



Biopesticides: Technical Update

Terry Horsman & Joshua Burnstone

Sustainable Use Directive Update

DIRECTIVE 2009/128/EC

Chapter 1, GENERAL PROVISIONS, Article 1

“This Directive establishes a framework to achieve a sustainable use of pesticides by reducing the risks and impacts of pesticide use on human health and the environment and promoting the use of integrated pest management and of alternative approaches or techniques such as non-chemical alternatives to pesticides.”

Sustainable Use Directive requires;

- Member states to encourage and support uptake of IPM.
- *“take all necessary measures to promote low pesticide-input pest management, giving, where possible, priority to non-chemical methods. Establish, or support the establishment of, necessary conditions for the implementation of integrated pest management.”*
- Ensure the general principles of IPM are implemented by professional pesticide users by 1 January 2014.

Current Status

- **UK National Action Plan submitted to EU for approval**
- **Policed via:**
 - *“Harmonised indicators will be adopted once adopted by the EU.”*
 - **Pesticide Usage Surveys**
 - **Number of approved biopesticides**
- **Will the EU accept these measures?**

Met52[®] granular bioinsecticide

IPM Technical Update



Croptalk Ask the Specialist

Spring 2014

GrowCareers 'pilot' launched at GroSouth

The HDC/IPPS/Fargo Study Day included nursery tours and seminars which preceded the show, details of which are included in this issue.

Launched on the day of the show was the 'pilot' GrowCareers event coordinated by Fargo where 12 students from across the South East were introduced to the trade. On offer was the *GrowCareers Passport* which included presentations and mentoring from leading industry experts, a tour of Roundstone's production facilities, business introductions and a free GrowCareers Goody Bag.



Students' tour of Roundstone's production facilities.

'There was lots of useful information that will help me now and in the future.'
Glenn Lucas, Merrat Wood



Held on the 13th November at Roundstone Nurseries, Chichester, West Sussex.

GroSouth, the largest horticultural exhibition in the South of England was a sell out. Stand allocations of 153 were at record levels and visitor numbers were at an all time high. GroSouth has grown from strength to strength and has become a regular fixture in the horticultural diary for growers.

'We had a great day at GroSouth this year – probably the best yet although it has been a good show for us from the start. We always enjoy catching up with current customers at the shows – this is an important reason why we do them – and at GroSouth this year we also spoke to many new potential customers, some of whom have already placed orders.'
Catherine Dawson, MetS2

In This Issue:

PRESTOP

Botrytis control on glasshouse salads and soft fruit crops. (Page 7)

T34 Biocontrol

Robust performance from the UK's only registered Trichoderma product. (Pages 4 - 5)

MetS2

The basis for Vine Weevil control in the UK HONS sector. (Page 2 - 3)

AQ10

Reviews from growers are positive. (Page 6)

GrowCareers & IPP/HDC Study Day (Pages 8 - 9)

NEW - Lepinox Plus:

A new *Bacillus thuringiensis* product will be launched in the Spring.

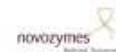
Lepinox Plus contains a new, highly effective strain for caterpillar control on many crops.

Fargo Energy

Gas, electricity, oil, LPG and biomass.

Call us for latest prices:

Tel: 01903 730735



MetS2 Update: Vine Weevil IPM

This technical update is intended to help growers get the best out of MetS2. Three seasons of experience with MetS2 has shown that MetS2 is best used within an Integrated Pest management (IPM) programme in partnership, when necessary with other control measures. There are no longer any 'silver bullet' standalone solutions, the highly persistent chemical options of the past will not be returning.



MetS2 is a biological product that has demonstrated excellent efficacy in the right environmental conditions. However we cannot expect MetS2 alone to deliver 100% control of vine weevil, particularly outside in the early spring and the autumn when temperatures are lower and biological products act more slowly.

Vine Weevil IPM: An Example Programme

The below example of an IPM programme includes four components. It will not always be necessary to resort to the supplementary adult and larval treatments, regular monitoring will inform that decision.

Core IPM Components		Supplementary IPM Treatments	
MetS2 MetS2 will form the backbone of your IPM programme. It provides an effective long term control of vine weevil larvae in the growing media. As a biological product it works slower as temperatures decrease and to it is important to bear in mind that supplementary treatments may be necessary in some cases.	Monitoring Monitoring is an essential component of any IPM programme. Monitor for vine weevil adults by looking for the distinctive leaf notches they make whilst feeding or checking under pot rims and in other refuges they may seek out during the day. Monitor from midsummer onwards by knocking out pots and looking for larvae in the media.	Adult treatments If vine weevil adults are present on the nursery it may be prudent to take steps to reduce pest pressure. Chemical sprays are available which can do a good job of controlling adults and therefore reducing the number of eggs laid in your media. HDC project report 'S/NHS 112' is available from the HDC and gives recommendations.	Larval treatments If monitoring shows that larvae have hatched and are present in pots in September then we recommend supplemental media treatments. We would recommend the use of a low temperature nematode (Nematus 1) to ensure the best results. Chemical options are available in some situations if preferred.

The timetable below highlights the key decision points in this programme.



MetS2 Technical Update, January 2014.

MetS2 contains *Metarhizium anisopliae*. MetS2® is a registered trademark of Novozymes A/S. Use plant protection products safely. Always read the label and product information before use.

PRESTOP  **P**[®]

Efficacious and cost effective disease control

GLIOCLADIUM CATENULATUM

Registered biofungicide strain *J1446*

Foliar application against *Botrytis*

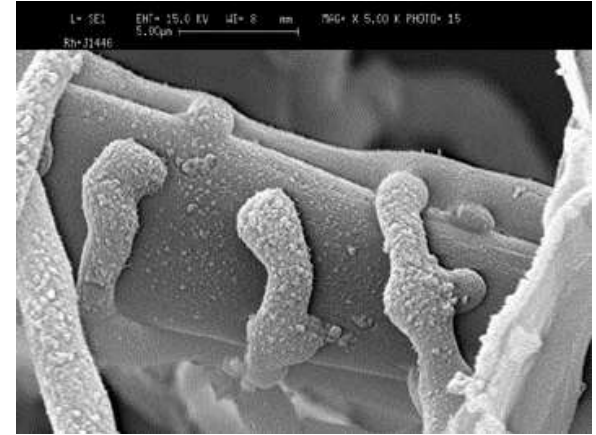
Growing media applications against
Pythium, *Rhizoctonia*, *Fusarium* and
Phytophthora



- Compatible with biological and integrated pest management programmes.
- Low risk of resistance.
- Safe for humans, the environment and beneficials (when used as directed).

How does it work?

PRESTOP has multiple modes of action:



Competition for living space: It deprives plant pathogenic fungi of living space and nourishment by colonising plant roots or foliage in advance of pathogens.

Hyperparasitism: PRESTOP attacks harmful fungi. Enzyme activity plays an important role and is involved with breaking down fungal walls.

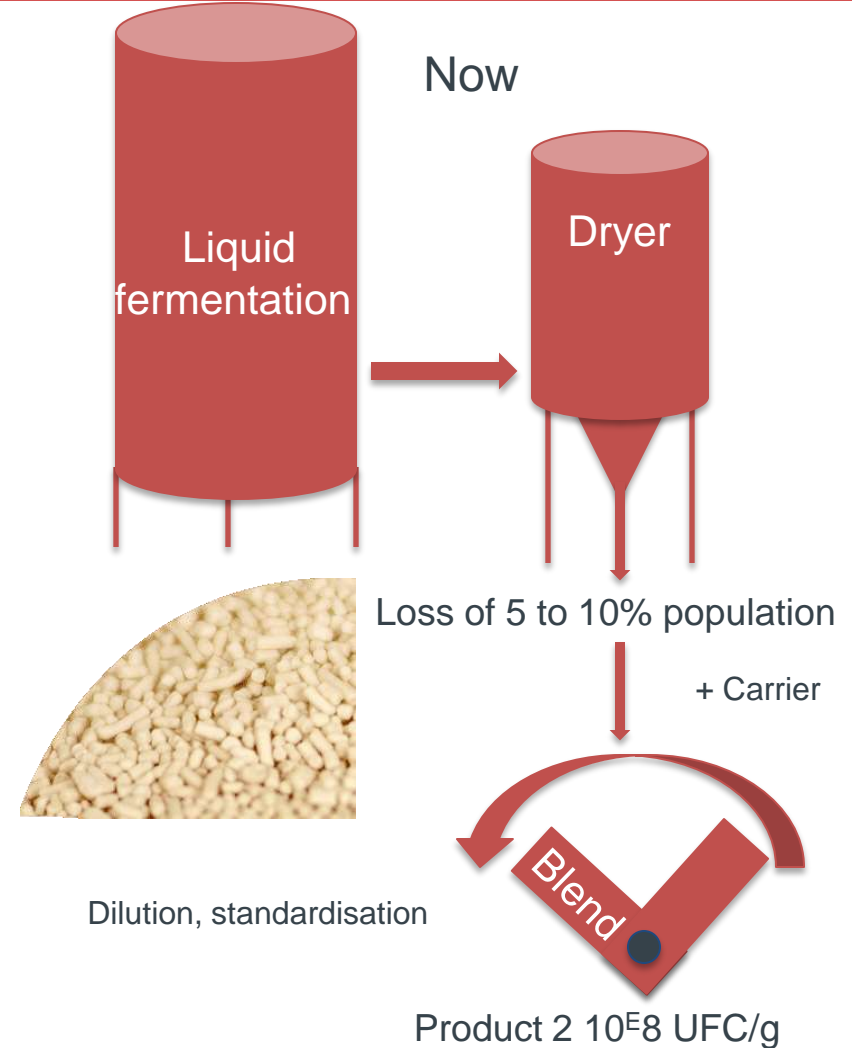
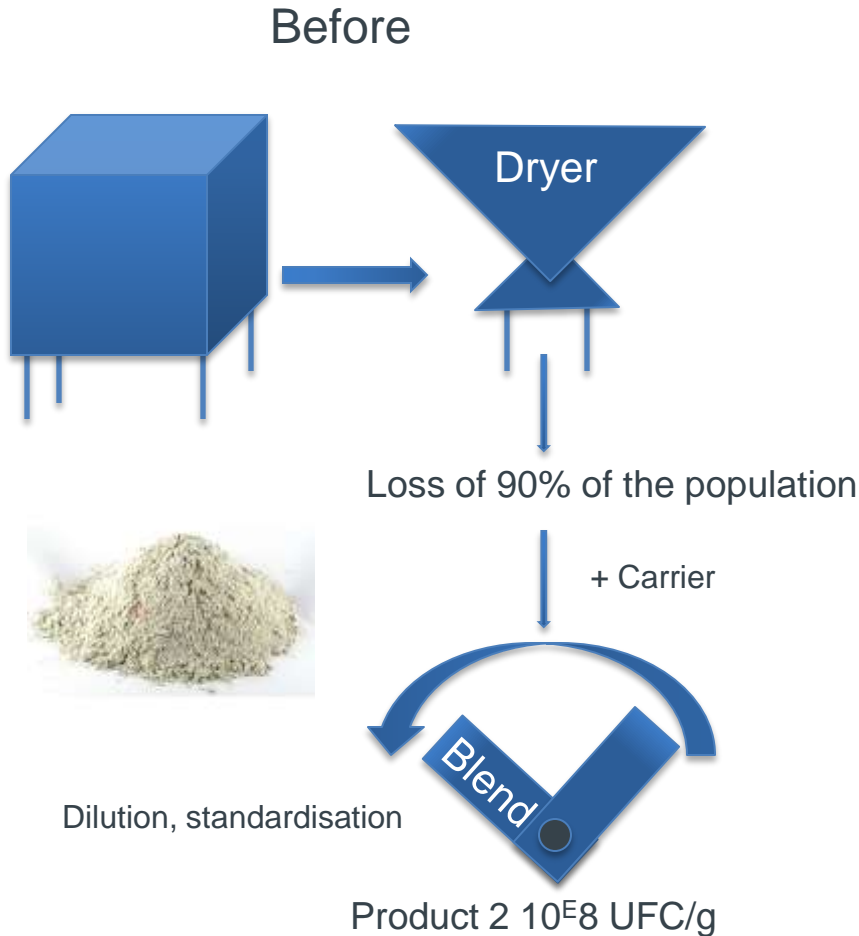
What has changed?

VERDERA are now owned by LALLEMAND who have invested heavily in new efficient production techniques

A new production facility in France has come on-stream

This has allowed the company to offer the product at a far more competitive price point

What has changed?



Dilution rate: 1kg in 200 litres (0.5%)

Application options:

1. High volume spray to just before run off ensuring thorough coverage of the crop
2. ULV application has been shown to be very effective

What are the advantages?

- Minimise chemical fungicide residue.
- Aids disease resistance prevention as Prestop provides different modes of action to conventional products.
- Controls some diseases not well controlled by other means.
- Minimises risk to the environment from chemical fungicides.
- Improve yield when used as a growing media treatment by colonising roots and aiding plant growth.

New Bt product for the UK market

Broad spectrum control of caterpillar pests



Active ingredient: Bacillus thuringiensis sv kurstaki strain EG2348

Formulation: wettable powder (WP)

On label uses include;

Apple, Pear, Strawberry and many other edible crops



You can find copies of all of our labels and
technical notes on our website:

www.fargro.co.uk