

It started here, where are we now?
UK Biocontrol market

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Biological Control in UK

1850 -toads in mushroom houses

1926-1949 Edward Speyer – Cheshunt Experimental Station

Encarsia formosa 1.5 million wasps per year
exported to 7 countries

Phytoseiulus

1945 -DDT

1960 - 1969

Resistance to OP insecticides

1969-

GCRI, Koppert, Bunting

Beneficial insects in greenhouses.

Dipel- *B thuringiensis* – indoor and outdoor use.

1969-2002 Regulation and Registration



Biological Control in UK

2007 - Market Drivers

Marks and Spencer, Tesco and Waitrose – “No Residues” food

Biopesticide Scheme

Bio-diversity policies – LEAF

Product withdrawals under EU reviews

Integrated Control (Biological Control, Organic Production)



Biological Control in UK

Insect Control-

Beneficial insects - Protected salads, strawberries
pot plants and other ornamentals

Parasitic nematodes - Vine weevil, Sciarid flies
Slugs
Amenity use for grubs

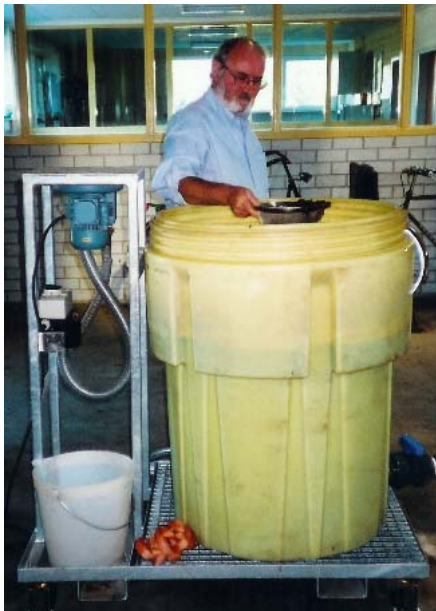
Physical products – **ERADICOAT** Savona, SB Invigorator

Biological Control in UK

Disease control-

Product sold as bio-stimulants or as amendments

Used in glasshouse crops and some outdoor high value crops



Compost T

Biological Soups

Trianum

Bio fungus

Bio max SA

Revive

Biological Control in UK

Outdoor crops-

Vegetables – brassica and lettuce crops

Top Fruit

Dipel- Bt well established in field and protected crops

Biological Control in UK

Outdoor crops-

Plant Extracts-

Plant oils used as physical insect control products



Garlic formulations used to control Root Flies and nematodes
Field vegetables

Contans- sclerotinia

Bicarbonates- powdery mildew

Phosphytes- downy mildew

B subtilis – botrytis/mildew control

Biological Control in UK

Top fruit -

Codling moth – Exosex mating disruption
Cyd-X granulovirus

Home and Garden Market-

Internet sales and Botanical Gardens

Biological Control in UK

Summary

The use of biocontrol in the UK is driven by a lack of chemical solutions and by supermarket protocols,. The use of biocontrol in greenhouse crops is well established in insect control. Bio control products are used in integrated programmes.

The biopesticide scheme is delivering new registered solutions

The lack of registered products over the last 20 years has resulted in “grey uses of bio products”.

This has also resulted in too many “snake oils” and grower distrust.

Efficacy and use recommendations are still lacking



Biological Control in UK

Footnote -

Managing and manipulating natural controls in field crops is key to success in the future.

Rothampsted and HRI/Warwick have studied push pull strategies with predators and parasites

Syngenta have been involved in the Buzz and Operation Bumblebee bio-diversity projects

In 2008 we may lose 200,000 ha of set aside.