



# Ambitious IPM for Ambitious Agriculture

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# Enough Political Courage?

If UK farmers are to have a real opportunity to reduce their use of chemical pesticides

UK politicians need to take their hands out of their pockets and tell the crop protection regulators (CRD) to be more pragmatic.

# Cuba's Crop Protection Politics



US Embargo 1960's

By 1990s – 80% less pesticides

Local low cost mass  
production bio-pesticides

1990s CREE

Political courage - pragmatic?

# Africa in the Lead

Growers in SA and Kenya have more opportunities to use biological controls than any EU Member State (10 x and 4 x)

African Governments and Regulators providing a **REAL enabling environment** for low pesticide farming



# UK Farmers tours



3 groups of 12  
UK farmers –  
part funded by  
DFID

visited  
Real IPM Kenya  
& Real IPM SA

# Level Playing Field?

UK growers visited South African top fruit farms, using:

*Bacillus subtilis* (powdery)

*Trichoderma asperellum* (scab)

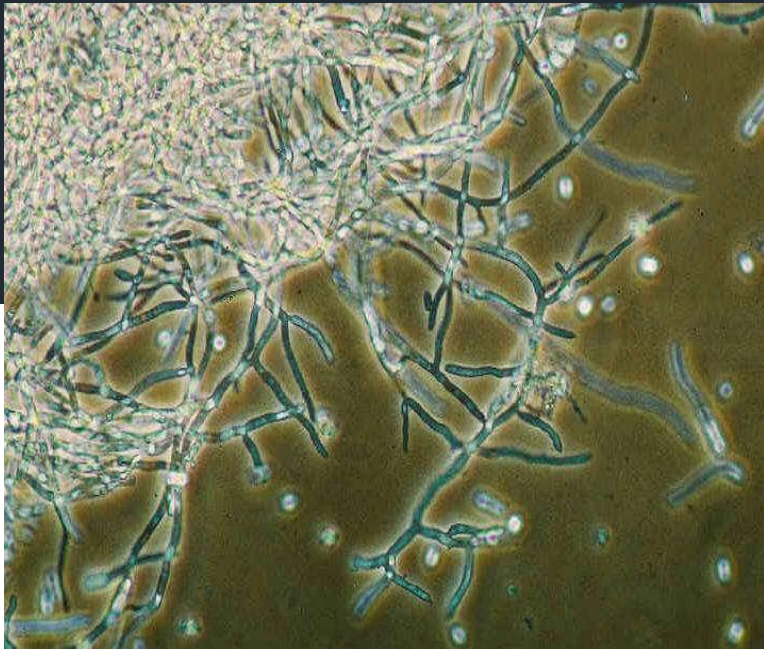
*Metarhizium* 78 (mites)

*Metarhizium* 69 (thrips, weevil, fruit fly)

*Metarhizium* 62 (aphids)



# Real IPM (Kenya) Tools



- **Bio-pesticides**

Entomo-pathogenic fungi  
(pest control)

Bacteria and fungi  
(disease control)

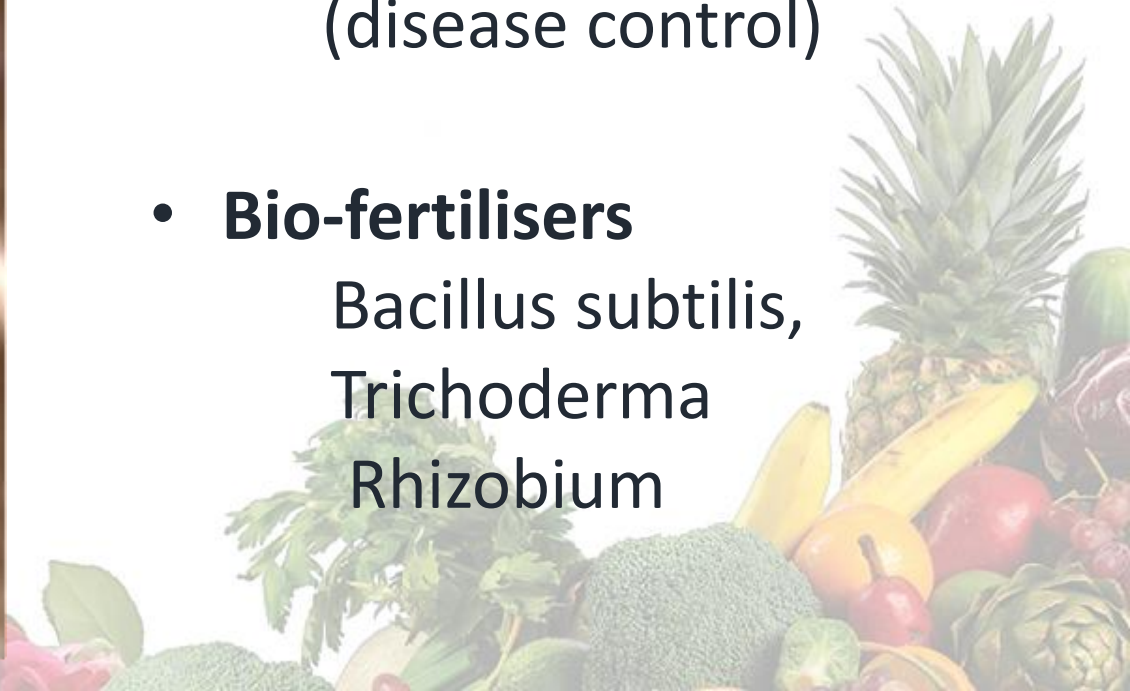


- **Bio-fertilisers**

Bacillus subtilis,

Trichoderma

Rhizobium



# Products

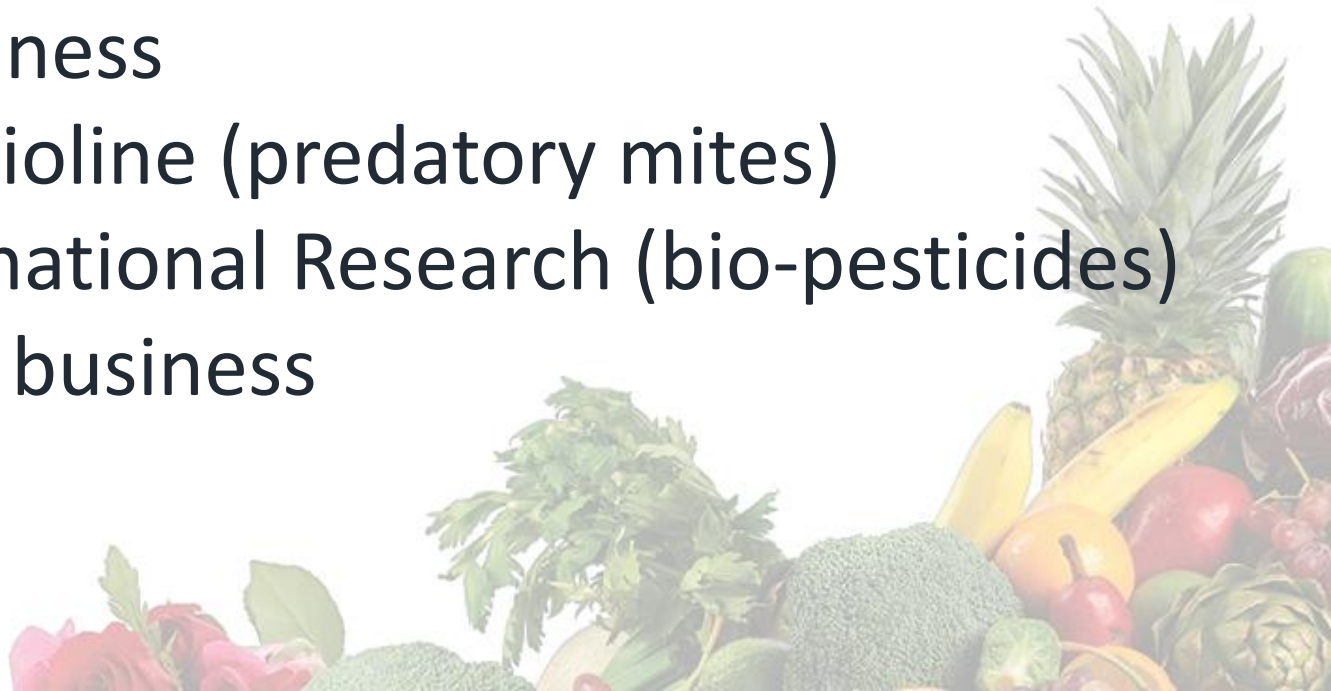
- **Predatory mites**
  - Phytoseiulus
  - Amblyseius cucumeris
  - Amblyseius andersoni
  - Amblyseius swirskii
  - Hypoaspis spp.
- **Other natural enemies**





# Real IPM (K) Ltd

- Employs 220 Kenyan staff (23 graduates)
- Two production sites – 8 ha greenhouses
- Laboratories – bio-pesticides
- Family business
- Syngenta Bioline (predatory mites)
- ICIPE International Research (bio-pesticides)
- 12 years in business



# Pan- African Registrations for Real IPM bio-pesticides



Accepted  
Kenyan Eco  
Tox package =  
£10,000

ONE payment  
in Kenya





# South African Pragmatism

Real *Bacillus subtilis* and Real *Trichoderma* =  
**BIO-FERTILISERS**



Can be used on **ANY** crop

Accepted Kenyan Eco Tax  
package = £10,000

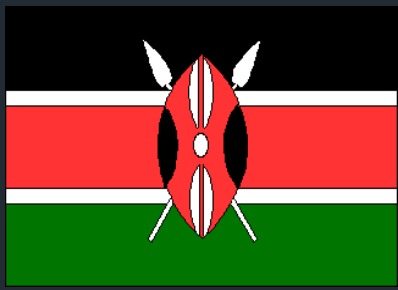




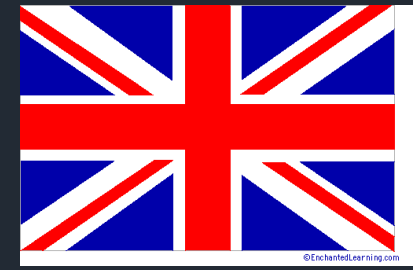
# SA brussel sprouts

- 22 rings of sprouts (9)
- NO club root

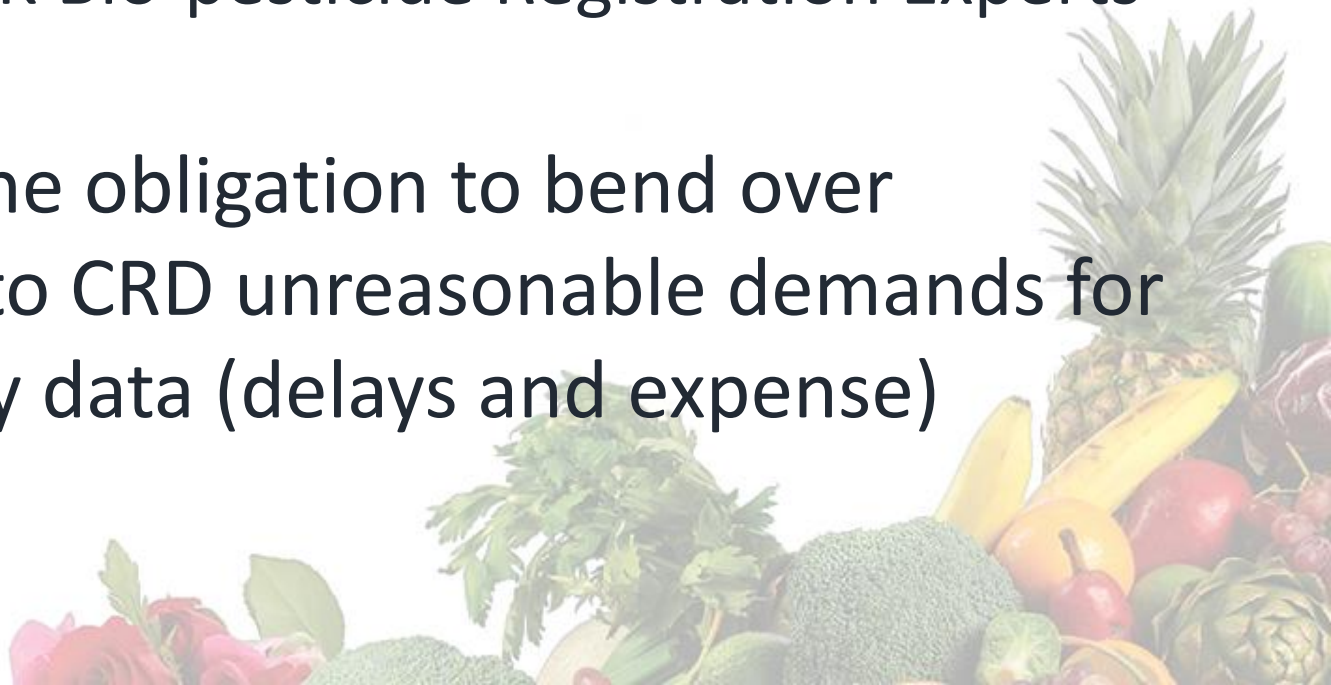


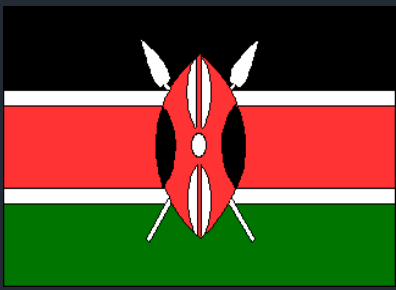


# Enabling Environment



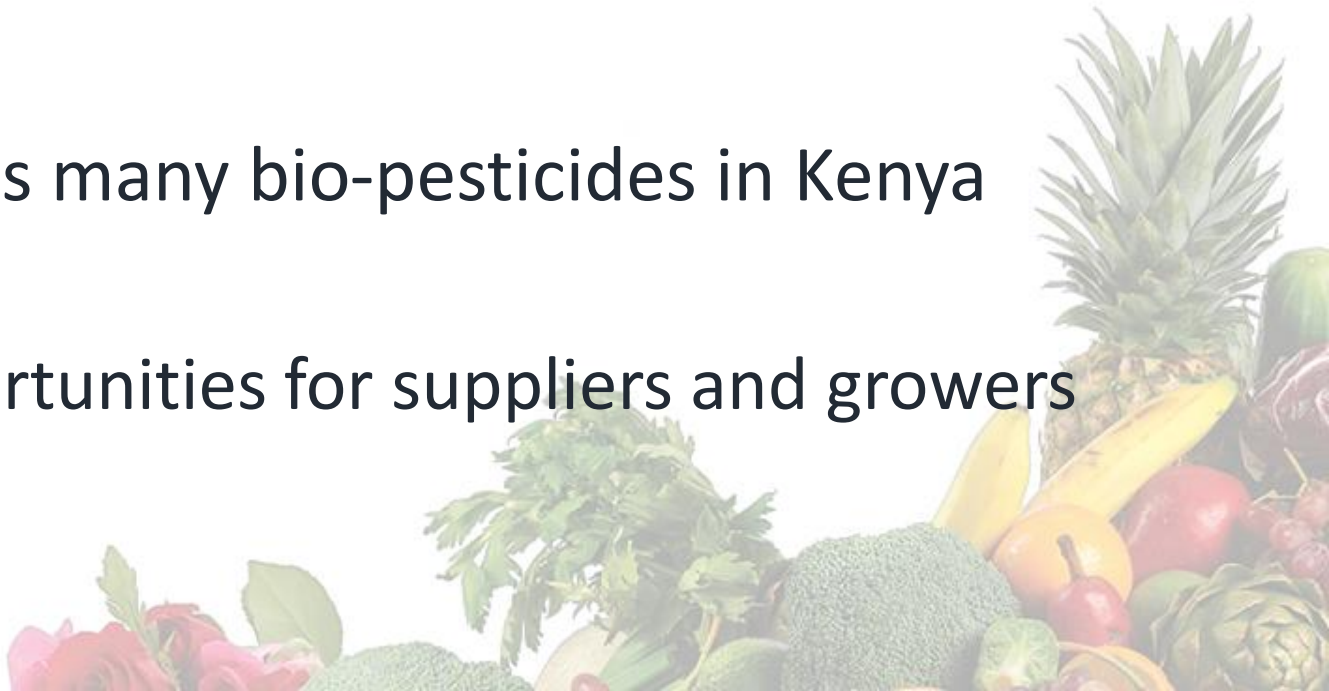
- DFID-funded (2003)  
Kenyan Bio-control Registration workshop
- Guided by UK Bio-pesticide Registration Experts
- Free from the obligation to bend over backwards to CRD unreasonable demands for unnecessary data (delays and expense)

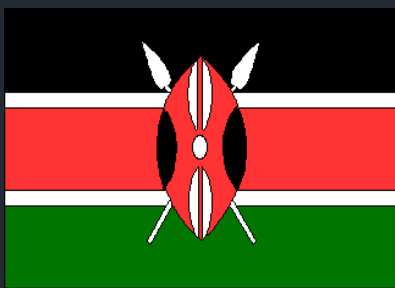




# Enabling Environment

- Agreement of stakeholders within 3 days
- Legal Notice –new ‘law’ within 6 months
- Four times as many bio-pesticides in Kenya
- Market opportunities for suppliers and growers





# Real IPM Kenya Ltd

- Manufacture bio-pesticides and natural enemies
- Innovative IPM programmes
- Opportunity to try biological controls



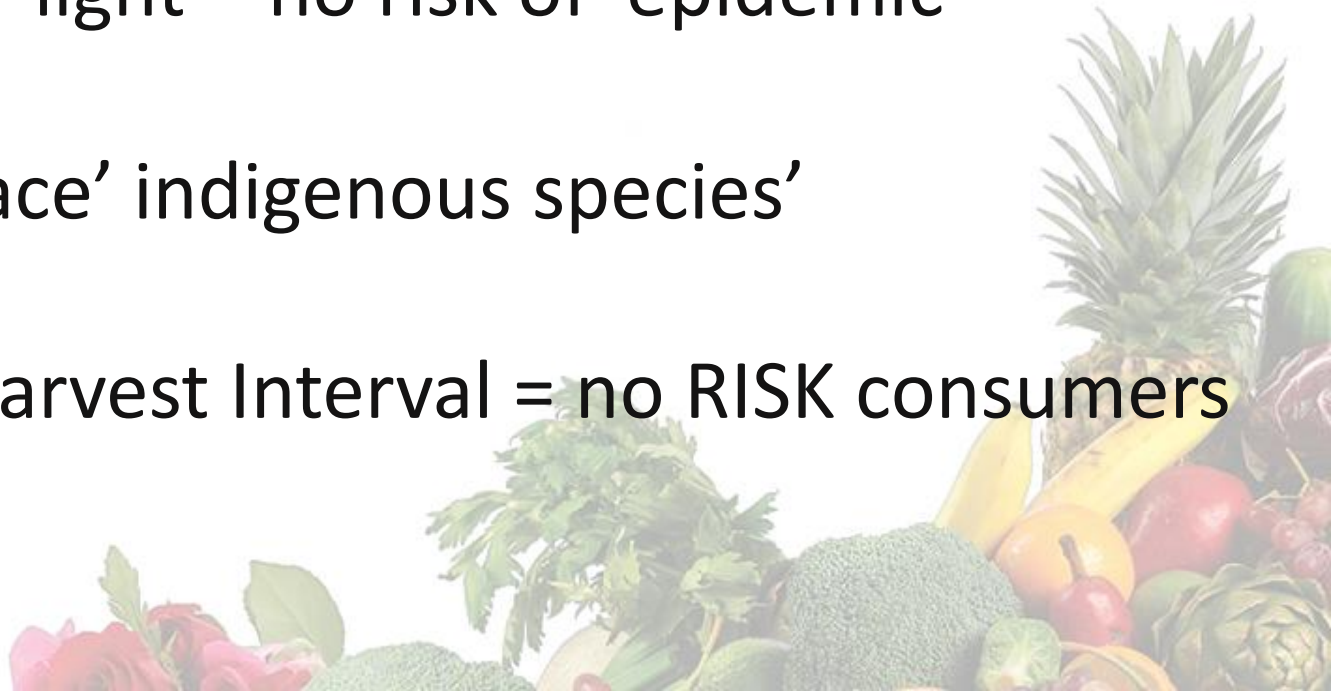
# Opportunity to try it out

**Bio-pesticides** = beneficial fungi, bacteria, viruses for crop protection

Killed by UV light – no risk of ‘epidemic’

Wont ‘replace’ indigenous species’

ZERO Pre Harvest Interval = no RISK consumers





# Niche or Backbone?

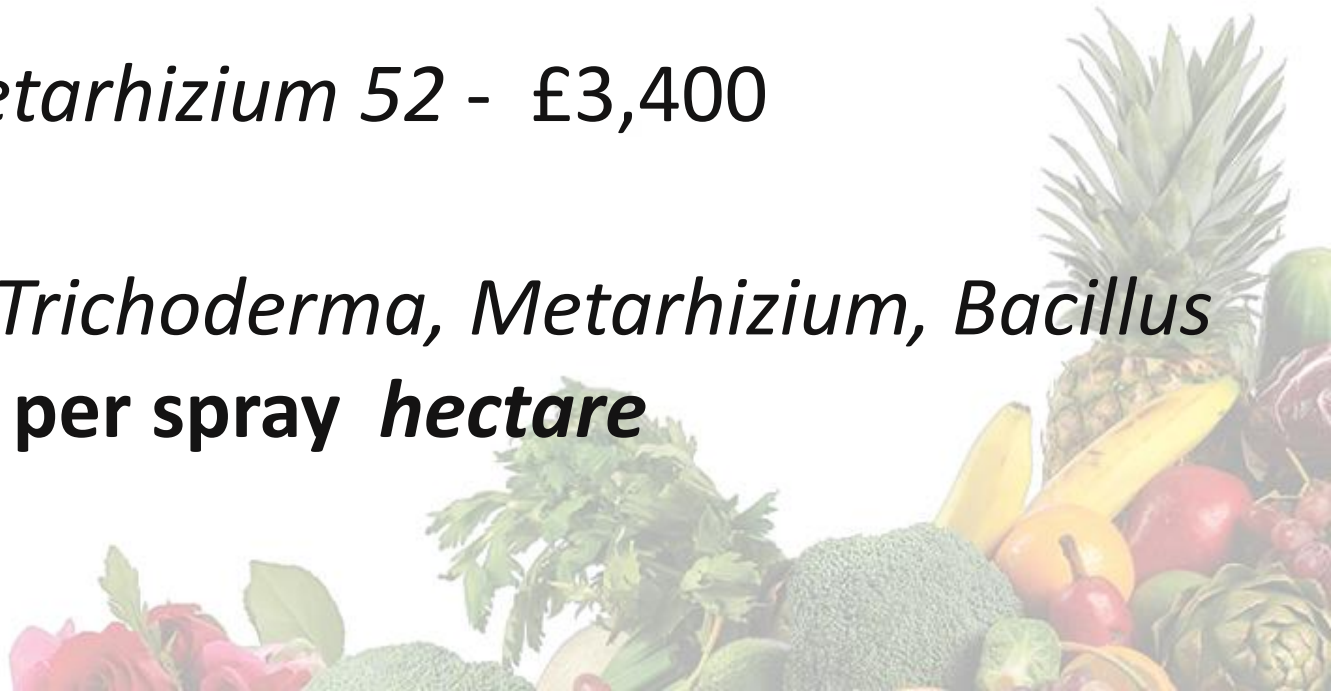
Naturalis L *Beauveria bassiana* - £115 to £230

Serenade - *Bacillus subtilis* - £125

Contans - *Coniothyrium* - £156 to £312

Met52 - *Metarhizium 52* - £3,400

Real IPM - *Trichoderma, Metarhizium, Bacillus subtilis* **£20 per spray hectare**

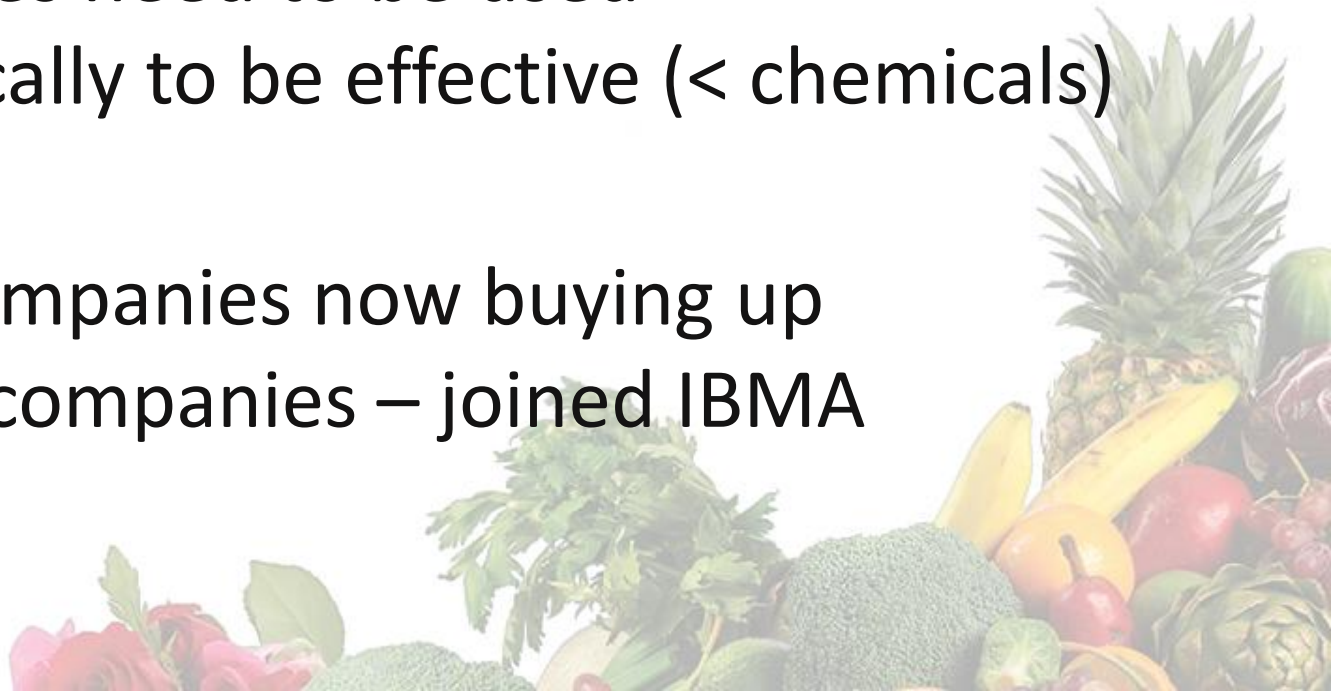


# Niche Market or Backbone?

“Green Portfolio’ of chemical giants – very expensive – remain niche products

Bio-pesticides need to be used prophylactically to be effective (< chemicals)

Chemical companies now buying up bio-control companies – joined IBMA



# Bee friendly

Real IPM has developed novel techniques using bees and the pests themselves to carefully spread our biopesticides in a very natural and environmentally way. Ask us for more details.



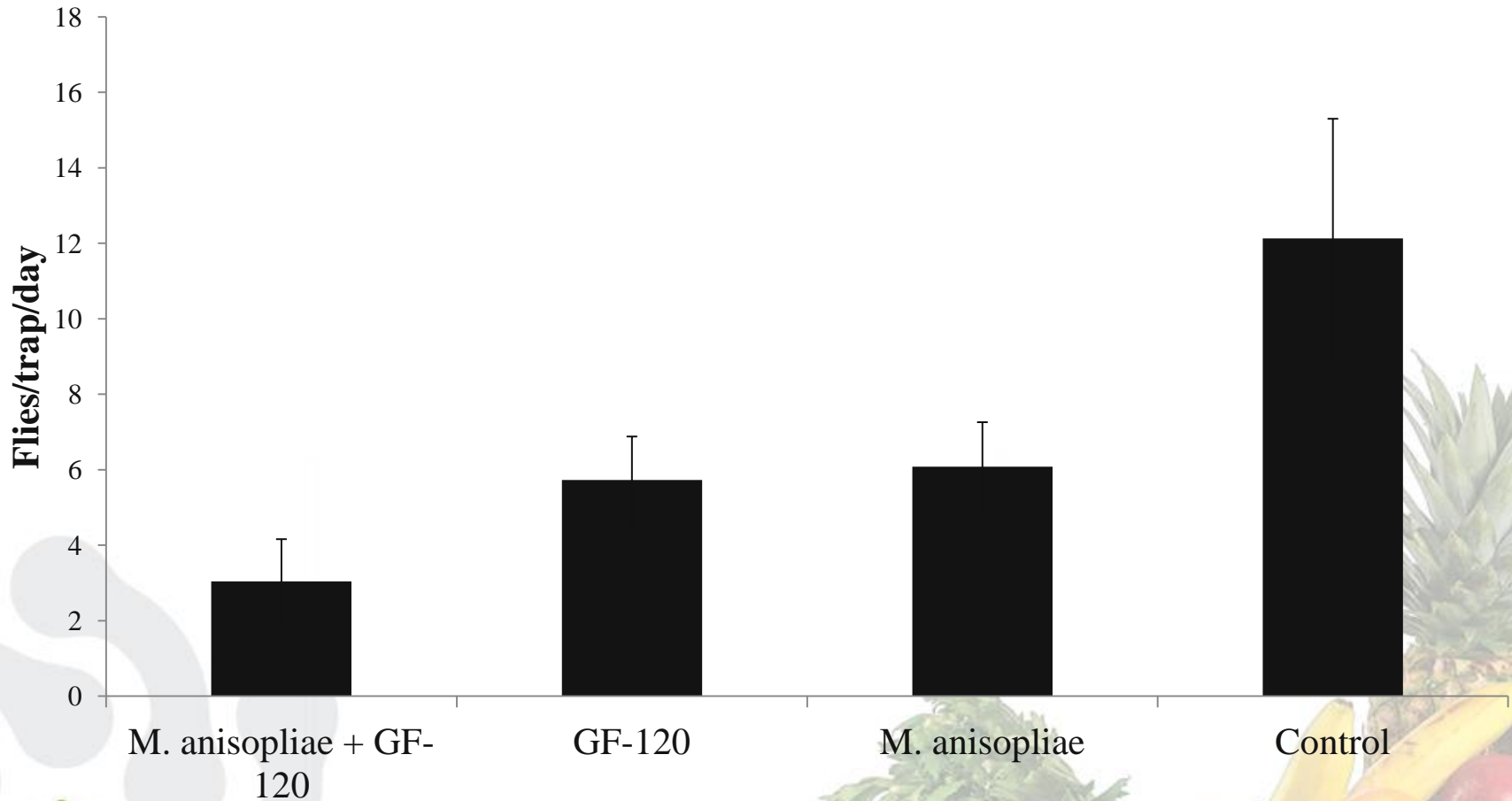
- Met 78 for varroa
- Using bees to deliver Met 69 to flowers for thrips control
- Trichoderma for botrytis control

- Auto-dissemination of Met 69 for fruit flies and thrips

- bait lures – live pests investigate
- infected with Met 69
- leave lure alive
- infect others same species
- 80% horizontal transmission in 3 wks



# Synergy = chemicals + bio-pesticides



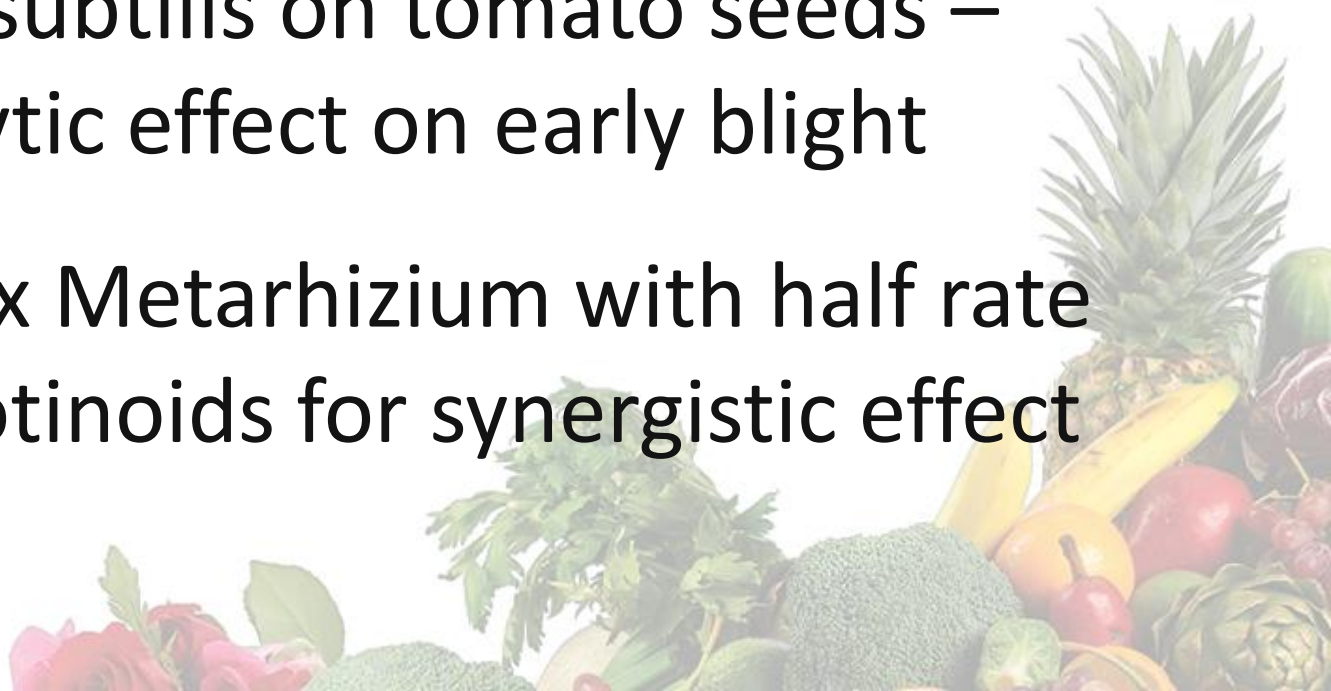
# Trichoderma Soft? or Hard?

- no need for WHO Class 1 nematicides
- Tricho for soil diseases  
no need for soil sterilants
- BAP – no rotation  
40 bean crops  
no rkn no Fusarium



# Field cereals

- *Bacillus subtilis* for wheat stem rust and soybean rust
- *Bacillus subtilis* on tomato seeds – endophytic effect on early blight
- Tank mix *Metarhizium* with half rate neo-nicotinoids for synergistic effect



# Innovation

- **Bio-herbicide seed trt for Striga** (parasitic weed of maize & rice)
- **Metarhizium 7 for ticks in cattle pasture**
- **Trichoderma for Agrobacterium – plant tumour**

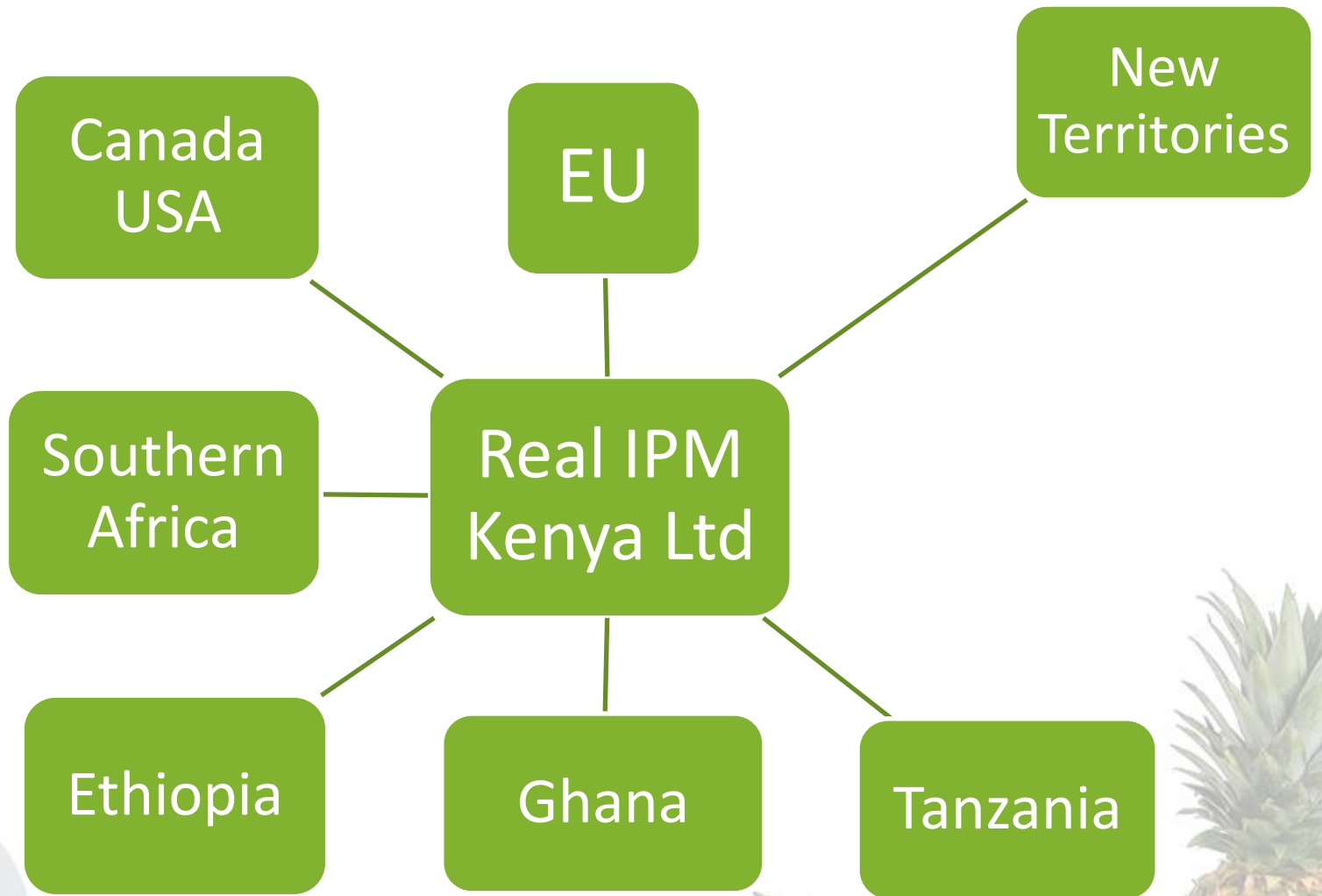




# Real IPM Growers

- IPM programmes in ornamentals and propagation
- 50% reduction in chemicals
- On the EQUATOR





# Real IPM (UK) Ltd

- Registration meeting CGTB Jan for bio-pesticides.
- Predatory mites already exported to EU
- MD – Antony Pearce [ap@realipm.co.uk](mailto:ap@realipm.co.uk)
- Grower Investor Model
- Sites for Registration Efficacy Trials 2015



# Ornamentals market Africa

- **Real IPM programmes**
  - > 2,000 ha
  - roses, carnations, gerberas, chrysanthus, poinsettias, lisianthus, gypsophila, lilies etc.



# SUD 2009/128/EC

- To reduce dependency on pesticides
- Promote Integrated Pest Management
- National Action Plans required

UK **N**ational **A**ction **P**lan - CRD & FERA



# IBMA UK view of the UK NAP

- Lacks ambition, dwells in the past, little new
- Promotion of IPM unclear unambitious
- R&D needs more focus and be ‘applied’, much in the past has failed to have any real impact.

# IBMA UK view of the UK NAP

- Lacks quantitative targets, measures, indicators and timetables
- IBMA members (suppliers of IPM tools) not represented on the **Pesticides Forum**



# Ambitious Agriculture

## INFORM

Opportunities for broad acre biological control in Africa  
Enabling Political Environment for IPM in Africa

## CHALLENGE

Lobby politicians to provide a REAL Enabling Environment  
for IPM and Registration of biological controls

## INSPIRE

Contact Antony Pearce [ap@realipm.com](mailto:ap@realipm.com) Real IPM (UK) Ltd





# Get on with it

*Tackling any environmental crisis, especially climate breakdown, requires a resumption of political courage: the courage just to open the sodding gate.*

[www.monbiot.com](http://www.monbiot.com)



# Karibuni Kenya

[www.realipm.com](http://www.realipm.com)

