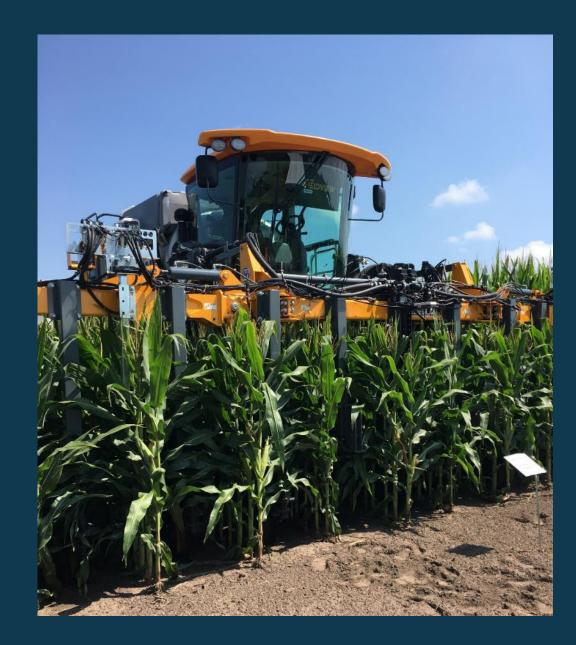
VITALA commercial beta in Mexico in 2020

// Biotech: ADVANCED TO PHASE 3

In collaboration with BASF, uses transgene to shorten internodes; enables applicability across wide-array of germplasm.

NEW! // Genome Editing: DISCOVERY

Multiple, elegant approaches to generate short-stature corn, creating potential for opportunities in multiple markets.



Short Stature Corn Offers Transformational Shift in Production

Benefits Include Plant Stability, Late Season Applications of Crop Inputs and Efficient Use of Key Nutrients



Reduced Crop Loss

- # Enabled by improved plant stability and lodging tolerance
- // Reduces crop loss from challenging environmental conditions
- # Annual yield losses due to stalk lodging in the U.S. range from 5% to 25%¹



Precision of Crop Input Applications

- // Extended in-season crop access due to shorter height
- # Supports tailored solutions with precise in-season crop protection



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Increased Environmental Sustainability

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

Acre Opportunity Expanding



Potential Global Opportunity Across >220m Corn Acres

Americas Alone Account for 140m Acres

¹ Purdue University (https://www.extension.purdue.edu/extmedia/ay/ay-262.html)

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 fungicides¹

- *I* Long-lasting solution to offer full control of all relevantsoybean 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^{®2}), in Phase 4





Reduces environmental impact through innovative formulation

Internal estimates
 In collaboration with Sumitomo.
 Always read and follow label instructions. Products not registered in all jurisdictions.

New Herbicide Molecule Unlocks Greater Flexibility

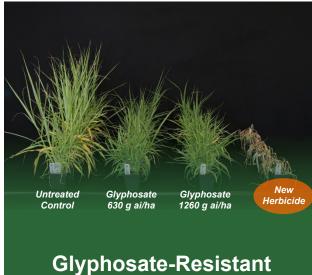
First New Post-Emergence Mode of Action for Broad Acre Weed Control in 30 Years

Potential to build on #1 position in global herbicides¹

- # Entirely new mode of action advanced to Phase 2 early development
- // Demonstrates effective control of key resistant grasses, including
 Goosegrass and Sourgrass
- // Discovery program launched in biotechnology to discover a matching herbicide tolerant trait; initial approaches under evaluation



Glyphosate-Resistant Goosegrass



Sourgrass

S

Enables continued use of conservation tillage and notill systems which improve carbon sequestration and soil health

¹ Internal estimates

FieldView Seed Advisor Advancing to Commercial Launch

Planning to Expand Corn Seed Advisor with Increased Acres in 2020

FieldView Corn Seed Advisor Optimizes Key Grower Decisions



Products & Portfolio

Which products should I purchase and how much of each? Assignment

Which fields do I optimally place each product? What's the right density? Should I redistribute seeds in this field?

Density

Powered by Millions of Data Points

- # Algorithm powered by >6m data points from >7,700 hybrids and 60K+ fields from Bayer R&D and seed genetic library to develop and validate algorithm
- // Performance testing from 2017-2019 demonstrates consistent 6-9 bu/ac yield advantage
- // Product enhancements focused on improving field assignment accuracy using extensive FieldView data

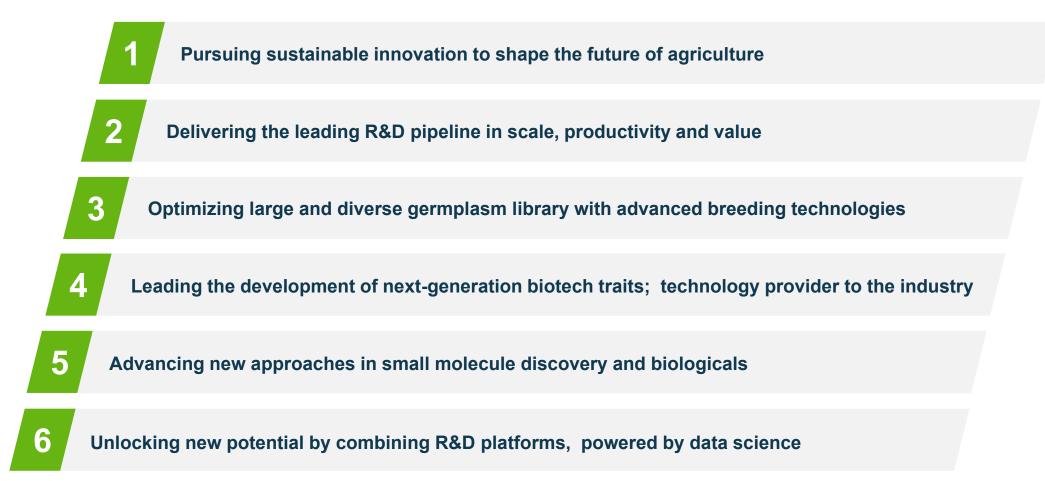
2019 Beta Launch for Corn Seed Advisor across seven states (IA, IL, IN, MN, MO, SD, WI)



Improves productivity per acre through optimized seed placement



Delivering World Class Innovation





Appendix: Crop Science Pipeline



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Corn R&D Pipeline – Peak Sales Potential: €11-14bn

R&D Target	Technology	Pha	se*	Enhancement**	R&D Target	Technology		Phas	e*	1
	Br PBt CP	1 2	3 4	Dev. Subm.		Br PBt CF	1	2	3 4	
YIELD & ABIOTIC STR	ESS – ~65% of Peak Sa	les Potential			DISEASE MANAGEMENT	- ~5% of Peak Sales	Potential		1	
Annual germplasm upgrades	\checkmark				Plant Health Systems					
Short Stature Corn	✓		NEW		// Corn Disease Shield - Annual upgrades	1				
Short Stature Corn ¹	✓		NEW		// Acceleron - Annual upgrades					1
3 rd generation BioRise microbial seed treatment	~				// Goss Wilt resistance	 Image: A second s			adv. to launc	
Early Pipeline					// Delaro Complete	√				
New Biological	✓				WEED MANAGEMENT - ~	15% of Peak Sales F	otential		1	
PEST MANAGEMENT -	-~15% of Peak Sales P	otential			// Herbicide tolerance					Т
Chewing Pests					// 3 rd generation weed management system	\checkmark				
Above Ground (Lepidoptera)					# 4 th generation weed management system with RHS2	\checkmark				
// 4 th generation Lepidoptera protection	\checkmark				5 th generation weed management system	\checkmark				
// 5 th generation Lepidoptera protection	✓				// Improved Dicamba formulations	✓				
// Vayego	\checkmark		adv. to launch		// Improved Dicamba & Glyphosate Premix	✓				- 1
// Belt Smart	✓				// Harness LCM					a b
Below Ground (Coleoptera)					Early Pipeline					
∥ SmartStax Pro	\checkmark				// Novel PPO Herbicide ²				NEW	1
# 4 th generation Coleoptera protection	\checkmark					•		NEW		21
Sucking Pests					// New Herbicide MOA	v		NEVV	I	
Stinkbug pipeline// ARVIS	1			NEW						
Nematodes										
Next generation NemaStrike formulation	✓									
Early Pipeline										
New Insecticide	\checkmark									
R&D Phases:			Br Breed	ling – incl. native traits :	and molecular breeding	Progress achie	ved Phases	1 through 4		
– Research, 2 – Early Development, 3 –	l ate Development 4 – F	Registrations Filed				Status indicatio		0	nent Items	
		(cgistrations r lied	PBt Plant	Biotech – biotechnolog	y traits	Strategic collab		,		
*Product enhancement: (Life Cycle Man	agement activities)		Cron	Protection - chemical a	nd biological solutions applied as	Represents an		ements and u	pgrades	
Dev. – Under development; Subm. – Subm	nitted for Registration		CP crop seed	treatment, foliar or via s	ioil	Pipeline status	highlighting	significant de	velopment, prog	res
HS2 = Second Generation Roundup Hybric	lization System ¹ In co	ollaboration with BA	SF ² In collaboration	on with Cumitomo					and Key Life Cyc	

cement** Subm

^r. to launch

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Soybean R&D Pipeline – Peak Sales Potential: €6-8bn

R&D Target	Technology	Phase*	Enhancement**	R&D Target	Technology	Phase*	
	Br PBt CP 1	2 3	4 Dev. Subm.		Br PBt CP	1 2 3	4
YIELD & ABIOTIC ST	TRESS - ~20% of Peak Sales Po	otential		DISEASE MANAGEM	IENT - ~30% of Peak Sales Po	otential	
/ Annual germplasm upgrades	✓			// Soy Disease Shield	\checkmark		
High Yielding Soy ¹	\checkmark			// Acceleron Upgrades	\checkmark		
Early Pipeline		- 1 1		// Delaro Complete	\checkmark		
New Biological	\checkmark			Asian Soybean Rust			
PEST MANAGEMEN	T - ~20% of Peak Sales Potenti	al		// Indiflin® ²	\checkmark		
Chewing Pests				// New Fungicide	\checkmark	NEW	
/ INTACTA RR2 PRO					IT - ~30% of Peak Sales Poter	ntial	
 # 2nd generation insect protection # 3rd generation insect protection 	✓ ✓			// Herbicide tolerance // XtendFlex	✓	adv. to la	aunch
// Belt Smart	✓			# 4 th generation weed management sy	stem 🗸	NEW	
Sucking Pests				// 5 th generation weed management sy	stem 🗸	NEW	
Aphid & Whitefly pipeline				// New Soybean selective herbicide 3-way m	ixture 🗸		
// Novel Sucking Pest Solution	✓			// New Soybean selective herbicide 2-way m	nixture 🗸		
Stinkbug Pipeline				// Improved Dicamba & Glyphosate Pro	emix 🗸		
/ ARVIS	\checkmark		NEW	// Improved Dicamba formulations	\checkmark		
V Novel Mite Solution	✓			Early Pipeline	✓		
Nematodes				// Novel PPO Herbicide ²	✓	NEW	
 Plant health systems 2nd generation Soy Cyst Nematode resistance 	✓			// New Herbicide MOA	√	NEW	
// Next generation NemaStrike formulation	✓						
Seed Treatment							
 New Insecticide Seed Treatment CropStar LCM 	\checkmark		NEW				
*R&D Phases:		Br	Breeding – incl. native traits a	nd molecular breeding		I Phases 1 through 4 or Life Cycle Management Items	
1 – Research, 2 – Early Development, 3	- Late Development, 4 - Regist	rations Filed PBt	Diant Riotoph histochaster	r traita	Strategic collabora	, ,	
**Product enhancement: (Life Cycle M	anagement activities)	РВС			Represents annua	al advancements and upgrades	
Dev. – Under development; Subm. – Su		СР	Crop Protection – chemical a seed treatment, foliar or via s	nd biological solutions applied as oil		ghlighting significant development, pr n R&D Pipeline (pink) and Key Life C	

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Cereals, Oilseed Rape, Cotton, Sugarbeets, Rice R&D Pipelines – Peak Sales Potential: €3-4bn¹

	R&D Target	Technolo	рду			Phase*			Enhanc	ement**		R&D Target	Т	Fechnology		Ρ	nase*		Enhan	cement**
		Br PBt	CP	1	2	3		4	Dev.	Subm.			Br	PBt CF	1	2	3	4	Dev.	Subm
	YIELD & ABIOTIC ST	RESS				1				1		YIELD & ABIOTIC STRESS								
	// Annual germplasm upgrades	✓										// Annual germplasm upgrades	✓							
	WEED MANAGEMEN	т					1			1		WEED MANAGEMENT					1	1		
	Selective Herbicides				1	1	1			1		// 4 th Generation Herbicide Tolerance		1						
	// New Cereals Selective Herbicide		1	-						1		// Improved Dicamba formulations								
												// Improved Dicamba & Glyphosate Premix		•						
S	// Atlantis franchise extensions // New Autumn Herbicides		× 1							. to launch . to launch		Early Pipeline		,						
$\overline{\mathbf{n}}$	// Pyrasulfotole LCM		×								C	// Novel PPO Herbicide ²		✓			NEW		1	
Ď									NEW	1	$\overline{0}$	PEST MANAGEMENT			-		1	1	1	1
	PEST MANAGEMENT	r			1	1					Ľ	Chewing Pests		,						
Ϋ́Γ	// New Cereals Seed Treatment		\checkmark						adv.	to launch	Ō	// 4 th Generation Bollgard		\checkmark						
	DISEASE MANAGEM	ENT									\bigcirc	Sucking Pests								
	// Disease package annual upgrade	\checkmark										// ThryvOn Technology		\checkmark						
	// iblon		\checkmark			a	dv. to lau	unch				(Lygus / Thrips cotton)								
	// New Bixafen extensions		\checkmark							NEW		// Novel sucking pest solution		✓				2		
	// Delaro forte		\checkmark									// Novel Mite solution		✓						
	// Redigo FS 25		\checkmark						adv	. to launch		Nematodes								
	// New Fungicidal Seed Treatment		~									// Next generation NemaStrike formulation								
												Early Pipeline								
												// New Insecticide		✓						

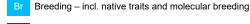
*R&D Phases:

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1 – Research, 2 – Early Development, 3 – Late Development, 4 – Registrations Filed

**Product enhancement: (Life Cycle Management activities)

Dev. - Under development; Subm. - Submitted for Registration

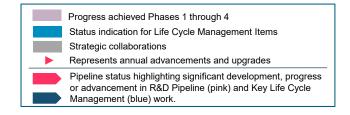


PBt

Plant Biotech – biotechnology traits

Crop Protection – chemical and biological solutions applied as seed treatment, foliar or via soil

¹ Peak Sales Potential Split: Yield & Abiotic stress = ~15%, Pest Management = ~20%, Disease Management = ~25%, Weed Management = ~40% ² In collaboration with Sumitomo



Cereals, Oilseed Rape, Cotton, Sugarbeets, Rice R&D Pipelines (con't.)

	R&D Target	Technology		Phas	se*	Enha	ancement**		R&D Target	Technology		Ph	ase*		Enhano	cement**
_		Br PBt CP	1	2	3 4	Dev.	Subm.			Br PBt CP	1	2	3	4	Dev.	Subm.
	YIELD & ABIOTIC STRESS					- i			YIELD & ABIOT	IC STRESS	1		1			
Ð	// Annual germplasm upgrades	\checkmark							// Annual germplasm upgrades	\checkmark		•				
Rape	including Podshatter								// Annual hybrid production	\checkmark		•				
Ø	WEED MANAGEMENT								WEED MANAGE	EMENT	1		1		1	
ľ	// DEKALB LibertyLink Canola	\checkmark			adv. to laun	ch			// Council Activ	\checkmark					adv.	to launch
σ	// TruFlex Canola with Roundup Ready							പ	// Council Star	\checkmark			1	1		NEW
Ŭ	// TruFlex Roundup Ready	\checkmark			adv. to laun	ch		ပိ	// Council Xtra	\checkmark			1	1	NEW	•
Ð	// TruFlex Roundup Ready + LibertyLink	\checkmark			adv. to laun	ch		Ric	PEST MANAGE	MENT						
<u></u>	// Dicamba-Tolerant Canola	√							// Sucking Pest Tolerance	\checkmark			adv	. to launch		
Oilseed	PEST MANAGEMENT								// Vayego	✓			adv	. to launch		
\cup	// New Insecticide	✓							Early Pipeline		1 1		·	-		1
									// New Insecticide	✓						
									DISEASE MANA	GEMENT						
	WEED MANAGEMENT								// Super Nativo	✓						
Sugarbeets		~			NEW	I										
	*R&D Phases: 1 – Research, 2 – Early Development, 3 – Late Development, 3 – Late Development: (Life Cycle Management		ons Filed	Br PB		n – biotechne	ology traits			 Progress achieved Status indication Strategic collabor Represents annual 	for Life Cycle ations	Manage	ement Iterr			

Dev. – Under development; Subm. – Submitted for Registration

CP Crop Protection – chemical and biological solutions applied as seed treatment, foliar or via soil

Pipeline status highlighting significant development, progress or advancement in R&D Pipeline (pink) and Key Life Cycle

Management (blue) work.

¹ Peak Sales Potential Split: Yield & Abiotic stress = ~15%, Pest Management = ~20%, Disease Management = ~25%, Weed Management = ~40% ² In collaboration with KWS

BAYER



Horticulture R&D Pipeline – Peak Sales Potential: €3-4bn

R&D Target	Technology	Phase*	Enhancement**	R&D Target	Technology	Phase*	Enhancement**
	Br PBt CP 1	2 3 4	Dev. Subm.		Br PBt CP 1	2 3	4 Dev. Subm.
YIELD AND ABIOTIC S	TRESS - ~45% Peak Sales Po	tential		DISEASE MANAGEMEN	T - ~25% of Peak Sales Potential		
// ~150 advancements to launch				Plant Health Systems			
// Highlights include SVTH2900 Tomato,				// Geminivirus resistant tomato	✓		
Shoreline Watermelon, Pinanta Tomato, GALVIR Galia Melon and Hot Pepper SVHA-1448				// Downy Mildew resistant lettuce	✓		
Yield & Quality			1	Dicot Leaf & Fruit Diseases			
// High concentrated Biological	✓			// LUNA brand family extension	\checkmark		adv. to launch
PEST MANAGEMENT -	~20% of Peak Sales Potentia			// Serenade ASO	✓		adv. to launch
Chewing Pests			1	Oomycetes			
// Vayego		adv. to launch		// Fluoxapiprolin	✓		
	•			Bacteria			
Sucking Pests			1	// Serenade ASO	\checkmark		adv. to launch
// Aphid & Whitefly pipeline				Seed- & Soil-borne Diseases			
// Novel Sucking Pest Solution	✓			// High concentrated Biological	\checkmark		
# SIVANTO brand family extension	✓		adv. to launch	Early Pipeline			
// Novel Mite Solution	✓			// New Biological Fungicide	\checkmark		
Nematodes				WEED MANAGEMENT -	~10% of Peak Sales Potential		
// BioAct DC	✓			// Alion LCM	✓		NEW
// Velum	✓		adv. to launch	// Roundup LCM	✓		NEW
// Next gen nematode resistant tomato	\checkmark	NEW		Early Pipeline			
Early Pipeline				// New Herbicide MOA	\checkmark	NEW	
// New Biological Insecticide	✓						
// New Insecticide	\checkmark						

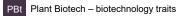
*R&D Phases:

1 – Research, 2 – Early Development, 3 – Late Development, 4 – Registrations Filed

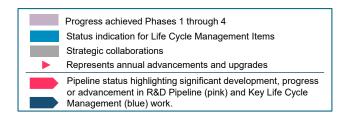
**Product enhancement: (Life Cycle Management activities)

Dev. - Under development; Subm. - Submitted for Registration

Breeding - incl. native traits and molecular breeding Br



Crop Protection – chemical and biological solutions applied as seed treatment, foliar or via soil





Digital R&D Pipeline

R&D Target	Phase*
	1 2 3 4 5
SEEDS AND PLANTING	
∥ Seed Advisor (US, Corn)	NEW
# Seed Selection (US, Corn)	
// Designed Hybrid Side-by-Sides (US, Corn)	NEW
# Seed Selection (US, Soy)	
// Advanced Seed Prescriptions (Argentina, Corn)	NEW
// Advanced Seed Prescriptions (EU, Corn)	NEW
// Advanced Seed Prescriptions (Brazil, Corn)	
// Advanced Seed Prescriptions (US, Soy)	
FIELD INSIGHTS	
// Field Health and Scouting Insights (EU, Corn)	NEW
// Advanced Irrigation Recommendations (US, Corn)	
// Disease Identification (US, Soy)	NEW
// Disease Identification (US, Corn)	
// Disease Identification (Global, Wheat)	
// Disease Vulnerability (US, Corn)	
// Disease Vulnerability (US, Soy)	NEW
// Disease Vulnerability (EU, Wheat)	NEW
// Fungicide ROI (Canada, Canola)	NEW
// Fungicide ROI (US, Soy)	NEW
	NEW

R&D Target		Pha	se*		
	1	2	3	4	5
YIELD ANALYTICS		' 1	1		
// Automated Experiment Design (Global, All Crops**)				NEW	
// Automated Experiment Analysis (Global, All Crops**)				NEW	
// Yield Prediction (US, Corn)			NEW	•	
// Yield Prediction (EU, Wheat)	NEW	•			
// Yield Prediction (US, Soy)					
// Field Productivity V2 (US, Corn)	NEW	•			
// Replant Models (US, Corn)					
# Seed Supply Planning (US, Corn)	NEW				
FERTILITY	1	1	1	1	1
// P & K Scripting (US, All Crops**)					
// P & K Scripting (Brazil and Argentina, Corn)					
// Advanced Nitrogen Scripting (US, Corn)					
// Advanced Nitrogen Scripting (US, Wheat)		•			
// Short Corn Fertility	NEW				
MEASUREMENTS					
// On-Equipment Soil Mapping (US, All Crops**)					
// On-Equipment Imaging (US, Corn)					
// On-Equipment Spray Sensing (US, All Crops**)					
// On-Equipment opray sensing (05, All Grops)		1			

*R&D Phases:

1 – Proof of Concept, 2 – Development, 3 – Pre-Commercial, 4 – Commercial / Launch, 5 – Post-Commercial / Enhancement ** All crops and/or regions enabled in FieldView P = Phosphorus K = Potassium

Progress achieved Phases 1 through 5

Pipeline status with color highlighting significant development, progress or advancement in R&D and commercial work