



# Cotton

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# Cautionary Statements Regarding Forward-Looking Information

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

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Guidance at constant currencies, not including portfolio divestitures if not mentioned differently.



# Fields of Opportunity

## Cotton



### // History of Cotton Demonstration

Amount of Land to Produce One 480 lb Bale of Lint



HT4 Cotton  
Herbicide  
Efficacy Plots

BG4 Cotton  
Non-Insect Treated  
Cotton



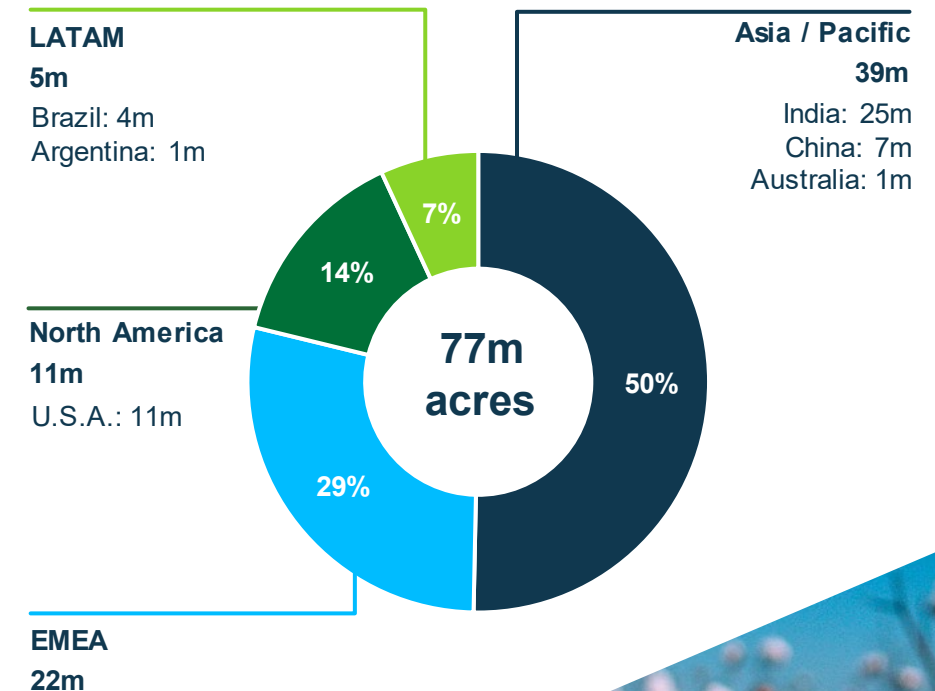


# Globally Grown Crop with Wide Range of Industrial Uses

## About Cotton

- // Total global cotton CP market: €2.3bn
- // Total global cotton Seed & Traits market: €1.5bn
- // Most widespread non-food crop
- // Wide range of industrial uses, particularly in textile industry
- // Traded in bales of raw cotton fibers
- // Yield expressed in pounds of lint per acre instead of bushels per acre (avg. in U.S. in 2021: 849 pounds)
- // Length and strength of lint key for industrial use

## Major Cotton Growing Geographies (planted acres, 21/22)<sup>1</sup>



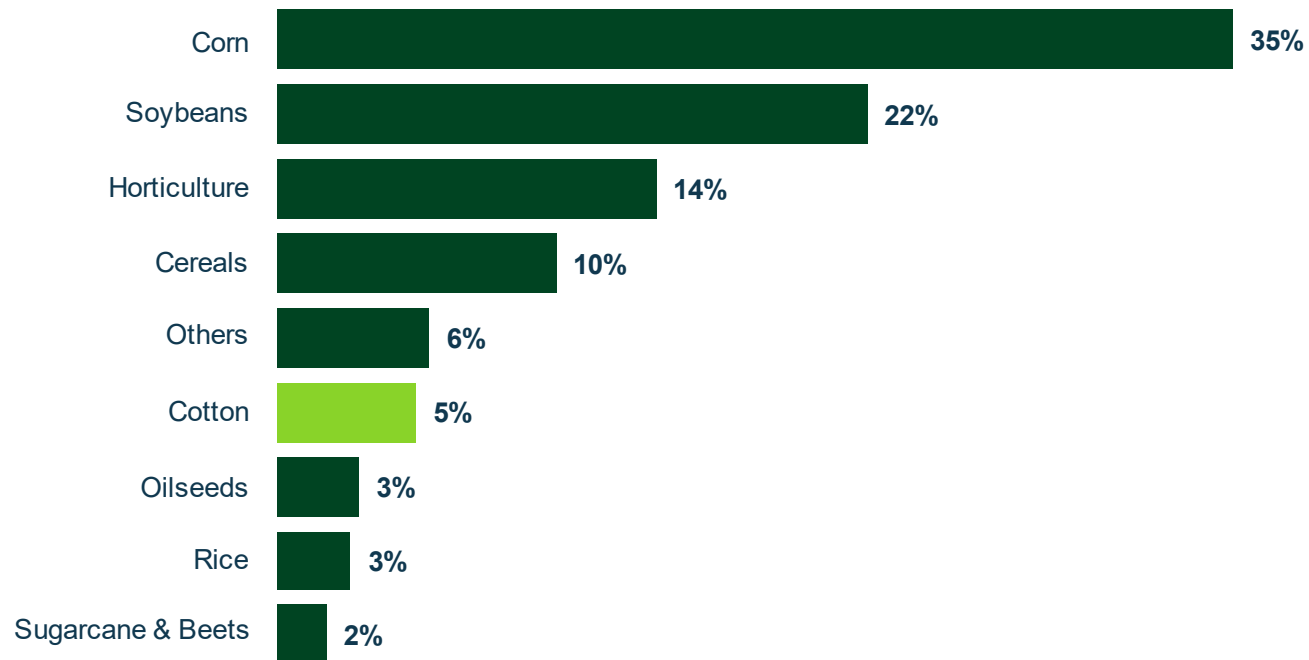
<sup>1</sup> Source: internal estimates, planted acres as of 2021



# A Global Leader in Sustainable Cotton Production

## Bayer Crop Science 2021 Sales<sup>1</sup>

### Sales by Crop Served



> Sales in Cotton: ~€1bn

<sup>1</sup> Source: Company estimates. Based on 2021 data, 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.



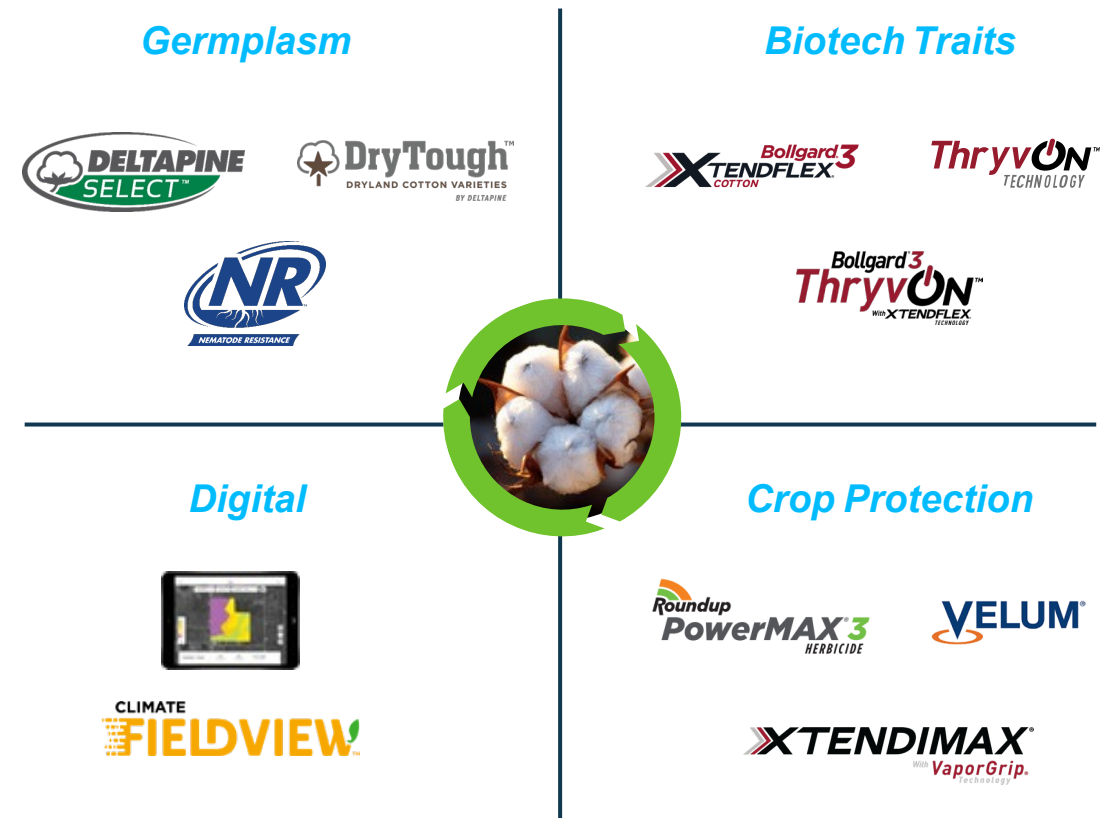
# Bayer Offers the #1 Cotton Seed & Traits Platform in U.S., Australia

Growing Presence in Brazil; Unsurpassed Weed Control with Roundup Brand of Agricultural Herbicides

## Bayer Global Cotton Footprint

- // Cotton Seed & Traits Sales in 2021: >€500m
- // Global leader in sustainable cotton production
- // #1 U.S. Germplasm share of ~65%
- // #1 U.S. Trait share of ~75%
- // Offer >25 varieties in the U.S.
- // Strong footprint in Australia (trait share of 100%) and Brazil (trait share of ~50%)

## Bayer Global Cotton Portfolio<sup>1</sup>



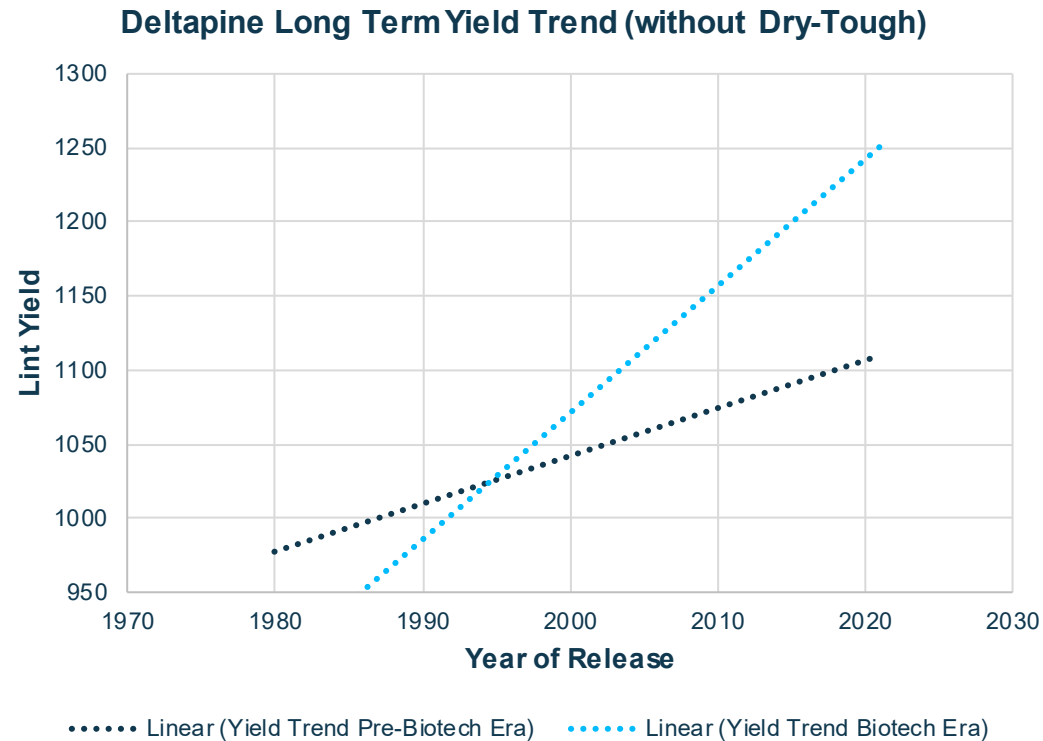
<sup>1</sup> Examples of key products in the Bayer portfolio; not a comprehensive representation



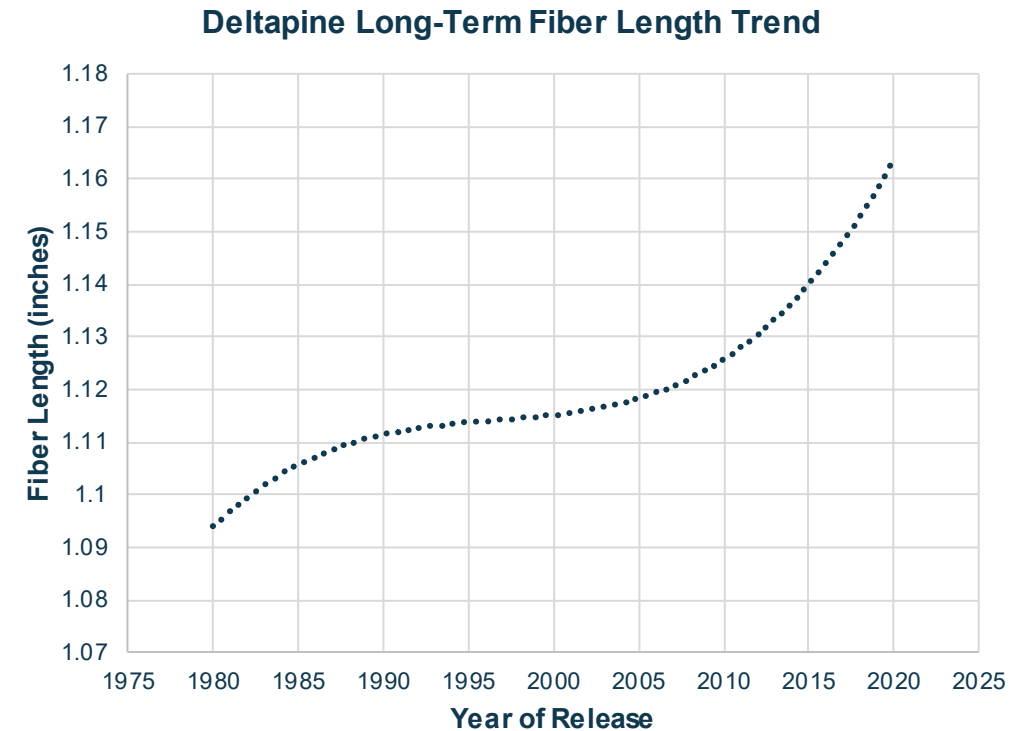
# Bayer Innovation Led Transformation in the Cotton Industry

Yield Increases and Fiber Length Gains Driven by Genetic Improvements and New Trait Technologies; Allowed for a 16% Reduction in Land Required for Production in the U.S.

## Genetic gain improved from 3.2 to 8.6 lb / year



## Continuous Fiber Length Improvements



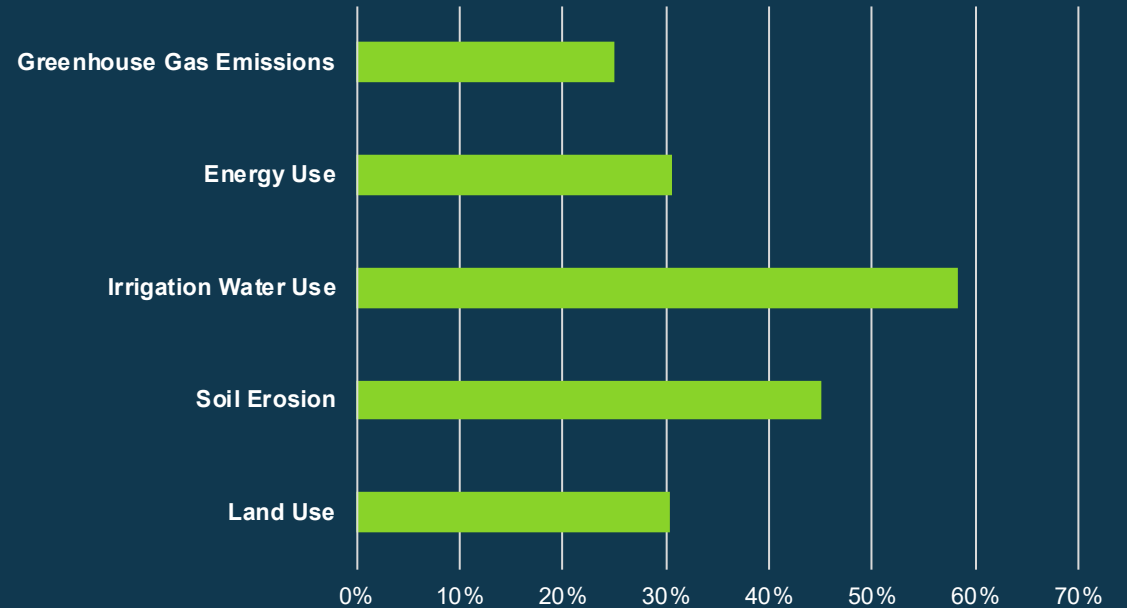


# Key Contributor to Sustainable Cotton Production Advancements

- // Industry engagement, partnership with subject matter experts, close grower relationships and state-of-the art digital technologies enable sustainable production and strengthen our position as trusted partner.
- // Cotton industry is laser-focused on driving future sustainability improvements through initiatives like:



**Sustainability Improvements in Cotton Industry<sup>1</sup>**  
(2020 vs. 1980, in %)



<sup>1</sup> Source: Field to Market 2021 National Indicators Report



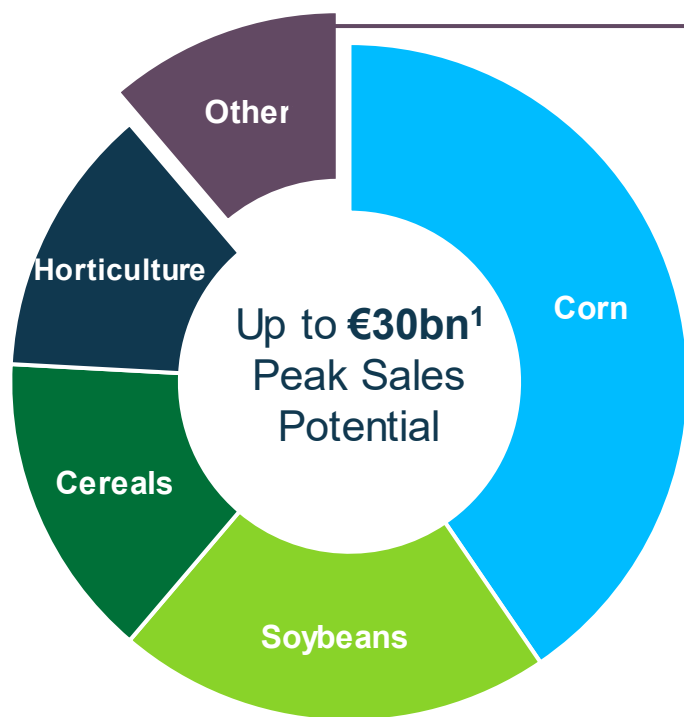


# 'Other' Pipeline Powered by Cotton, Digital and Carbon

Pipeline Potential Balanced Across Key Global Crops

## Crop Science Pipeline Peak Sales Potential

Seed, Trait, Crop Protection and Digital Solutions by Crop *Served*



### Other<sup>2</sup>: ~€4bn Peak Sales Potential

- Annual Germplasm Upgrades (e.g. Cotton and Canola)
- 4<sup>th</sup> Generation herbicide tolerance trait (HT4)
- Bollgard 4
- ThryvOn Technology (Lygus & Thrips Control)
- New Crop Protection Formulations
- Carbon
- Digital Tools (e.g. Orbia, Microsoft Collaboration)

<sup>1</sup> Represents 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. ~50% incremental sales value. Estimated to reach ~40% of peak sales potential by 2031, ~40% by 2032-2035 and ~20% by 2036+


<sup>2</sup> Projects listed per crop are subset of the pipeline; selected top contributors to peak sales potential



# Multiple Traits in Late-Stage Development for Cotton Farmers

Leading Innovation for Cotton Growers Driving Growth in >€500m<sup>1</sup> Cotton S&T Business

## 1<sup>st</sup> generation



First-ever biotech trait for piercing and sucking insect control

## 5 herbicide tolerances

**HT4 Cotton**

- Glyphosate
- Dicamba
- Glufosinate
- HPPD
- PPO

## 4<sup>th</sup> generation

**Bollgard 4 Cotton**

Season-long protection with multiple modes of action for key lepidopteran pests

Stewarded **Commercial Launch** in 2022 in the U.S.



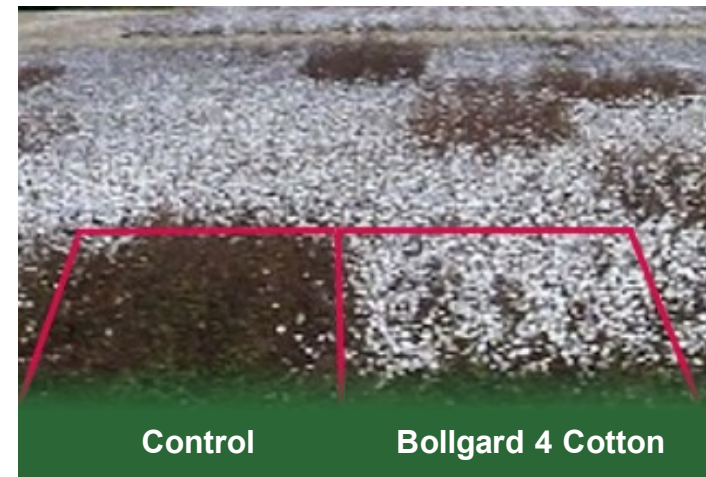
Scott, Mississippi, U.S. | Sep. 27, 2021

**ADVANCED** to Phase 3



2x 5-way tank mix at V3 stage in U.S. 2020 field trial in Scott, MS

**ADVANCED** to Phase 3



2019 Rocky Mount NCSU Results

<sup>1</sup> 2021 cotton seed & traits sales for Bayer Crop Science  
ThryvON™ Technology has received full approval for planting in the United States but, as of the date this material was published, is pending approval in certain export markets. Specific plans for commercialization depend upon regulatory approvals and other factors.