

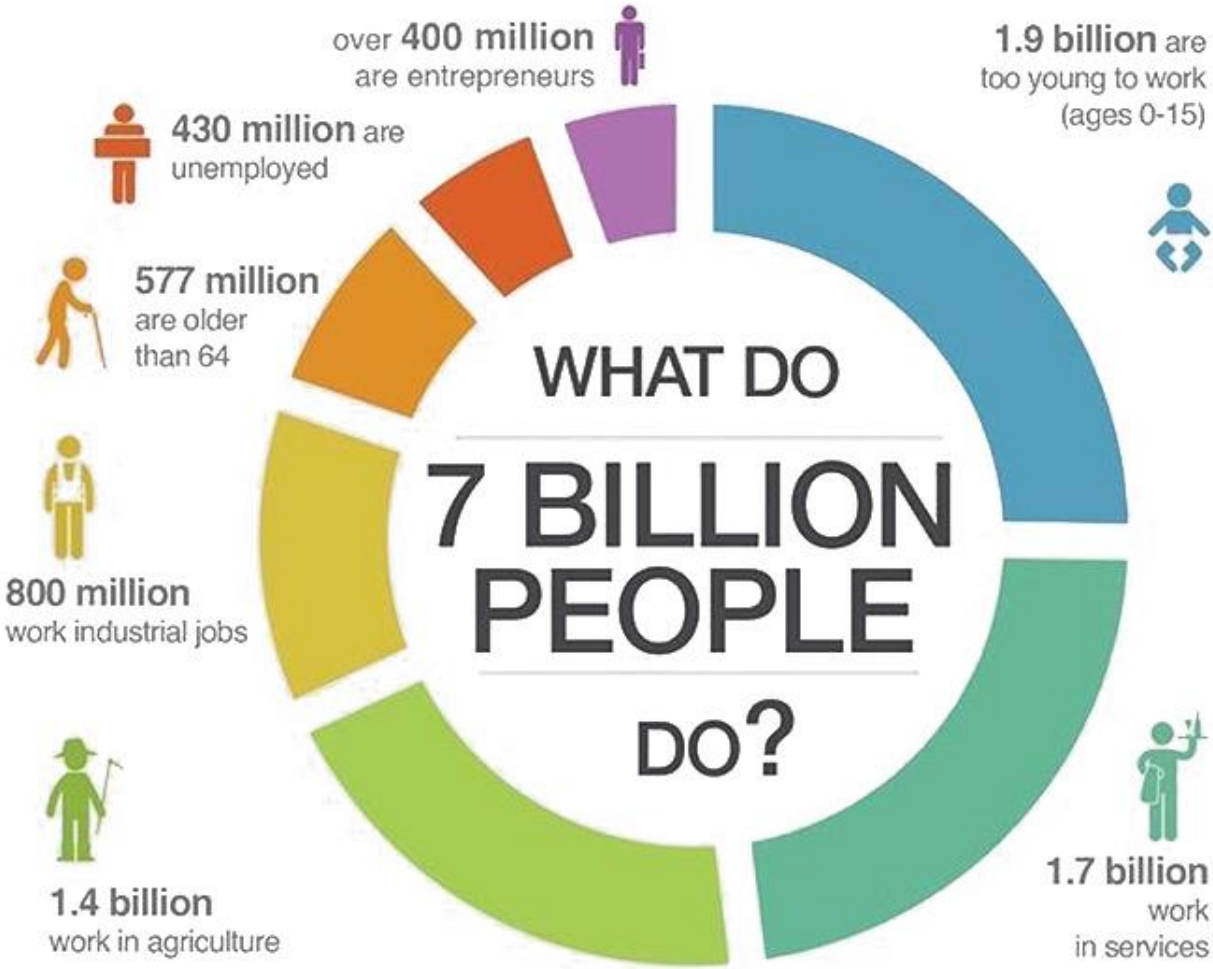


WHERE SCIENCE SERVES NATURE

# The Challenge of future farming

Prem Warrior

# OUR WORLD



Population growth to 9.8 Billion in 2050. Need to produce 70% more food by 2050 (FAO) but, agricultural productivity will slow to 1.7%. We need \$ 84 Billion in investment! (WB)

FFI Funders and Founders

sources: cia.gov, census.gov, gemconsortium.org



Where science serves nature

# Constraints to Food Security

- **ABIOTIC FACTORS:** Drought, salinity, cropping systems, poor soil fertility & lack of inputs, poor genetic potential and plant types of local varieties
- **BIOTIC FACTORS:** insects, bacteria, fungi, viral diseases, and weeds
- **MARKET LOGISTICS:** Weak market linkages, poor distribution, access to capital, food storage, local infrastructure & lack of information
- Global **Business trend** favoring agriculture in developed countries
- Political instability, weak **policies** and risk of investment in developing countries
- Other **social factors**, preferences, affecting rural livelihoods – unique to each context



# We have plenty to be happy about

- Let's be clear; we produce enough food
- And as biotechnology and “omics” march on.....
- **Crop improvement**
  - adaptive breeding
  - disease/insect resistance, abiotic stress
- **Biological products** (microbials, macrobials, biostimulants) Demand grows
  - Natural, cost-effective, yet adapted to farmer needs
  - Growth/yield, disease management, stress tolerance
- **Formulations, customized** – Right dose, Right place, Right time; getting better
- **Postharvest technologies** – to “protect” what we already have – e.g. Apeel
- **Microbiome** – Human, Plant, Soil - Metabolomics
- **Ag technologies** – CRISPR-Cas9, Gene editing, RNA, NGS, IoT, Big Data etc....

# Indian context

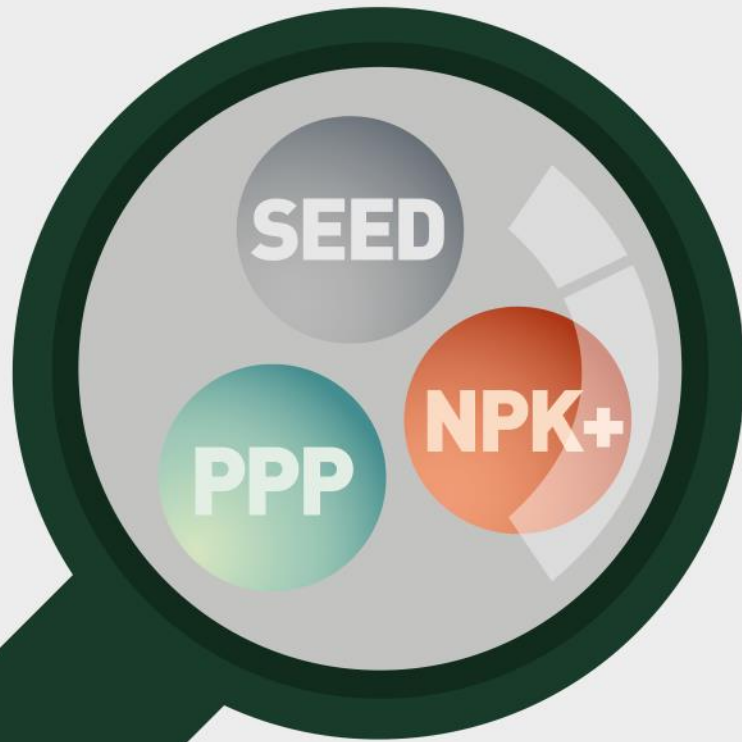
- India, one of the fastest growing economies, has one of **highest poverty prevalence** in the world and is home to approx. 40% of the world's poor
- The majority are in rural areas and largely **dependent on agriculture** for their livelihoods; **Concentrated in the mid and lower Gangetic plain** where small holder farmers have lower agricultural productivity rates
- High interest in biologicals & lots of talent; but,... Rigor, Quality, Regulation – needs improvement
- Is “Organic” farming really the answer? Are we going about it the right way?
- Urbanization, demographics and People moving away from Farming – need to create new opportunities
- Progress in “ease of doing business” and interest in balanced approach to agriculture



# OUR INDUSTRY

# CONVENTIONAL SOLUTION | PRODUCT FOCUSED

## TRADITIONAL FOCUS



## NICE TO HAVE



BIOSTIMULANTS



BIOCONTROL



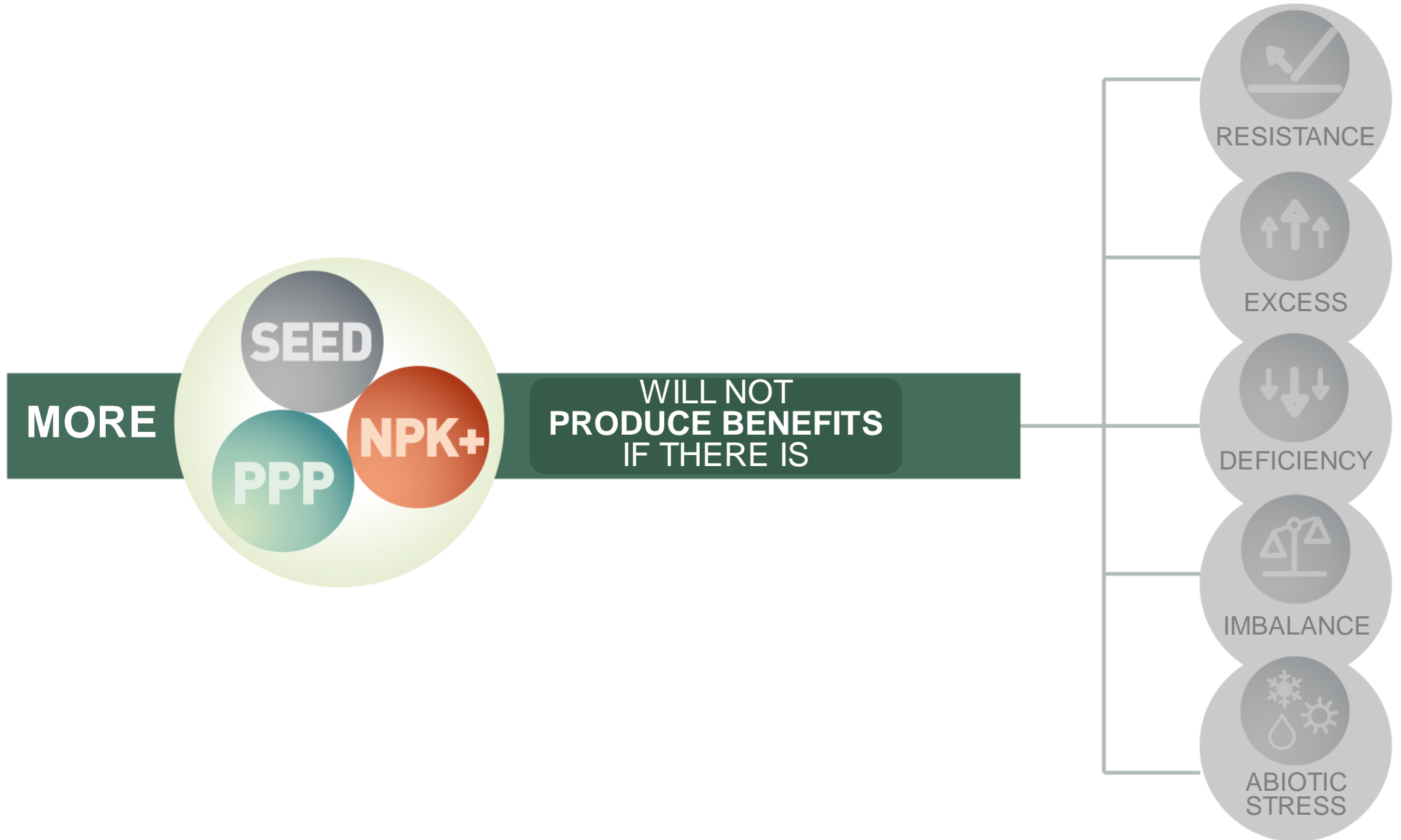
MICRONUTRIENTS



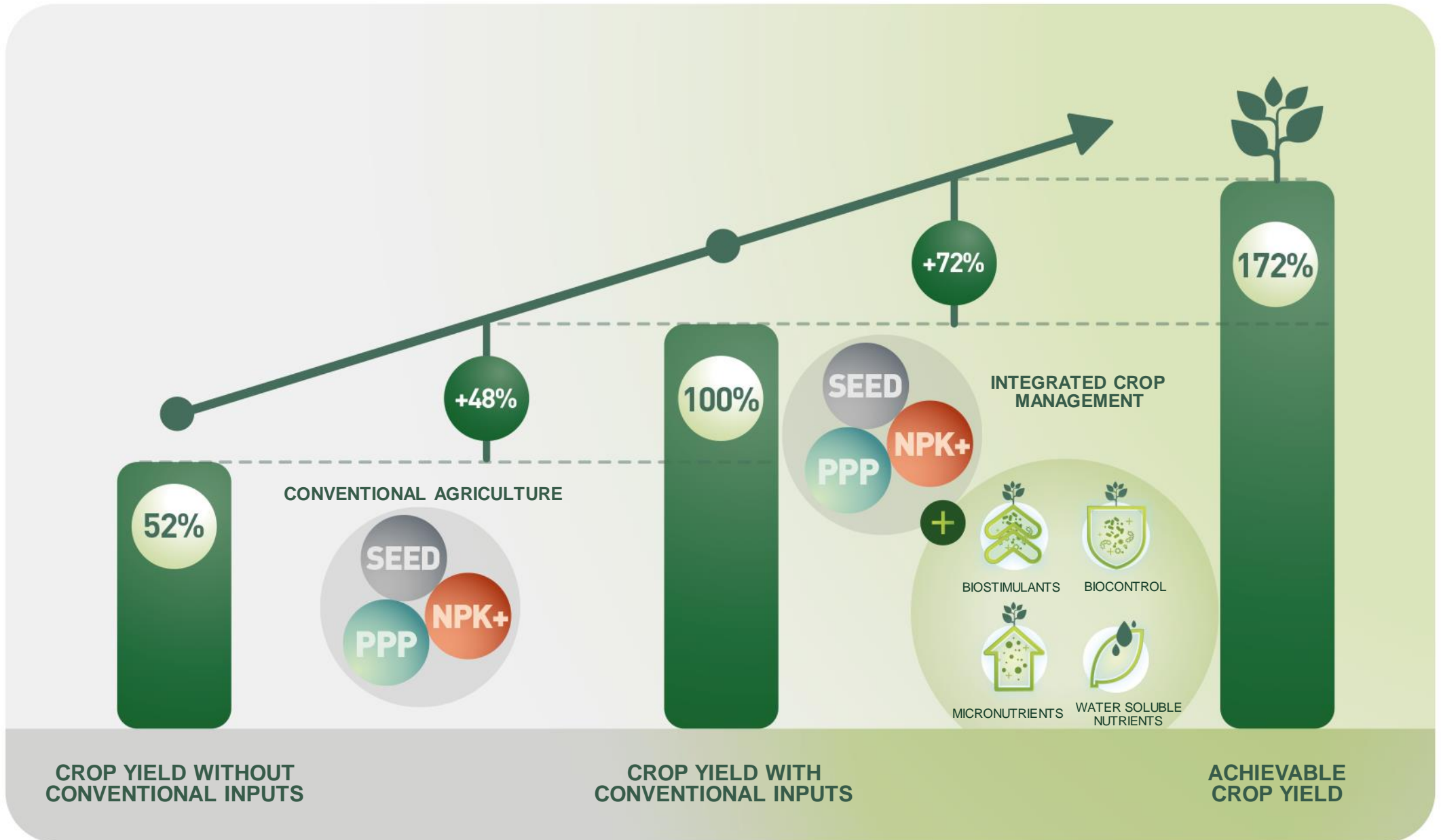
WATER SOLUBLE  
NUTRIENTS



# CLEAR LIMITATIONS TO TRADITIONAL APPROACH



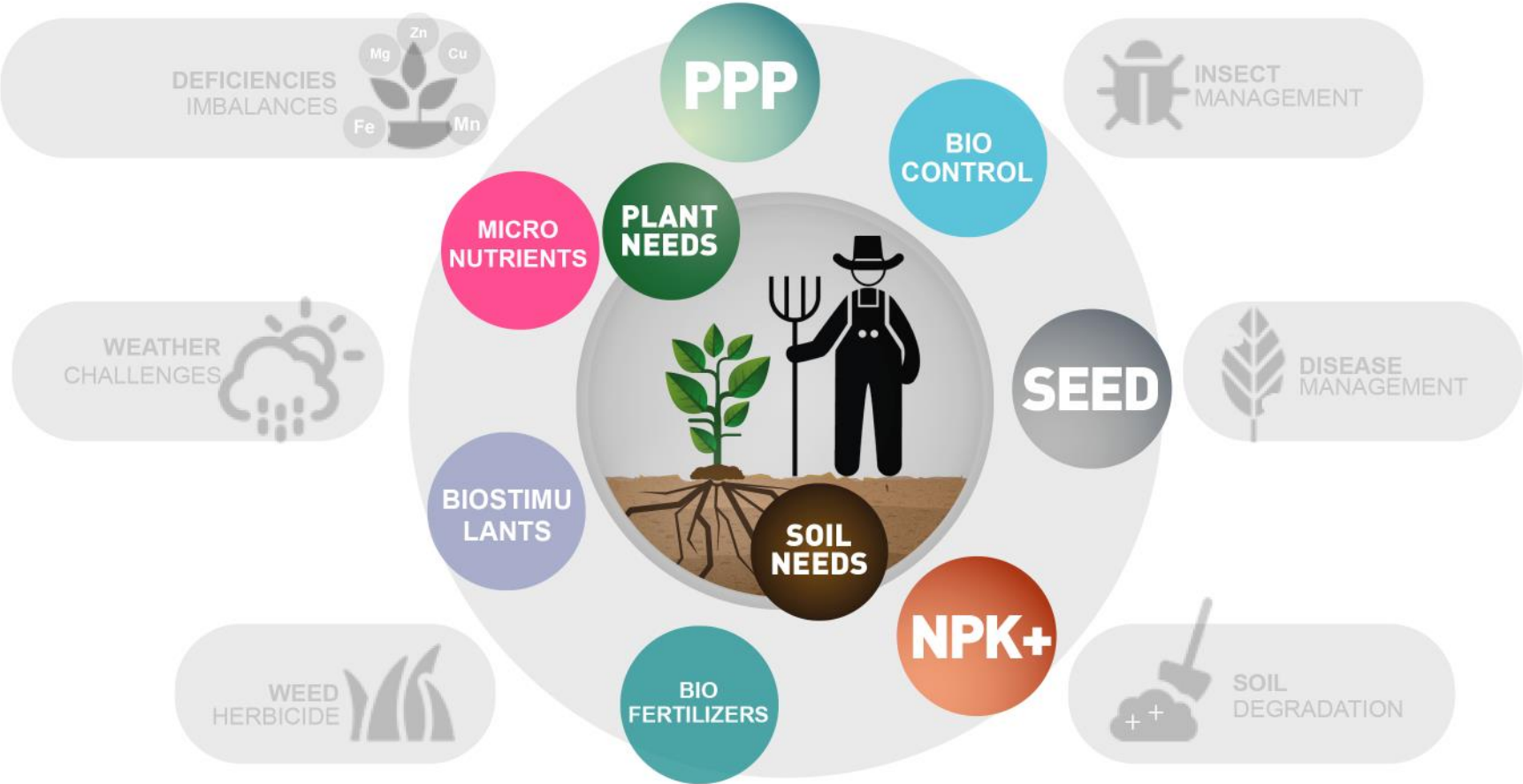
# CLEAR LIMITATIONS



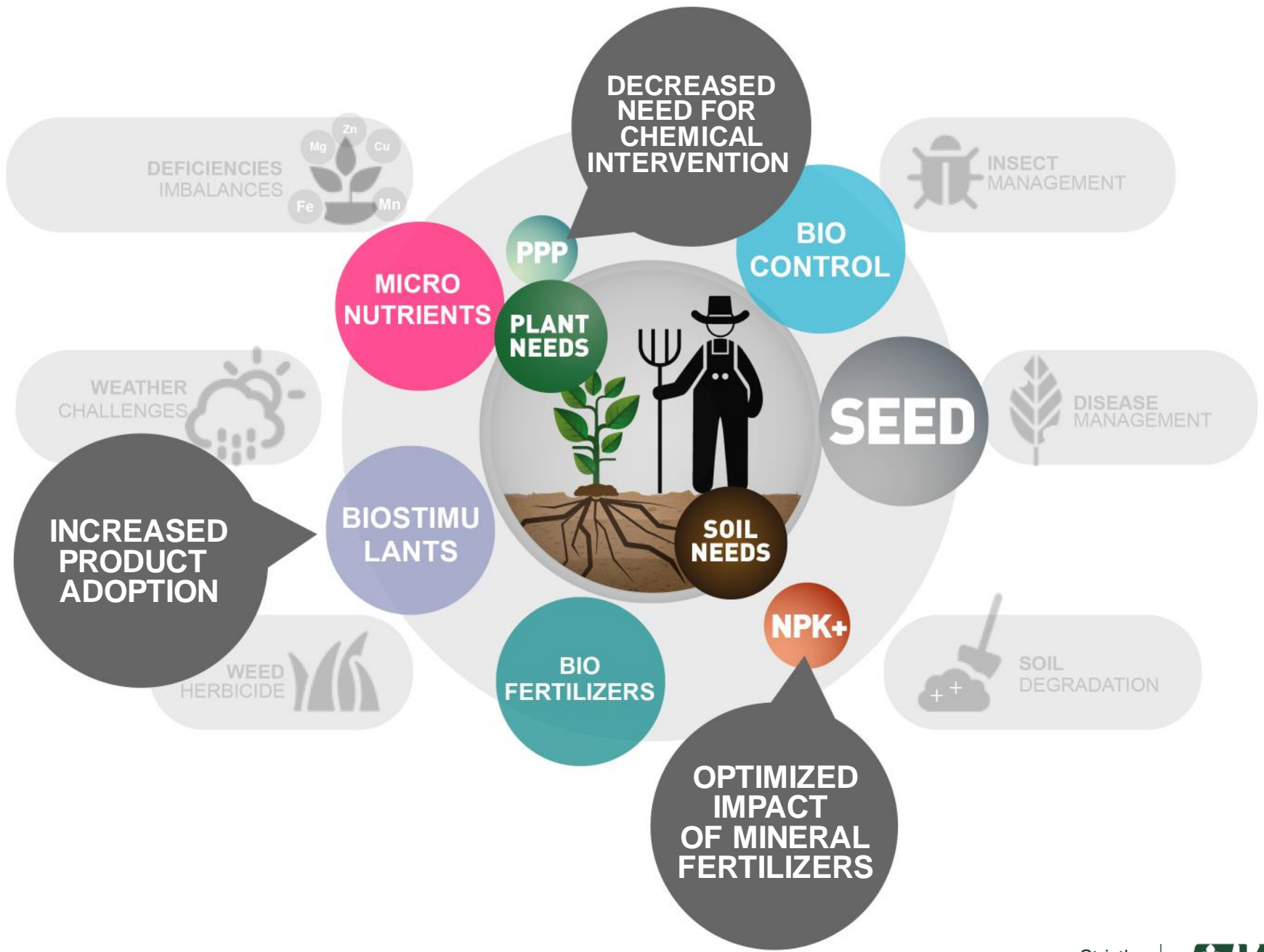
# VALAGRO'S APPROACH - FROM PRODUCTS TO SOLUTIONS



# TODAY'S SHIFT



# TODAY'S SHIFT | VALUE CHAIN IMPACT

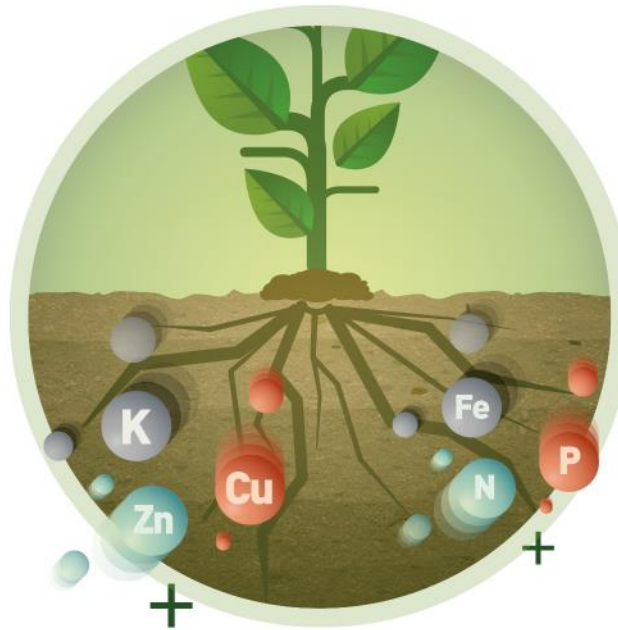


# WHY BIOSTIMULANTS?

## BIOSTIMULANTS INCREASE AGRICULTURAL EFFICIENCY



1 - Improve tolerance to **ABIOTIC STRESS**



2 - Improve nutrient **USE EFFICIENCY**

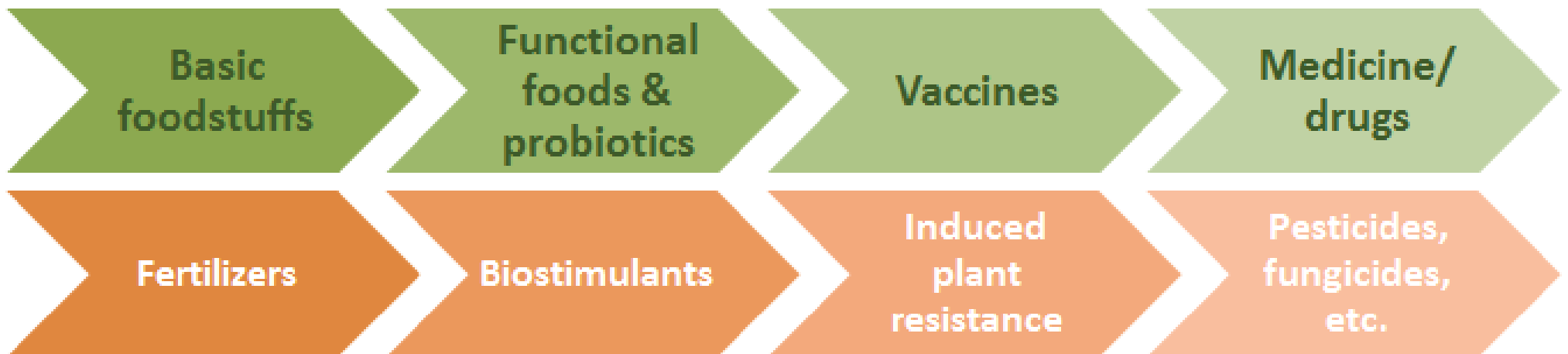


3 - Improve **CROP QUALITY**

# BIOSTIMULANTS – PLANT & MICROBIAL

**Plant biostimulant** - a material which contains substance(s) and/or microorganisms whose function when applied to plants or the rhizosphere is to stimulate natural processes to benefit nutrient uptake, nutrient efficiency, tolerance to abiotic stress, and/or crop quality, independently of its nutrient content”

**Modernizing the regulatory framework means incorporating nuances like those found in the treatment of human health and nutrition**



**OUR MISSION,  
OUR VISION,  
OUR VALUES**



# OUR MISSION

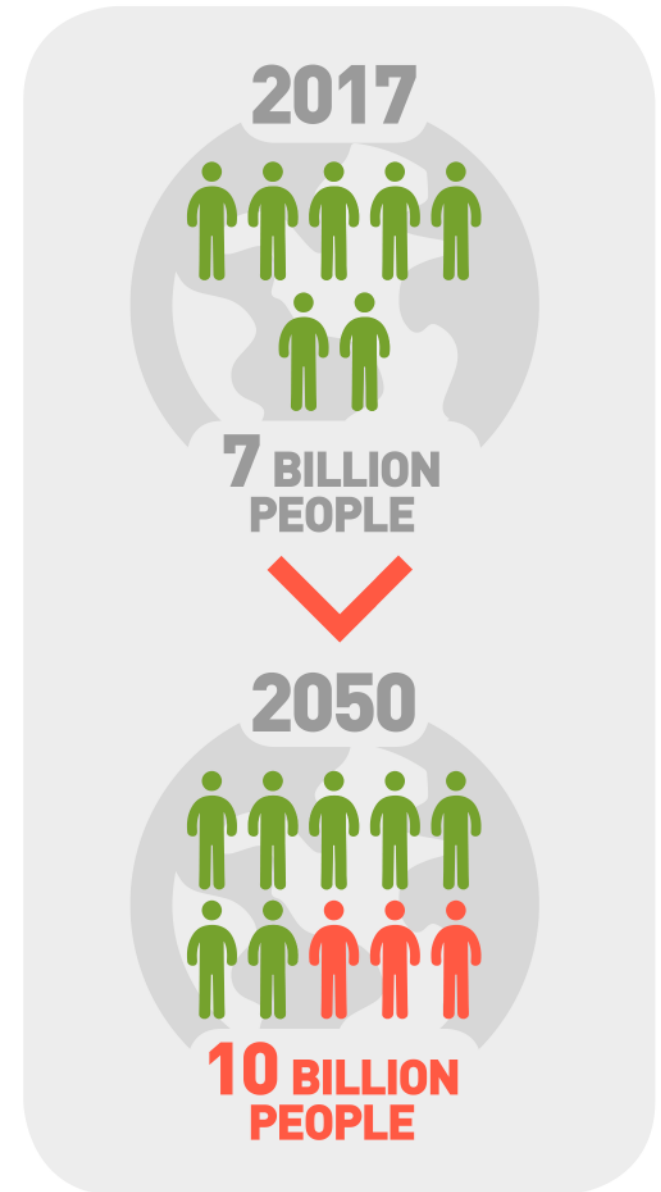
For years VALAGRO has been developing with passion **innovative and effective solutions for plant nutrition and care**, while respecting both people and the environment. The increasing demand from the world's population for food and well-being requires an effective response. Trusting in a return to nature is not a realistic alternative because it is not sufficient to **meet the global needs**. On the other hand, relying excessively on chemistry is not a sustainable choice for the environment in the long term.

# OUR VISION

Aware of this challenge, VALAGRO believes it is possible to find a way to meet the needs of humankind using fewer resources, placing Science at the service of man through innovation while respecting Nature.

# OUR VALUES

- HONESTY AND INTEGRITY
- PASSION FOR THE CUSTOMER, PRODUCTS AND OUR WORK
- RESPONSIBILITY TO OURSELVES, OTHERS AND THE ENVIRONMENT
- COHESION AND MULTICULTURALISM
- CONFIDENCE IN INNOVATION



# COMPANY OVERVIEW

# COMPANY SNAPSHOT |

Valagro is a leading global biostimulants and specialty nutrients company.

## 1 BUSINESS OVERVIEW

- Founded in 1980.
- Develops sustainable solutions to enhance food production and improve nutritional quality.

**20+ product lines** (Biostimulants,

- Micronutrients and Water-Soluble Nutrients).

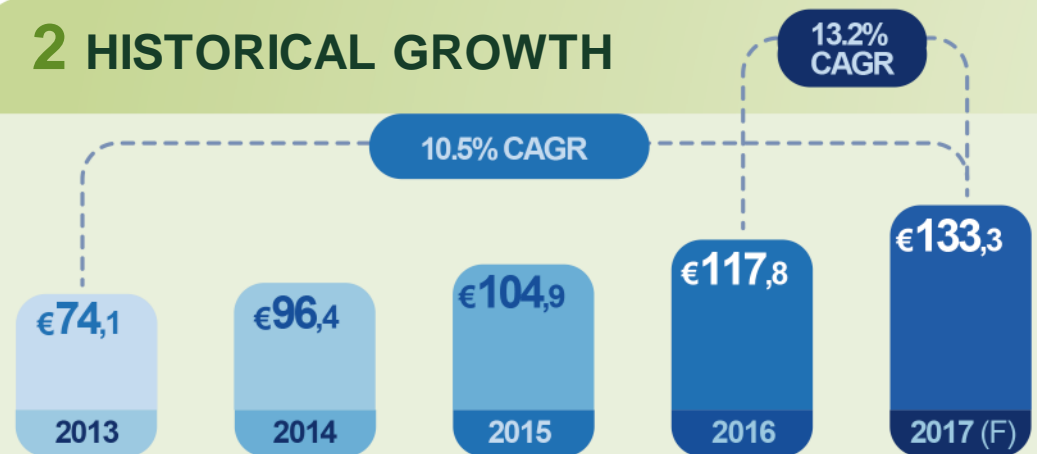
- **Two business units:**  
Farm, Industrials

- Sales in over 80 countries

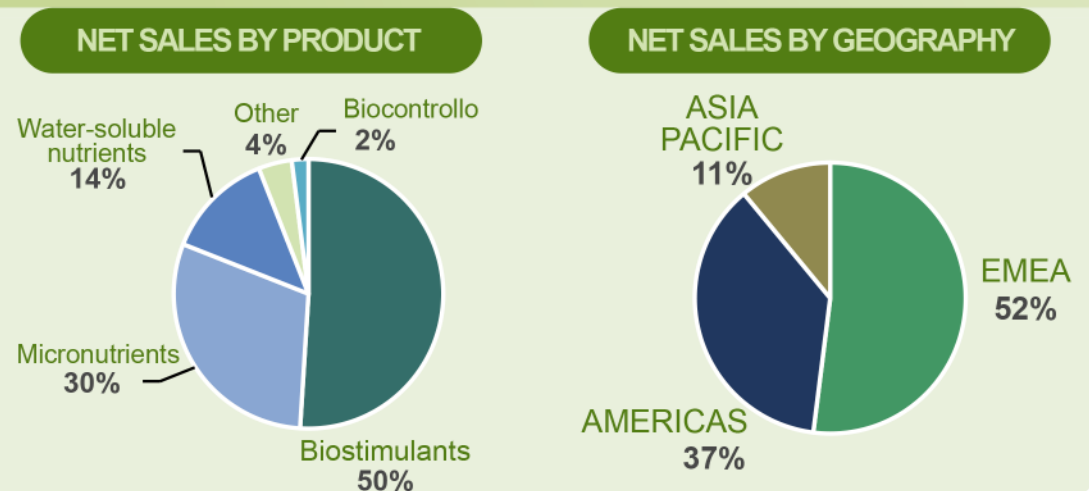
2017 Net Sales:

- **€ 133.3 million**
- **629 employees**

## 2 HISTORICAL GROWTH

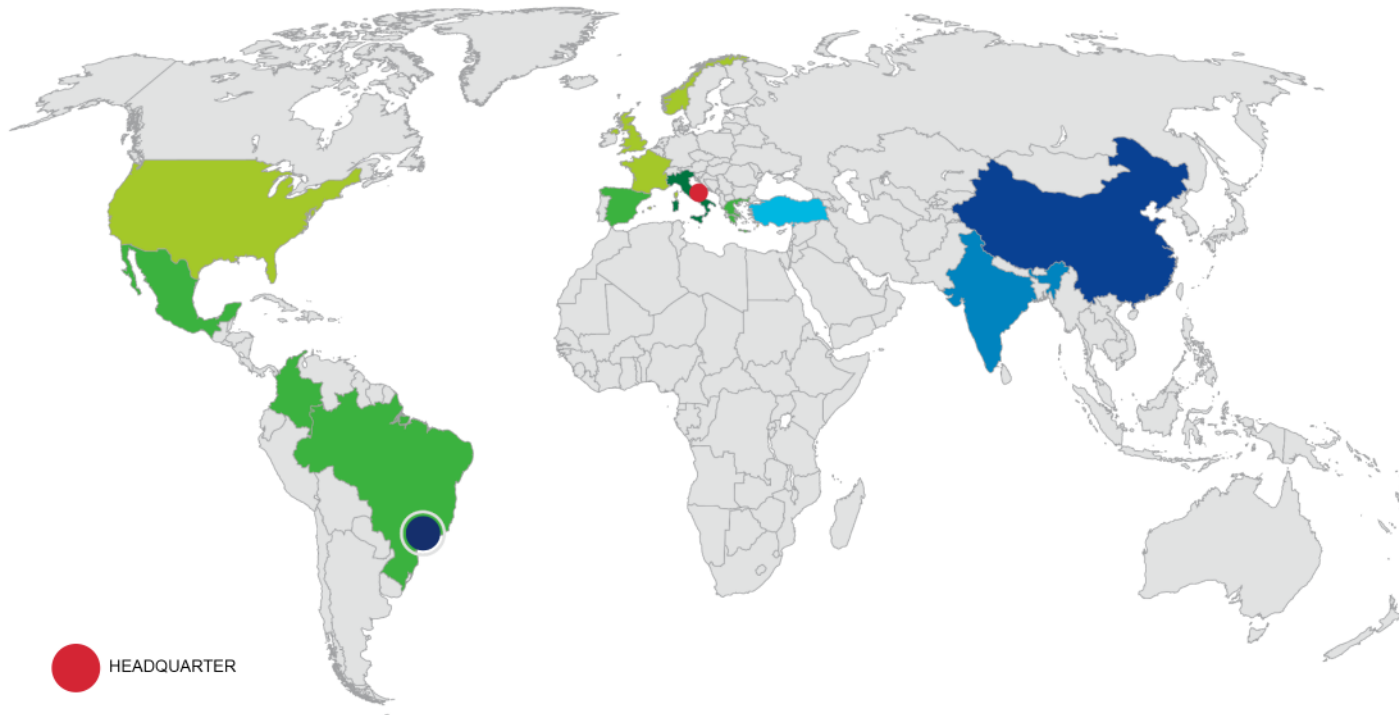


## 3 NET SALES BY CATEGORY – 2017



# HISTORIC EXPANSION AND GROWTH |

With over 30 years of operational history, Valagro has pioneered the field of biostimulants



**2017**

- New production plant in **BRAZIL**.

**2016**

- New commercial subsidiary in **CHINA**.

**1980s**

- **VALAGRO** was founded in **Italy** by Ottorino La Rocca & Giuseppe Natale.
- The first biostimulant product is launched.

**1990s**

- New commercial subsidiaries set up in **GREECE, MEXICO, COLOMBIA** and **BRAZIL**.
- The first commercial subsidiary is established in **SPAIN**.

**2000**

- Acquisition of **ALGEA** in **NORWAY** and **MAXICROP** in **ENGLAND**.
- Acquisition of **SAMABIOL** in **FRANCE**.
- A new commercial subsidiary established in the **U.S.**

**2012**

- Acquisition of **PACIFIC GROWERS** wholesale business lines.
- **GEAPOWER** is implemented to improve plant performance.

**2014**

- A site is purchased in **BRAZIL** for a new planned manufacturing facility.
- A Turkish subsidiary is established, **VALAGRO TARIM TICARET**.

**2015**

- Acquisition of the company **SRI BIOTECH LABORATORIES INDIA**.

# BUSINESS UNIT OVERVIEW |

Valagro's operations are conducted through two distinct business units.

## FARM

83% 2017(F)  
Net Sales



▪ 2017(F) Net Sales:

€107.3  
million

▪ # of Product Lines:

81

▪ # of Customers:

2182

## INDUSTRIALS

17% 2017(F)  
Net Sales



▪ 2017(F) Net Sales:

€26.1  
million

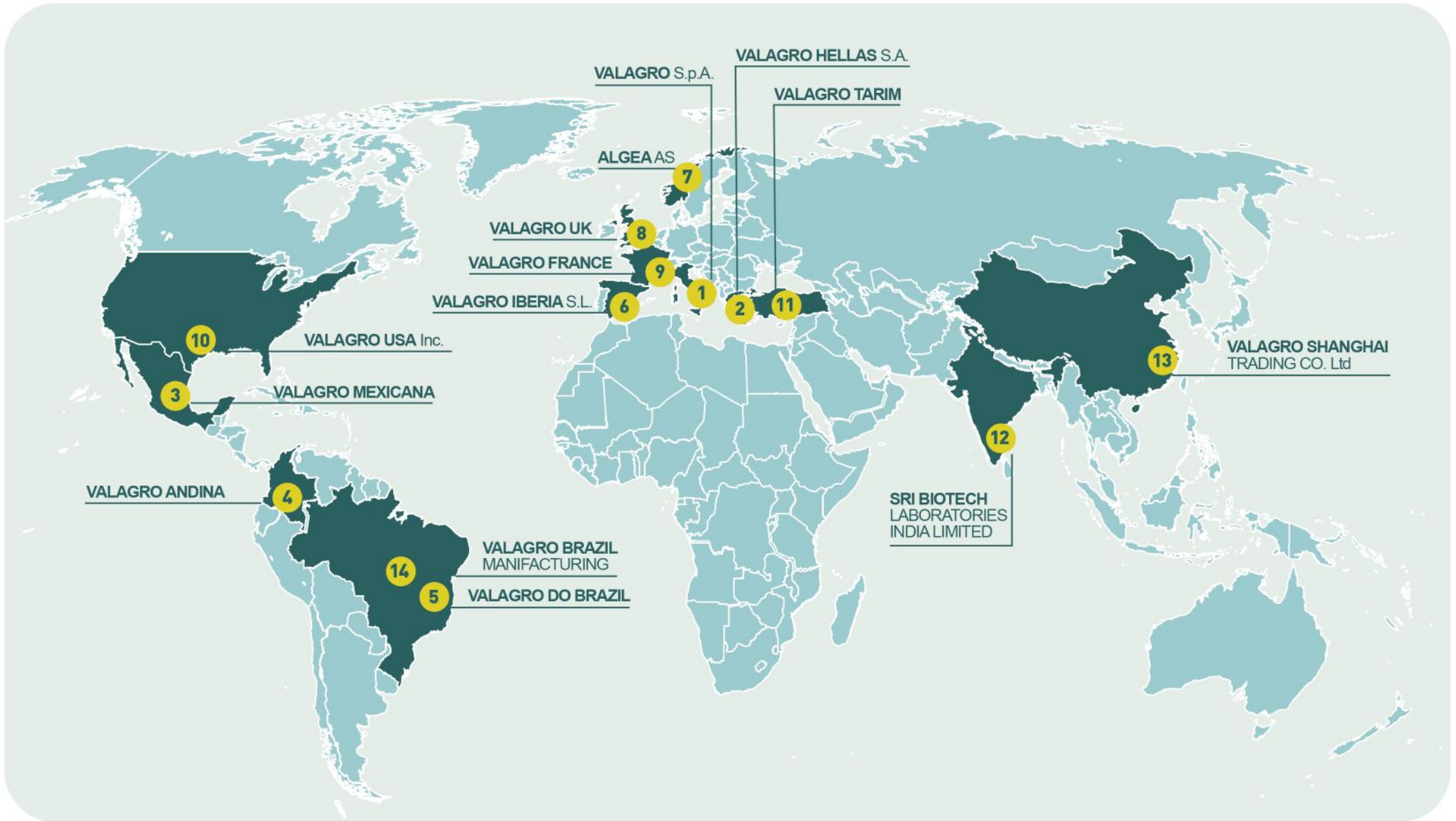
▪ # of Product Lines:

41

▪ # of Customers:

1274

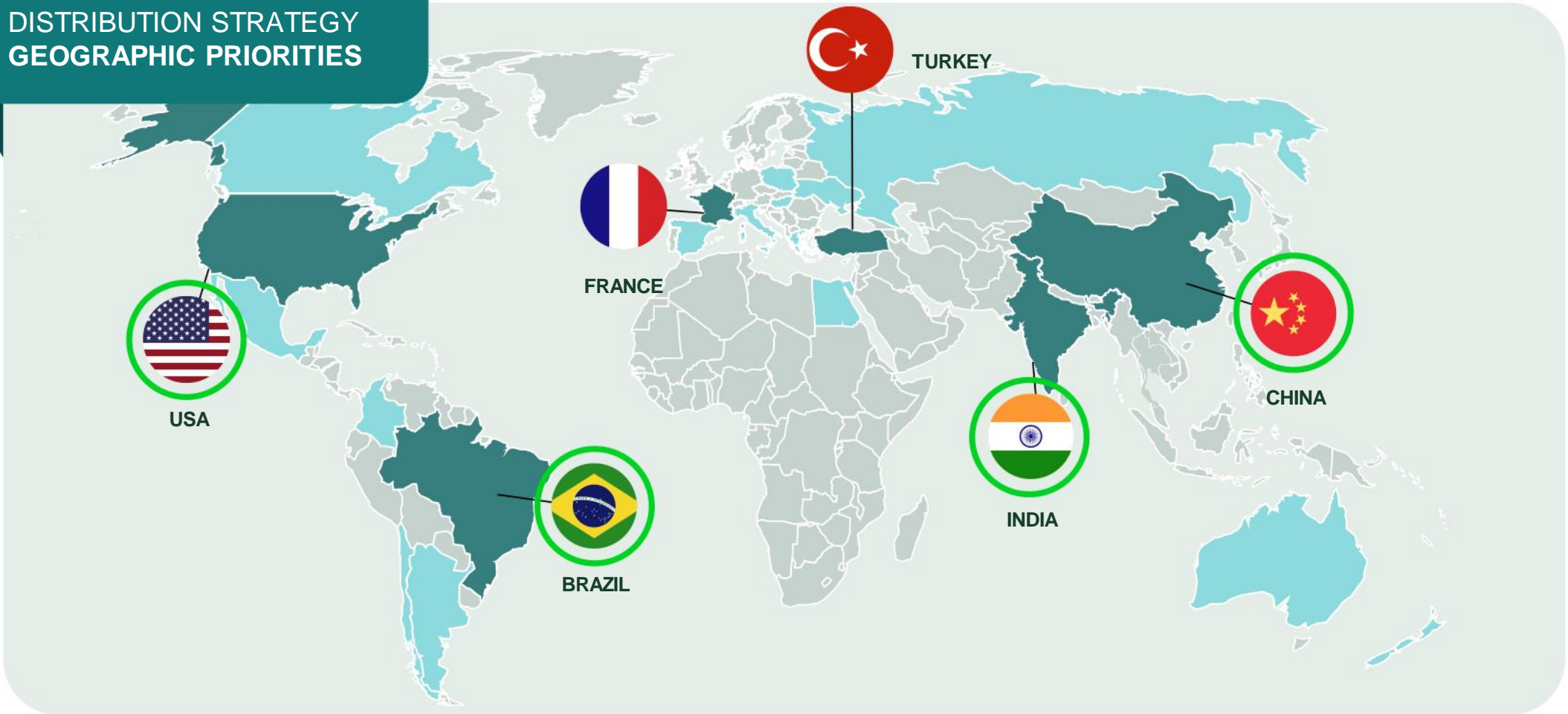
# SALES, DISTRIBUTION & MANUFACTURING



# SALES, MARKETING AND DISTRIBUTION STRATEGY

Farm business unit sold primarily through distributors with direct sales in select countries

## DISTRIBUTION STRATEGY GEOGRAPHIC PRIORITIES



Starting from a wide global coverage, we will focus efforts and investments in top priority markets (**Priority A**) to strengthen distribution and gain market participation.

- Priority A
- Priority B
- Others priority

# SALES, MARKETING AND DISTRIBUTION STRATEGY

Farm business unit sold primarily through distributors with direct sales in select countries

## BUSINESS MODEL CUSTOMER-CENTRIC SOLUTIONS



TECHNICAL  
& SALES  
MANAGER



TRADE-  
MARKETING  
SPECIALIST



CROP  
MANAGER



PRODUCT  
MANAGER



RSM

**+37**  
by 2019

**187**  
FIELD FORCE  
& SUPPORT  
STAFF



- OPINION LEADER
- UNIVERSITY NETWORK
- PRIVATE CONSULTANTS



NEW E-SOLUTIONS  
FOR AGRICULTURE



VALAGRO  
ACADEMY

We continue to invest in and develop our business model through technologies and services that provides a closed-loop between customer needs and product development.



# KEY MANUFACTURING FACILITIES

## INTEGRATED PRODUCTION

- Harvests and processes *Ascophyllum Nodosum* seaweed and seaweed meal
- Extracts the main active ingredients contained in seaweed
- Produces biostimulants, micronutrients and water-soluble nutrients

## TECHNOLOGICALLY ADVANCED

- One of the few production facilities in the world capable of synthesizing chelated micronutrients essential for plant nutrition

## MULTIFORMULATION CAPABILITIES

- Able to produce for plant, animal, cosmetics and human nutrition markets
- Fermentation expertise

ATESSA,  
ITALY  
64.7k m<sup>2</sup>



KRISTIANSUND,  
NORWAY  
7,6 k m<sup>2</sup>



BRØNNØYSUN,  
NORWAY  
8.4k m<sup>2</sup>



PASHAMYLARAM,  
INDIA  
5.6k m<sup>2</sup>



KARAKAPATLA,  
INDIA  
40.4k m<sup>2</sup>

# KEY MANUFACTURING FACILITIES | NEW PLANT IN BRAZIL



**NEW**  
**PIRASSUNUNGA**  
**SÃO PAULO,**  
**BRAZIL.**

On **May 2017**, Valagro has officially inaugurated the **Pirassununga plant**, in the state of São Paulo, **Brazil**.



# KEY MANUFACTURING FACILITIES | NEW PLANT IN THE U.S.A.



**25 MAY 2018**

Valagro announces the construction of its plant in the USA

Valagro, a leading company in the production and marketing of biostimulants and specialty nutrients, announces the construction of a new plant located in USA.

The American plant will be built in Orangeburg County, South Carolina, as stated in the official note published yesterday by the S.C. Department of Commerce.....

## Back to the basics

# HOW DO WE FEED THE WORLD SUSTAINABLY?

### 1. *Increase productivity (managing the supply side)*

- Gains in many parts of the world (developed countries and Latin America and Asia). Lots of ongoing research on how to sustainably intensify global food production, bridge yield gaps of crops and livestock, improve value chains

### 2. *Reduce waste in food value chains*

- Post-harvest losses and at the post-consumption stage. **Still overlooked**..and much to be done especially in India.

### 3. *Consuming more sustainable diets (managing the demand side)*

- Modifying what we eat could have significant impacts on the use and and water, reduce GHG emissions, and have important health and nutritional benefits – **Not easy!**

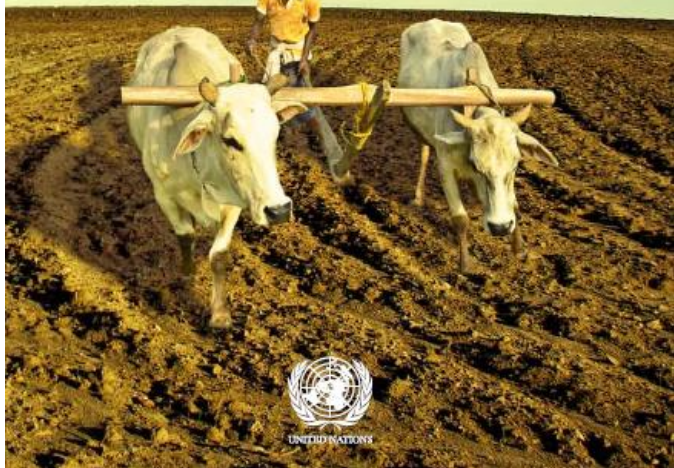
# SUSTAINABILITY – IN THE FACE OF CLIMATE CHANGE

TRADE AND ENVIRONMENT REVIEW 2013

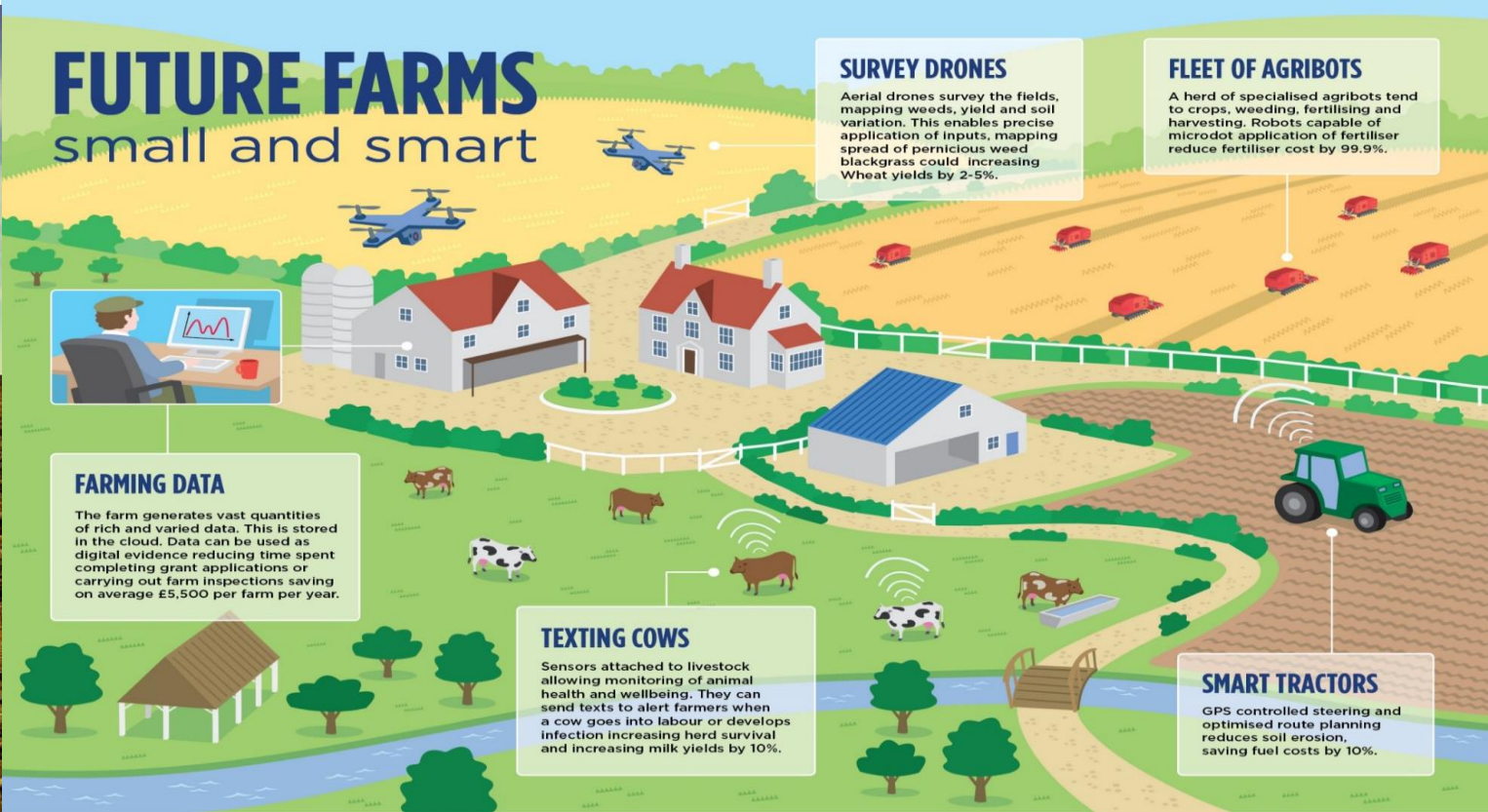
## WAKE UP BEFORE IT IS TOO LATE

MAKE AGRICULTURE TRULY SUSTAINABLE NOW FOR FOOD SECURITY IN A CHANGING CLIMATE

**EMBARCO**  
The contents of this Report must not be quoted or summarised in the print, broadcast or electronic media before 10 September 2013, 17:00 hours GMT



## FUTURE FARMS small and smart



Yet, we still need balanced agricultural inputs

# BIO-BASED TECHNOLOGIES - THE ANSWER TO GLOBAL FOOD INSECURITY?

- 2008 Food crisis was an important catalyst for realizing the **NEED FOR A FUNDAMENTAL TRANSFORMATION**
- The world needs a paradigm shift in sustainable agriculture: “a green revolution” to an “**ecological intensification**” which encompasses **INNOVATION, INCLUSION, INCENTIVES**
- **Going back to nature OR Bio-based technologies will be an integral component of this transformation.** But, it will not be enough. Integration of technologies is what we need.
- An opportunity for “**Engineering Reverse Innovations?**” (In India, China)
- Additional elements to consider:
  1. **Good science** & Public-Private partnerships are basic
  2. Leveraging **Ag technologies** including **digital agriculture**
  3. **Input optimization** – fertilizers, pesticides – don’t forget the Soil!
  4. Reduction of **waste & Postharvest management**
  5. Managing demand & **Market access**

# THE FUTURE BELONGS TO BIOLOGICAL PRODUCTS

(Inoculants, PGPR, biopesticides, biostimulants)

Have become **essential components** of global agriculture  
(\$ 4 Billion in 2020, according to BPIA)

They can be stand-alone entities as well as “life-extenders” of conventional products and even GMOs.

**In order to be recognized as significant, reliable entities, they must**

- **Be supported by Good Science**
- **Work in complex situations incl. SHF, geographies**
  - **Be integrated with Farming practices & Easy to use**
  - **Provide Return On Investment to the growers**

***“If Agriculture goes wrong, Nothing else will go right.”***

- Dr. M. S. Swaminathan





WIN THE  
GLOBAL  
CHALLENGE  
TOGETHER

