Biocontrol Industry Solutions for Stored Grain and Oilseeds

Brussels 4 October 2021
• Introduction to IBMA
• Introduction to biocontrol
  • What is it and what are its benefits
• What policy changes are needed to bring biocontrol to market more quickly
• Available products for stored grain and oilseeds
International Biocontrol Manufacturers Association

Part of the Federation of Biocontrol industries Bioprotection Global

Small Association
Local associations around Europe – members represent us where no local Association

SMEs dominate
In Europe 71 SMEs and 76 micro SMEs

Global with European Focus
236 member companies globally of which 160 in Europe Global members join to access Europe.

25 years old
Established in 1995 – 25th anniversary

Global reach
Part of Bioprotection Global IBMA
Kenya and 35% of members from outside Europe
Annual Biocontrol Industry Meeting
October in Basel
Biocontrol products: 4 categories

MACROBIALS
INVERTEBRATE BIOCONTROL AGENTS

- Beneficial Insects, mites and nematodes that control other insects and mites

MICROBIALS

- Micro-organisms that outcompete or control pests and diseases

NATURAL SUBSTANCES

- Botanical extracts and minerals

SEMIOCHEMICALS

- Insect pheromones and plant kairomones that affect the behaviour of specific insects or plants

Subject to PPP regulation
Biocontrol enhances soil life and soil health
- Biocontrol respects non-targeted fauna and flora
- Example of organic farming

It reduces risks of chemical contamination

Biocontrol respects non-targeted fauna and flora

Example of organic farming

SOIL

Biocontrol enhances soil life and soil health
- It reduces risks of chemical contamination

CLIMATE
- Potentially less emissions
- Enabler for sustainable farming

CLIMATE

FARM ECONOMICS
- Proven efficacy of biocontrol
- Response to chemical pesticide ban/restrictions
- High benefit/cost ratio

HUMAN HEALTH
- Less pesticide exposure for farm workers
- No chemical residues in food

GOVERNANCE
- Biocontrol goes together with ecosystem knowledge and holistic approach

www.ieep.eu  @IEEP_eu
The Green Deal and F2F

Farm to Fork Strategy
For a fair, healthy and environmentally-friendly food system

Reduce use and risk of chemical pesticides by 50%

Pave the way to alternatives

Enhance provisions on integrated pest management

Maintain farmers’ incomes

The use of chemical pesticides in agriculture contributes to soil, water and air pollution, biodiversity loss and can harm non-target plants, insects, birds, mammals and amphibians. The Commission has already established a Harmonised Risk Indicator to quantify the progress in reducing the risks linked to pesticides. This demonstrates a 20% decrease in risk from pesticide use in the past five years. The Commission will take additional action to reduce the number of steps. It will revise the Sustainable Use of Pesticides Directive, enhance provisions on integrated pest management, and pave the way to alternatives. Agricultural practices that contain biological active substances and reinforce the environmental risk of pests are encouraged.
Biocontrol is Essential for the Green Deal

**Definition of biocontrol**

The 4 categories, invertebrates, microbials, semiochemicals and natural substances

**Set positive target for biocontrol**

75% of all PPP use in EU is biocontrol by 2030

**Simplify and Differentiate**

Current PPP legislation is built for chemicals and biocontrol does not fit.

**Biocontrol Experts**

Dedicated biocontrol experts in evaluation and risk assessment of biocontrol in EU and MS
Biocontrol in stored products - Examples

With thanks to the following IBMA Members for providing these examples

Please contact members directly for any additional information on these product examples – contact details on slides

• SilicoSec – Biofa
• Checkmate Puffer - Suterra
• BraconTop; TrichoKarte– AMW Nutzelinge
• Tricholine storage – Bioline Agrosciences
• Dismate – Russel IPM
• Entostat Technology – International Pheromone Systems
SilicoSec®

Highly effective insecticide for the control of insects and mites in stored grain and empty storage rooms

Mode of action

SilicoSec® is a fine almost white powder with a strong dehydrating impact on insects and mites. Once the insects come into contact with the product, they dehydrate and die within a short time from desiccation. Up to now, no resistances have been identified.

As there is no degradation of the active substance SilicoSec® does not lose it's efficiency in dry stored grain and storage rooms.

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A member of the Andermatt Group
An automated aerosol dispenser of pheromone that provides effective, sustainable protection against stored grain moth pests for up to 6 months per application

MODE OF ACTION

Mating Disruption
Non-toxic mode of action based on the use of the target species sex pheromones

PRODUCT USES

For use in the entire food supply chain wherever infestations of Stored Product Moths (P. interpunctella, E. kuehniella, E. elutella, C. cautella and C. figulilella) occur

BENEFITS

EFFECTIVE
State-of-the-art technology proven to reduce population levels of stored product moths in large and small facilities

COST SAVINGS
Reduce plant shutdowns with the added benefit of long-term control solution, as the Puffer SPM device last 6 months long

SUSTAINABLE
Uses the power of Pheromones to provide control, reducing amount of pesticides and fumigations, while also safe for the workers & the environment

Available in the EU from 2022
Contact information: cssales@suterra.com
Moth Control using Beneficial Insects – AMW Nutzlinge

Moth Control

with beneficials from AMW Nutzlinge

Stop the cycle!

pupae

moth

eggs

larae

BraconTop

TrichoKarte

AMW Nützlinge, Außerhalb 54, D-64319 Pfungstadt, www.amwnuetzlinge.de
Tricholine Storage

Containing *Trichogramma* spp., a beneficial micro-insect that parasitises moth eggs hidden in production areas, preventing them from hatching.

A natural and effective way to fight against moths of stored grain products (including *Plodia* spp., *Ephestia* spp., *Sitotroga* spp., etc), which feed mainly on dry foods: flours, grain-based foods (wheat, maize, rice) like pasta, semolina, muesli, biscuits, dried fruit, *Tricholine Storage* can be used in production areas as well as in food storage areas.

Contained within Bioline patented cardboard dispensers, the *Trichogramma* develop quickly and emerge regularly over several days, providing continuous protection. These insects seek out moth eggs and parasitise them. Ten to fifteen days after egg-laying, new *Trichogramma* emerge from the pupae and regenerate the population. When more moth eggs are present, the population dies out naturally.
Dismate PE releases pheromones to disorientate the male moths. The male thinks the pheromone is a female moth and flutters around looking for a her, using up all his energy and dying before he has the opportunity to mate. Subsequently the resident moth population can be effectively removed.

**Designed for professional use to combat:**

- Indian meal moth.
- Mill moth.
- Warehouse moth.
- Tropical warehouse moth.
- Raisin moth.
- Cocoa moth.

Dismate PE is used both as a curative and preventative alternative to poison treatments, with none of the associated downtime.

**Where to use?**

- Cereal processing
- Bakeries
- Confectionary manufacturing facilities
- Dried food /storage facilities

**For more information please visit** [www.russellipm.com/dismate-strategy/](http://www.russellipm.com/dismate-strategy/)
Entostat® Technology – Inspired by nature

A novel technology discovered at the University of Southampton and developed over years within industry. Entostat® is an eco-friendly and effective way to control pests using innovative electrostatic wax particle technology.

The key to success of Entostat is primarily associated with its ability to maintain an electrostatic charge.

In the middle of 2019, International Pheromone Systems Ltd had the opportunity of acquiring IP from Exosect.

Auto Confusion technology combined with patented Entostat® technology creating two products, SP-Tab® and CL-Tab®

These products are for managing the population and interrupt the lifecycle of several important moth pests including Plodia interpunctella, Ephesia kuehniella, Cadra cautella, Ephesia figulilella and Ephesia elutella and Tinea bisselliella.

Pheromones can be formulated into the wax and can be transferred directly on to the insects body via electrostatic charge. This offers a novel approach to mating disruption techniques that work in harmony with current monitoring and IPM programs.

The Entostat platform provides opportunity for development of new management solutions for a wide range of other food processing and storage pests.