Sustainability @Crop Science

Shaping Agriculture to Benefit Farmers, Consumers and Our Planet

Klaus Kunz
Shaping Agriculture
to benefit farmers, consumers and our planet

Our Mission as the industry leader

- Deliver world-class innovation
- Pioneer the digital transformation
- Set new standards of sustainability

Tailored solutions are key to sustainably managing resources and improving productivity to feed a growing global population
Guiding principles for sustainability at Crop Science

1. Focus on transformational topics related to agriculture where we can really make a difference.

2. Always keep the farmer’s perspective in mind while creating value transparently for environment & society.

3. Link sustainability strategy to the core of our business and R&D/technologies.

4. Define KPIs to make all commitments measurable.
The Model of Planetary Boundaries Provides Clear Guidance

Biodiversity loss exceeds the planetary boundaries by far most

GHG emissions as well as Phosphorus & Nitrogen also represent serious issues

Most of the extreme poor – about 600 million – live in rural areas

Sustainability at Crop Science

Challenge:

Biodiversity, climate change and food security are key challenges to humankind, and sustainable agriculture plays a key role to provide solutions\(^1\).

Way Forward:

We will link Sustainability to the core of our business and R&D/technologies.

We will create value transparently to balance farmer’s needs with societal expectations.

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1. Based on latest publications of World Resources Institute, The Lancet, UN Climate, FAO and others.
Living up to Our Responsibility
through transformational commitments in sustainability

Advancing a carbon-zero future for agriculture

30% Reduction in field greenhouse gases emitted per kg of crops produced

Produce higher-yielding crops with fewer natural resources and inputs

30% Reduction of crop protection impact on the environment

Empowering smallholder farmers to access sustainable agricultural solutions

>100M Smallholders benefit e.g. access to education, tailored solutions & partners

Future of Farming Dialogue /// September 2019
Empowering Smallholder Farmers

With Digital Tools

Climate FarmRise™
- Serves ~100K monthly active users
- Focuses on local agronomics, credit and crop marketing
- Aims to have daily conversations with our smallholders and be the digital companion of all their needs

Early success in India
- Focus on unique smallholder challenges
- Available in 10 states, 6 languages
- Agronomic info for 10 key crops
- Marketing info for 64 crops
- Scales by geography, crop, and partner
Advancing a Carbon Zero Future for Agriculture

With Plant Microbiomes

Joint venture of Bayer and Ginkgo Bioworks

3% of worldwide global greenhouse gas emissions from industrial nitrogen fertilizers

Nitrogen fixation through plant microbiomes to significantly reduce synthetic fertilizers
Reducing Environmental Impact

With Biotechnology

Bayer Intacta RR2-PRO™ Soybeans

Increased Soybean Production

↑ 20M Incremental tons

Reduced Greenhouse Gas

equivalent of 3.3M cars

Reduced Use of Chemistry

↓ ~ 2 Application of Insecticides
Reducing Environmental Impact
With New Tailored Solutions

Growing Citrus in Spain with MOVENTO™

Reduction of Active Ingredient

~70% Volume of A.I./ha

Reduced Environmental Impact

~70% Environmental Impact/ha

1 EIQ Environmental Impact Quotient, other measures under evaluation
Sustainable Intensification

More with less
Progress will be measured by comparing the future solutions against the current market standard.

Achieve sustainable solutions that find common ground with those who grow our food and those who consume it.

We will be transparent on progress and would like to see others do the same.
Where we are,

Where we’re going
Thank You
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