IPM of *Thrips* in Strawberry
First steps to biological control

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IPM Strategy for *Thrips*

Reduce levels of residues on fruit at a economic beneficial production

- Means
  - Monitoring Thrips by blue sticky traps
  - Biological control with predatory mites
  - Strategies for 'lure & retain' natural enemies

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Experiments 2011

- 4 planting dates: May 25, June 8, June 28, July 6 cv. Elsanta
- Application Deltamethrine according practice
- Application Predatory mites *Neoseiulus alpinus & N. reductus* before first blossoming

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Thrips Predator *Platypalpus sp.*

Photo by courtesy of Anton van der Linden

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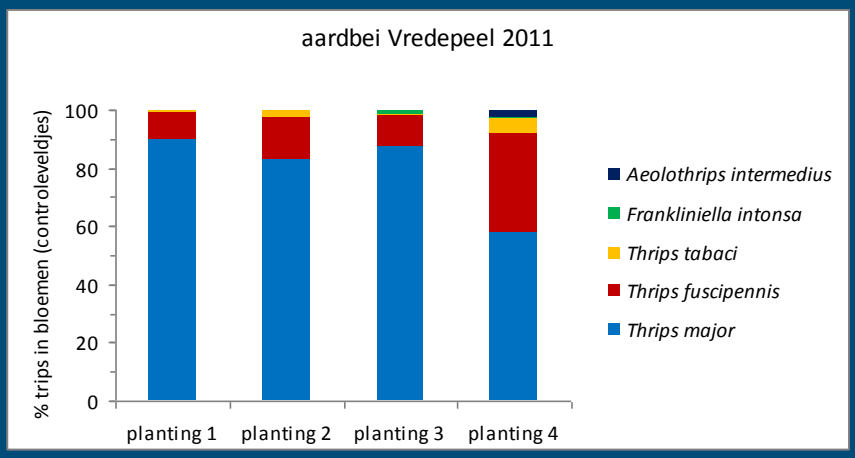
Determination thrips in flowers Vredepeel



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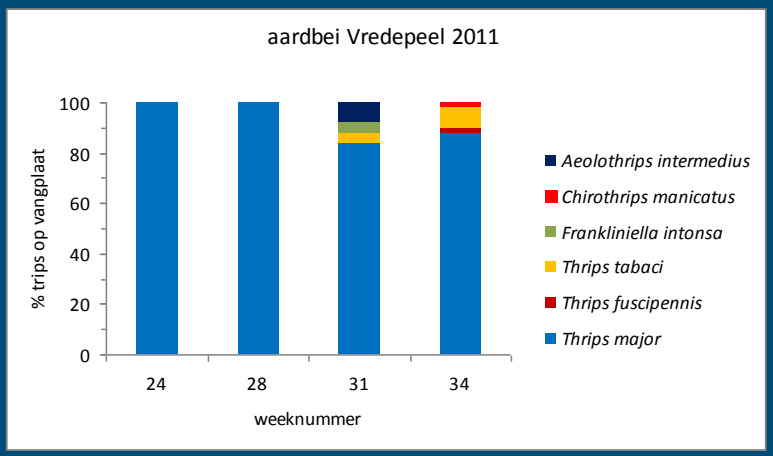
Determination thrips on sticky traps Vredepeel



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First results

- In planting 1&2 none effects of predatory mites
- In 3th planting some effect of *N. reductus*
- Mainly in 3th and 4th planting effective *Thrips control* by *Orius majusculus & O. niger*

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Thrips damage white fruits Planting 1 on 25 July

Object	% none	% moderate	% not marketable
Untreated	33	36	31
Deltamethrine	83	12	5
N. alpinus	37	26	37
N. reductus	36	30	34

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Thrips damage white fruits Planting 2 on 8 August

Object	% none	% moderate	% not marketable
Untreated	91	7	3
Deltamethrine	94	5	1
N. alpinus	92	6	2
N. reductus	90	8	2

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Thrips damage white fruits Planting 3 on 22 August

Object	% none	% moderate	% not marketable
Untreated	68	26	6
Deltamethrine	76	17	7
N. alpinus	66	24	10
N. reductus	75	21	4

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Thrips damage white fruits Planting 4 on 5 September

Object	% none	% moderate	% not marketable
Untreated	79	12	9
Deltamethrine	77	15	8
N. alpinus	82	13	5
N. reductus	82	10	8

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Future outlook

- Further development of application methods predatory mites
- Further improvement of systems for 'lure & retain' *Orius spp.*

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