

# THRIPS CONTROL STRATEGY IN STRAWBERRIES 2018

Jurgen Verheyen  
Crop specialist berries





### 30 years of biological solutions

1987

First commercial bumblebee hives  
in the world



Dr. Roland De Jonghe

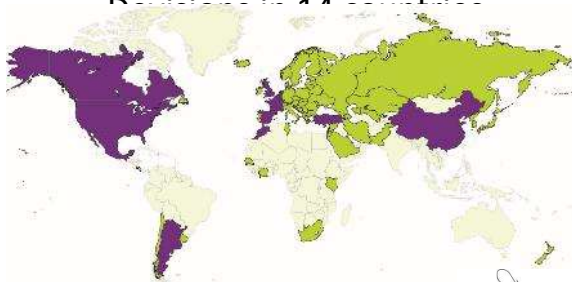


2017

Bumblebees • Beneficials •  
Biologicals

More than 1000 employees  
worldwide

Operations in 14 countries





# Biobest NV

## Company background

Headquarters: Westerlo, Belgium

### Departments

- General management
- Business development
- Marketing and Sales
- R&D
- Customer service

### Facilities

- Production units: 5.5 ha
  - Bumblebees
  - Beneficial insects/mites

- Greenlab: R&D greenhouse



### Worldwide no. 2 in Integrated Crop Management

Bumblebees • Beneficials • Biologicals  
Monitoring & trapping systems  
Technical support in the field

### 30 years of successful export driven growth

97% export  
10 production facilities • 14 distribution offices  
Sales in > 60 countries • 5 continents

### Innovative solutions

> 50 beneficials species • Patented inventions  
(Flying doctors, Nutrimite, ...)





# Focus on thrips control

- Lot of problems last years
- Several varieties have very attractive flowers (Murano!)



Different seasons (crops) asking  
different approaches

OR

(Early) spring crop (Sonata, Clery,  
Elsanta)  
vs.  
Glass summer / Glass autumn /  
Everbearer



## (Early) spring

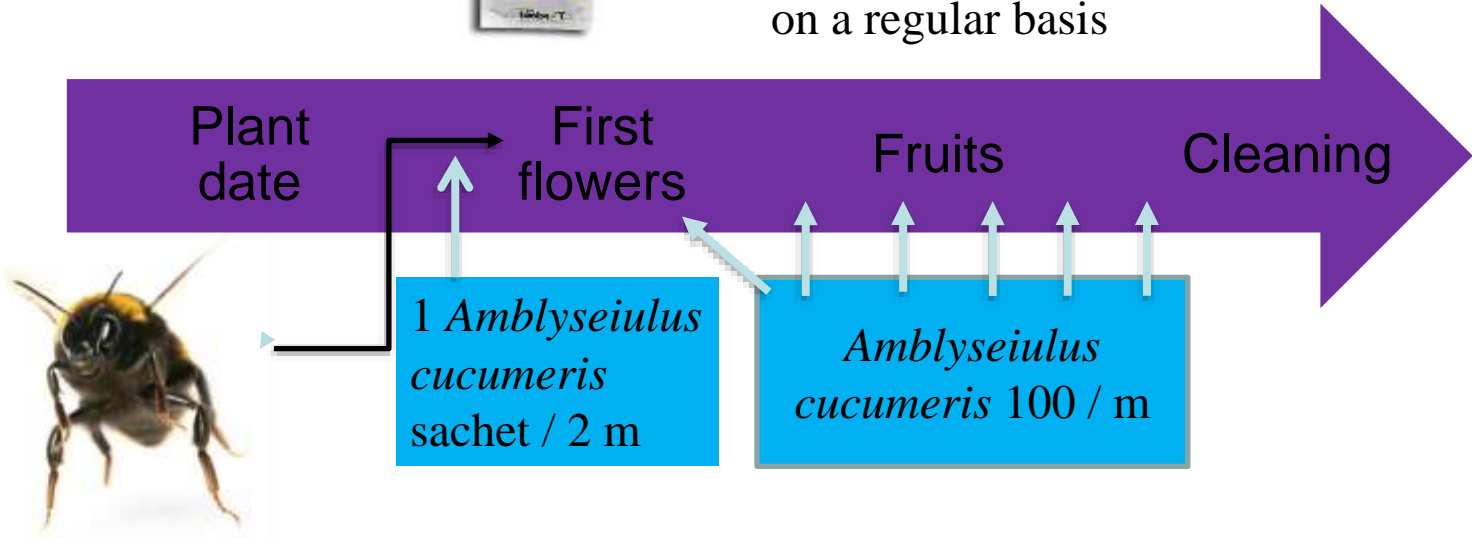
- Environmental conditions
  - Short day length
  - Low temperatures during night
- Thrips population
  - Low thrips pressure (initially; no incoming thrips)
  - Thrips overwinter in greenhouse



Mass trapping with yellow and blue sticky traps



2 weeks before first flowers appear  
on a regular basis







### Glass summer / Glass autumn / Everbearer

- Environmental conditions
  - Higher temperatures and longer daylight
  - Start up after early spring crop or table top
  - Several varieties have very attractive flowers
- Thrips population
  - Fast population build up of thrips



### Mass trapping with yellow and blue sticky traps

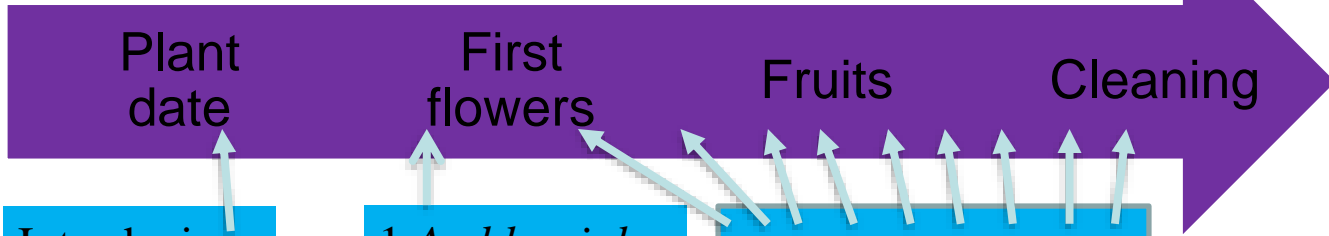


immediately after planting on substrate



2 weeks before first flowers appear

on a regular basis



Introducing *Hypoaspis* 150/m<sup>2</sup>

1 *Amblyseius cucumeris* sachet / 1 m

*Amblyseius cucumeris* 100 / m





## When thrips appear

- Increase *Amblyseius cucumeris* to 200 / m weekly
- Introduce *Orius Laevegatus* 1,5 ind/m<sup>2</sup> in 2 releases



## Conventional solution



Solution: chemical pesticides?

Quick action  
Easy to use  
Predictable efficacy

But...

Residues!  
Safety concerns!  
Resistance development!  
Not always compatible with pollinators  
and beneficial insects!





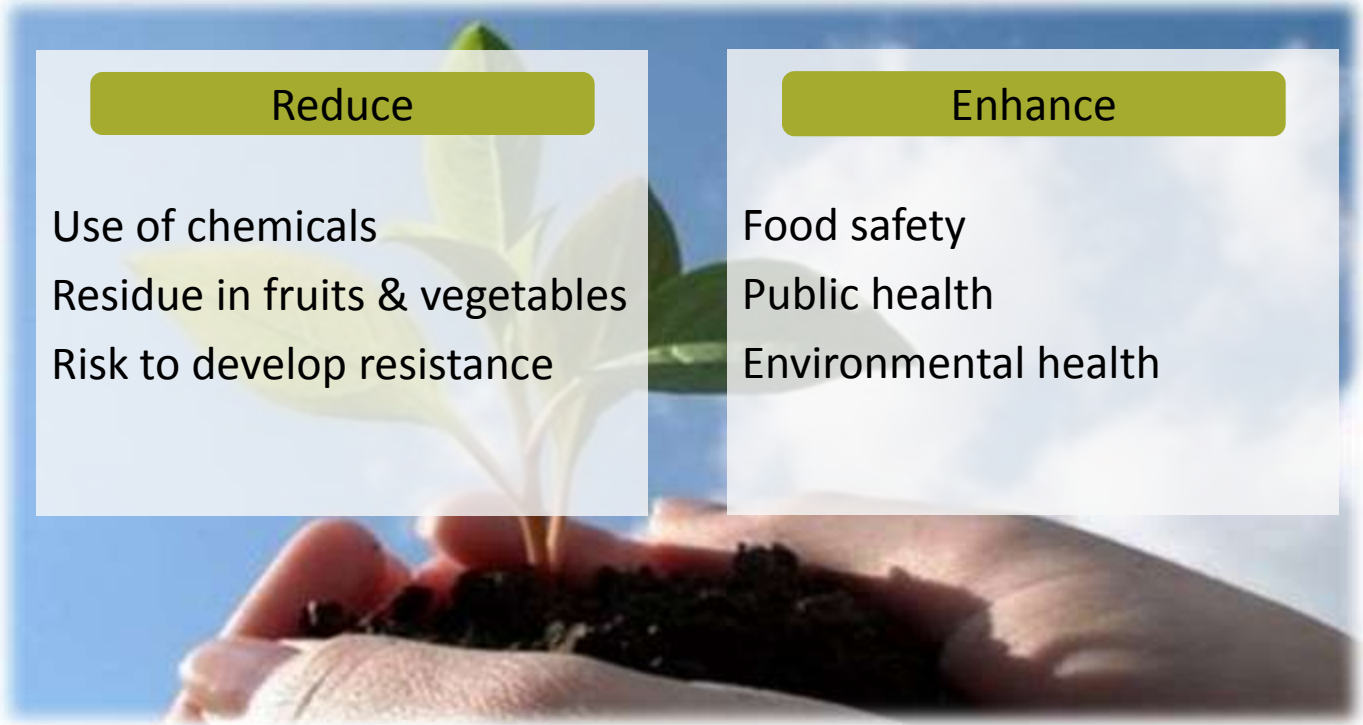
# IPM: Integrated Pest Management

## Reduce

- Use of chemicals
- Residue in fruits & vegetables
- Risk to develop resistance

## Enhance

- Food safety
- Public health
- Environmental health





## Why Flying doctors<sup>®</sup>

- High amount of chemical applications per crop cycle
  - Problems with residues
- Strict requirements from the market
  - Botrytis control
- Promising results @ Research Centre Hoogstraten



- The hive has a patented dispenser system with a plastic tray in which you can apply the Prestop 4B product (1 spoon = 8g)
- When the bumblebees leave the dispenser through the exit, they take the product with them on their hairy body
- The bumblebees carry the product and leave it on the flowers they pollinate



# Flying doctors<sup>®</sup> Prestop 4B







# Biobest Side Effects app

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

Toxicity of chemicals on Biological agents?



Active ingredient: **imid**

Commercial product: **imidadepnid**

Beneficial organisms:

- Coleoptera
- Dacnusa sibirica
- Diglyphus isaea
- Encarsia formosa
- Eretmocerus spp.**
- Feltiella acarinuga
- Hypoaspis spp.
- Macrolophus pygmaeus**
- Hematodes
- Oritus spp.
- Paecilomyces fumosoroseus
- Phytoseiulus persimilis**
- Trichogramma spp.

		abamectin	acetamiprid	bifenazate	
		s	s	l	s
<b>Eretmocerus spp.</b>	larva	1	2	2	1
	adult	2	2	1	1
	parasit	2 w	2	2	-
<b>Macrolophus pygmaeus</b>	nymph	2	2	2	1
	adult	2	2	2	1
	parasit	3 w	2	2	-
<b>Phytoseiulus persimilis</b>	nymph/adult	2	2	1	2
	parasit	2 w	1 w	-	1 w



**Thanks for  
your attention!**



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