Benefits of good regulation for bioprotectants

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UN Sustainable Development Goals

Aim to:
End poverty, protect the planet and ensure prosperity for all: a healthy and productive environment is needed to support this.

Agricultural intensification puts pressure on the environment and increases threats to human health.
Global populations and farmable land

Population in Millions

Farmable land ha/person
Bioprotectants globally

Food security

30 – 40 % crops lost before harvest

> 10 % after harvest

To meet the challenges

we need ‘Best Practice’ crop protection

Bioprotectants

increasingly the mainstay of sustainable crop protection
Bioprotectants

Macroorganisms

Microorganisms

Botanicals

Semio-chemicals
Natural forces control populations

One year

→

one cabbage aphid

→

250 million tonnes

Information and photo: courtesy of D. Chandler, Warwick Crop Centre and eplantswholesale.com.au respectively
EU Sustainable Use Directive 2009/128/EC

Integrated Pest Management – working with nature
EU biological* PPP - active substances

TOTAL biopesticides: 134 (17) = 151

* Definition of biological PPP not fixed so approximate numbers only

Total all PPP = 493
EU new plant protection products – pending*

Number of active substance applications

Total  Biopesticide  Conventional chemical

* October 2016
Bioprotectant markets

Global market increased over 300%* from 2008-2018

Global market 2019 value increased over $6 billion*
Society requires good regulation

- Protection of:
  - Consumer safety
  - Operator and worker safety
  - Environmental safety
  - Crop safety
  - Assure product quality
  - Technology & innovation
Global harmonisation

- FAO
- OECD - EGBP
- EU
- EPPO
Regulatory approaches for bioprotectants for PPP uses in EU

Out of scope for PPP
- Natural enemies
- Entomopathogenic nematodes
- Root symbionts

Registered EU PPP
- Microorganism
- Semio-chemicals
- Botanicals
- Biorationals
  - (acetic acid
  - fatty acids
  - Paraffinic oils)

PPP Basic substances
- Not PPP but may be used for plant protection

PPP Low Risk
- Products where active substance is assessed as Low Risk

IBMA
International Biocontrol Manufacturers Association
EU registration timelines for PPP: 1107/2009

Regulatory system - same for all plant protection products

Year
0
1
2
3
4
5

Active substance
Submit dossier
Assess dossier - DAR
Peer review - EFSA
EU vote - Approval

Products - zonal
Products - Low risk

Submit dossier
Zonal assessment
Product approval
Regulation of bioprotectants

Are bioprotectants different from conventional chemical pesticides?

Guidance documents
- Microbials
- Semiochemicals
- Botanicals

Low Risk
Products where active substance is assessed as Low Risk

YES
Plant colonising microorganisms

Plant colonising microbials are common – no plant is microbial free
Secondary compounds will be produced
Plant colonising microbials will affect plant physiology
Persistence
Interactions operate at multiple levels
Inevitably, studies of interactions are complex to perform
Difficult to attribute effects
Bioprotectant regulatory skills

soil ecology, plant ecology, landscape ecology, biology, microbiology, genetics, microbial ecology, population biology, plant physiology, population modelling, landscape modelling, population ecology, etc. ........................

and maybe, sometimes, even chemistry
IBMA call for appropriate and proportional regulation

PROPOSAL FOR SOLUTIONS

To ensure implementation in the circular bio-economy in the agricultural sector, appropriate, streamlined and faster regulatory procedures that will deliver sustainable bioprotection solutions and provide innovative tools for farmers and other users of the natural environment need to be enacted.
What are the advantages of a new regulatory system for bioprotectants?

Eliminating disproportionate costs compared to the risks these technologies represent.

Efficiently assessing the risk specifically linked to bioprotection technologies, in consequence reducing the required resources whilst appropriately addressing potential risks.

Shorter evaluation periods resulting in more bioprotection products placed faster on the market, replacing products deemed to be of concern.
Thank you for your attention