Biocontrol as a business
KOPPERT BIOLOGICAL SYSTEMS

- Founded in 1967
- 1100 employees worldwide
- Family company

Koppert started with a beneficial mite to control spider mite infestation

Today a more holistic approach is used in both horticulture and agriculture
1967

- Jan Koppert
- Vegetable grower
- Chemical control
- Decreasing efficacy
- Resistance
- Need for alternatives
- The first natural enemy to combat spider mite infestation
- Positive results and effects
Since then, the search for biological solutions has expanded.

Today Koppert is the market leader in biological crop protection and natural pollination.

Koppert’s solutions are successfully applied in more than 90 countries.
MILESTONES

1967
Founder Jan Koppert

1972
Introduction Encarsia formosa

1988
Start production bumblebees

1993 - 1997
Start of Koppert Canada, USA & Mexico

1993 - 1997
Start of Koppert Canada, USA & Mexico

2005
Breakthrough in ornamentals

2007
Breakthrough horticulture in Spain

2010
First phase new Head Office

2011
Introduction NatuGro

2011
Introduction NatuGro

2012
Acquisition of Itaforte, Brasil

2013
Start of Koppert India

2014
EY 2014
KOPPERT’S CORE DISCIPLINES:

- Research and development
- Worldwide production and distribution of solutions
  - Pest & disease Control
  - Natural Pollination
  - Application techniques & monitoring
  - Resilient Growth with NatuGro
  - Seed treatment
- Know-how and knowledge sharing
PEST CONTROL

EACH CROP AND PEST HAS SPECIFIC CHARACTERISTICS

- Varies greatly in terms of cultivation, region and season

SUCCESSFULLY PRODUCING NATURAL ENEMIES

- Parasitic wasps, predatory insects and mites
- Has helped growers restore natural balance in crops for decades
- Our worldwide knowledge and individual advice are the key to this success
ANTAGONISTIC MICRO-ORGANISMS

- Fungi and bacteria for control of a wide range of soil diseases and nematodes
- Application in many crops
- Early in the crop as a preventive measure, easy to apply on seed or in propagation phase
- A healthy start provides a healthy plant
BIOLOGICAL CONTROL OF PESTS AND DISEASES

KOPPERT’S PEST MANAGEMENT SOLUTIONS

- Widely used throughout the horticultural industry
- Dramatically reducing the use of agrochemicals over the years
- The greatest impact has been in tomato cultivation
- The use of crop protection chemicals has been decreased by 95%
WHY POLLINATION BY NATUPOL?

- Natural pollination results in considerably higher yield
- Improves the quality and shelf life of both seeds and fruit
- Growers have tried to improve pollination manually in the past. Natupol has reduced labour costs for the grower
NATURAL POLLINATION

NATUPOL POLLINATION SOLUTION
SINCE 1988

- Introducing bumblebees for commercial pollination
- Producing millions of bumblebees annually for a variety of applications
- Helping growers around the world to cultivate their crops successfully
RESILIENT GROWTH WITH NATUGRO

NATUGRO, NATURAL GROWING

A SYSTEM THAT CONSISTS OF:

- Beneficial micro-organisms: Fungi and Bacteria
- Biostimulants
  - Amino, humic & vulvic acids
  - Seaweed extracts, Vitamins
- Professional advice
- That benefits the crop, environment and consumers
- Creating optimal growing conditions
- Maximizing crop resilience against diseases and pests
- Reducing the use of chemical crop protection products and artificial fertilizers
TAILOR MADE SEED COATING - PANORAMIX

- Mix of biostimulants provide the perfect start
- Improves the condition and biodiversity of the soil
- Ensures that diseases have less chance of taking hold
- Enhances the uptake of water and fertilizers
- Crops grow more rapidly and robustly and are therefore more productive
- Eventually produces entirely residue-free end products
- Suitable for crops such as maize, wheat and soya
R&D IS THE BACKBONE OF KOPPERT’S ACTIVITIES:

- Ongoing drive to discover and utilize natural principles
- R&D turns this knowledge into practical applications
- Contributes to finding solutions
- Ground-breaking discoveries with regard to pollination solutions
- Koppert’s R&D is always looking for new solutions
Know-how and Knowledge Sharing

Dealers and growers are supported

- More than 300 professional consultants
- Operational advice

Knowledge available to a wider target group

- Works closely with universities around the world
- Offers a variety of courses

We train large groups of stakeholders in knowing and recognizing diseases and pests every year
BIOCONTROL AS A BUSINESS - KOPPERT WORLDWIDE

Revenue in millions

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PRODUCTION FACILITIES IN:

- The Netherlands
- Slovak Republic > bumblebees
- Spain
- United States
- Turkey
- Mexico
- New Zealand
- South Korea
THE MARKET: INTERNATIONAL

- Vegetable crops
- Ornamental crops
- Fruit crops
- Flower bulbs
- Mushrooms
- Tree nurseries
- Public green (parks, lawn trees)
- Seed crops
- Golf courses
- Cereals, soya, potatoes
- Tropical fruits
- Cattle and pig farms
FROM PROTECTED CROPS TO FIELD CROPS
The Market demands low residue or even residue-free produce

Retailers and supermarkets impose non-statutory requirements on farmers

More attention for worker safety

Society and Legislators want less impact on public health, the environment and biodiversity

Sustainable production: more production with less input and less impact
WE ARE IN THE CENTER OF THRIVING MARKET

- Chemical pesticides can and will no longer be the only basis for crop protection
- Integrated Pest and Disease Management will become the standard
- As Koppert we expect that we are just at a starting point of a thriving sector
CHALLENGES IN A GROWING BUSINESS

Product development

- R & D, Registration
- High Investment
- Too long and costly registration process
- Return of Investment
- Time to market long
- Time to volume challenging
Sustainable Use of Pesticides Directive

- Priority for non-chemical products, and IPM
- Low risk a.s. and products
- In reality: little progress in availability and adoption of biopesticides
- Innovative legislation needed for low risk PPPs
Macrobiials
Predatory mite and parasitoid: after almost 50 years still as efficient as ever and important products in the market

Pollination
Almost 30 years of world wide use: indoors and outdoors

Microbiials
15 years in use and opportunities unlimited
EXTERNAL CHALLENGES FOR KOPPERT

Turning point for a better and healthier future

- Need for Innovative Legislation
- Access and Benefit Sharing
- Knowledge transfer
- Adoption of IPM
Koppert Biological Systems contributes to better health of people and the planet

In partnership with nature, we make agriculture healthier, safer and more productive

Thank You for your interest!

Koppert Biological Systems Partners with Nature

OUR MISSION