

Managing Mushroom Pests and  
Disease Control in response to  
resistance and Environmental  
Sustainability demands  
Donal Gernon

# Why are we here today?

- Disease issues over the past few months
  - Lower yields
  - Cost of controlling disease
  - Picker productivity
  - Reduced farm profitability
- Inform growers on what products are available
- Audit compliance

# Topics covered:

- List of Approved products in Ireland and the UK:
  - Labels
  - Application Rate and Timing
  - Application Method
- Integrated Pest Management Strategy
- Audit compliance information

# List of Approved Products:

Product	PCS number (ROI)	MAPP number (UK)
Sporgon 50 WP	05094	17700
Vivando	05685	18026
Pyrethrum 5EC	06255	Not Approved for use on Mushroom crops in UK
Decis Protech	05269	Not Approved for use on Mushroom crops in UK
FLiPPER	05027	Not Approved for use on Mushroom crops in UK
*Botanigard*	06264	Not Approved for use on Mushroom crops In UK
Naturalis L	Not Approved for use on Mushroom crops in ROI	17526
Met52	Not Approved for use on Mushroom crops in ROI	15168

# DAFM PCS website:

**Pesticides**  
Registration & Control Division

[Home](#) [Biocontrol](#) [Plant Protection Products](#) [Food Safety](#) [S-E Compliance](#)

[Product Search](#)

Product Name	PCS No.	Function
Amylo-X WG	06311	Fungicide
Sporekill	92396	Disinfectant
Sporgon 50 WP	05094	Fungicide
Vivando	05685	Fungicide

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# HSE Pesticide register database:

You are in: [Guidance](#) » [Industries](#) » [Pesticides](#) » [Databases](#) » [Pesticides Register](#) » [Product Search](#) » [Results](#)

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## Approved Products Search Results

Click on a Product name to view Full Details for the Product.

[New Search](#)

Displaying results 1 - 10 of 15

Product MAPP No	Product Expiry Date <small>(notes)</small>	Marketing Company	Crop(s) (may have different Expiry Dates) see notice	Active(s)
<a href="#">Allure 12651</a>	30/09/2021	Chiltern Farm Chemicals Limited	all edible crops except potato and cauliflower	metaldehyde
<a href="#">Amylo X WG 17978</a>	30/09/2027	Certis	mushroom (permanent protection with full enclosure)	Bacillus amyloliquefaciens D747
<a href="#">Appeal 12022</a>	31/12/2021	Chiltern Farm Chemicals Limited	all edible crops except potato and cauliflower (protected, outdoor)	metaldehyde
<a href="#">Appeal 12713</a>	30/09/2021	Chiltern Farm Chemicals Limited	all edible crops except potato and cauliflower	metaldehyde
<a href="#">Attract 12023</a>	31/12/2021	Chiltern Farm Chemicals Limited	all edible crops except potato and cauliflower	metaldehyde
<a href="#">Attract 12712</a>	30/09/2021	Chiltern Farm Chemicals Limited	all edible crops except potato and cauliflower	metaldehyde
<a href="#">Carakol 3 14309</a>	31/03/2022	Adama Agricultural Solutions UK Ltd	all edible crops except potato and cauliflower	metaldehyde
<a href="#">Desire 14048</a>	30/09/2021	Chiltern Farm Chemicals Limited	all edible crops except potato and cauliflower	metaldehyde
<a href="#">Enzo 14306</a>	31/03/2022	Adama Agricultural Solutions UK Ltd	all edible crops except potato and cauliflower	metaldehyde
<a href="#">Sporgon 50 WP 17700</a>	30/06/2026	Sylvan Spawn	mushroom	prochloraz

Result Pages: [Back](#) [1](#) [2](#) [Next](#)

[New Search](#)

### Explanatory Notes

#### Expiry Dates

The expiry date shown is the final expiry date of the product.

# Sporgon 50 WP

- Rate of Use: 1 grams per m<sup>2</sup>
- Active Substance: Prochloraz
- Application Method: Watering Tree, Lance, Automatic watering system
- Dilution Rate: Up to 1.8L of water per m<sup>2</sup>
- Application Timing: During case run
- Harvest interval: 10 days
- MRL: 3 mg/kg
- Max number of applications: 1 per crop

# Sporgon 50 WP

## Sporgon<sup>®</sup> 50 WP

A wettable powder containing 461 g/kg (46% w/w) prochloraz. A fungicide for the control diseases in indoor mushrooms.

A wettable powder containing 46% w/w prochloraz.

### Risk and Safety Information

**Warning:**  
Very toxic to aquatic life with long lasting effects.

Avoid release to the environment.  
Collect spillage.  
Wear suitable protective gloves/  
protective clothing/eye protection/  
face protection.

Wear respiratory protection.

Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for clean empty containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment, comply with the instructions for use.

PCS No: 05094



**1** kg

SPECIMEN  
2018 to date



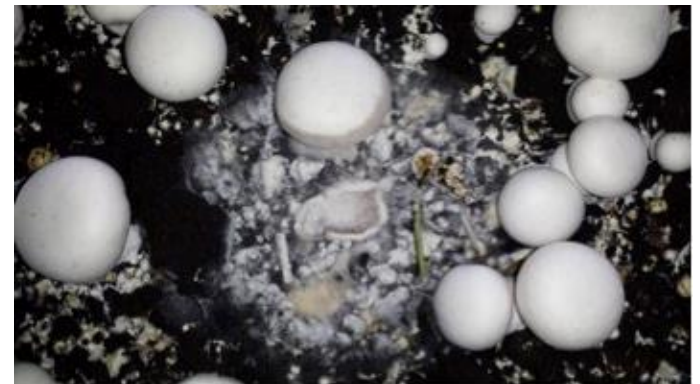
# Sporgon 50 WP

- Used to control Verticillium and Dactylium
- PPE: Heavy Duty overalls Wellingtons, Face mask/respirator, Gloves
- Mix Sporgon and water in a bucket first and then add to a tank which can be agitated to get even mix
- Rinse tank when finished and apply rinsed water to the across all bed area treated



# Vivando

- Rate of Use: 1 ml per m<sup>2</sup>
- Active Substance: Metrafenone
- Application Method: Watering Tree, Knapsack, Lance, Automatic watering system
- Dilution Rate: Recommended 150ml/m<sup>2</sup>
- Application Timing: case run only
- Harvest interval: 10 days
- MRL:0.5mg/kg



# Vivando

ml  
800  
700  
600  
500  
400  
300  
200  
ml

# Vivando®

A fungicide for control of cobweb mould in mushrooms

An suspension concentrate containing 500 g/litre (42.4% w/v) metrafenone

**Risk and Safety Information**

Toxic to aquatic life with long lasting effects.

Collect spillage.

Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple-rinsed empty containers which can be disposed of as non-hazardous waste.

May produce an allergic reaction. Contains: 1,2-benzisothiazol-3(2H)-one

To avoid risks to human health and the environment, comply with the instructions for use.



**1** Le

**UN 3082**  
Packing Group III  
Environmentally hazardous substance, liquid, N.O.S.  
(contains metrafenone 42%)  
Marine Pollutant

MAPP 18026  
PCS 05685

IE Marketing Company  
BASF Ireland Limited  
BASF plc, P O Box 4,  
Earl Road, Cheadle Hulme,  
Cheshire, SK8 6QG, UK  
Telephone: 01 825 5701  
Fax: 01 825 2038

Technical Enquiries (Office hours):- Tel: 00 44 (0)845 602 2553  
Emergencies (24 hour freephone):- Tel: 00 49 180 2273112

UK Marketing Company  
BASF plc, P O Box 4,  
Earl Road, Cheadle Hulme,  
Cheshire, SK8 6QG  
Telephone 0161 485 622

**BASF**  
We create chemistry

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work. (UK only)

**PRECAUTIONS**

**Operator protection**

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate or applying the product.

WASH HANDS AND EXPOSED SKIN before meals and after work.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

IF YOU FEEL UNWELL, seek medical advice (show label where possible).

However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection (UK only).

**Environmental protection**

Do not contaminate water with the product or its container. (Do not clean application equipment near surface water/ Avoid contamination via drains from farmyards or roads).

**Storage and disposal**

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP OUT OF REACH OF CHILDREN.

KEEP IN ORIGINAL CONTAINER tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

DO NOT RE-USE CONTAINER for any purpose.

Store in a suitable pesticide store, keep dry and protect from frost.

FOR PROFESSIONAL USE ONLY

This label is compliant with the CPA  
Voluntary Initiative Guidance (UK only)



This product is approved under Plant Protection Products Regulation (EC) 1107/2009.

**IMPORTANT INFORMATION**

FOR USE ONLY AS A PROFESSIONAL FUNGICIDE.

Crops	Maximum individual dose (product)	Maximum number of applications (product)	Latest time of application
Mushroom	10 l/ha (1 ml/m <sup>2</sup> )	1	10 days before harvest

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE.

MAPP 18026  
PCS 05685



® = Registered trademark of BASF

81116694IE1047

# Vivando

- For control of Cobweb
- PPE: Same as Sporgon
- Advisable to apply at dilution rate of 0.5 – 1L of water/m<sup>2</sup>
- Ensure Vivando is mixed in tank before application to crop
- Do not apply after 1<sup>st</sup> flush
- Rinse tank when finished and apply rinsed water to the across all bed area treated



# Pyrethrum 5 EC

- Rate of Use: 0.065ml/m<sup>2</sup> (Refer to [EAMU Document](#))
- Active Substance: Natural Pyrethrins
- Application Method: Fogging
- Dilution Rate: 2 – 4 litres of water per 1000m<sup>3</sup>
- Harvest interval: 24 hours
- Fogging frequency: Every 7 Days
- Maximum number of applications: 3 per crop
- MRL: 1 Pyrethrins



# Pyrethrum 5 EC



The image shows a green and white product label for Pyrethrum 5 EC. At the top left is the PelGar logo, which consists of a globe with the brand name 'PelGar' in a black oval. Below the logo, the text reads 'International INSECTICIDE' followed by a circled 'I' and 'PCS 06255'. The product name 'PYRETHRUM 5 EC' is prominently displayed in large, bold, white letters. Below this, it says 'AN EMULSIFIABLE CONCENTRATE (EC) FORMULATION CONTAINING 5% (W/V) PYRETHRINS'. A photograph of a green and yellow insect is shown in the upper right corner. A large, semi-transparent watermark 'SAFE to use' is overlaid diagonally across the label. At the bottom of the label, there is a 'SAFETY INFORMATION' section with various hazard symbols and text. The volume '1 litre e' is printed at the bottom left of the label area. The bottom right corner of the label features a stylized daisy flower and a portion of the Union Jack flag.

**PelGar**

International  
INSECTICIDE

PCS 06255

**PYRETHRUM 5 EC**

AN EMULSIFIABLE CONCENTRATE (EC) FORMULATION  
CONTAINING 5% (W/V) PYRETHRINS

Pyrethrum 5 EC is a contact insecticide for use against chewing and sucking pests including aphids (blackfly and greenfly), thrips, whitefly and red spider mite on protected fruit and vegetable crops.

**SAFETY INFORMATION**  
**PYRETHRUM 5 EC**  
An emulsifiable concentrate formulation containing 5% (w/v) pyrethrins.  
Contains: Phosgene dioxide, odourless kerosene and sodium dialkyl sulphosuccinate.

**Danger**  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
Causes serious eye damage.  
Very toxic to aquatic life with long lasting effects.

Do not eat, drink or smoke when using this product.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.

**IF SWALLOWED:** Immediately call a POISON CENTER/ doctor.  
**IF INHALED:** Call a POISON CENTER/ doctor if you feel unwell.  
**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Do not breathe spray. Avoid release to the environment.  
Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.  
To avoid risks to human health and the environment comply with the directions for use.

PCS 06255

1 litre e

# Pyrethrum 5 EC

- PPE required:



# Pyrethrum Directions on how to apply:

- Used to control Sciarid and other mushroom flies
- Turn off fresh air and increase fan speed
- Direct fogger to the re-circulate (air handling unit) or place in between shelves. Turn on from outside tunnel.
- During and following fogging, 2 to 4 hours of recirculation is required before venting.
- Turn on from outside tunnel.
- Not approved for use in the UK





# Decis Protech

- Rate of Use: 5ml/100 m<sup>3</sup> (Refer to [EAMU Document](#))
- Active Substance: Deltamethrin
- Application Method: Fogging
- Dilution Rate: 2 – 4 litres of water per 1000m<sup>3</sup>
- Harvest interval: 3 days before harvest
- Minimum interval between applications: 14 Days
- Maximum number of applications: 2 per crop
- MRL: 0.05 mg/kg

# Decis Protech



1Le

## Insecticide

A broad spectrum pyrethroid insecticide for the control of aphids, caterpillars and a range of other pests in a wide range of agricultural and horticultural crops.

An oil-in-water emulsion formulation containing 15 g/L (1.50 % w/w) deltamethrin.

Authorisation Holder:  
Bayer CropScience Ltd  
230 Cambridge Science Park  
Milton Road, Cambridge  
CB4 0HW, UK.

Marketing Company:  
Bayer CropScience Ltd  
Bayer Ltd, The Atrium  
Blackthorn Road, Sandyford  
Dublin 18

Freephone: 1800 818534.

For 24 hour emergency information  
contact Bayer CropScience Limited  
Telephone: 00800 1020 3333



For professional use only.

### Safety information

#### DECIS PROTECH

Contains 15 g/L (1.50% w/w)  
deltamethrin.



### Warning

Flammable liquid and vapour.

Very toxic to aquatic life with long lasting effects

Ground/bond container and receiving equipment

Wear protective gloves/protective clothing/eye protection

Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

Contains 1,2-benzisothiazolin-3-one, reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one (3:1), alpha-hexylcinnamaldehyde, benzylsalicylate. May produce an allergic reaction.

**To avoid risks to human health and the environment, comply with the instructions for use.**

PCS Number: 05269



To access the Safety Data Sheet for this product scan the code or use the link below:  
[www.bayercropscience.ie/sds/decisprotech.pdf](http://www.bayercropscience.ie/sds/decisprotech.pdf)  
or alternatively contact your supplier

IE84485136b rA1a

Bayer

# Decis Protech

- Calculate rate of application example:
  - ❖ Tunnel Volume =  $(3.14 \times \text{radius}^2 \times \text{Length of tunnel}) / 2$
  - ❖ Example = Tunnel A – Width 9 m, Height 4.5m, length 45m,  $r = \text{width} = 4.5\text{m}$
  - ❖ Volume =  $(3.14 \times 4.5^2 \times 45) / 2 = 1,431 \text{ m}^3$
  - ❖ Application rate =  $(1,431 / 100) \times 5\text{ml} = 71.55\text{ml}$

# FLIPPER

- Target: Sciard & Phorid
- Rate of Use: 1.6ml per m<sup>2</sup>
- Active Substance: Fatty Acids (potassium salts)
- Application Method: Knapsack
- Can also be applied to walls, doors,vents similar to Ficam.
- Dilution Rate:62.5ml per m<sup>2</sup>
- Harvest interval: N/A
- Application timing: Recommended 1-2 applications at case run, and an application between flushes.
- Maximum number of applications: 5 per crop
- MRL: N/A
- Not approved for mushroom crops in the UK



# FLIPPER

## FLIPPER® Insecticide/Acaracide



FLIPPER® is a contact insecticide / acaricide for the control of aphids, whitefly and spider mites on a range of crops.

**Read all instructions carefully before using this product.**

MAPP 17767 / PCS 05027

10 Litre

**alphabiocontrol**  
BIO-INSPIRED CROP PROTECTION

### FLIPPER®

An emulsion in water (EW) insecticide containing 479.8 g/Litre (47.9% w/v) plant origin carboxylic acid potassium salts C14 - C20.  
**A contact insecticide / acaricide for the useful preventative control of whitefly, aphids and two spotted mite on a range of protected crops.**

MAPP 17767 / PCS 05027

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work (UK only).

#### RISK & SAFETY INFORMATION.

An emulsion in water (EW) insecticide containing 479.8 g/Litre (47.9% w/v) plant origin carboxylic acid potassium salts C14 - C20.

#### Classification and labeling

Skin Irritant - Category 2  
Irritating to Eyes - Category 2

#### WARNING

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.  
Harmful to aquatic life with long lasting effects.

#### PRECAUTIONARY STATEMENTS

Do not breathe mist/vapours/spray.

Wash hands thoroughly after handling. Use only in a well-ventilated area. Avoid release to the environment.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty, fully rinsed containers which can be disposed of as non-hazardous waste.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. If eye irritation persists: Get immediate medical advice/attention.

**To avoid risk to human health and the environment, comply with the instructions for use.** MAPP 17767 / PCS 05027



Authorisation Holder: Alpha BioPesticides Limited t/a AlphaBio Control Ltd, St John's Innovation Centre, Cowley Road, Cambridge, CB4 0WS, England. Tel: +44 (0) 1223 91766.

#### Distributed by

Fargro Ltd, Vinery Fields, Arundel Road, Poling, Arundel, West Sussex BN18 9PY. Tel: +44 (0)1903 721591. E: info@fargro.co.uk.

For advice on medical emergencies, fires, spillages or chemical hazards ONLY - Tel: 0870 190 6777 (UK only).

In case of a medical emergency following exposure to a chemical, the public should call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24 (UK only).

The National Poisons Information Service, Dublin  
Tel: 00 35 3 137 99 64/379966.

FLIPPER® is a registered trade mark of AlphaBioPesticides Limited (Trading as AlphaBio Control), St John's Innovation Centre, Cowley Road, Cambridge, CB4 0WS.

**alphabiocontrol**  
BIO-INSPIRED CROP PROTECTION

**fargro**  
Ask the Specialist

# Botanigard

- Target: Sciarid & other mushroom flies
- Rate of Use: 0.24g per m<sup>2</sup>
- Active Substance: Beauveria bassiana
- Application Method: \*\*EAMU states that product is to be applied via cold fogger\*\*
- Harvest interval: N/A
- Application timing: After Casing and between flushes
- Maximum number of applications: 4 per crop
- MRL: N/A
- Not approved for mushroom crops in the UK

# Botanigard

## BOTANIGARD® WP

CERTIS

**MAPP 17054 PCS 06264** | Batch No.: Date of Manufacture: - See container

A wettable powder containing 220 g/kg *Beauveria bassiana* GHA present as  $4.4 \times 10^{10}$  CFU/g MPCA (minimum  $3.7 \times 10^{10}$  CFU/g MPCA; maximum of  $5.2 \times 10^{10}$  CFU/g MPCA) for the control of whitefly on various crops.



INSECTICIDE

### Botanigard WP

A wettable powder containing  $4.4 \times 10^{10}$  CFU/g of *Beauveria bassiana* GHA.



### DANGER

**MAY CAUSE AN ALLERGIC SKIN REACTION. MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS. OR BREATHING DIFFICULTIES IF INHALED.**

Avoid breathing dust, fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

Wear respiratory protection.

Use only outdoors or in a well-ventilated area.

IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTRE/doctor.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: call a POISON CENTRE/doctor.

Wash contaminated clothing before reuse.

Dispose of contents/ container to a licensed hazardous waste disposal contractor or collection site except for empty, triple rinsed, clean container which can be disposed of as non-hazardous waste.

Contains *Beauveria bassiana* strain GHA (GAL/CS428-82-0). May produce an allergic reaction.

To avoid risks to human health and the environment, comply with the instructions for use.

**MAPP 17054/PCS 06264**

THE (COSHH) CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS MAY APPLY TO THE USE OF THIS PRODUCT AT WORK - UK ONLY.

### SAFETY PRECAUTIONS

#### Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT\* when handling the product or applying the product.

\*Disposable filtering facepiece respirator to at least EN149 FFP3 or equivalent.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

#### Environmental protection

Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

#### DIRECTIONS FOR USE:

Refer to leaflet attached to this container.

For advice on medical emergencies, fires, spillages or chemical hazards ONLY – phone 0870 190 6777.

### IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HORTICULTURAL INSECTICIDE

Crops: Full details are attached on leaflet.

Maximum individual dose/Maximum number of treatments/

Maximum total dose/Latest time of application/

Other specific restrictions: Full details are on attached leaflet.

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

500 grams e

423978

# Naturalis L

- Target: Broad range of flies
- Rate of Use: refer to product label
- Active Substance: Beauveria bassiana
- Harvest interval: N/A
- Application timing: After Casing and between flushes
- Maximum number of applications: 5 per crop
- MRL: N/A
- Not approved for mushroom crops in the ROI



# Naturalis L

# NATURALIS®-L

**A bioinsecticide for the control of whitefly in all edible crops (protected) and ornamental plant production (protected). The product will also provide a reduction in thrips.**

I

Professional use only

TECHNICAL ENQUIRIES:  
+44 1903 721591

24 HOUR EMERGENCY  
NUMBER: +44 1903 721591



This label is compliant with the CPA Voluntary Initiative guidance.

Contents: 1L

## FOR USE ONLY AS AN AGRICULTURAL / HORTICULTURAL INSECTICIDE

FORMULATION AND ACTIVE INGREDIENT :  
An oil dispersion formulation containing 7.16% w/w

*Beauveria bassiana* ATCC 74040  
( $2.3 \times 10^7$  CFU ml<sup>-1</sup>).

For use only on crops under permanent protection.

Do not freeze.

The (COSHH) Control of Substances Hazardous to Health (UK only).

Regulations may apply to the use of this product at work.

Batch number / Production date: see packaging.

**Naturalis®-L** - An oil dispersion formulation containing 7.16% w/w *Beauveria bassiana* ATCC 74040 ( $2.3 \times 10^7$  CFU ml<sup>-1</sup>)

**Micro-organisms may have the potential to provoke sensitizing reactions**

Avoid breathing spray.

Do not get in eyes, on skin, or on clothing.

Use only outdoors or in a well-ventilated area.

Wear protective gloves.

IF exposed or if you feel unwell: Call a POISON CENTER or doctor / physician.

To avoid risks to human health and the environment comply with the instructions for use.

MAPP No. 17526 PCS No. 04187

## IMPORTANT INFORMATION

For use only on crops under permanent protection. For use only as an insecticide.

Crops	Max. individual Dose (l/ha)	Max. number of treatments	Latest time of application
All edible crops (protected)	3	5	Not applicable
Ornamental plant production (protected)	3	5	Not applicable

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

## SAFETY PRECAUTIONS

### Operator Protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

- Wear suitable protective clothing (coveralls), suitable protective gloves and suitable respiratory protective equipment\* when handling the concentrate or applying the product.

\*Disposable filtering facepiece respirator to at least EN149 FFP3 or equivalent.

- However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection (UK only).

- IF YOU FEEL UNWELL, seek medical advice immediately (show the label where possible).

- WHEN USING DO NOT EAT, DRINK OR SMOKE.

- IN CASE OF CONTACT WITH EYES OR SKIN, RINSE IMMEDIATELY with plenty of clean water.

- AVOID CONTACT WITH SKIN AND EYES.
- WASH HANDS AND EXPOSED SKIN before meals and after work.

- USE ONLY IN A WELL VENTILATED AREA.
- DO NOT BREATHE SPRAY.

### Environmental Protection

- Do not contaminate water with the product or its container. Do not clean application equipment near surface water and avoid contamination via drains from farmyards and roads.

### Storage and disposal

- KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.
- KEEP OUT OF REACH OF CHILDREN.
- KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
- DO NOT RE-USE CONTAINER FOR ANY OTHER PURPOSE.
- WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

### Storage

Naturalis®-L is a biological product and has a guaranteed shelf-life of 1 year at room temperature. The product preferably should be stored at 4-5 °C to retain maximum spore viability.

### DIRECTIONS FOR USE

**IMPORTANT:** This information is approved as part of the product label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

## Restrictions

- Do not apply through spray nozzle filters which are less than 50 mesh.
- Do not apply using irrigation equipment.
- Naturalis®-L should not be tank mixed with any other product. After a Naturalis®-L treatment, leave at least 48 hours before applying a fungicide. The effects of fungicides applied before a Naturalis®-L treatment has not been fully evaluated. Some fungicides may reduce effectiveness of Naturalis®-L.

## Resistance

Naturalis®-L has not been reported to have any insect resistance. However, it is good practice to use such products as components of Integrated Pest Management systems, alternating with other control measures. This is particularly important for sequential crops. The effects of Naturalis®-L on natural enemies has not been fully established, some adverse effects may occur, for example on *Encarsia* sp.

**Naturalis®-L** is a bio-insecticide containing viable spores of the fungus *Beauveria bassiana*, strain ATCC 74040, a naturally occurring and non-genetically modified fungus. It is applied for the control of all stages of whitefly and for the reduction of thrips in crops under permanent protection. The fungus has a unique mode of action: conidiospores germinate to produce a penetration hypha, which when inside the insects body proliferates to cause insect desiccation and death.

## Pest control

Naturalis®-L controls adult and larval stages of whitefly species which belong to the family Aleyrodidae, including the glasshouse whitefly *Trialeurodes vaporariorum* and provides a reduction in numbers of adult and larval stages of thrips species, including Western Flower Thrips, *Frankliniella occidentalis*.

## Crop recommendations

Naturalis®-L is for use on all edible crops (protected) and ornamental plant production (protected). Naturalis®-L has been used on a wide range of crops under a range of conditions. Little phytotoxicity has been seen at recommended rates. Before making applications it is advisable to test Naturalis®-L on a small area of crop.

## Application rate & frequency

Naturalis®-L is to be applied at a concentration of 0.3% w/v (i.e. 3 litres in 1000 l water). It should be applied with a fine spray, ensuring complete

coverage of the plant, to the point just before run-off. Applications should be carried out in the morning or in the evening when adults fly less and relative humidity is higher. Apply at the very first appearance of whitefly or thrips on the crop, and repeat the application at intervals of no less than 5 days, up to a maximum of 5 treatments.

## Efficacy

Naturalis®-L works well when the temperature is between 20 °C and 30 °C, and the relative humidity is over 60%.

## Mixing and spraying

Spraying equipment must be clean and free of pesticide residues. Before measuring out the product, gently rotate the product container to ensure that spores are evenly mixed within the concentrate. Initially, make a solution in half the final volume of water. Once the product is completely dispersed, make up to the final volume with the remaining amount of water. When mixing, continually agitate the solution to ensure that the spores are evenly dispersed. Agitation of the solution when spraying will prevent spore sedimentation. After application, rinse out the spraying equipment several times with water and leave to air dry before being returned to store.

## WARRANTY

The seller makes no warranty, expressed or implied, with regard to the use of the product other than that indicated on the label. The purchaser and user shall assume all risk associated with use and/or handling and/or the storage of the product, if this use and/or handling and/or storage are carried out contrary to the instructions on the label.

Marketing company: fargro

FARGRO LIMITED  
Vinery Fields - Arundel Road - Poling - West Sussex  
BN18 9PY - UK - www.fargro.co.uk  
Tel: +44 1903 721591

Approval holder: BIOGARD  
Division of CFC (Europe)

CBC (Europe) S.r.l.  
Via E. Majorana, 2  
20834 Nova Milanese (MB), Italy  
Tel. 0362-365079  
© Naturalis is a registered trademark of  
CBC (Europe) S.r.l.

Rev. 03-2016

# Met52 granular bioinsecticide

- Target: Sciarid
- Rate of Use: refer to product label
- Active Substance: Metarhizium Anisopliae
- Harvest interval: N/A
- Application timing: refer to product label
- Maximum number of applications: refer to product label
- MRL: N/A
- Not approved for mushroom crops in the ROI

# Met52

## INSECTICIDE

### MET52<sup>®</sup> GRANULAR BIOINSECTICIDE

A granular product containing 2% w/w *Metarhizium anisopliae* var. *anisopliae* strain F52 (a minimum of  $9 \times 10^{11}$  cfu/kg).

For controlling black vine weevil (*Otiorynchus* spp.) larvae in soft fruit and ornamental crops (protected and unprotected).

Product registration number: MAPP 15168  
(PCS 04811)

Contains a specific strain of a natural insect pathogenic fungus.  
For incorporation into soil or growing media for the control of vine weevil in open field and container crops.  
Effective long lasting control.



Fargro Ltd  
Vinery Fields, Arundel Road,  
Poling, Arundel,  
West Sussex  
BN18 9PY  
Tel: +44 (0)1903 721591  
Email: info@fargro.co.uk  
www.fargro.co.uk

USE PLANT PROTECTION PRODUCTS SAFELY.  
ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE

Issue: pm-09/13

Page: 1 of 4

Met52 granular

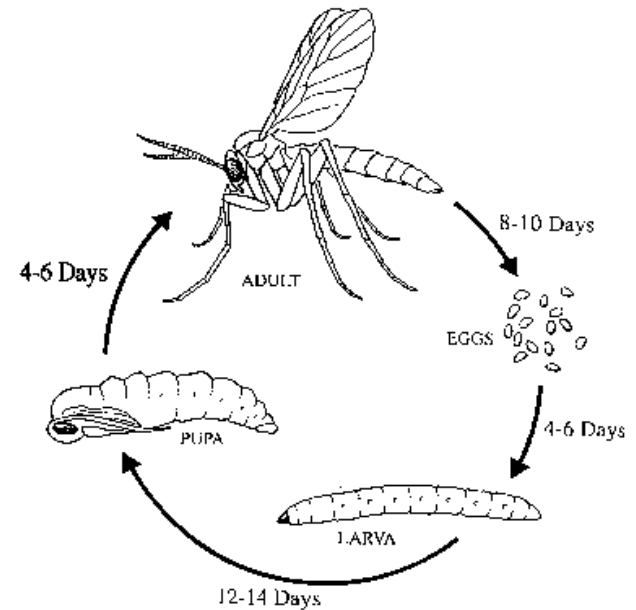
# Nematodes (*Steinernema feltiae*)

- Rate of Use: 2 – 3 million per m<sup>2</sup>
- Application Method: Watering Tree, Lance, Automatic watering system
- Dilution Rate: 0.5 – 1L of water per m<sup>2</sup>
- Application Day: During case run usually after ruffling (day 4/5). Can also be applied after 1<sup>st</sup> flush.
- Harvest interval: N/A
- PCS Number: N/A
- Use: To control Fly Populations



# Nematodes

- Important Nematodes are stored in a fridge
- Take out of fridge at least 1 hour before application
- Mix nematodes with water in a bucket before adding to the mixing tank.
- Ensure the nematodes are being constantly agitated during application to ensure they don't settle at the bottom of the tank.



# Recent withdrawals:

- **Ficam W** (PCS Number: 93413) (MAPP no: 5390)
  - Can not be used in ROI since 31/08/20
  - Can not be used in the UK after 10/12/20

# Label Changes:

- **Sporgon 50 WP** (Old PCS No: 91288)(New PCS No: 05094)
  - Label expired in ROI on 30/09/20
- **Pyrethrum 5EC** (Old PCS No: 92317) (New PCS No: 06255)
  - Label expired in ROI on 30/06/20

# Biocides

Product	PCS	Active Ingredient	Hose	Fog	Product Type	Application Rates
Omnicide M	99380	Glutaraldehyde	✓	✓	PT4	0.5%-2%
Enviro-tech	97311	Benzylalkonium Chloride	✓	✓	PT4	0.5%-2%
Sporekill	92396	Potassium salts of fatty acids	✓	✓	PT2,PT4	0.5%-2%
Jet 5	95366	Peracetic acid	✓	✓	PT1-6, PT11, PT12	Refer to label
Sodium Hypochlorite (Red Label)	96864 97678	sodium hypochlorite	✓	-	PT2-5, PT11	Refer to label
Prophyl	93133	Chlorophene, Chlorocresol	✓	✓	PT2	0.2%-0.5%

# Product Type (PT)

PT 2	Disinfectants and algaecides not intended for direct application to humans or animals	<p>Used for the disinfection of surfaces, materials, equipment and furniture which are not used for direct contact with food or feeding stuffs. Usage areas include, inter alia, swimming pools, aquariums, bathing and other waters; air conditioning systems; and walls and floors in private, public, and industrial areas and in other areas for professional activities.</p> <p>Used for disinfection of air, water not used for human or animal consumption, chemical toilets, waste water, hospital waste and soil.</p> <p>Used as algaecides for treatment of swimming pools, aquariums and other waters and for remedial treatment of construction materials.</p> <p>Used to be incorporated in textiles, tissues, masks, paints and other articles or materials with the purpose of producing treated articles with disinfecting properties.</p>
PT 4	Food and feed area	<p>Used for the disinfection of equipment, containers, consumption utensils, surfaces or pipework associated with the production, transport, storage or consumption of food or feed (including drinking water) for humans and animals.</p> <p>Used to impregnate materials which may enter into contact with food.</p>

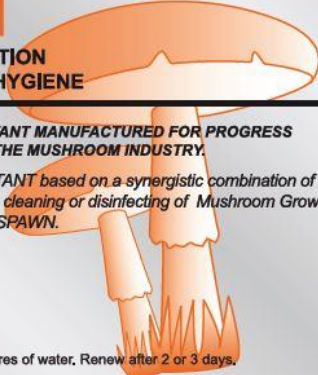


# Omnicide

**PROGRESS PRODUCTS**  
HYGIENE SPECIALISTS TO THE MUSHROOM INDUSTRY

## OMNICIDE-M

✦ PROVIDING OPTIMUM SURFACE DISINFECTION  
✦ ASSISTS IN CREATING IDEAL LEVELS OF HYGIENE



**A BROAD SPECTRUM, NON-PHENOLIC SURFACE DISINFECTANT MANUFACTURED FOR PROGRESS PRODUCTS TO MEET THE STRINGENT REQUIREMENTS OF THE MUSHROOM INDUSTRY.**

OMNICIDE-M is a specially formulated SURFACE DISINFECTANT based on a synergistic combination of Glutaraldehyde and QAC, specifically designed for the surface cleaning or disinfecting of Mushroom Growing Houses PRIOR TO THE INTRODUCTION OF MUSHROOM SPAWN.

**DESCRIPTION:** A Clear pale amber liquid.

**SOLUBILITY:** Forms a clear solution in water.

**DIRECTIONS FOR USE**  
(REFERRAL TO OUR MSDS BEFOREHAND IS ADVISED)

**FOOT DIPS:** Use at 1.5% solution, i.e. 1 litre of OMNICIDE-M per 65 litres of water. Renew after 2 or 3 days.

**CONCRETE PATHWAYS AND FLOOR AREAS:** Apply OMNICIDE-M at a 0.5% (1ltr in 200ltr water) dilution. Avoid contact with all shelves, casing etc. during cropping.





**GENERAL DISINFECTION AND HYGIENE ROUTINE IN POLY-TUNNELS AND ALL FOOD RELATED AREAS:** Remove all organic matter and hose down floors, walls and ceilings with water or a solution of non-ionic detergent. Apply OMNICIDE-M at 0.6% (1:150) whilst still wet and leave to dry without rinsing. Use a more concentrated dilution (2% or 1:50) if contamination of the previous crop was an issue. Growing houses can then be refilled after the area is dry. The safe period for re-entry should be determined in strict compliance with Local Health and Safety Legislation. All factors should be taken into account to accurately determine this. Re-entry should not take place until or before this determined period has been reached.

**PICKING KNIVES AND OTHER EQUIPMENT:** Use a 2% (1ltr in 50ltr water) dilution to disinfect these items, which then must be rinsed thoroughly before re-use, with clean water.

**AVOID DIRECT CONTACT WITH NEAT OR DILUTED FORMS OF "OMNICIDE-M" WITH EXISTING CROP OR COMPOST.**

For use within the Fresh Mushroom growing industry. Omnicide - M carries: PCS 99380

Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects. Wear protective clothing, gloves, eye and face protection. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Dispose of contents/ container in accordance with local regulations.



**DANGER** Contains: QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-18-ALKYLDIMETHYL, CHLORIDES 9.9g/100g and GLUTARALDEHYDE 14.7g/100g.

UN:1760 For professional use only. Store in tightly closed, original container in a dry, cool and well-ventilated place. **5/25 LITRES**

**PROGRESS PRODUCTS**  
Queenswood House, 70 Durlough Road, Bridgwater, Somerset, TA6 7JE  
Tel: (01278) 429800 Fax: (01278) 444866 Email: [steve@progressproducts.co.uk](mailto:steve@progressproducts.co.uk)

# Enviro-Tech

## ENVIRO-TECH

**ALL ROUND BROAD SPECTRUM DISINFECTANT.  
BACTERIAL AND FUNGICIDAL DISINFECTANT.  
FOR USE IN THE FOOD INDUSTRY (MUSHROOM INDUSTRY)**

**Directions for use:** Use at 1:50 (2%) where infection is suspected.  
For general disinfection use at dilution of 1:150 (0.6%)

**Foot dips:** Use at 1.5% dilution i.e. 1L of Enviro-Tech per 65L water.  
Renew after 2 or 3 days.

**End of crops:** Beds can be drenched with a solution of approx. 0.5% before emptying. Tunnels or growing houses can be fogged with Enviro-Tech at approx 1.75ml per cubic metre and allowed to act with doors closed with a minimum of 2 hours.

**Concrete pathways and floor areas:** Apply at 0.5% (200-1) dilution.  
Avoid contact with all shelves, casing, etc.

**Between crops cleaning of growing houses:** Remove all organic matter and hose down floors, walls and ceilings. Apply Enviro-Tech at 0.6% (1:150) whilst still wet and leave to dry without rinsing. Where intensive disinfection is required up the dosage to 2% (1:50) growing houses can then be refilled.

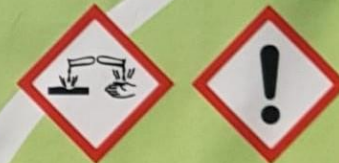
### **UK & IRELAND DISTRIBUTOR:**

Conway Services  
20 Mooreisland Road, Armagh,  
N. Ireland BT61 8LX  
TEL: +44 (0) 28 3889 1195 / +353 (0) 8779 88569  
[www.conwayservices.co.uk](http://www.conwayservices.co.uk)

### **WARNING**

Causes burns. Harmful if swallowed.  
May cause sensitization by skin contact.  
Keep away from food, drink and animal feeding stuffs.  
Do not breathe vapour/spray. In case of contact with eyes rinse immediately with plenty of water and seek medical advice.  
Wear suitable protective clothing gloves and eye/face protection. Use only in well ventilated areas. In case of inadequate ventilation wear respiratory protection.

### **EU CHEMICAL CLASSIFICATION**



PESTICIDE CONTROL  
SERVICES NUMBER

PCS 97311

HAZCHEM CLASS 8

UN1719

**20/205 LTRS**

# Sporekill

## SporeKill

*Mushroom farm disinfectant and sanitiser*

SPOREKILL IS A MULTI-ACTION PRODUCT BASED ON A SYNERGISTIC BLEND OF NATURAL FATTY ACIDS WHICH HAVE A STRONG CLEANING ACTION THROUGH A POWERFUL SURFACTANT AND FUNGISTATIC/BACTERIOSTATIC ACTION TO IRREPARABLY DAMAGE SPORES AND MYCELIA STRANDS. IT LEAVES A FILM THAT ALSO TRAPS ANY REMAINING SPORES, THUS RENDERING THEM NON-VIABLE. DO NOT WASH DOWN.

SPOREKILL IS CLEAR IN COLOUR AND REMAINS CLEAR ON DILUTION.

### Classification

Cleaning products

Approval No:

PCS92396

Please read accompanying leaflet for more information.

### Composition

Potassium salts of fatty acids

67701-09-1 45-47%

Rosin

8050-09-1 8-9%

### DIRECTIONS

#### Equipment & general use

0.75% (1L in 133L) up to 2% (1L/50L) for contaminated conditions. Leave to dry.

#### Outside concrete surfaces

0.5% (1L in 200L). Leave to dry.

#### Fogging

1L in 5L per 1000m<sup>3</sup>. Houses must be sealed and in contact with Sporekill for at least one hour.

#### Wooden Trays/Shelves

2% (1L in 50L) left to dry.

#### Footclips and end of crop use

2% (1L in 50L)

#### Empty houses between crops

0.75% (1L in 133L) up to 2% (1L/50L). Clear all organic debris and brush clean. High pressure hose all inside surfaces then apply Sporekill. Leave to dry.

### APPLICATION

Sporekill should be applied via a spray or through a pressure washer. It is best to apply when wet washed surfaces are dry or drying. It can also be applied effectively through fogging equipment. Do not wash down or protective film will be lost.

### DISPOSAL

Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Never place unused product down any indoor or outdoor drain.

### SAFETY

Wear protective clothing and rubber gloves when applying Sporekill. If Sporekill comes in contact with eyes or skin wash off with copious amounts of water.

### Manufactured by:

Nutrigain Ltd., Unit 9a, Holmes Chapel Business Park, Manor Lane, Holmes Chapel, Cheshire, UK, CW4 8AF

Country of Origin:UK



READ LABEL BEFORE USE  
EMERGENCY TEL: +44 - 7721 639939

20L / 1000L

# Jet 5

JET 5®  
PCS No. 95366  
Patent No. EP-B0613464  
A powerful and safe disinfectant containing 5% w/w peroxyacetic acid

5 Litre e  
Batch No.:

THE (COSHH) CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS MAY APPLY TO THE USE OF THIS PRODUCT AT WORK - UK ONLY

#### CAUTIONS

USE PLASTIC VESSELS when preparing dilutions.  
DO NOT MIX WITH OTHER CHEMICALS.  
CONTAIN & COLLECT SPILLAGE. DRENCH SPILLAGE AREA with water.  
KEEP ONLY IN ORIGINAL CONTAINER.  
DO NOT RE-USE CONTAINER.  
WASH OUT CONTAINER THOROUGHLY after use and dispose of safely.

#### Risk and Safety Information

JET 5 - A powerful and safe disinfectant containing 5% w/w peroxyacetic acid, hydrogen peroxide and acetic acid.



#### DANGER

**MAY INTENSIFY FIRE; OXIDISER  
MAY BE CORROSIVE TO METALS  
HARMFUL IF SWALLOWED, IN CONTACT WITH SKIN OR IF INHALED  
CAUSES SEVERE SKIN BURNS AND EYE DAMAGE  
MAY CAUSE RESPIRATORY IRRITATION  
VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Take any precaution to avoid mixing with combustibles.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Avoid release to the environment.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
IF SWALLOWED; Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a POISON CENTRE or doctor/physician.  
Absorb spillage to prevent material damage.  
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty tripled rinsed clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment, comply with the instructions for use

PCS No.: 95366

# Prophyl

DESIGNED TO  
DECONTAMINATE



# prophyl®

FAST ACTING

MARKET LEADER

*Prophyl will improve your farm hygiene and reduce the danger of diseases.*

Maximum Protection

Persistent Action

Economical

Biodegradable

Non-corrosive

Safe to use

Very broad spectrum activity against viruses, bacteria, Mycoplasmas, Spores and Fungi, including:

Trichoderma Viride  
Mycogone Perniciosa  
Mycobacterium Tuberculosis  
Escheria Coli  
Streptococcus Faecalis  
Bacillus Anthracis  
Foot & Mouth Disease Virus  
Swine Fever Pest Virus  
Myxomatosis Virus

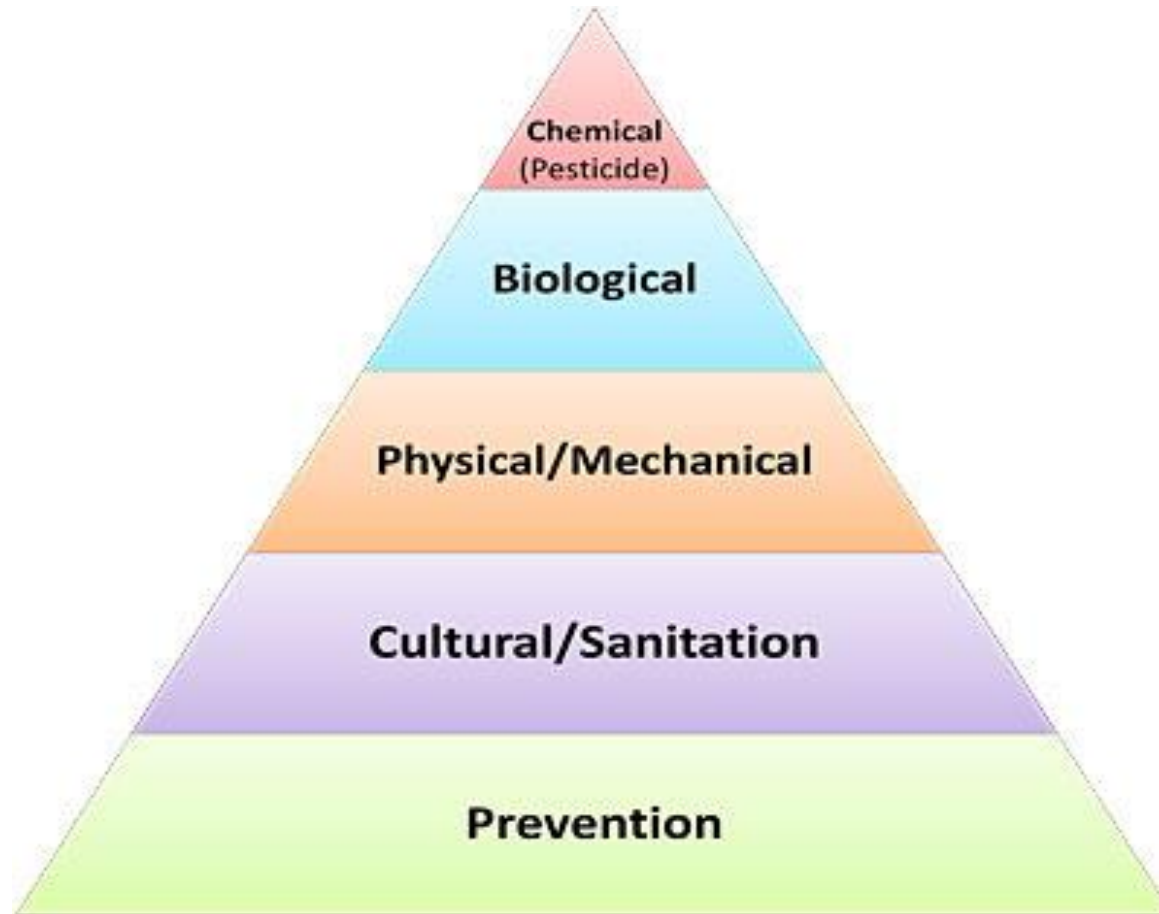
Advantages:

*Prophyl* is an advanced type of disinfectant, combining synthetic phenolic derivatives with activators and detergents.

- Clear bluish liquid with a slight fragrant scent and dissolves in water instantly
- All purpose DISINFECTANT/DETERGENT
- Completely biodegradable in waste water
- Does not corrode equipment or plastics in diluted form. Completely harmless and extremely pure active constituents are used in its manufacture.
- Near neutral when diluted and free from soda. This ensures the active ingredients have a prolonged action and do not breakdown into phenates readily, contrary to the usual action of other phenolic derivatives, reducing their effectiveness.
- Clean and practical product
- Non-irritating to skin using 2%-5% solution.
- Stable at high temperatures
- Remains active in the presence of organic material
- Low use level of 0.4%, therefore very economic
- Compatible with organophosphoric insecticides

Available in three sizes: 5, 20 & 60 litre containers

# Integrated Pest Management Strategy



# Crop Filling Hygiene

- Clean filling machine – No dirt or debris visible.
- Disinfecting filling machine, conveyors, lorries, concrete apron and all equipment before commencing the operation.
- Operatives wearing disposable overalls



# Crop Filling Hygiene

- Filling Operatives not allowed to mix with harvesting staff – Separate canteen/toilet facilities
- Ensure filling operatives are not collecting mushrooms before the filling operation commences
- Reduce fan speed in nearby tunnels with disease infection
- Close doors immediately after filling



# Sealing tunnels

- Preventing pest and disease entering clean tunnels is critical.
- Brush strips and door seals
- Exhaust seals



# Preparing tunnel before/after filling:

- Foot dips
- Fly Filter at fresh air intake
- Fly drum and fly traps
- Prevent/restrict access to tunnels from central corridor



# Ruffling and Machinery storage:

- Ruffling is a potential source of crop contamination.
- Operator must wear disposable overalls, gloves and clean boots.
- Disinfect ruffler before operation commences.
- Store filling machine, conveyors, filling winch and ruffler in clean shed



# Fly Monitoring

- Using fly traps
- Weekly fly record



# Disease Identification and treatment:

- Dedicated staff to treat disease
- Train staff how to identify disease and treat each disease correctly
- Treat disease early before it gets out of control
- If flush has high levels of disease, don't water the crop
- Always check the crop before watering
- Record and monitor disease



# Poor disease Treatment:

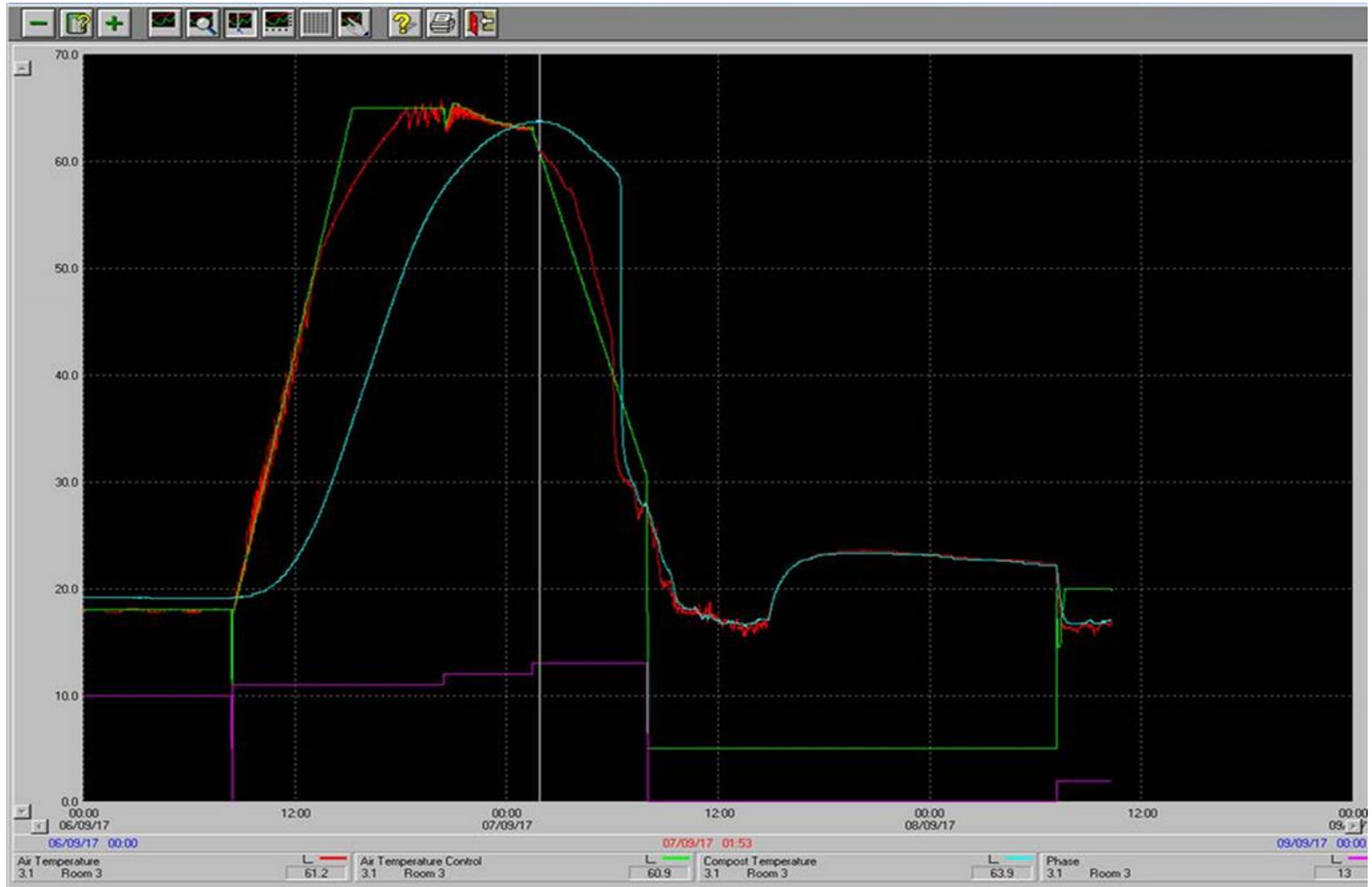


# Limit harvesters spreading disease:

- Pick clean crops first and reduce harvester movement between flushes
- Reduce harvester numbers in infected rooms
- Ensure harvesters are changing gloves regularly and using alcohol gel before leaving and entering tunnels.
- Use Foot dips IN & OUT of every tunnel
- Clean and Disinfect canteens, toilets, door handles and corridors regularly
- Dedicated overalls (colour code), trolleys & picking knives for infected crops



# Cookout crop





# Emptying crop

- Kill off crops early with high levels of disease infection
- Ensure crop is cooked out before emptying
- Cover over emptying conveyor



# Net washing

- Clean concrete apron if washing with power washer
- Brushes and jets in good condition on net washer



# Washing/disinfecting empty Tunnel

- Remove dirt and debris before washing
- Could apply Sodium Hypochlorite (red label) on concrete before washing to help remove dirt. Can
- High standard of washing
- Disinfect tunnel after washing



# Audit Compliance

- Pesticide Usage
- The associated Paperwork needed to comply
- Pesticide storage facilities



# Pesticide Usage

- Inventory record
  1. Name and Address of supplier
  2. Brand name
  3. PCS or MAPP number
  4. Quantity
  5. Date of receipt

# Pesticide Usage

- Pesticide usage record:
  1. Product name
  2. PCS or MAPP number
  3. Location (tunnel applied)
  4. Crop (Mushrooms)
  5. Area treated (m<sup>2</sup>)
  6. Application rate
  7. Date applied
  8. Harvest interval
  9. First permissible harvest date
  10. Justification of use (disease outbreak)
  11. Operator name
  12. PA advisor name and number (Donal Gernon, PA001369)

# The associated Paperwork needed to comply

- 2 copies of inventory records must be kept on file. (one in growing office and one in chemical store).
- Growers must monitor pest and disease incidence patterns. Pesticide application must be based on pest/weed threshold levels and/or disease pressure. An Integrated Pest Management Policy must be implemented to minimise pesticide use.
- Pesticides must be officially registered, approved for use and purchased from a registered distributor
- Plant Protection Product List (PPPL) must be on display in the pesticide store and a copy stored in the farm office
- Pesticides must only be used according label instructions.
- Pesticide users and advisors must be register with DAFM.
- MSDS and product labels must be available for individuals safety

# Pesticide storage facilities

- Located areas used for collection and sorting of harvested produce, fuel and waste storage.
- Sound structure
- Fire resistant
- Locked, ventilated and well lit
- Equipped with shelving and work surfaces that can be easily cleaned (non-absorbent). Anti slip floors





# Pesticide storage facilities

- Pesticide segregated:
  - Flammable; non-flammable
  - Powers stored above liquids
  - Obsolete pesticides labelled and segregated to be disposed of accordingly.
- Empty pesticide containers:
  1. Triple rinsed, crushed or pierced to prevent re-use
  2. Appropriately stored and labelled
  3. Disposed of using licensed waste contractor



# Conclusion

- Record Your Pesticide usage
- If Unsure ask your Advisor
- Store Pesticides correctly
- Remember Customers test your Produce so be honest about your pesticide use

**Thank you**  
**Any Questions??**