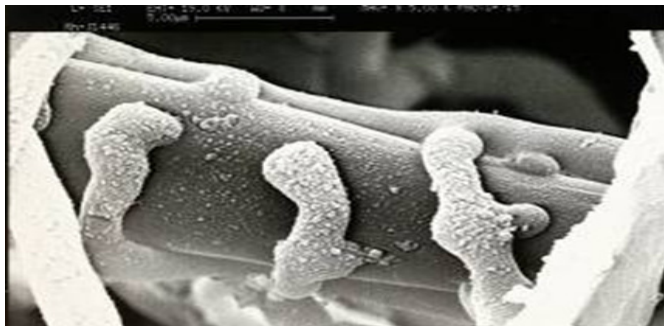
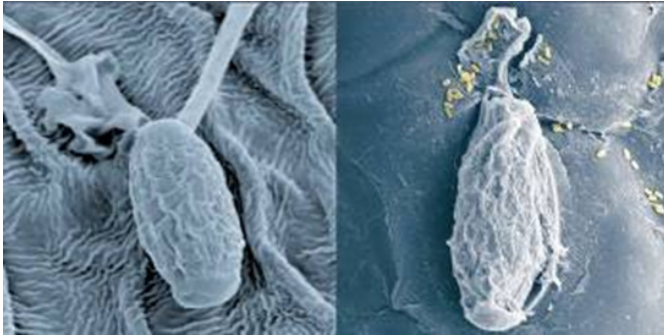


BPOA conference – 22 January 2014

# Biopesticides: an introduction

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[www.adas.co.uk](http://www.adas.co.uk)



# Overview

## Introduction

1. Why use biopesticides?
2. What is available?
3. What can they do?

## Workshop

# Why use biopesticides?

- SUD...“only use conventional pesticides when all other options have been considered...”
- Retailer / consumer demand
- Increasing number coming to the UK market
- Integration with macrobiologicals

# What is available now for protected crops?

Product	Active	Crops	Target 'pests'
<b><u>Biofungicides</u></b>			
AQ10	<i>Ampelomyces quisqualis</i>	Ornamentals	Powdery mildew
Prestop	<i>Gliocladium catenulatum</i>	All edible/non-edible	Botrytis
Serenade ASO	<i>Bacillus subtilis</i>	Strawberry, ornamentals	Botrytis, powdery mildew
T34 Biocontrol	<i>Trichoderma asperellum</i>	Ornamentals	Fusarium
<b><u>Bioinsecticides</u></b>			
Dipel DF	<i>Bacillus thuringiensis var Kurstaki</i>	Cucumber, pepper, tomato, ornamentals	Lepidoptera
Met 52	<i>Metarhizium anisopliae</i>	Ornamentals	Vine weevil
Mycotal	<i>Lecanicillium muscarium</i>	Edibles/ornamentals	Whitefly, thrips, mealy bug
Naturalis-L	<i>Beauveria bassiana</i>	Ornamentals	Whitefly, thrips, spider mite

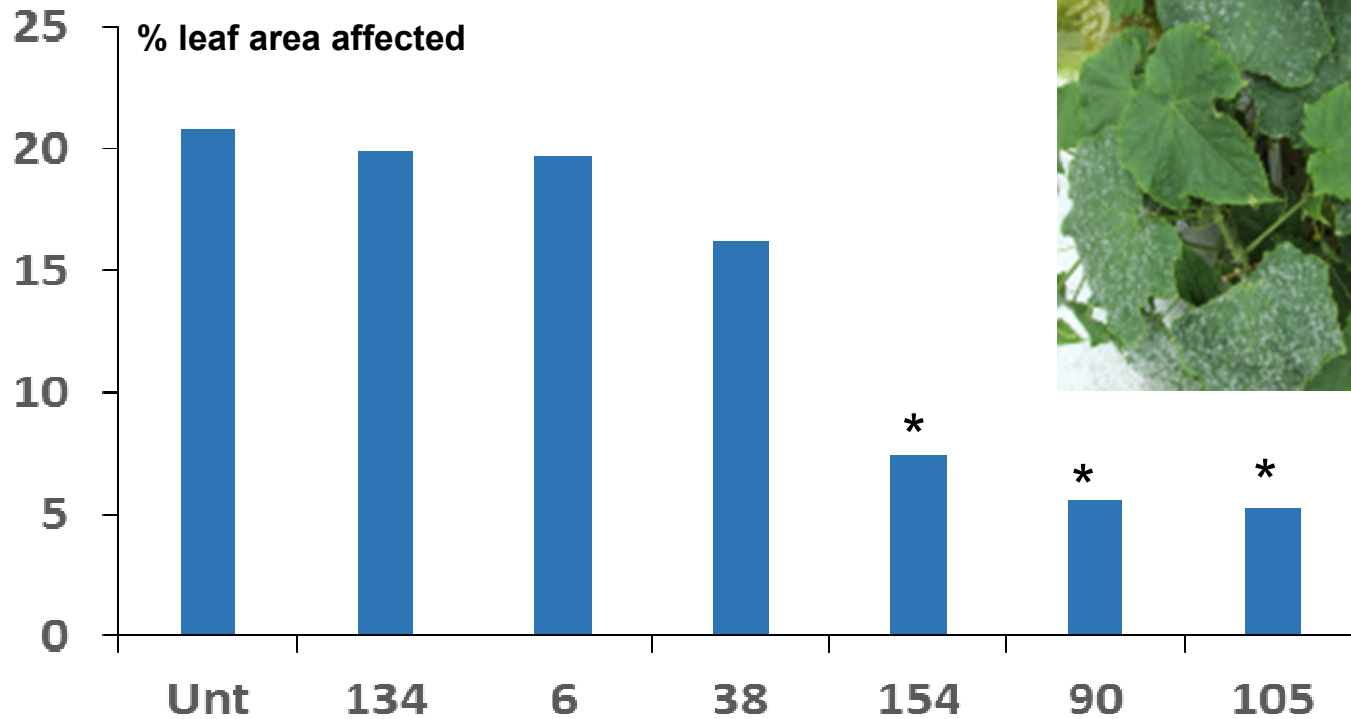
# What can they do?

## Results in recent Sceptre trials

Crop	Pest	Biopesticides	
		No. tested	No. reducing pest
Brassica	Downy mildew	13	1
Cucumber	Powdery mildew	7	3
Leek	Rust	3	2
Tomato	Botrytis	5	0
Strawberry	Phytophthora	4	2
Pepper	Aphids	3	1
Tomato	Whitefly	3	1
Tomato	Spider mite	3	3
Pepper	WFT	4	4

# Example results - Diseases

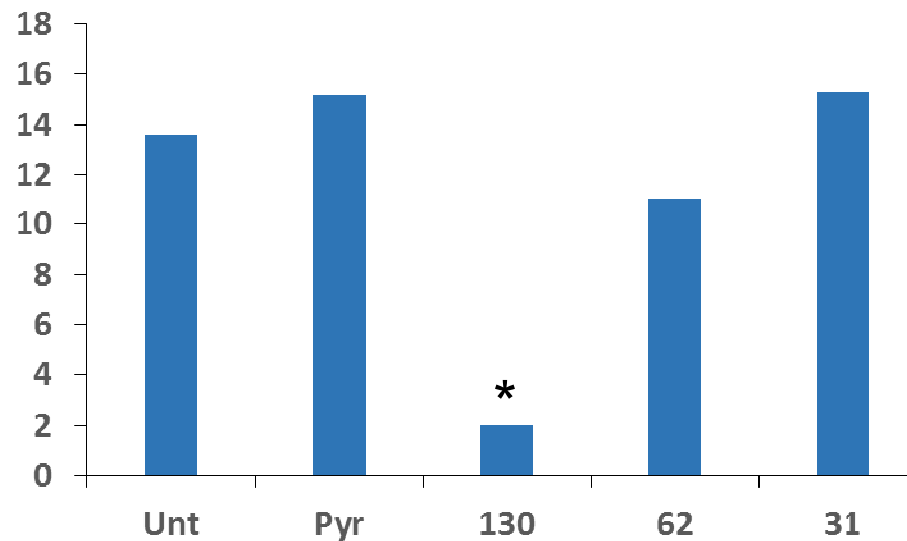
Cucumber powdery mildew (2012)



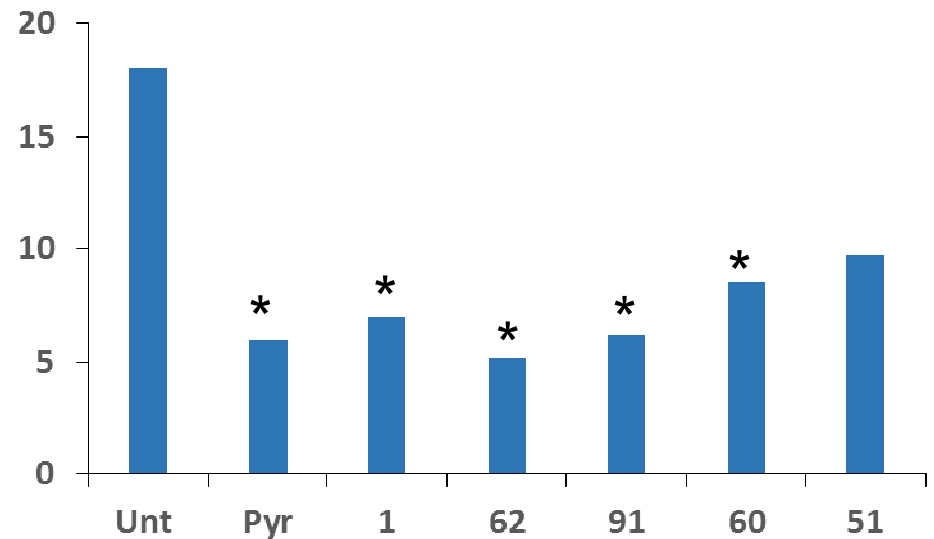
\* Significantly different from the untreated (Unt)

# Example results - Pests

## Aphids on pepper (2013)



## WFT on pepper (2012)



\* Significantly different from the untreated (Unt)

# Biopesticides work within MOPS

## Pests

- Whitefly
- WFT
- Aphids (x2 spp.)
- Caterpillar

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Nematode diagnostic  
Phytotoxicity

## Diseases

- Powdery mildew (x2 spp.)
- Rust

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Disinfectants  
Novel soil treatment  
Hot foam  
Phytotoxicity



# **Biopesticides workshop**

**Roma Gwynn**