



BIOGARD®

biological First.

Biological first: why ?

A new slogan with multiple meanings

MASSIMO BENUZZI - ABIM CONFERENCE - October 21st, 2015



Who we are

Biogard is a Division of CBC (Europe) S.r.l.,
a subsidiary of CBC Co. Ltd (Tokyo, Japan)
a full range of biological products for organic and IPM agriculture



BIOGARD®



NUTRITION



MICROBIALS



**PHEROMONES
& MONITORING**



BENEFICIALS



BOTANICALS
biological First.



The reasons for a new slogan

- For BIOGARD biological control tools are the **first** products
- In IPM, Biological control is generally listed in **first** place
- Biological control products should be applied as **first** control method
- BIOGARD has been and still is a trailblazer in introducing for the **first** time new Biological control methods in the Italian/EU market



Biocontrol: first product

- BIOGARD strongly believes that Biocontrol is the frontrunner for pest control in agriculture
- Therefore, Biocontrol should be the first step in IPM; chemical control should be used only when needed
- To avoid any misunderstanding we have only Biocontrol tools in our catalogue
- No alternatives for our sales network
- Our customers perceive us as «*The Experts*» in Biocontrol



Biocontrol: first product

- Like the conqueror Hernán Cortés, we do not look for any alternative!
- Cortés dismantled the ships after arriving in Mexico
- No alternative choice for them we have chosen the same way!





Unique product portfolio

- 13 mating disruption products
- 11 microbial biopesticides
- 4 botanical insecticides
- 1 mass trapping system
- 5 additional non-chemical pesticides
- Full range of beneficials and EPNs
- Full range of monitoring devices
- **BIOGARD deals only with authorized Pheromone, Botanical and Microbial Plant Protection Products**



In IPM, Biocontrol is listed first !



PERO - INSETTICIDI

	Afide grigio	Afide lanigero	Afide verde	Carpocapsa	Cecidomia	Cemiosoma	Cidia del pesco	Cocciniglia 5. José	Eulia	Meicalfa	Mosca della frutta	Orgia	Pandemis Archips	Psilla	Rodilegno giallo	Rodilegno rosso	Tentredine	Eriofide rugginoso	Eriofide vescicoloso	Ragnetto rosso	N° max di interventi all'anno	
Bacillus thuringiensis							♦		♦			♦	♦									
Confus. e distraz. sess.				♦			♦								♦							
Diottilsolfosuccinato di sodio														♦								
Sali potassici di acidi grassi	♦	♦												♦								
Nematodi entomopatogeni *				♦																		
Olio minerale								♦		♦				♦								
Zolfo																			♦	♦		
Cattura massale																♦	♦					
Virus della granulosi					♦																	
Indoxacarb										♦			♦									2
Abamectina														♦					♦	♦		3
Spinosad				♦		♦	♦		♦				♦									2
Clorantraniliprole				♦			♦		♦				♦									2
Emamectina				♦		♦	♦		♦				♦									2
Triflumuron				♦			♦									♦						2
Diflubenzuron				♦																		4
Tebufenozide				♦					♦				♦									3
Metossifenoziide				♦			♦		♦				♦									3
Fosmet				♦			♦	♦			♦											4
Clorpirifos etile				♦																		4
Clorpirifos metile								♦	♦				♦									1 in pre fioritura
Pyriproxifen								♦														
Buprofezin								♦														
Clofentezine																					♦	

- In IPM metho measu
- Examp for crop region

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ontrol

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... and in Organic Agriculture ?

- Curiously in Organic Agriculture things are supposed to be exactly the opposite !
- Biocontrol products should be used only “in the case of an established threat to a crop” (Reg.CE 889/2008)
- This is not the proper use of Biocontrol tools



*Biocontrol should be **first** control method*

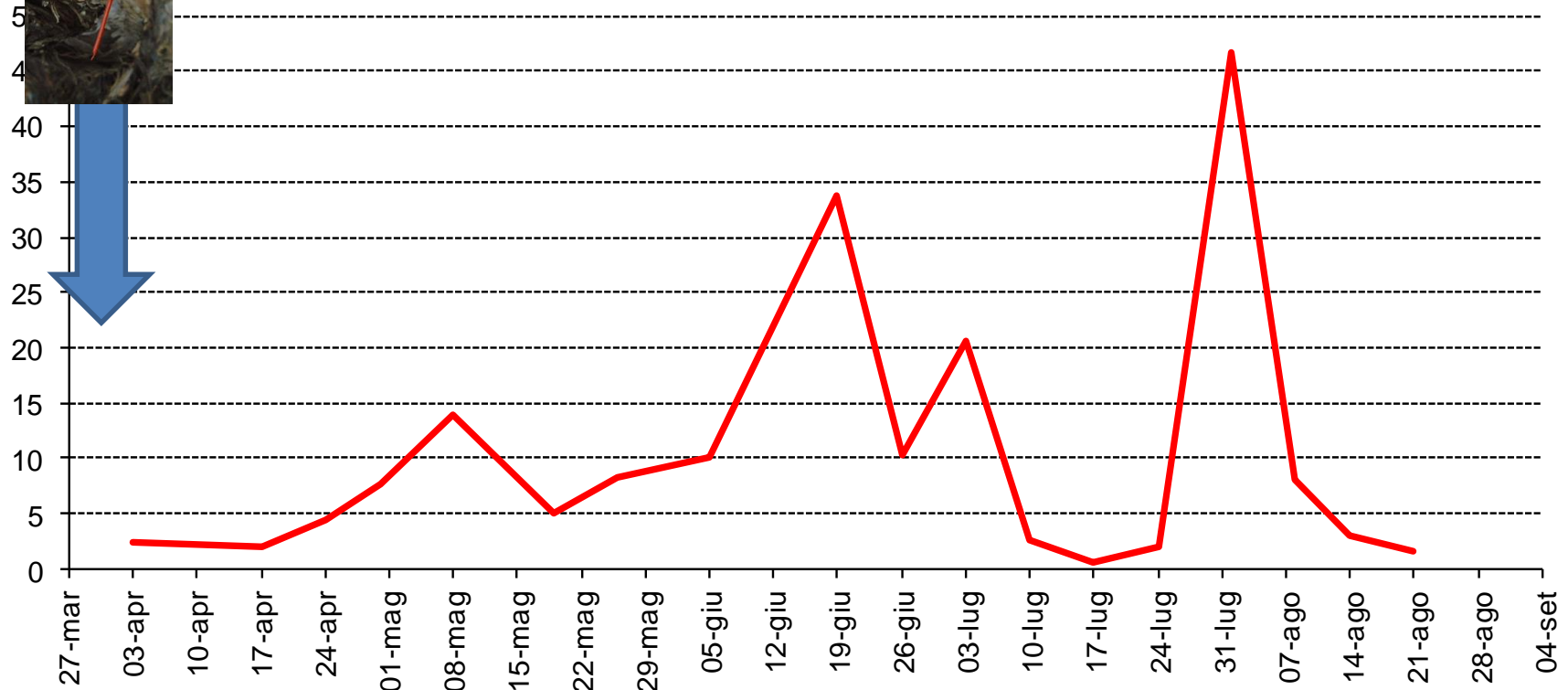
- Biocontrol is mainly a preventative method
- Biocontrol products work better when the level of infestation/infection is still low
- Some examples, one each for the 4 IBMA categories of biocontrol products:
 - Pheromones and Mating Disruption
 - Botanicals (azadirachtin A)
 - Microbials (*Beauveria bassiana*)
 - Beneficials

Mating Disruption



Dispensers application
before start of first flight

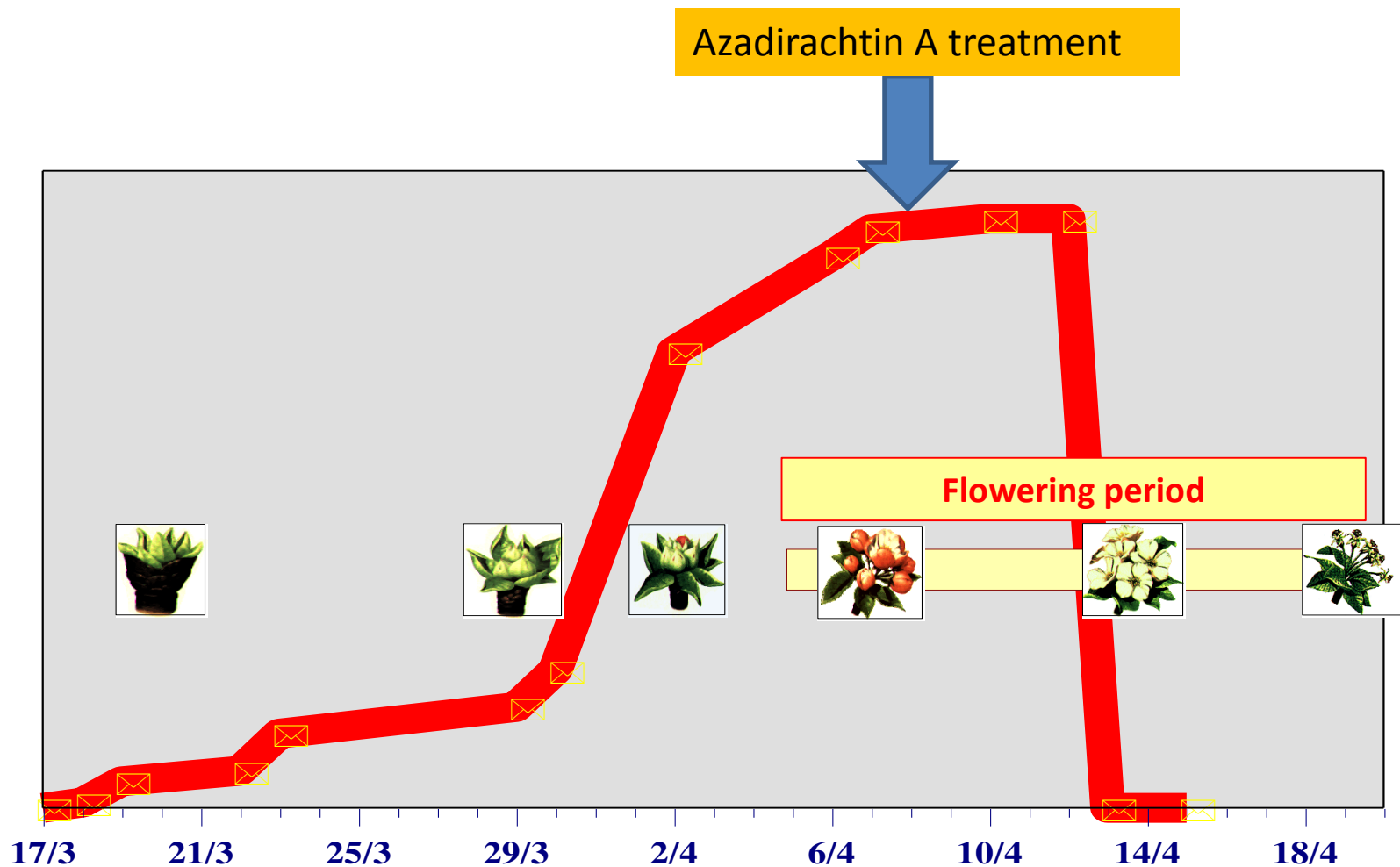
Flight of *Lobesia botrana* (Toscana - 2003)





Azadirachtin A

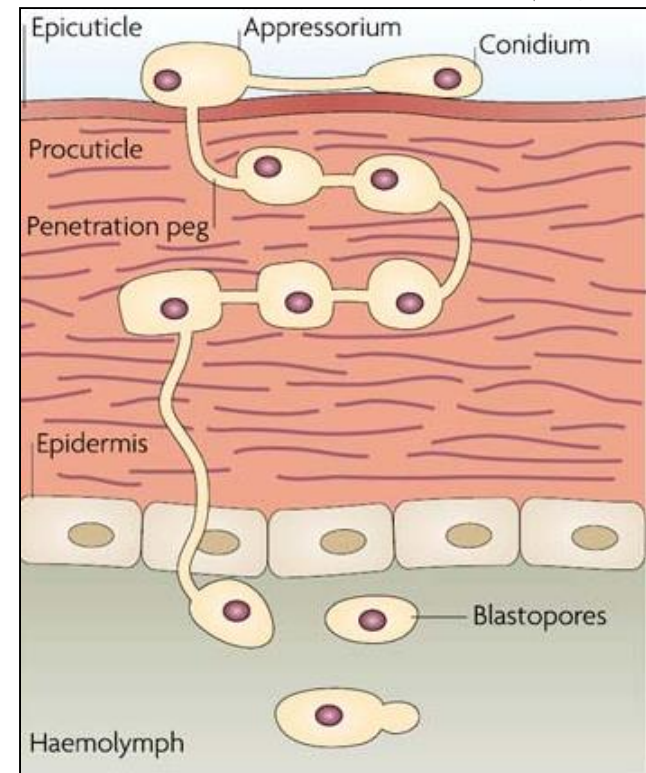
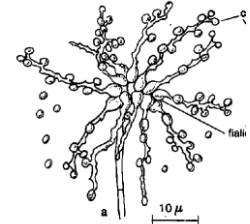
Egg-hatching of Rosy Apple Aphid on apple in Trentino in spring





Beauveria bassiana

- Mycoinsecticides (such as *B. bassiana*) do not have any knock-down effect
- They must be applied at the beginning of the infestation or after a knock-down insecticide spray
- They do not act as fast as chemicals

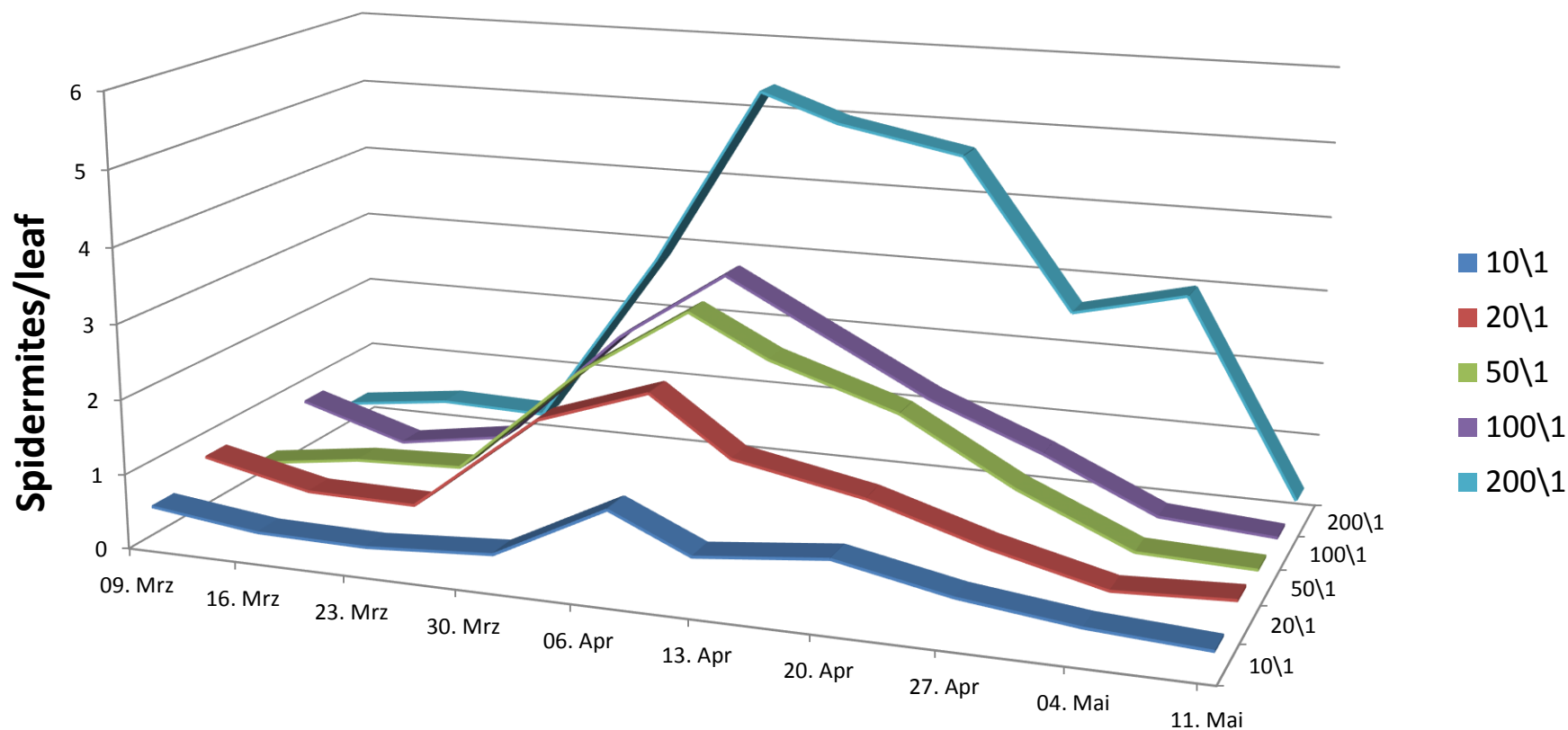




Phytoseiulus persimilis



T. urticae infestation on strawberries depending on prey/predator ratio





Conclusions

- Biocontrol tools should be applied preventatively or at the very first appearance of the infestation/infection in order to be effective,
- and not only close to harvest to reduce/avoid unwanted residues.
- In many cases they should be applied prior to chemical plant protection products.
- Therefore, a different technical approach is required,
- and additional technical field support is needed.



**Thank you
for your attention**

BIOGARD®
biological First.

***A different approach for technical
solutions***

biological First.