



Biocontrol as a business

René Koppert | 21-10-2015

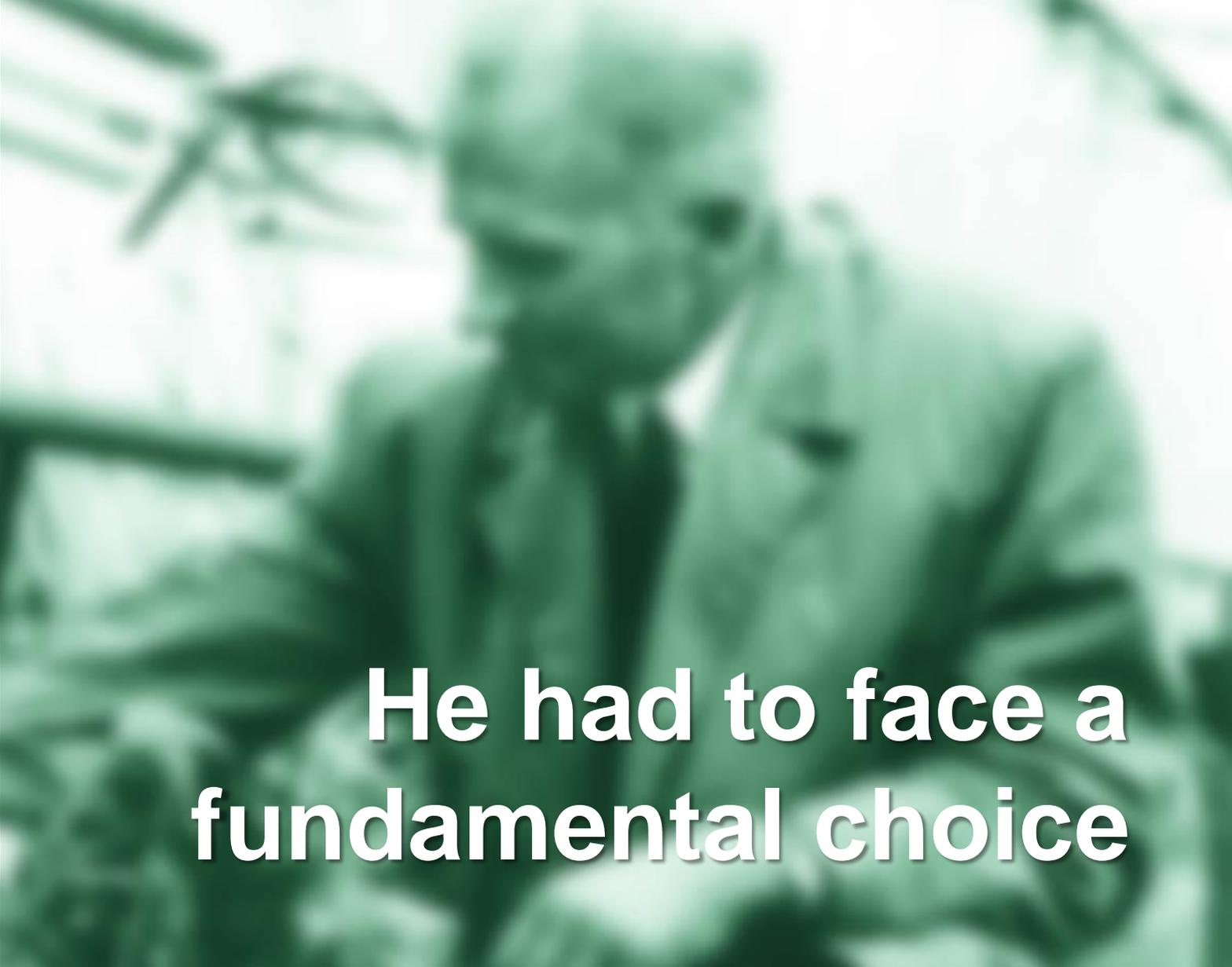
BU manager macro & supply chain

FRANCE 1988 | TRICHOGRAMMA



1967

- Jan Koppert
- Chemical control
- Decreasing efficacy
- Need for alternatives
- The first natural enemy to combat spider mite infestation
- Positive results and effects



**He had to face a
fundamental choice**

MILESTONES



KOPPERT BIOLOGICAL SYSTEMS

1967
Founder Jan
Koppert



1972
Introduction
Encarsia formosa



1988
Start production
bumblebees



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



2012
Acquisition of
Itaforte, Brasil



2013
Start of
Koppert India



2014
EY 2014



KOPPERT BIOLOGICAL SYSTEMS

- Founded in 1967
- 1100 employees worldwide
- Family company
- 27 subsidiaries

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

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



TRENDS



- The Market demands residu-poor or even residu-free produce
- 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





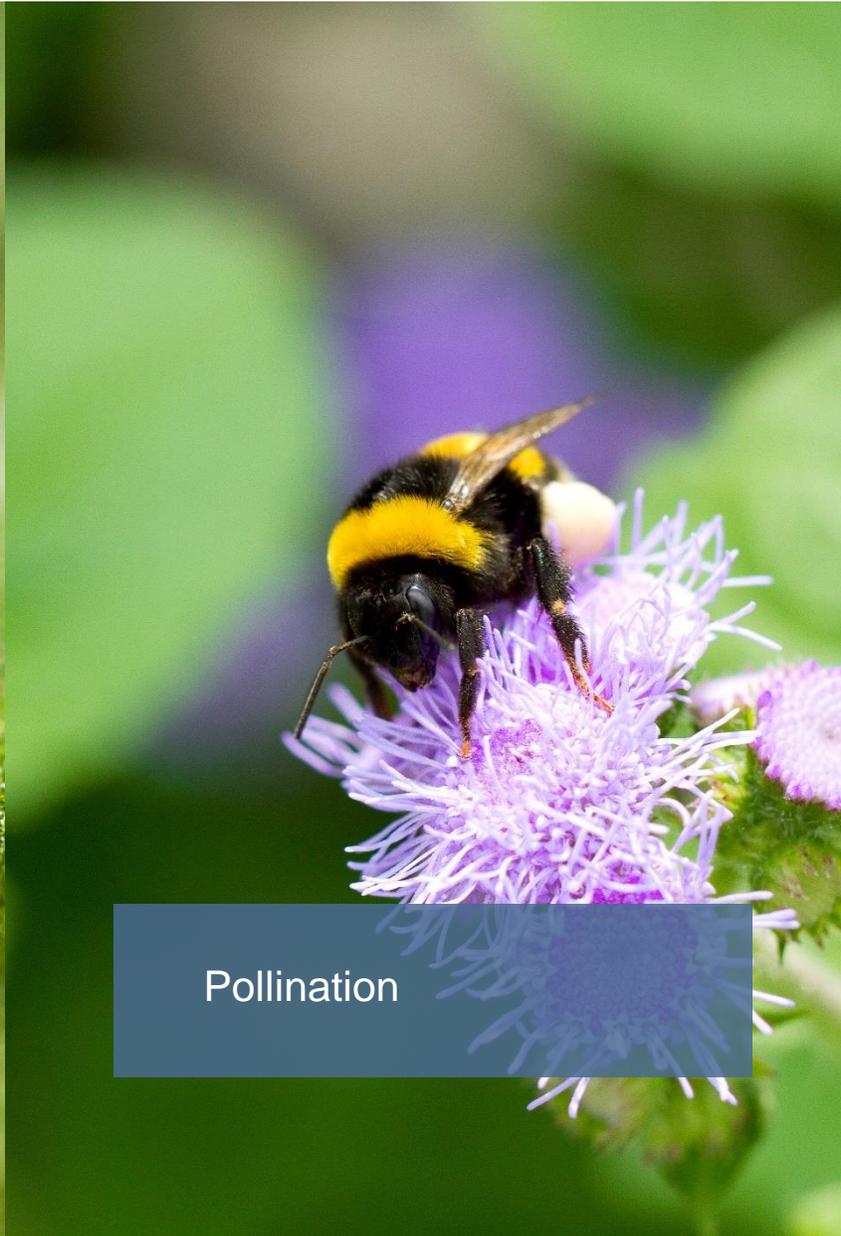
Key drivers for implementing Biological solutions

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

TOTAL APPROACH BIO CONTROL



Macrobials



Pollination

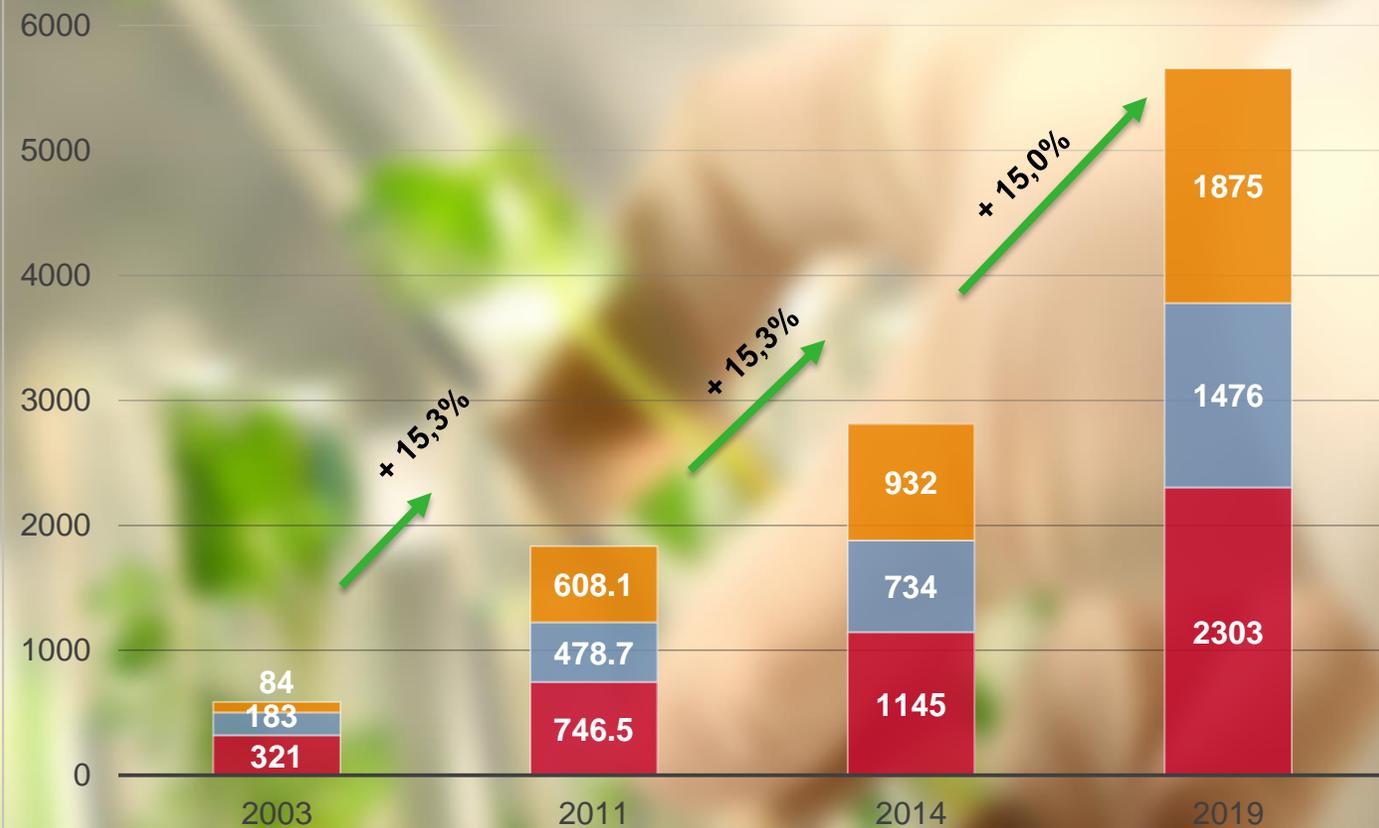


Microbials

WE ARE IN THE CENTER OF STRIVING MARKET

- Chemical pesticides can and will no longer be the only basis for crop protection.
- Integrated Pest and Disease Management will be lifted to a higher level
- As Koppert we expect that we are just at a starting point of a striving sector

Global biopesticide market 2003-2019 (USD m)



■ Micro-organisms; Bacteria, Fungi, Nematodes,

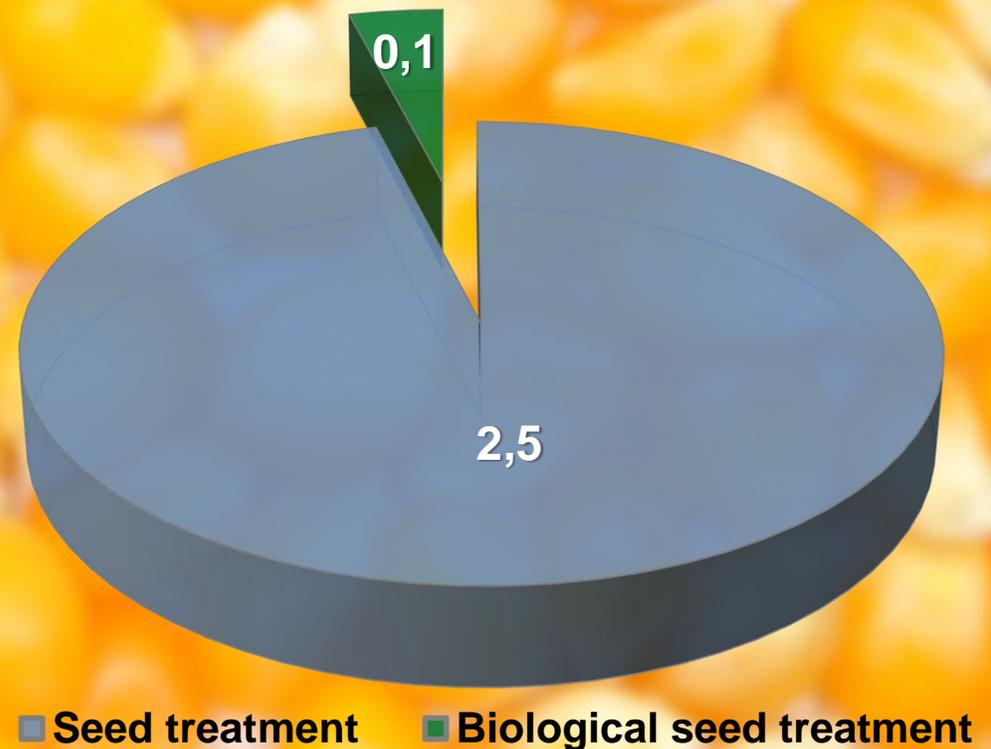
■ Macro-organisms; Insects, Mites and Pollinators

■ Biochemicals; Plant growth regulators, Insect growth regulators, Organic acids, Plant Extracts, Semiochemicals, Minerals/Others

GREAT MARKET POTENTIAL

- Seed treatment USD 2,5 bln 2013 CAGR 2018 10%
- Biological seed treatment USD 100 mln up to 300 CAGR 2018 25%

Sales in USD (billion)



THE IDEAL MIX

- Oil based, liquid concentrate which comprises the following plant growth promoting micro-organisms:
 - Mycorrhiza
 - Trichoderma
 - Multiple Bacillus species
- Co-formulants





HOW TO STAY INNOVATIVE?

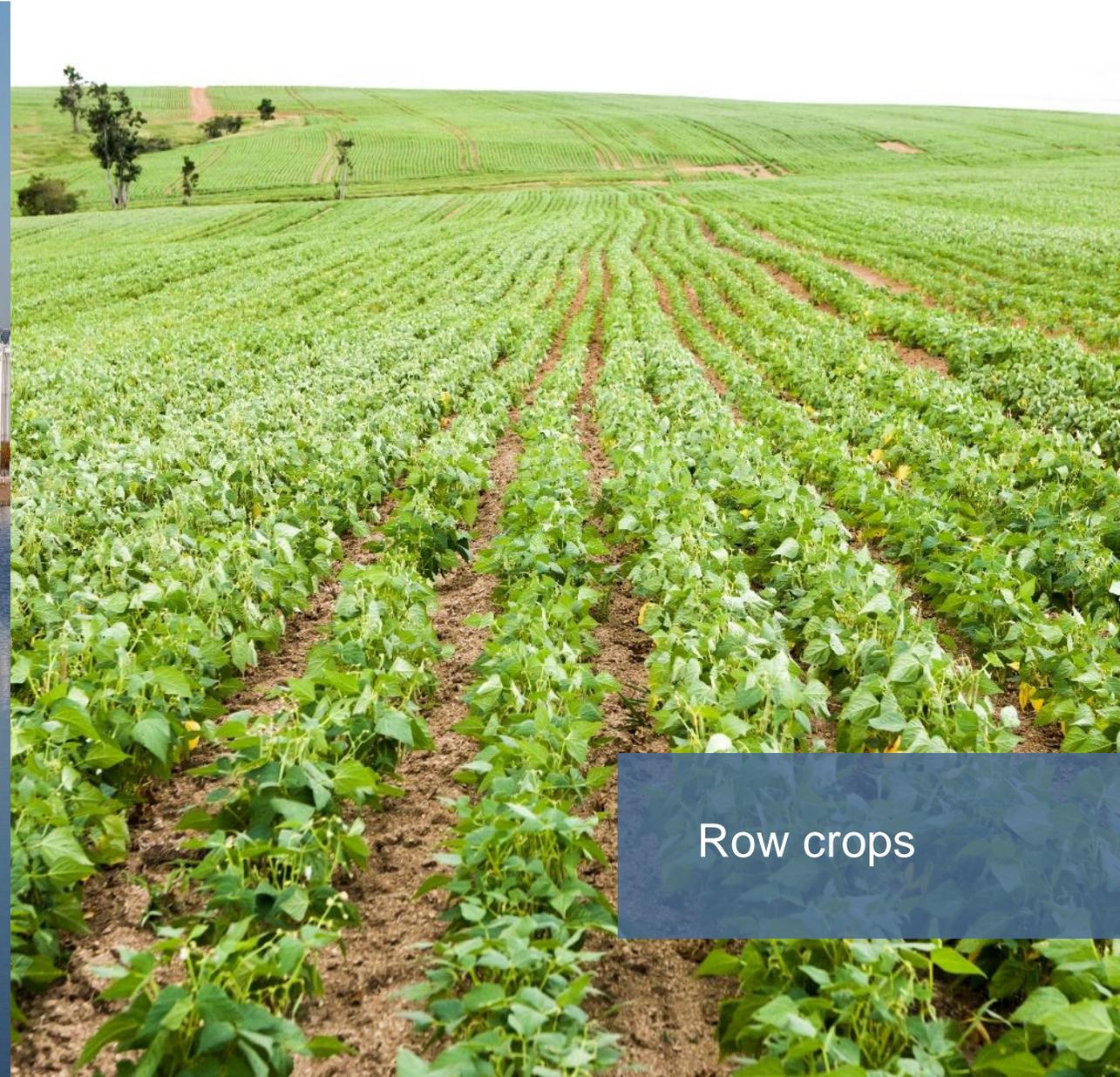


Innovation

THE WAY OF DOING BUSINESS



Greenhouses



Row crops

2012 – 2015: MARKET DEVELOPMENT BRASIL



Our first market in row crops



PROFESSIONALIZE



**THE FAMILY BUSINESS
CHALLENGE:
WHERE IS THE RIGHT
BALANCE?**



THAT'S THE
GREAT THING ABOUT
FAMILY BUSINESSES: WE
CAN BE REALLY HONEST.
YOUR NEW MARKETING
PLAN IS UTTER RUBBISH!

YES,
COMPLETE
RUBBISH

ARE YOU
COMING TO THE
TWINS' BIRTHDAY?



GABS.

EXTERNAL CHALLENGES FOR KOPPERT

- Lobbying and external engagement
- ABS
- Alliances





THANK YOU FOR YOUR ATTENTION



Koppert contributes to
BETTER HEALTH
of people and the planet

In partnership
WITH NATURE
we help to make agriculture
HEALTHIER
SAFER
and more
PRODUCTIVE