

Science for a Better Life



Vision for Sustainable & Regenerative Agriculture

Crop Science Innovation Summit
June 20, 2023

Rodrigo Santos // President, Bayer Crop Science



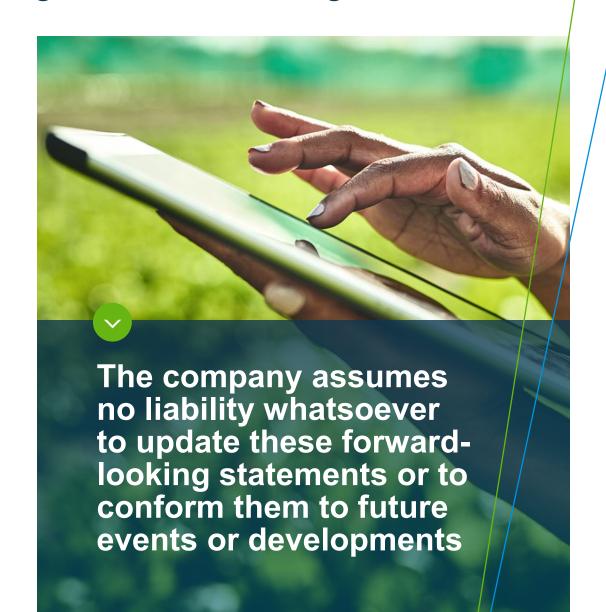
Cautionary Statements Regarding Forward-Looking Information



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

► WWW.BAYER.COM





Event Agenda

Convene, One Liberty Plaza, NY, NY



June 20, 2023

8:00 am	Welcome	Laura Meyer	
8:02 am	Vision for Sustainable & Regenerative Agriculture (Live Webcast)	Rodrigo Santos, Jeremy Williams, Frank Terhorst, Bob Reiter	
9:00 am	Break		
9:15 am	Innovation Engines to Power New Value Pools (Live Webcast)		
	// Designer Seeds: Next-Generation Breeding Technology	Mike Graham	
	// Transformative Trait Technologies	Kelly Gillespie	Convene – East Hub
	// Sustainable Small Molecules	Axel Trautwein	
	// Biological Breakthroughs	Jess Christiansen	
	// New Frontiers in Digital & Carbon Farming	Tom Eickhoff	
11:00 am	Break		
11:20 am	Live Q&A (Live Webcast)	Laura Meyer, Rodrigo Santos, Jeremy Williams, Frank Terhorst, Bob Reiter	
12:10 pm	End of Investor Portion of Event	Lunch Served	Convene – North Gallery



Crop Science Executive Leadership Perspectives



Rodrigo Santos

President,
Crop Science Division



Robert Reiter, Ph.D.

Head of R&D, Crop Science Division



Jeremy Williams, Ph.D.

Head of Climate LLC and Digital Farming Solutions



Frank Terhorst

Head of Strategy & Sustainability, Crop Science Division



Our Global Food Systems are Under Increasing Pressure

Demand for Sustainably Sourced Food and Renewable Fuels Never Greater



¹ UNDESA 2017 (United Nations Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision)

⁵ FAO Saving our soils by all earthly ways possible | FAO Stories | Food and Agriculture Organization of the United Nations

²FAO 2017, (FAO Global Perspective Studies)

³ FAO, 2020 (Water Scarcity | UN-Water (unwater.org)) ⁴ UN-Water, 2021 Water Scarcity | UN-Water (unwater.org))

⁶ FAOSTAT (accessed Oct 30, 2018) for 1961-2016 data on land, FAO 2012 for 2030 and 2050 data on land, and UNDEDA 2017: World Population Prospects for world population data

⁷ Nelson et. al. (2014): FAO 2016 "Climate change and food security"



Future of Farming

Broadening our sustainability approach with a regenerative focus



Sustainability Focus

"Producing more with less"

We're supporting food security while reducing agriculture's impact on nature

We're committed to: (1) minimizing the climate footprint of farming, (2) reducing the environmental impact of crop protection, (3) enabling smallholder farmers and (4) improving water use

Reducing and mitigating:

Increasing productivity while reducing the impact on nature

Regenerative Focus

"Producing more and restoring more"

We're supporting food security and securing farm incomes while delivering net benefits to nature

We're committed to: (1) minimizing the climate footprint of farming, (2) reducing the environmental impact of crop protection, (3) enabling smallholder farmers and (4) improving water use



We're delivering nature-positive outcomes by improving soil health, restoring biodiversity and protecting habitats, conserving water and sequestering carbon

We're helping farmers increase productivity and incomes with climate adaptation solutions and new sources of revenue

Adapting and regenerating:

Increasing productivity and incomes while renewing nature



Lead

with Regenerative Ag Solutions



Win

by being more grower centric

/// Bayer Crop Science Innovation Summit /// June 20, 2023

Our Purpose

Shaping agriculture for the benefit of farmers, consumers and the planet

Benefits of Regenerative Ag:



Yield increase and improved productivity, social and economic well-being of farmers and communities



Improved soil health



Mitigation of climate change



Preservation, restoration of biodiversity



Conservation of water

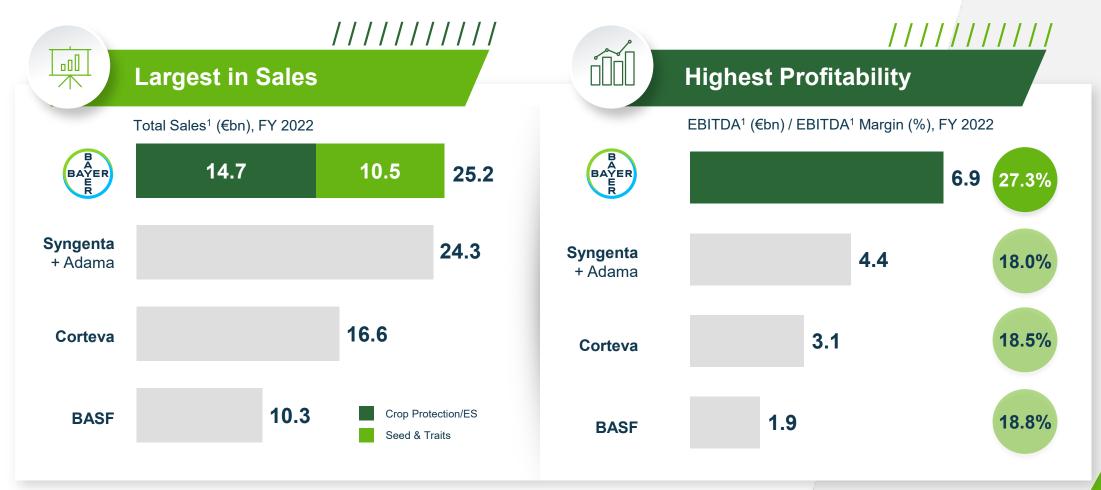


Sustainably-sourced food, Renewable fuels



The Established Leader in Crop Science

Industry leading profitability underpinned by ~€2.6bn in annual seed & trait licensing revenue

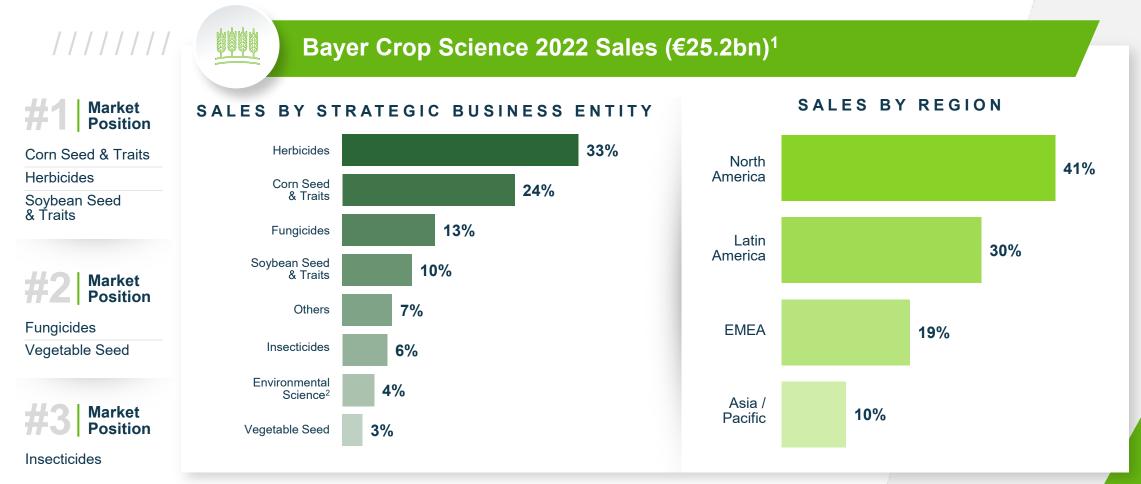


¹ Company information; exchange rate: FY 2022 ~1.05 USD/EUR. EBITDA before special items; Representing the legacy Syngenta AG results plus Adama



Growers Worldwide Recognize the Value We Deliver

#1 in Seed & Traits with Leading Crop Protection Portfolio and >70% of Sales in the Americas



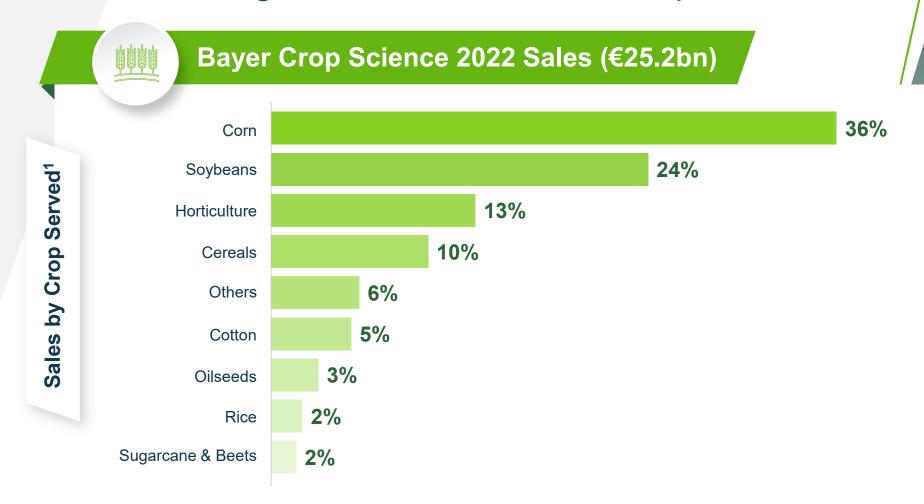
Note: Market Position determined annually, as of Q1-2023

¹ Company information; exchange rate: FY 2022: ~1.05 USD/EUR.

² Environmental Science Divestiture - October 2022



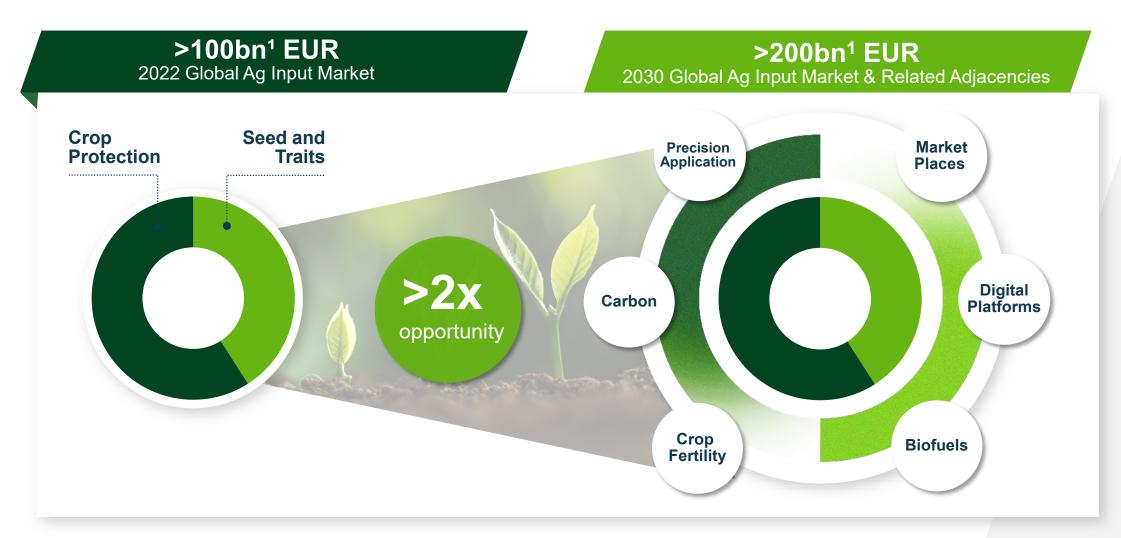
Focused in High Value, Broad Acre Crops



^{&#}x27;Source: Company estimates. Based on 2022 sales, excluding Environmental Science sales Crop protection sales allocated to crops where they are applied "Others" includes digital farming solutions, non-commercial crops, and non-identified crops.



More than Doubling Our Accessible Market by Driving Productivity and Sustainability Together to Unlock Adjacent Spaces



¹ Company estimates



Broadening our Reach To Shape Regenerative Ag on >400m Acres

- // Today our seed & trait technologies reach ~340m acres globally, anchoring our vision for regenerative system solutions
- By the middle of the next decade, we envision broadening our reach to >400m acres
- // Hybrid wheat, direct seeded rice, corn traits in Africa & Asia and carbon farming enable potential in new crops and markets
- // Preceon Smart Corn System and next-gen herbicide tolerance in soybeans build out our base





Delivering Regenerative Ag Benefits and Improved Profitability

Example: 130 HA Bayer Forward Farm Agricola Testa, located in Pergamino, Argentina 2019-2022

Increased farmer roi¹

+13%

grain productivity

+22%

gross margin/HA

.....And more sustainable agriculture¹

65%

Improvement in carbon balance (CO2 eq kg/ha)

+40%

system biomass production

+1,512

carbon sequestration (Kg CO2/HA)

-15% less sprays



Graphical depiction of Bayer Forward Farm in Pergamino, Argentina

Farmer expanded regenerative farming practices to 1,000 HA rented land after seeing these results

¹Since 2015, Agricola Testa has been certified in Good Agricultural Practices in sowing, spraying and harvesting. Results shown here depict the improvements achieved from adoption of no-till agriculture, crop rotation, inclusion of winter & cover crops, implementation of digital agriculture, selection of top performing germplasm, biotechnology traits, a balanced fertilization strategy and monitoring pests for defined control timing practices, from 2019 to 2022 at Bayer's Forward Farm, Agricola Testa, located in Pergamino, Argentina.



Science for a Better Life

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Vision for Sustainable & Regenerative Agriculture

Crop Science Innovation Summit

June 20, 2023

Frank Terhorst // Head of Strategy & Sustainability, Bayer Crop Science
Jeremy Williams, PhD // Head of Digital Farming Solutions



Vision: North America Farm of the Future

generating growth

Year-Round Cropping to Restore the Soil, Sequester Carbon and Improve Productivity & Profitability



Location: Illinois Size: 5.000 acres

Crops: Corn, Soybeans, Covercress

Current Needs

- // Improved decision-making in crop planning and management
- # Effective management of rising input costs, volatility for fertilizers
- // New revenue opportunities
- // Maintaining healthy & productive soil for the long run
- // Contributing to sustainable farming without sacrificing returns

Bayer's Unique System of Solutions

- // Preceon Smart Corn System
- // Next Gen Insect Control & Herbicide Tolerant Traits
- // Nitrogen-fixing seed treatment
- // Delaro fungicide
- // CoverCress
 (new crop opportunity)
- // HT4/HT5 Soybeans
- // Next Gen Broadacre Herbicide
- // Microsoft Azure
- // FieldView
 - // Seed Advisor
 - // Disease Management Advisor
 - // Multi-Season Crop Planner
 - // Outcome-based pricing
- // ForGround by Bayer

- ✓ Industry-leading seeds & traits
- ✓ Most flexible, efficacious weed control
- Simplified, data-based decision making for crop management and precision application
- ✓ For short stature corn, crop management opportunity at later stage and less risk of losses from lodging/green snap
- ✓ Additional farm incomes from cover crops, opportunity from verifiable carbon offset credit
- ✓ Sustainable outcomes:
 - // Improved soil health
 - // Carbon sequestration
 - // Low-carbon oil for renewable diesel
 - // Reduced environmental impact from crop protection









Vision: LATAM Farm of the Future

Bayer's Leading Innovation Drives Increased Farm ROI and Improved Sustainable Outcomes in Large-Scale Operations





Location: Brazil Size: 1,500 acres Crops: Soybeans

Current Needs

- // Sustaining productivity with the latest, most advanced input technologies to address challenging tropical farm environment
- // Remaining competitive in export market with better cost efficiencies
- # Effective management of large-scale farming operations
- // Lower impact on the environment; reduced deforestation

Bayer's Unique System of Solutions



- // Monsoy Soybean Varieties
- Next Gen Intacta Insect Control & Herbicide Tolerant Traits
- Broad insect control seed treatment
- # Fox Family fungicide
- // Plenexos insecticide
- Verango insecticide
- // Orbia
- PRO CarbonoPRO Carbono ConectaPRO Carbono Commodities
- // FieldView

- ✓ Industry-leading seeds & traits
- ✓ Most flexible, efficacious weed control
- Simplified, data-based decision making for crop management and precision application
- ✓ For Orbia, convenient access to input solutions, agricultural & financial service providers, and commodities market
- ✓ Sustainable outcomes:
 - // Improved soil health
 - Carbon sequestration
 - Low-carbon oil for renewable diesel
 - Reduced environmental impact from crop protection



Vision: EMEA Farm of the Future

Creating a Tomato Growing Environment that Enhances Nutrition, Conserves Water and Minimizes Crop Protection Use





Location: Spain Size: 50 acres Crops: tomatoes

Current Needs

- // Adapting to shifting regulations on crop protection use & residue levels to serve both local & export markets
- // Improving productivity while becoming more resource-efficient, especially in water use

Bayer's Unique System of Solutions



- // DeRuiter hybrid tomato seeds
- // Serenade biological fungicide
- / Ambition plant activator
- // BioAct biological
- Vynyty Press
- // Velum Prime
- // Bayer NemaTool
- // Bayer ResiYou

- ✓ Varieties with better built-in disease resistance, higher yield potential
- ✓ Combination of chemical & biological crop protection solutions, with digital tools for verification, to be fully compliant with EU regulations
- ✓ Sustainable outcomes:
 - // Reduced environmental impact from crop protection



Vision: APAC Farm of the Future

Providing Sustainability Benefits to Rice Production for Farmers and the Environment while Improving Farmer ROI





Location: India Size: 3 acres Crops: rice

Current Needs

- Managing rice production with scarce and increasingly expensive labor
- // Gaining more know-how on new & better technologies and practices
- // Increasing productivity while keeping costs manageable
- // Adapting to climate change with expected water scarcity

Bayer's Unique System of Solutions



- # Arize non-GM herbicide tolerant hybrid rice seeds for direct seeding
- Reatis & Evergol seed treatment
- // Herbicides:
 - // Oxadiazone pre-emergent Council early to mid-post Next gen post-emergent
- // Velum
- // Next Gen insecticides
- // Next Gen fungicide
- // FarmRise
- // Better Life Farming

- ✓ From direct seeding, higher yield output using less labor, inputs, and time vs transplanting
- ✓ For FarmRise and Better Life Farming access, know-how, & expertise on new technologies and practices, plus agricultural & financial service providers
- Additional incentives from verifiable carbon credits
- ✓ Sustainable outcomes:
 - // Lower carbon & methane emissions
 - // Reduced water use
 - // Reduced environmental impact from crop protection



Lead

with Regenerative Ag Solutions



Our Strategic Priorities



Maintain Leadership positions in our core markets



Shape Regenerative Ag by investing to increase food production, farm incomes and resilience in a changing climate, while renewing nature



Digitally Enable Our Sales to offer full crop system solutions, creating an outstanding customer experience



Invest in innovation to Win in new markets



by being more grower centric



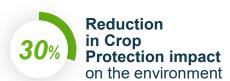
Innovative, Sustainable Solutions to Address Global Challenges

Global Challenges:



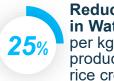
Climate Change Sustainable Energy Sources **Growing Population Increasing Protein Demand**

Our Sustainability Goals:





Reduction in Field Greenhouse gas emitted per kg of crops produced



Reduction in Water Use per kg of crops produced in rice cropping systems

Empowering 100m smallholder farmers by 2030, to become more productive and profitable

Our Solutions:

- · Novel small molecules and biological solutions with reduced environmental impact
- Short stature corn to unlock additional yield potential by optimizing crop inputs





- Digital tools for carbon sequestration measurement, precise input application
- Next-gen herbicide tolerant traits to enable no-till/ conservation tillage systems
- Covercress cover crops





- · High-performing rice seed
- Digital precision farming
- Innovative crop protection solutions for weed control in lieu of field flooding



- Arize dry-seeded rice varieties and hybrids
- Better Life Farming
- FarmRise Mobile App
- Food Value Chain Partnerships and BayGAP





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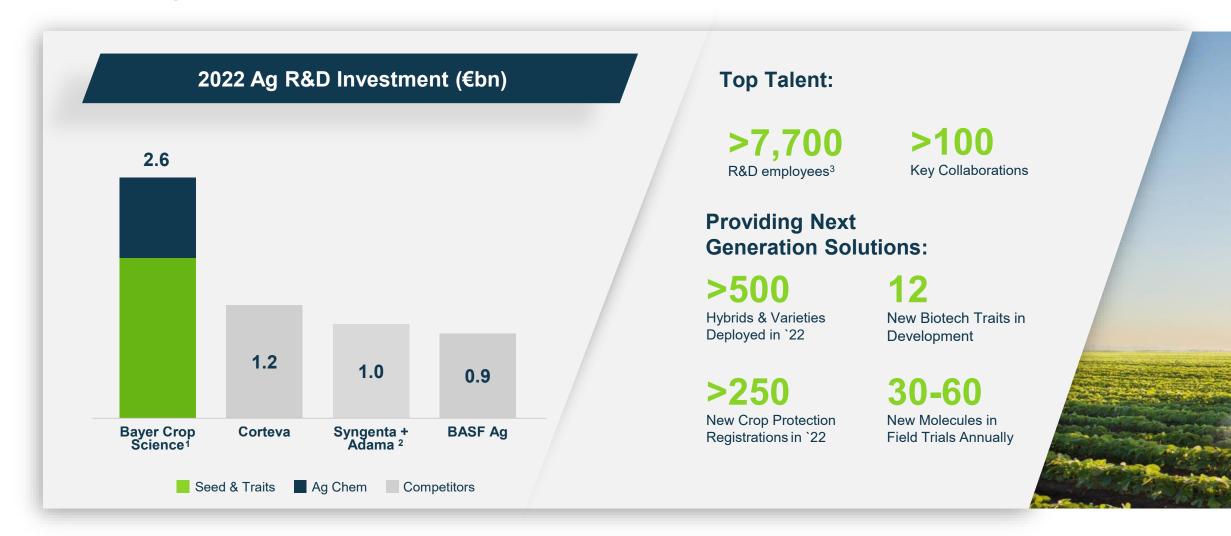
Our Innovation Investment

Crop Science Innovation Summit
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Bob Reiter, PhD // Head of R&D, Bayer Crop Science



Building the Farm of the Future with €2.6bn Annual R&D Investment





Leaps by Bayer Technology Investments Expand R&D Reach

18 Distinct Investments in Sustainable Productivity and Improved Nutrition

Leap 03/ Reduce environmental impact of agriculture















Leap 07/ Provide next-generation healthy crops









Companies shown by primary Leap but may have potential in further Leaps
For additional information on these and other Leaps by Bayer investments, please visit: https://leaps.bayer.com/



R&D Investment Powers Pipeline with >€30bn Peak Sales Potential

>€30bn

Cumulative

PSP¹

~50% of Peak Sales Incremental to Current Annual Sales

Other SBE²

Corn S&T

~€4bn

~€11bn [\]



- Digital Platforms, HortiView
- ▶ 100's of cotton varieties, 1000's of vegetable varieties/hybrids, canola hybrids and rice hybrids

Insecticides

- > Plenexos Insecticide. ~€500m
- Various LCM projects (formulations and mixtures)
- Digital Farming Solutions Franchise Value

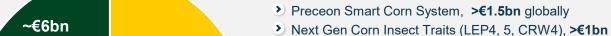
Fungicides

- Next generation Fungicide Small Molecules, >€1.2bn
- Various LCM projects (formulations and mixtures)
- Digital Farming Solutions Franchise Value

Herbicides

- New Herbicide Small Molecule, >€750m
- Various LCM projects (formulations and mixtures)
- > Digital Farming Solutions Franchise Value

Phasing of €30bn PSP¹: **30**% by 2032, **80**% by 2037



- ▶ 5th Generation Herbicide Tolerance in Corn
- ▶ 1000's of new corn hybrids
- Digital Farming Solutions Franchise Value

Soy S&T

- y 4th and 5th Gen Herbicide Tolerance Trait in Soybeans, >€1bn
- > 3rd and 4th Gen Insect Protection Trait in Soybeans, >€800m
- 1000's of new soybean varieties
 Digital Farming Solutions Franchise Value

Upside Opportunities:

- Direct Seeded Rice
- > Corn Biotech Traits in new markets in Asia & Africa
- > New Herbicide Small Molecule, over-the-top label
- Carbon Farming
- > ~€1.5bn Biologicals Sales Ambition

~€2bn

~€3bn

~€4bn

¹Represents non-risk adjusted estimated peak sales for the combined breeding, biotech, crop protection and environmental science pipelines, as well as new business models and new value areas. Note that products are excluded from the pipeline PSP typically the year following launch. Projects listed are only a subset of the pipeline.

SBE = Strategic Business Entity; LCM = Life Cycle Management; PSP = Peak sales potential

² "Other SBE" category includes seeds and traits, such as cotton, canola, wheat, OSR, rice, vegetable seeds and sugarbeets, plus digital platforms



Successfully Advancing Regenerative Ag Solutions for Farmers

15 Projects Advance in 2022; Hundreds of Seed Deployments and New Crop Protection Registrations









Convergence of Leading R&D Platforms to Unlock Next Layer of Value Creation in Agriculture



- > Leading germplasm libraries paired with advanced breeding and data science technology application
 - >3,500 unique field-testing locations
 - >500 deployments in 2022:
 - >250 in corn
 - ~150 in soybeans
 - >90 in vegetables
 - >10 in cotton

- Leading protein optimization technology with extensive protein libraries
- First-ever biotech trait for piercing and sucking insect protection
 - >65 trait products approved in 27 years reaching ~300m acres annually
 - ~3bn datapoints generated by Precision Genomics team to deliver biotech traits and accelerate genetic gain
 - **12** next-gen. traits in development

CHEMISTRY

CROP PROTECTION

- > Strong discovery platform for molecules with new modes-of-action and differentiated profiles
 - 100% Novel Mode of Action in early discovery
 - **30-60** molecules selected for field trials per year

Expect ~90-100

new formulations to launch in the next decade

Launched 15 new actives in past 15 years

- > Open Innovation Model to deliver innovative and sustainable solutionsto growers
 - >40 assets under evaluation for new collaborations or in-licensing

BIOLOGICALS

- >1,300 trials in 46 countries in 2022
- 2 Multi-year strategic partnerships with Ginkgo Bioworks and Kimitec
- >60m acres in row crops, plus additional high value horticulture and vegetables acres

DIGITAL FARMING



DATA SCIENCE

- database
 of grower and field
 trial seed performance
 data in the industry
 - >115bn
 - data points of product performance under real-world farmer management practices
 - >220m subscribed acres across 23 countries



Crop Science Executive Leadership Q&A



Rodrigo Santos

President, Crop Science Division



Robert Reiter, Ph.D.

Head of R&D, Crop Science Division



Jeremy Williams, Ph.D.

Head of Climate LLC and Digital Farming Solutions



Frank Terhorst

Head of Strategy & Sustainability, Crop Science Division



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Appendix

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Crop Science: Seed & Traits and Digital R&D Pipeline (Annual Update Feb 2023)



	Phase I		Phase II		Phase III		Phase IV		PSP	
CORN SEED & TRAIT	2nd Generation Seed Density Digital Tool - NA	\text{\(\text{\tint{\text{\tint{\text{\tinit}\\ \text{\texi}\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\text{\texit{\tett{\texi}\text{\text{\text{\texi}\text{\text{\text{\text{\text{\texi}\text{\texi}\text{\text{\text{\text{\text{\text{\tex{	5th Generation Lepidoptera Protection 5th Generation Herbicide Tolerance Digital Disease Mgmt. – NA Seed Placement Digital Tool - NA Annual Germplasm Upgrades	96 96	Short Stature Corn – Biotech Trait ³ 4th Generation Coleoptera Protection Annual Germplasm Upgrades	3	Short Stature Corn – Breeding Approach 4th Generation Lepidoptera Protection Seed Density Digital Tool – EMEA Seed Density Digital Tool – LATAM Annual Germplasm Upgrades	≥ □ □ ≥	~€11bn	
SOYBEAN SEED & TRAIT	Annual Germplasm Upgrades	旦 芝	Seed Placement Digital Tool – NA 4th Generation Insect Protection Annual Germplasm Upgrades Soybean Native Resistance	D 300 S 25 S 25	3rd Generation Insect Protection 2nd Generation Soy Cyst Nematode resistance 4th Generation Herbicide Tolerance (HT4) (2,4-D and HPPD tolerance) 5th Generation Herbicide Tolerance (HT5) (PPO tolerance) Annual Germplasm Upgrades Soybean Native Resistance	0 200 200 20 20 20 20 20 20 20 20 20 20	Vistive Gold Xtend Annual Germplasm Upgrades Soybean Native Resistance	E	~€4bn	
VEGETABLES and OTHER ⁴ Including Carbon Model	Wheat Annual Germplasm Upgrades Wheat Disease Package Upgrades Cotton Annual Germplasm Upgrades Canola/OSR Annual Germplasm Upgrades Veg- Annual Germplasm Upgrades		Wheat Digital Disease Mgmt EMEA Wheat Annual Germplasm Upgrades Wheat Disease Package Upgrades Cotton Annual Germplasm Upgrades Canola/OSR Annual Germplasm Upgrades Veg- Annual Germplasm Upgrades Rice Annual Germplasm Upgrades		Canola Dicamba Tolerance Sugarbeets 2nd Generation Herbicide Tolerance ² Cotton 4th Generation Herbicide Tolerance (HT4) (5 tolerances – Adds 2, HPPD and PPO) Cotton 4th Generation Insect Protection Wheat Annual Germplasm Upgrades Wheat Disease Package Upgrades Cotton Annual Germplasm Upgrades Canola/OSR Annual Germplasm Upgrades Veg- Annual Germplasm Upgrades Rice Annual Germplasm Upgrades) 48) 48) 48) 48 100 not not not not not	Lygus and Thrips Control (ThryvOn Technology) - Stewarded Commercial Launch Wheat Annual Germplasm Upgrades Wheat Disease Package Upgrades Cotton Annual Germplasm Upgrades Canola/OSR Annual Germplasm Upgrades Veg- Annual Germplasm Upgrades Rice Annual Germplasm Upgrades	Na ha ha ha ha ha	~€6bn	Breeding Trait Digital Model advanced to next phase

Projects listed here and included in the peak sales potential by segment do not include projects funded by our LEAPS investments; includes all advancements made in FY'22, updated Feb'23
PSP = Peak Sales Potential, 50% incremental; Expected to reach 30% of PSP by 2032, 80% of PSP by 2037 and remainder in 2038+; Note that products are excluded from the pipeline PSP typically the year following launch
² In collaboration with KWS; ³ In collaboration with BASF; ⁴ "Other" category includes seeds and traits, such as cotton, canola, wheat, OSR, rice, vegetable seeds and sugarbeets, plus carbon and digital Models



Crop Science: Crop Protection R&D Pipeline (Annual Update Feb 2023)



✓ ✓ ✓ Å₀ ✓ Å₀ ✓ Å₀		Non-Selective Glyphosate LCM Selective Merlin Flexx / Adengo LCM Balance Flexx LCM Convintro New over-the-top herbicide Luna Flexx Super Nativo	✓ Council Family ✓ Ronstar One	
3 ✓√✓ Å,				ugg.
		Delaro Forte	✓	Ψ
	Plenexos √ √ √ o♣o	Vayego Duo Velum LCM Rice Plant Hopper	✓ ✓	~€2bn
itment √ ³3,		INS FUN ready mixture Redigo FS 25	✓ ✓	
ıtı	ment 🗸 🎝	ment \checkmark by the second	Rice Plant Hopper INS FUN ready mixture	ment ✓ NS FUN ready mixture Redigo FS 25 ✓

¹ Shown here is a subset of Bayer's total life cycle management activities; focused on new formulation developments which have the potential to bring significant innovation to customers compared to currently marketed product; Products shown may not yet be fully registered in all jurisdictions; includes all advancements made in FY'22, updated Feb'23; ² SeedGrowth is currently reported within other SBEs; ³ 3rd party collaboration PSP = Peak Sales Potential, 50% incremental; Expected to reach 30% of PSP by 2032, 80% of PSP by 2037 and remainder in 2038+; **Note that products are excluded from the pipeline PSP typically the year following launch.**

advanced to next phase Selection of projects listed here and included in the peak sales potential by segment do not include projects in early research or discovery