

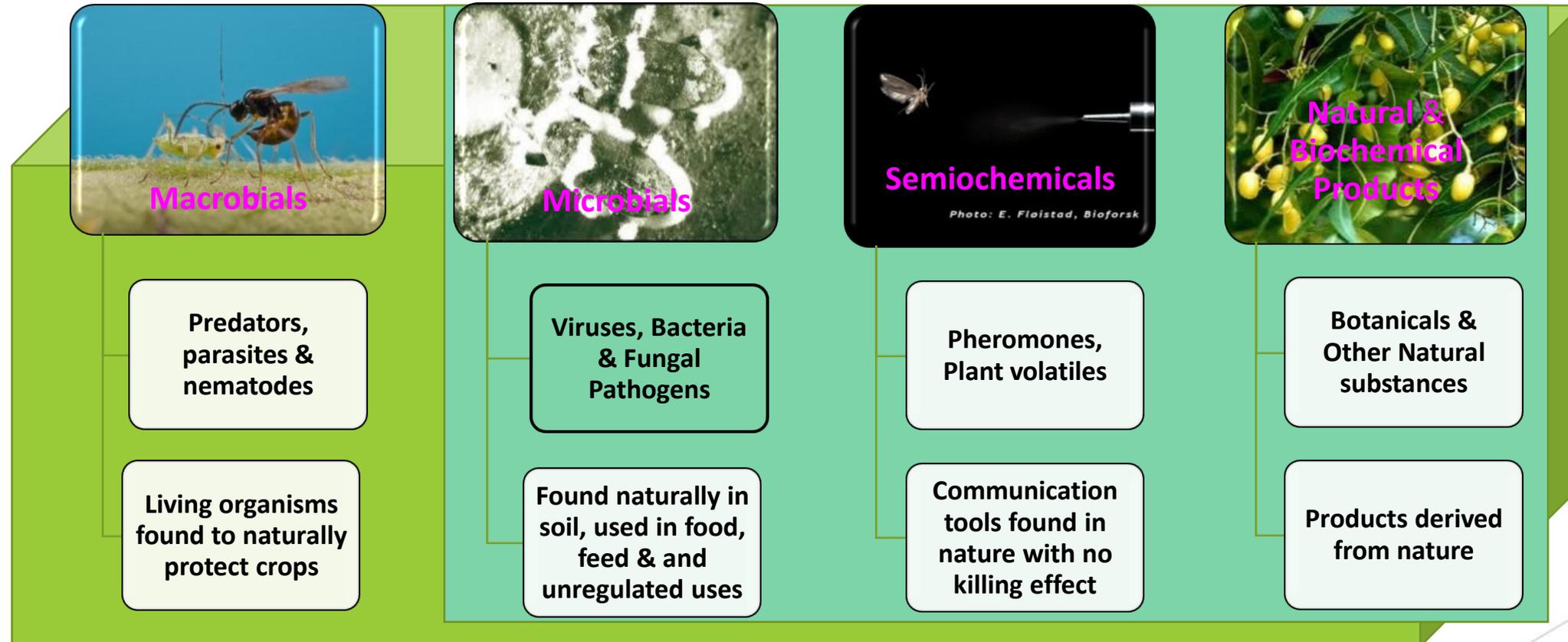


# Future of Biocontrol for Organic Agriculture

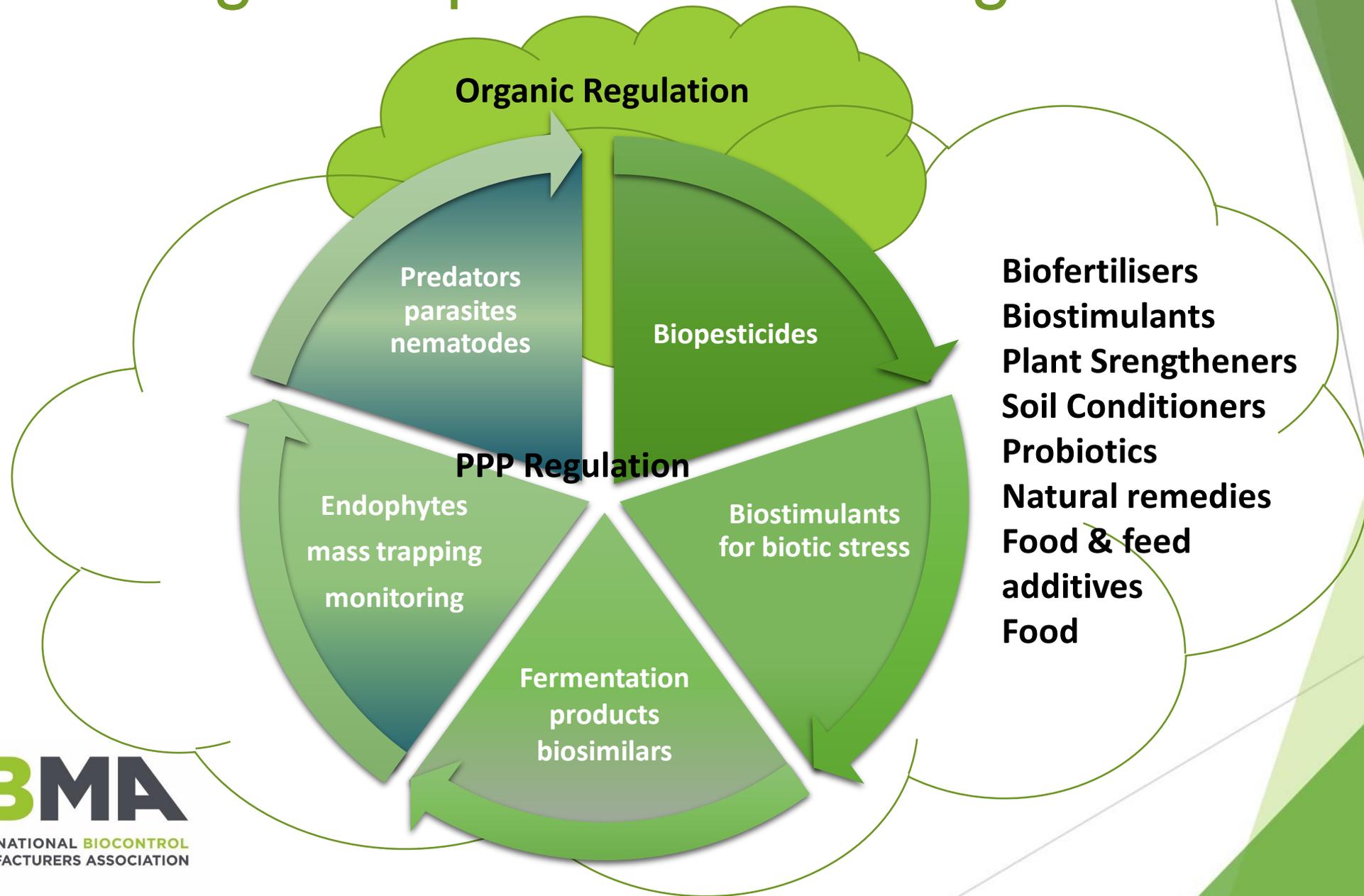
David Cary, Executive Director of IBMA



# What “tools” are available from the Biocontrol industry?



# Where do biological inputs fit within regulation?



# Biopesticides – market, manufacturers and products

- Biopesticide market
  - Worldwide in 2014: \$1.9 billion at user level; annual growth 15-20%
- Biopesticide manufacturers
  - Worldwide : approx. 230 (ex China, India)
  - Europe: 91
  - America's 98
  
  - IBCAs 52
  - Microbials } 171
  - Semio-chemicals }
  - Natural products }
- Total of biopesticide products:
  - Macros: > 230 organisms
  - Micros, semiochems, naturals: > 450 actives, > 2300 products



Sources:  
DunhamTrimmer, Biopesticide Industry Overview 2015  
CPL, Biopesticides Worldwide Market 2013

# Vital to Organic & Conventional Agriculture:

# Integrated Pest Management

*working with and not against nature*



# Merging of Agricultural Systems

## Organic

- Holistic Systems based
- Use of IPM principles
- In harmony
- Trust
- Certification

## Conventional

- Production focus
- Redefining IPM
- Constantly requiring correction
- Silver bullets
- Resistance

Movement forced

Policy changes

External  
influences

Unsustainable in  
current form

# Factors affecting adoption: Macro factors

- Political and societal needs favour the use of bioprotection (environment, biodiversity, food safety)
- Increased legislation of chemicals will stimulate development of alternative solutions
- Increased demand for organic agriculture is an opportunity for bioprotection
- The main driving force is the requirement of retailers and consumers for residue-free food !!!!
- The biocontrol industry has reached a sufficient level of maturity enabling solid growth in the near future

# Future Crop protection led by Organic Agriculture

- **Founded on prevention and monitoring**
- **Intervention only when needed**
- **New tools all nature-based solutions**
- **Biopesticides, biostimulants, biofertilisers**
- **Resilient soils and resilient plants (microorganisms, seed treatments)**
- **Automation, ICT tools and intelligent equipment minimise use of products and exposure**
- **Holistic approach**
- **Interventions upon a licensed PCA written recommendation**



# Threats to Organic use of Biocontrol

- Flow of information
  - General principles
  - Local tailoring to be fit for purpose
- Lack of Harmonisation of regulations
  - Global and Regional harmonisation required
  - Cross sector harmonisation
  - Agricultural input harmonisation
  - Smart integration of regulations eg 1107/2009 & 834/2007

# Examples of registered products being avoidably delayed to organic producers

- Laminarine
- Sheep fat
- Dimatiaceous Earth
- Garlic Extract

• Microbials



• Plant extracts



• Compromise needed



Application for organic use  
at time of Annex 1 listing in  
1107/2009

# Concluding remarks

## Growth of bioprotection market

### Growth areas:

- **Microbials**

  - Bacteria, for disease control, for nematode control

  - Antagonistic fungi, for disease control

  - Entomopathogenic fungi: slow growth

  - Baculoviruses: increased use in orchards and vegetables

- **Macrobials**

  - EPNs: orchard, vegetables, amenity areas

- **Semiochemicals & Natural Products**

  - More specific niche solutions

  - Fermented products including Metabolites

  - Mixtures

- **Annual growth will continue with 15-20%**

- **Bioprotection will become a major part of crop protection means: > 50% in 2030**



Good for the environment  
Good for the economy  
Good for jobs  
Good for Human Health

With special thanks to Willem Ravensberg, Bill  
Dunham & CPL





# Many thanks!

Also to Federbio and the organic movement

