Zukunft der Landwirtschaft
Versorgungssicherheit durch umfassende Nachhaltigkeit

Regina Ammann
Leiterin Business Sustainability & Public Affairs Schweiz

16.März 2023

“Truly glocal”

Helping farmers feed the world and take care of the planet, wherever they are

53,000
people

100+
countries

$28.2 billion
sales in 2021

#1
in Crop Protection
(chemistry and biologicals)

#3
in Seeds

#1
in China

Syngenta Group: four business units to meet customer needs

Syngenta Group

syngenta Crop Protection

- Weed Control
- Insect Control
- Disease Control
- Seed Treatment
- Biologicals
- Professional Solutions

syngenta

- Corn & Soybean
- Vegetables
- Rice
- Sunflowers
- Wheat
- Flowers

ADAMA

- Weed Control
- Insect Control
- Disease Control
- Consumer & Professional Solutions

Syngenta Group China

- Crop Protection
- Seeds
- Crop Nutrition
- Farmer Services

Digital platforms and agronomic advice

Our products help farmers to transform agriculture

Artesian corn

Drought tolerant

Up to 40% higher corn yields in extreme drought

YOOM

More nutritious food

Higher in antioxidants and extended shelf life

Enogen

Feed efficiency

5% higher feed efficiency and improved ethanol productivity

ADEPIDYN™

Lower application

Long-lasting control against fungal diseases and 20% lower application rate

Crop Protection

Improved efficiency

Increases efficacy to improve crop yield while reducing environmental impact

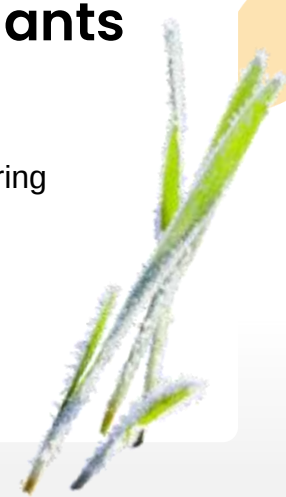
Asorbital™ FORMULATION TECHNOLOGY

Plant biostimulants

Surviving frost

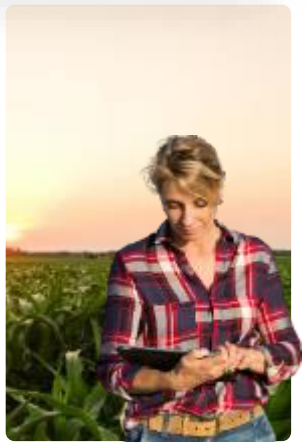
Promotes vegetal growth during environmental stress and improves effectiveness of treatments

MEGAFOL



Our contribution positively and sustainably impacts the entire food value chain

Growers



Improved yield and crop quality, sustainable soil and water management and safe use of agricultural inputs

Processors

Easy to harvest crops, optimized factory processing time and reduced wastage

Retail

Fresh and healthy food, longer shelf-life, traceability and food safety

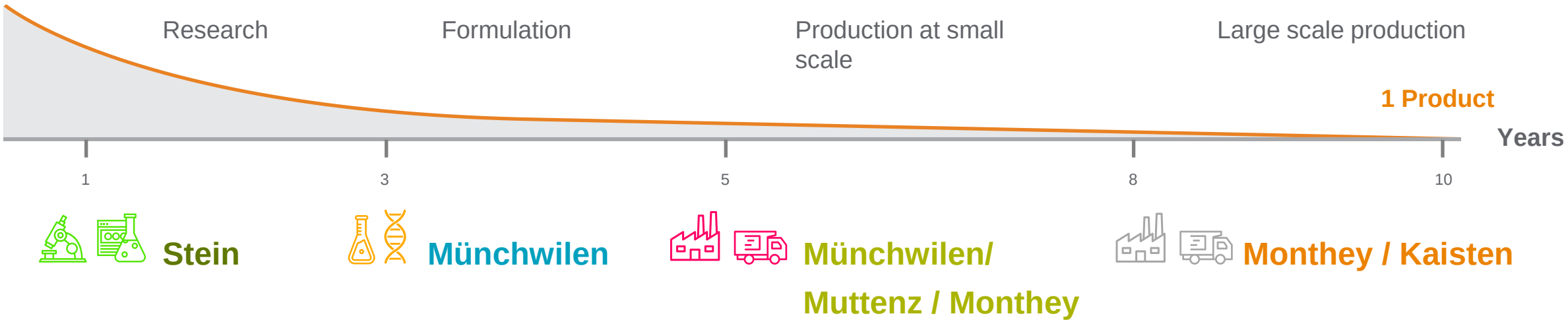
Consumer

Constant food supply fulfilling ever-changing demand for new flavors, tastes and diets

Relevance of Switzerland – from R&D to large scale production

Our R&D and production process in the area of crop protection
Important sites in Switzerland

> 100 000 Molecules



Global challenges require **holistic approaches**

Every day, the world's population grows by **200,000** people and the same number migrate to the cities every day. By 2050, **70%** of the world's population will live in cities and **50 %** more food is needed to feed ~**9.5 billion** people.

828 million people go to bed hungry - **70%** of them working in agriculture, but without access to knowledge and technology. According to FAO, **affordability of food** is an increasing challenge.

Every second agricultural land the size of a football field is lost,
40% of the soil is degraded. New varieties are based on genetic resources, but **biodiversity is under pressure.**

In 2050, **4 billion** people will live in countries with water scarcity - and agriculture already uses **70 %** of the fresh water.

Climate change leads to an increase of extreme weather events. Agriculture is a victim, but is also responsible for up to **22%** and the food system for **34 %** of greenhouse gas emissions,

Syngenta Group

Addressing challenges – Holistic view of sustainability

Economic dimension
Increase productivity

Ecological dimension
Reduction of environmental footprint

Social dimension
Increase prosperity of rural communities

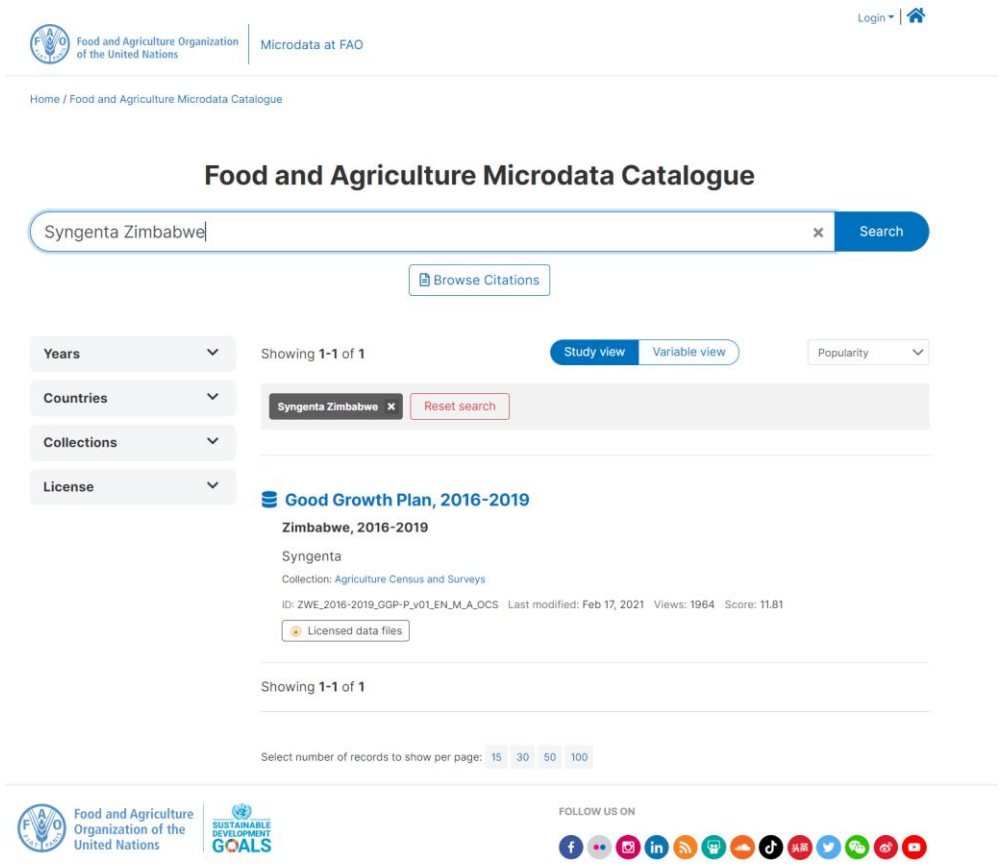
→ Agriculture can and must become more resource efficient and sustainable.

The Good Growth Plan 1, Duration 2013 - 2019

Our six commitments within our “Good Growth Plan" as a means to quantify our contribution to the UN Sustainable Development Goals (SDGs).

Good Growth Plan Open Data

Building transparency to better inform on sustainable farming practices



www.data.syngenta.com

Since we launched the first Good Growth Plan in 2013, Syngenta has publicly shared Good Growth Plan Open Data. We use Open Data Institute (ODI) certificates to ensure best practice standards that make data searchable, usable by all and shareable.

More recently, we also shared all Good Growth Plan micro-level farm data with the Food and Agriculture Organization to support the monitoring of development trends such as the SDGs. The data is available in the Food and Agriculture Microdata Catalogue (FAM)

With our new Good Growth Plan, we are continuing with this practice and publishing open data on the following topics: soil health, biodiversity, carbon benefit potential on farmland, safe use of products and land productivity.

Syngenta Group

The Good Growth Plan 2

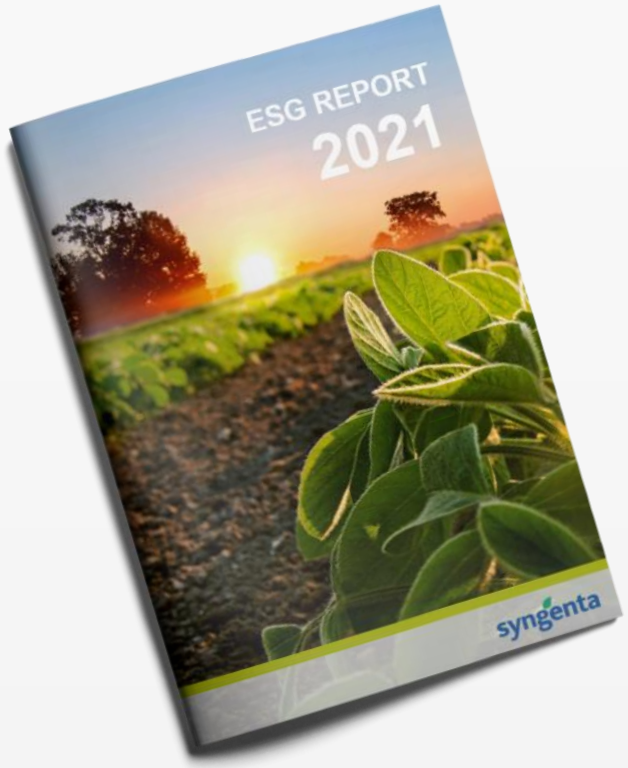
Accelerate innovation for farmers and nature

Strive for carbon neutral agriculture

Help people stay safe and healthy

Partnering for impact

Sustainability Reporting



ESG Report 2021

www.esg-reporting.syngenta.com

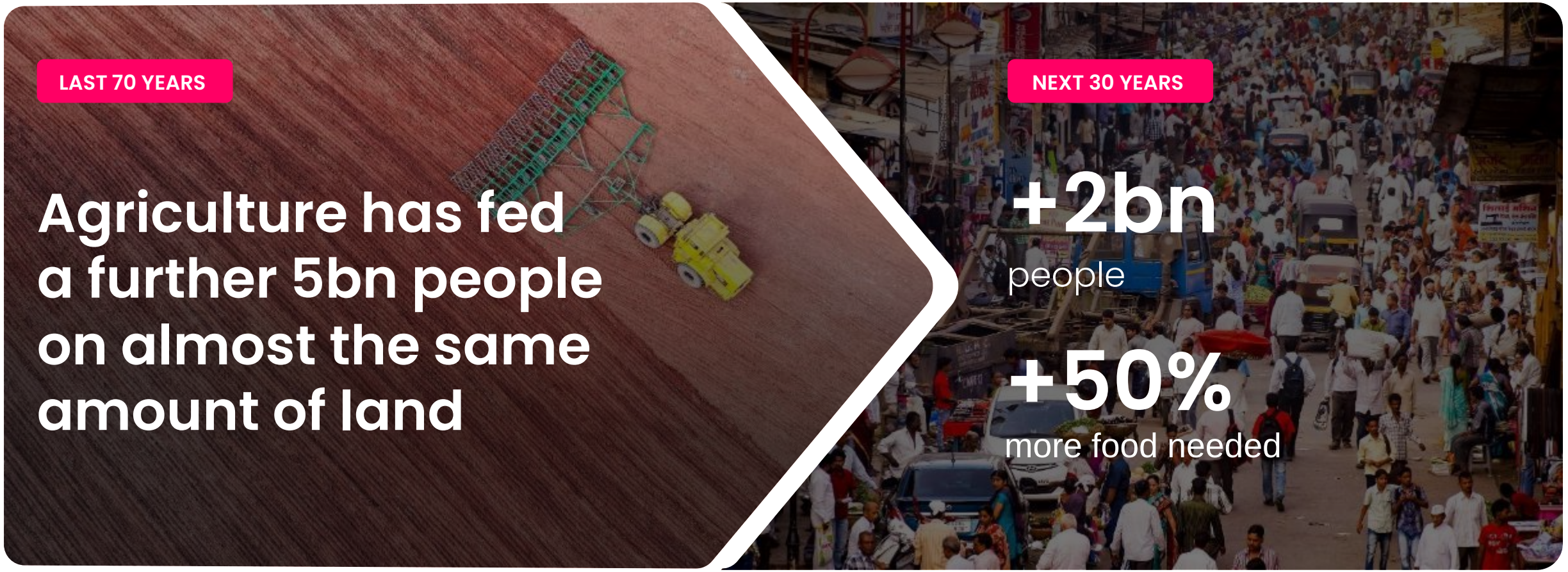
Syngenta has been reporting on a wide range of sustainability topics for many years.

Our Syngenta Environmental, Social and Governance (ESG) Report covers Syngenta Crop Protection, Syngenta Seeds and Syngenta AG, which are now part of the Syngenta Group. It meets the non-financial reporting requirements of selected reporting standards and frameworks (GRI, SASB, TCFD, UNGC) as well as the information needs of ESG rating agencies, investors and other stakeholders.

Importantly, it also includes the KPIs we use to measure our progress toward achieving the goals of our Responsible Growth Plan.We have begun to expand our ESG reporting across the Syngenta Group.

We expect to publish our first ESG report for the Syngenta Group in 2024.

One of the global challenges is to feed a growing population with the same amount of land and resources available



Source: UN, FAO, IntechOpen

Regenerative Agriculture

Regenerative agriculture is an outcome-based food production system that nurtures and restores **soil health**, protects the **climate, water resources** and **biodiversity**, and enhances **farms' productivity** and **profitability**.

Key principles

Minimized soil disturbance
ADOPT NO-TILL OR REDUCED-TILL TECHNIQUES

Plants in the ground year round
PLANT COVER CROPS TO PREVENT SOIL EROSION AND INCREASE CARBON INPUTS

Diversified crops in time and space
EXPAND CROPS IN ROTATION AND ADOPT INTERCROPPING

Precision application of biological and chemical inputs
DATA-ENABLED PRECISION PLACEMENT OF SEEDS, CROP PROTECTION AND CROP NUTRITION

Integrated livestock when possible
CROP RESIDUES AND COVER CROP GRAZING, MANURE AND COMPOST INPUTS

Some of the World’s biggest food players committing to Regenerative Agriculture

Nestlé committed to **source 50%** of key ingredients through regenerative agricultural methods **by 2030**

PepsiCo committed to regenerative practices across **7 million acres by 2030**

Cargill committed to advance regenerative agriculture practices across **10 million acres** of land in North America **by 2030**

McCain Foods committed to implement regenerative agriculture practices across 100% of McCain potato acres **by 2030**

General Mills committed to **1 million acres** of regenerative agriculture **by 2030**

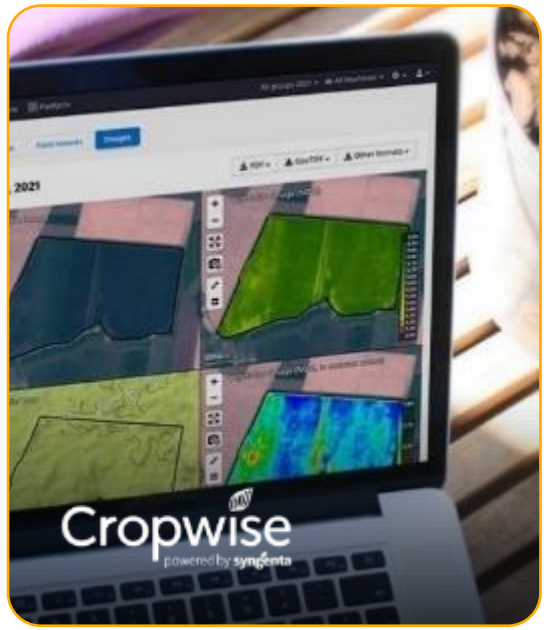
Walmart works with suppliers to increase adoption of regenerative practices and commits to help manage at least **50 million acres of land by 2030**

What is Syngenta Group's contribution to regenerative agriculture?

As the world's most local agricultural technology partner, Syngenta Group strives to transform agriculture through tailor-made solutions that support and enable farmers across the world to adopt regenerative agricultural practices, for the benefit of farmers, society and our planet.

- Science to quantify environmental, agronomic, and economic outcomes
- Biological technologies that enhance crop and soil health
- Crop Protection products that require less and are more environmentally friendly
- Access to digital tools to unlock the potential of precision agriculture
- Elite crop varieties with sustainability traits for climate resilience
- Technical advice and training to growers

We moved into new areas
that help make farmers more successful



Digital platform

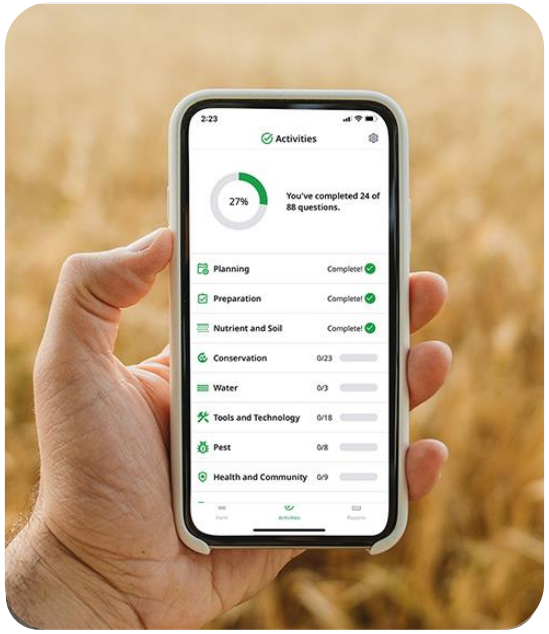
All-in-one digital farming solution with leading position in every region

Unique seed placement tool

Optimizing seed selection and placement

Precision farming

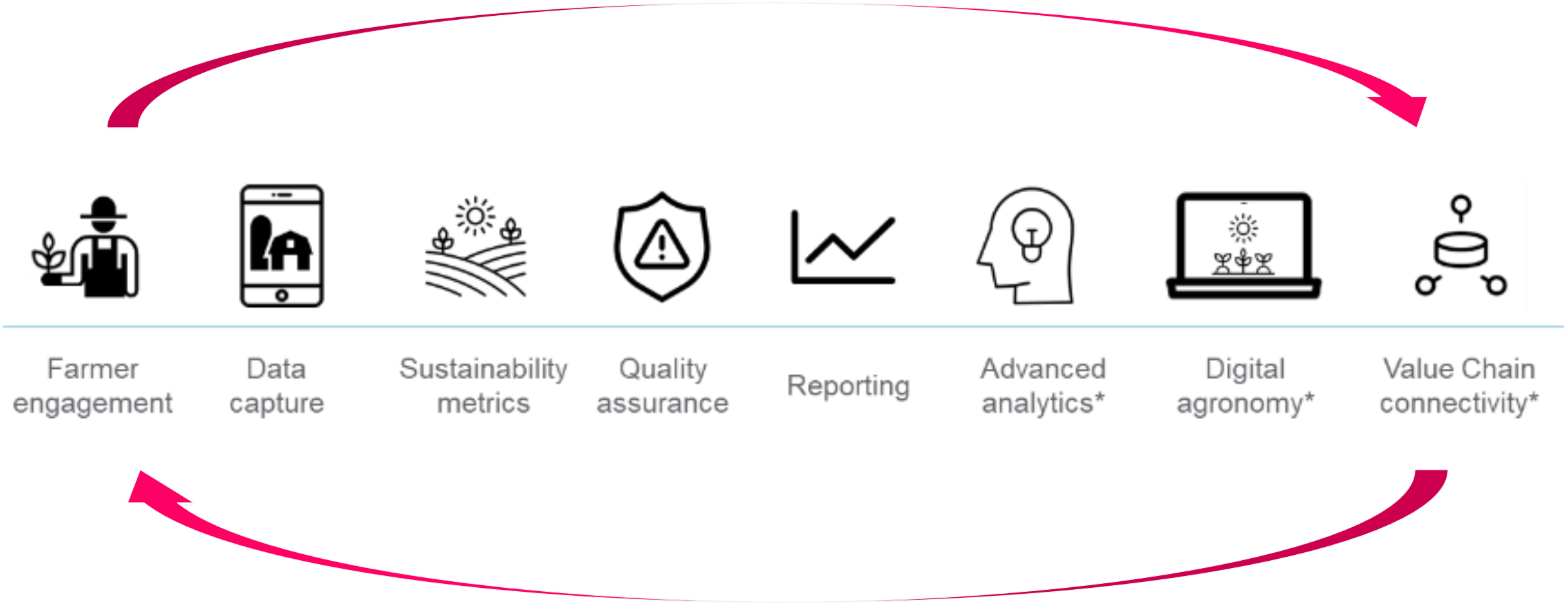
Driving increased productivity and sustainability through targeted application



Sustainability

Enabling farmers to report on on-farm sustainability

Data connecting farmers and the food value chain



Syngenta Group

MAP Centers – transforming agriculture together with growers in the whole of agriculture

To transform agriculture in China our network of Modern Agriculture Platform (MAP) Centers help farmers to modernize their farms with new sustainable solutions and connecting them to premium buyers – increasing the quality of their crops and their profitability

Rapid growing MAP center network:
transforming agriculture side-by-side growers

2018 67

2021 438

2022+ >500

Leading the way in meeting consumer demand for sustainably grown great tasting and healthy food

A KEY PART IS MAP BESIDE

A program that helps farmers grow very high quality, traceable crops in a climate-smart way and sell to commercial buyers at premium prices. The crops end up in China's Hema (or Freshippo) fresh grocery chain operated by Alibaba, the country's top online retailer.


Yoom Tomatoes


Xianzi Cauliflower

QR code provides traceability with data

Syngenta Cropwise Sustainability

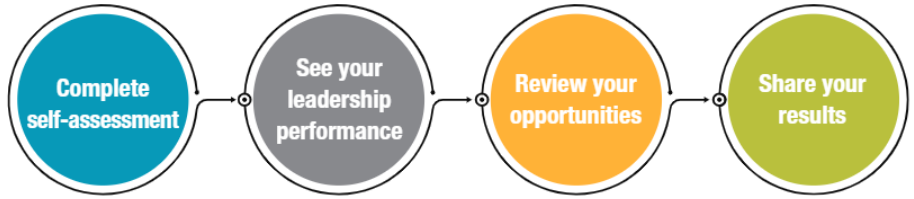
Solutions to simplify getting started in sustainability

Cropwise® Sustainability is a free and simple tool to assess your leadership in sustainability compared to other farmers and identify opportunities to improve using the Sustainable Outcomes in Agriculture standard.

- Calculate your sustainability leadership score quickly & easily
- Receive your farm-level sustainability results with actionable insights
- Meet your sustainability reporting needs for business partners
- Quick and easy data inputs
- Data privacy for all users

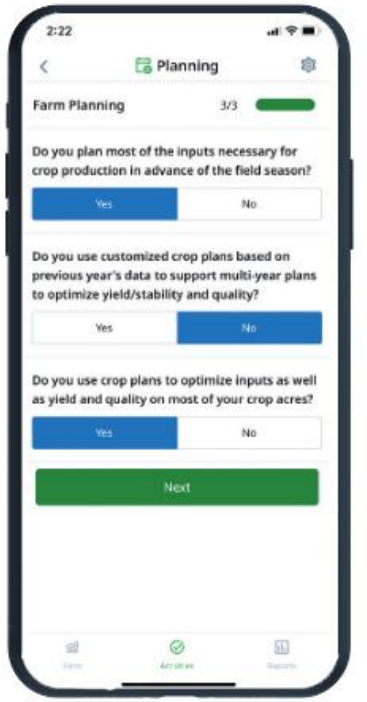
The Sustainable Outcomes in Agriculture (SOA) standard assesses farmer sustainability leadership scores, helping producers and agriculture supply chain companies improve outcomes in regenerative agriculture. The SOA standard has achieved Gold-level equivalency against SAI Platform's FSA 3.0, the highest level of equivalency.

Start measuring your progress today



Cropwise® Sustainability

Cropwise® Financials



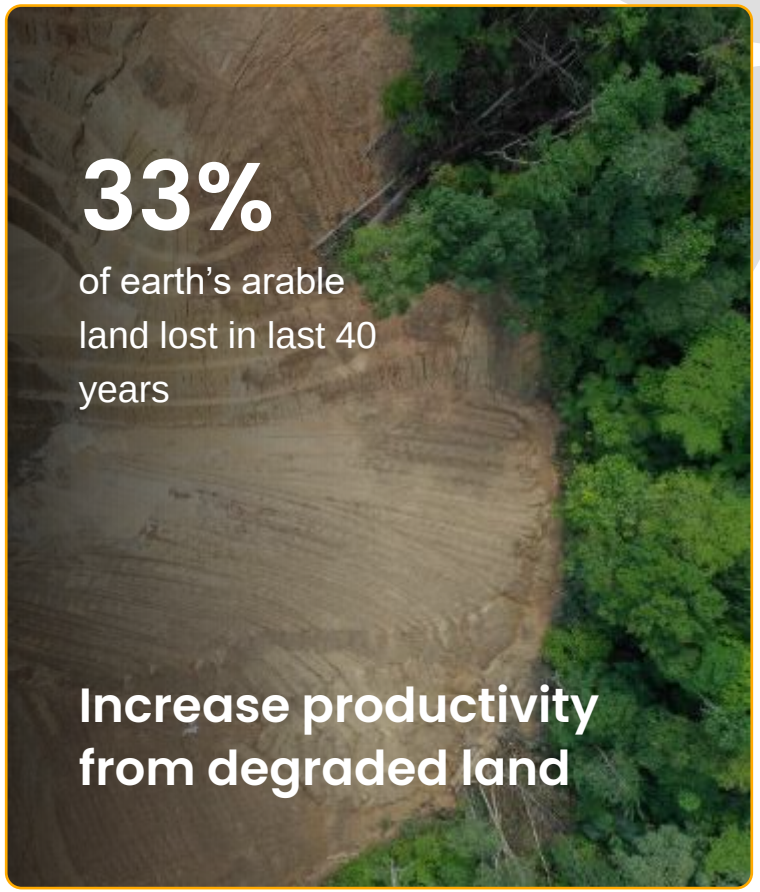
Syngenta Group

Benefits of Regenerative Agriculture to consumer health and wellbeing

- **Nutritional quality** – healthier soils increase vitamins, minerals, and phytochemicals in crops
- **Affordability** – higher yield means lower costs of healthy food
- **Food safety** – right practices lower the risk of food contamination with bacteria, chemicals, and other pathogens

Enabled by digital tools that document practices and quantify outcomes for greater transparency in the food value chain

Conclusion 1:
Agriculture needs to change current practices with sustainable innovation



Source: UNESCO; UN; IPCC

Conclusion 2:
World needs to unlock a new wave of Agricultural Innovation

- Will require acceleration in the development **and** adoption of agricultural innovations.
- Pioneering and scaling technology, practices and services that maximize food production, whilst cutting emissions, and regenerate nature.
- Unlocking a new era of progress across the sector.

Syngenta Group

Conclusion 3:
Enable and Reward the Farmer for changing

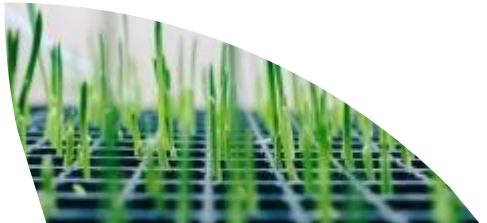
- Too often farming is portrayed as the problem and farmers as laggards
- But agriculture lives and breaths change – its revolution has been the basis of humanities progress.
- Farmers need to be supported to rise to this centuries new challenge
- To be provided with innovations that reward them financially for changing.

→ And someone needs to drive this…..









Syngenta Group

syngenta Crop Protection

syngenta Seeds

ADAMA

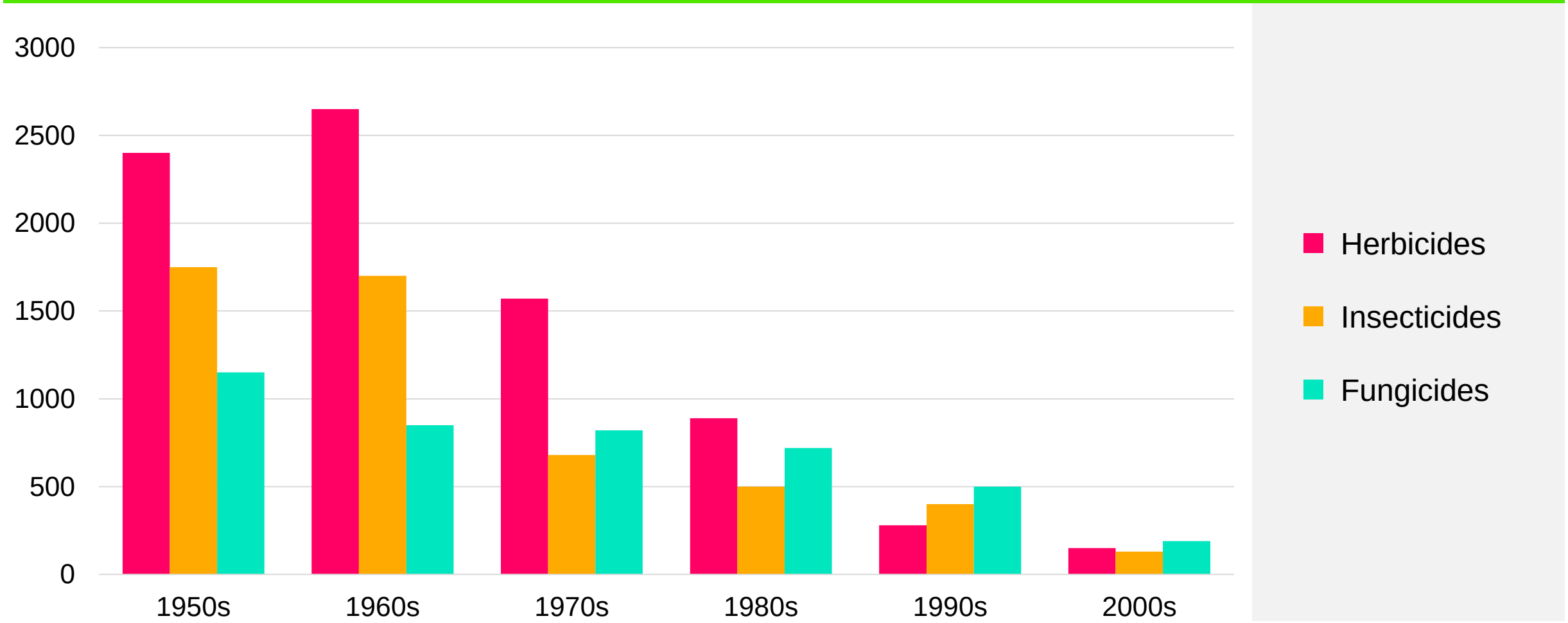
Syngenta Group China

Helping farmers feed the world with safe, nutritious, affordable and tasty food

Back-up Slides

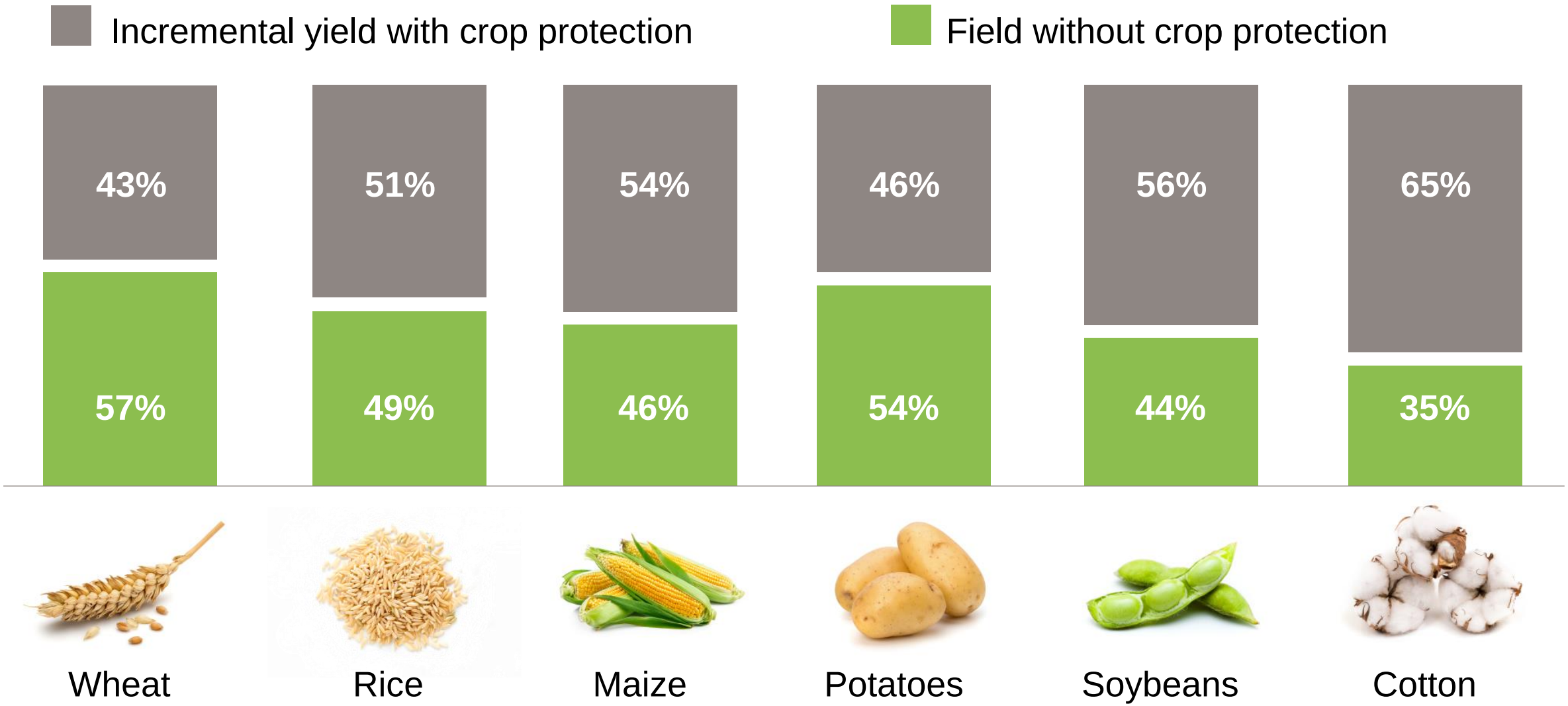
Leistungen unserer Branche (1):
Innovation: 95% Crop Protection chemistry volume decline

Average application rates (grams per hectare)

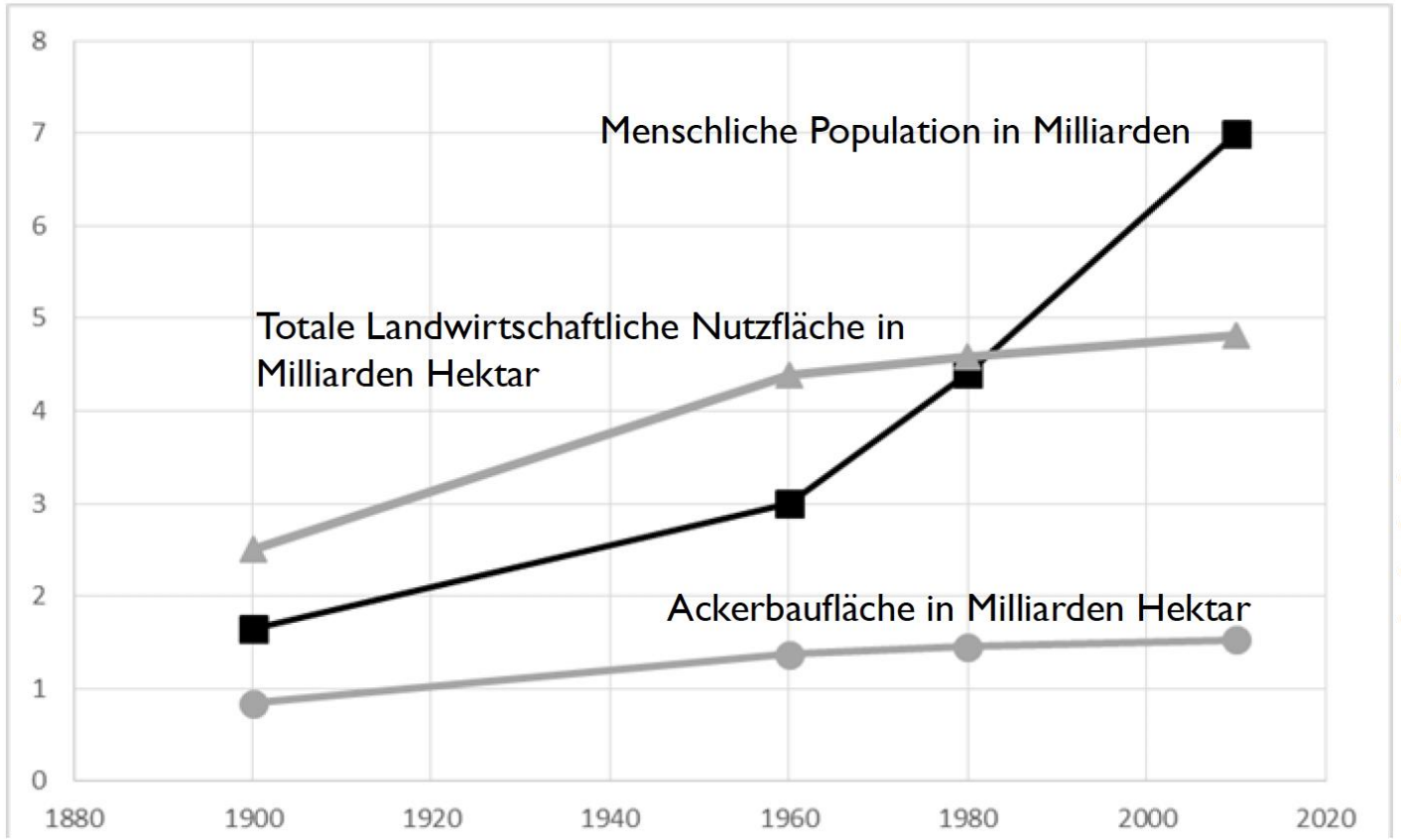


Source: Phillips McDougall, CropLife.org

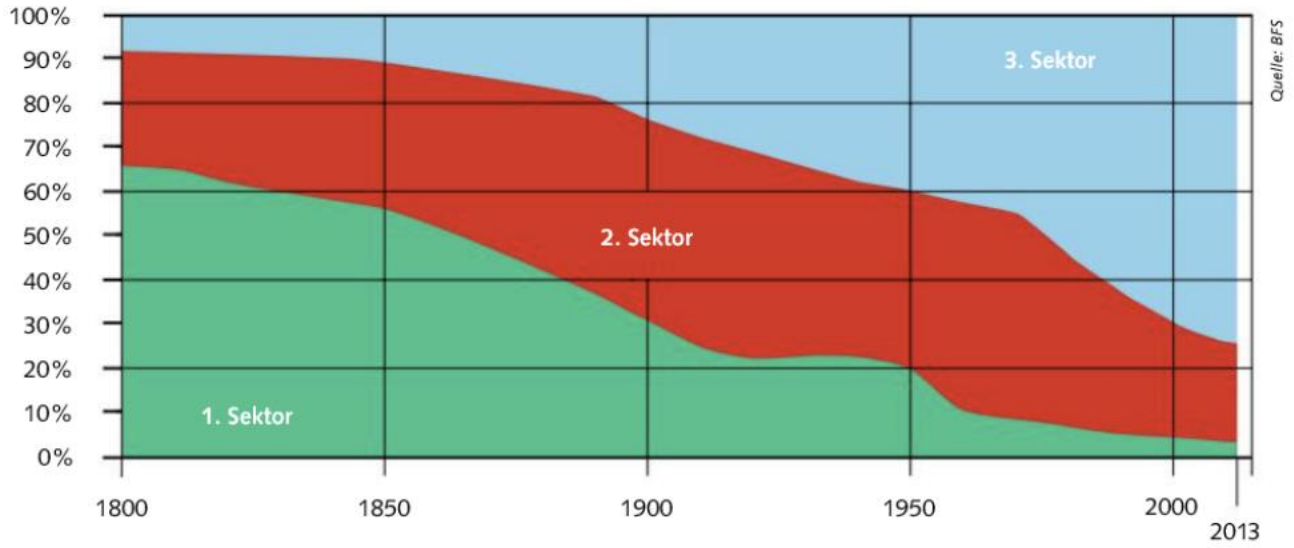
Leistungen unserer Branche (2):
Crop protection products are vital to protect and enhance yield



Die Leistungen unserer Branche (3): Agrar-Revolution heisst Fortschritt



Die Leistungen unserer Branche (4):
Produktive Landwirtschaft ermöglicht Dienstleistungsland Schweiz



Entwicklung der Sektorenstruktur der Schweizer Wirtschaft.
Quelle: BfS

Measuring Biodiversity to enable informed decision making

- Biodiversity is declining at an unprecedented rate
- Insect decline also connected to intensive agriculture
- Need to restore biodiversity in agriculture landscapes
- Fragmented biodiversity monitoring exists with no interoperability of data or data locked in private ecosystems

BREAKDOWN

Globally time series data on farmland is missing

what insects occur where and when, how active they are throughout the day, and the **influence of farming practices** on these variables and the **ecosystem**.

Need of technology & indicators

to support stakeholders aligning with biodiversity policies

Syngenta Group

We are developing **a game changing breakthrough technology**

Biodiversity Sensor

Counting wildlife, from birds to butterflies and bees. Our sensor transforms how we measure biodiversity – doing it autonomously, reliably and at a low cost.

IDENTIFIES MOST SPECIES | **ARTIFICIAL INTELLIGENCE**

SOLAR-POWERED | **FUTURE PROOFED HARDWARE**

IN PARTNERSHIP WITH:

IIT ROPAR

Fraunhofer IME

Tumbling Dice

Biodiversity Information Standards TDWG

GBIF Global Biodiversity Information Facility

alliance for biodiversity knowledge

Syngenta Group

AVAILABLE IN 2023