



Biologicals meet new technologies

P. Maes – Corporate Marketing Director at Koppert Biological Systems



Introduction



History



Trends



Current portfolio



Future perspectives



Koppert AT/Services



Partners with Nature

KOPPERT BIOLOGICAL SYSTEMS

- Founded in 1967
- Market leader and the only truly “global” and “pure” biocontrol company (thought leader)
- 1300 employees worldwide
- Family company

Koppert started with a beneficial mite to combat spider mite infestation.

Nowadays a more holistic biological approach is used in both horticulture and agriculture.



Back in 1967, Jan Koppert was a dedicated cucumber grower. Diseases and pests were controlled with chemicals but the efficacy of this method decreased each year.

Jan Koppert became allergic and ill as a result of these products. He had to look for alternatives and immersed himself in the world of natural enemies.

He was the first to introduce a natural enemy to combat spider mite infestation. The results and effects were so positive that Jan Koppert decided to produce this solution.



**He had to face a
fundamental choice**

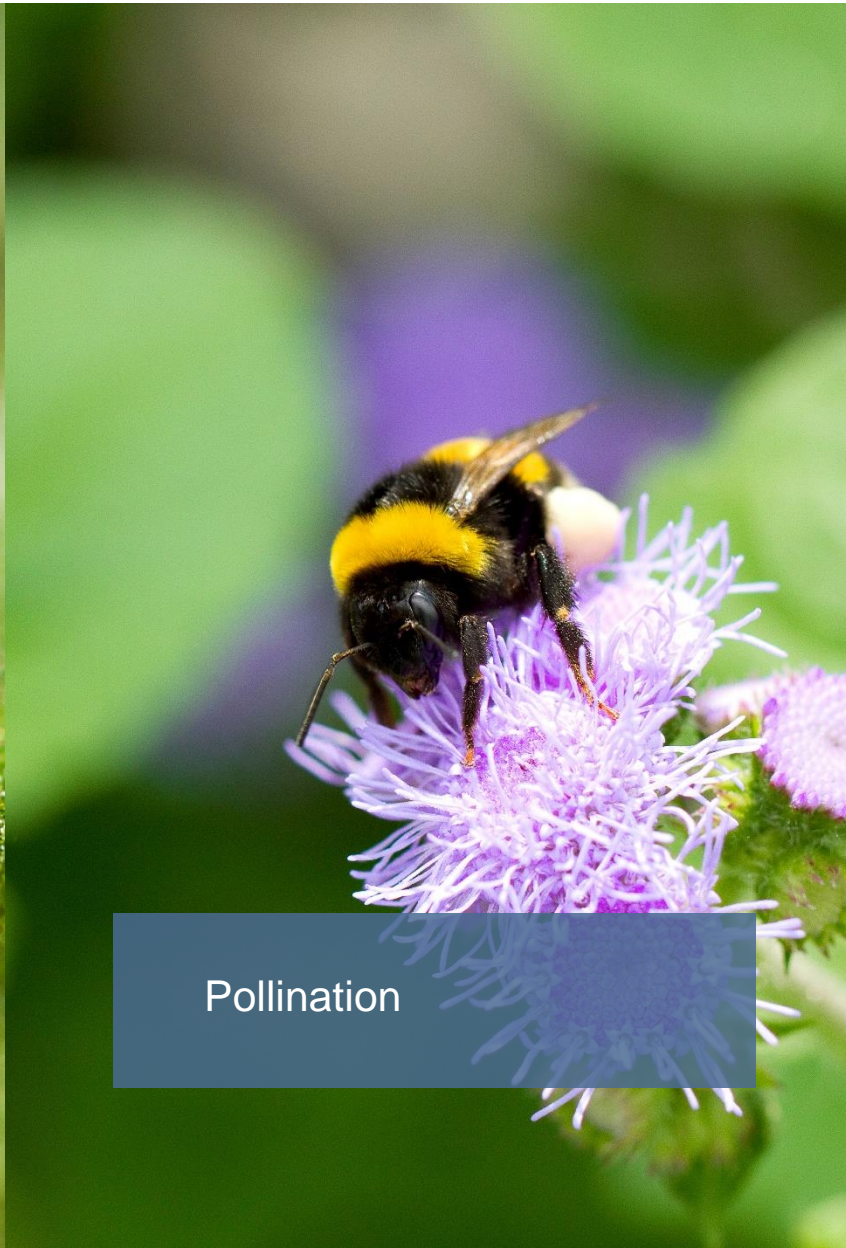
HISTORY – CONTINUOUS EXPANSION AND RECENT ENTRANCE TO ROW CROP MARKET

- 30 subsidiaries
- Koppert's solutions are successfully applied in more than 95 countries.
- Market leader in biological crop protection and pollination (protected and high value markets)
- In 2012 first significant activities and sales in row crops.
- 2015: introduction of first in-house developed product for biological seed treatment





Macrobials



Pollination



Microbials



THE WORLD IS CHANGING

- Preserving biodiversity
- Reducing greenhouse gases
- Soil depletion/ water quality
- Sustainable intensification
- Food safety/security
- Precision agriculture (more with less)
- 10 billion 2050/70% city (1111-1333)

- The Market (consumer) demands residue-poor or even residue-free products
- Retailers and supermarket impose extra-legal requirements on farmers
- More attention for work safety
- Society and Legislator want less impact on the environment and public health
- Sustainable production: more production with less input and less impact
- Circular economy





Key drivers for implementing Biological solutions

- Pesticide resistance
- Residu management (license to supply)
- Productivity and Quality. Influence of pesticides and fertilizers
- Technology
- Transparency



KOPPERT'S CORE DISCIPLINES:

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

TRENDS INFLUENCE AGRICULTURE AND FOOD SUPPLY

- Smart Farming/Precision Agriculture
- Remote Growing
- Data exchange
- Sensors, robotica, digital vision etc.
- Worldwide urban cities (2050-70%)
- Personalisation/individu
- Transition speed
- Vertical Farming
- Exponential change!
 - Digital world (More's law)





- Digital monitoring and scouting applications
- (positioning systems e.g. GPS)
- Remote Sensing and UAV Sensing
- Visual recognition/ camera detection
- Autonomous vehicles (labour saving + tackle human error)
- BeeVision Technology Natupol
- Innovative packaging

WHAT DOES KOPPERT HAVE TODAY (HARDWARE)

Associated products and technologies

- Airobug
- Airbug
- Mini Airbug
- Distribug
- Rotabug
- Horiver
- Rollertraps
- Wireless Bee Home
- Pherodis



WHAT DOES KOPPERT HAVE TODAY (SOFTWARE)



- Koppert SmartScout
- Side Effect Guide/App



- Releasing beneficials by UAV, airplanes, autonomous machines etc. (efficient, effective and suitable for large areas)
- Achieving by combining Koppert's (bios)knowledge with appropriate partners





Koppert SmartScout App

- Digital database for collecting data from all different sources, e.g. Remote Sensing, UAV Sensing, soil life sensors etc. (input from external – Koppert's output)
 - *TEC-IB (Remote Sensing)*
 - *Prospera (pest and disease detection)*
 - *Pessl – Metos (soil life monitoring)*
- Analyzing data by Koppert's models – DSS (Decision Support Systems)
- Scouting and monitoring pests and diseases by smart phone

Koppert's Smart Farming / Precision Agriculture

- Connection Koppert's release mechanisms with Koppert SmartScout (GPS)
- Data – insight – action (translation of data)
- Apply bio stimulant, micro- and macro biology on the right place on the right moment; changing from site level to plant level
- Advice on long-distance (Remote Consultancy)
- Long-term development



CLOSING

**THANK YOU FOR
YOUR INTEREST!**

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