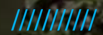




Euroopa Maaelu Arengu  
Põllumajandusfond:  
Euroopa investeringud  
maapiirkondadesse

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



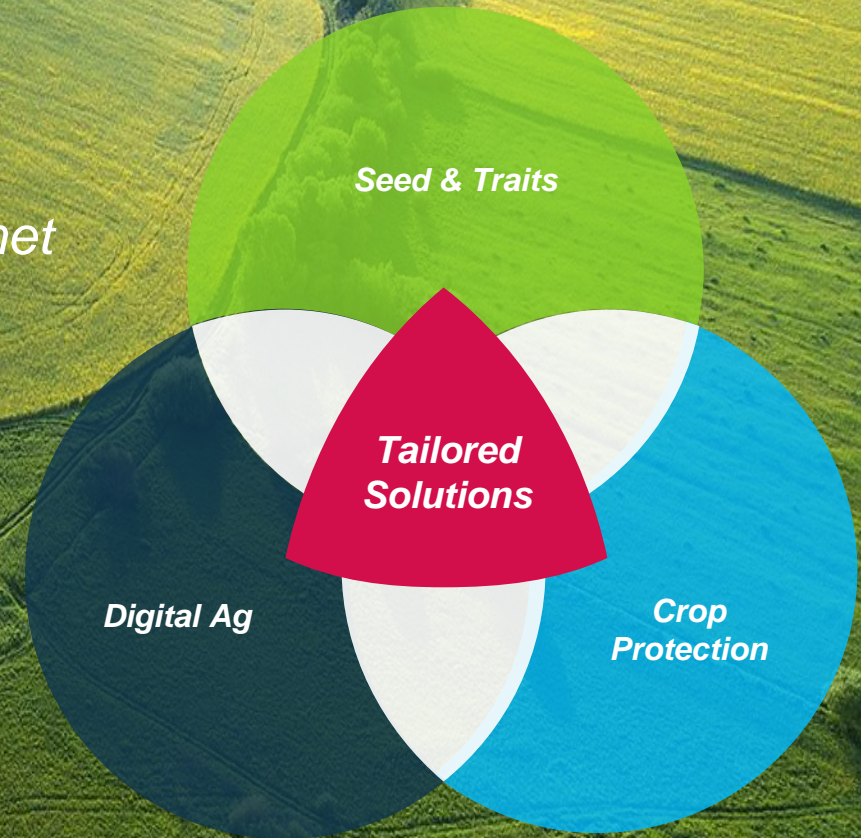
Deliver world-class innovation



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

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



# Taking Sustainable Agriculture to the Next Level

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

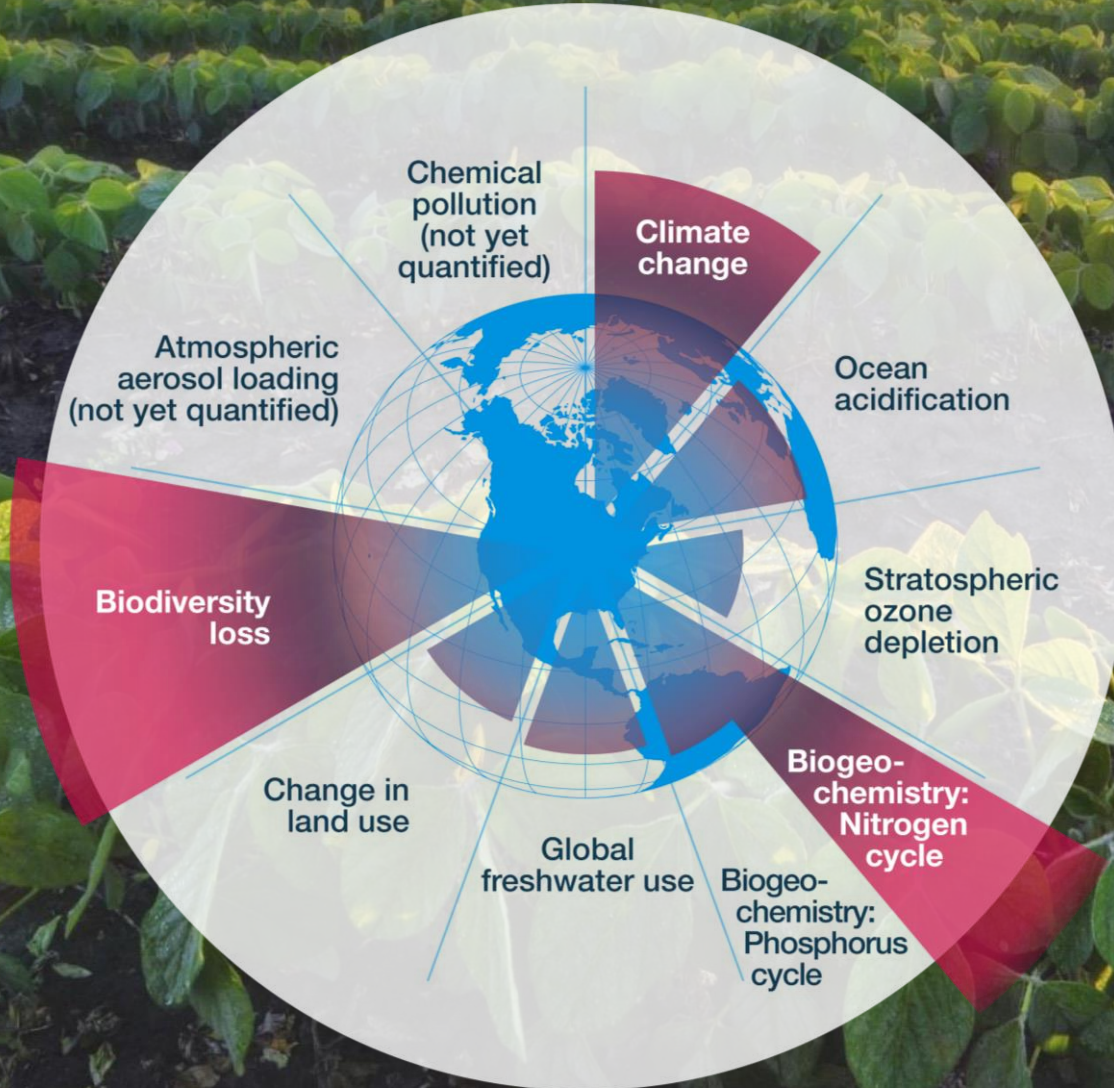
Always keep **the farmer's perspective** in mind while creating value transparently for environment & society

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

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 <sup>1</sup>**

<sup>1</sup> Source: FAO 2015. report. Ending Extreme Poverty in Rural Areas.  
Source: Eat Lancet Summary Report 2019. Based on studies by the Stockholm Resilience Center



# Sustainability @Crop Science

## Challenge:



**Biodiversity, climate change and food security are key challenges to humankind, and sustainable agriculture plays a key role to provide solutions<sup>1</sup>.**

## 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**

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**

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





# 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<sup>1</sup>/ha

<sup>1</sup> EIQ Environmental Impact Quotient, other measures under evaluation



# *Advancing a Carbon Zero Future for Agriculture*



**With Plant Microbiomes**

## *Joyn Bio*

*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*





 Future

 2019

 2018

 2000

 1980

Each Plot  
**=10**  
Bushel Yield

 1940

*More with less*

# *Sustainable Intensification*



*Where we are,*

*Where we're going*





# Aitäh

