This project received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement n°3111879

Biological control of pests in pear orchards in the Netherlands

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- Mainly cv Conference pears
- High input crop, many pesticides
- 18 orchards in Central Netherlands, 2014, 2015
- Densily populated agricultural landscape
- SNH 2-22%

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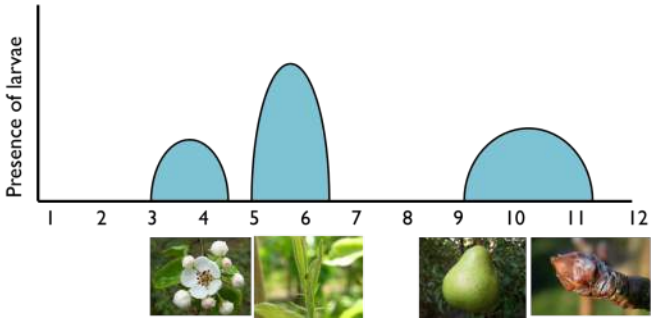
Crop specific pests

- Pear psyllid *Cacopsylla pyri*
- Main pest in European pear cultivation
- Multiple generations/yr
- Main damage by larval feeding



- Summer fruit tortrix *Adoxophyes orana*
- Representative for many tortricid pests in orchards

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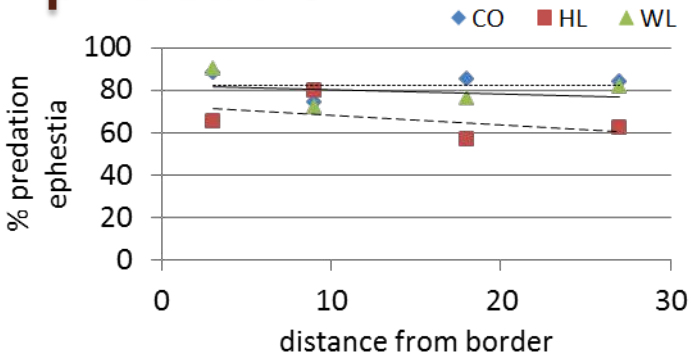
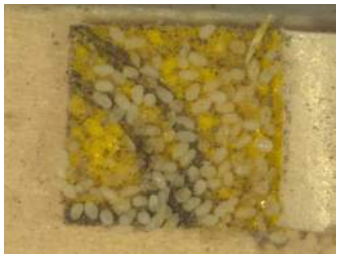
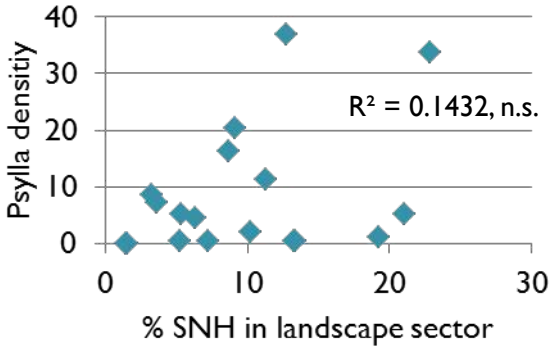
Effects of SNH on predation

Type of SNH bordering the orchard, or distance from the border, did not affect predations of sentinels





% of SNH in 1 km radius had no effect on predation of sentinels or on pest levels



Autumn 2014 we saw slightly lower psylla infestation near woody linear elements bordering the orchard

At the same time, growers complained about birds damaging pears near hedgerows

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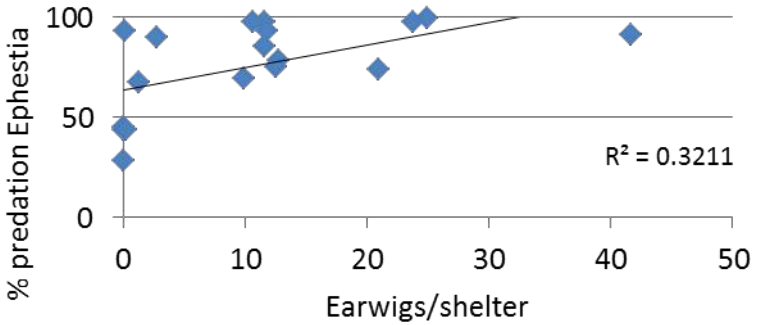
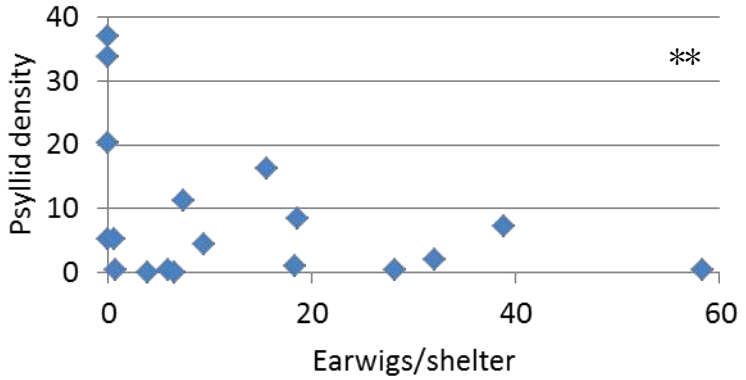
Effects of SNH (2)

We measured the density of the common earwig *Forficula auricularia,* a generalist predator in orchards

Predation of sentinels strongly correlates with presence of earwigs



Psylla level in autumn strongly correlates with presence of earwigs



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Discussion, conclusion

- At low prey density levels (of both sentinels and pest) in this study, the % SNH in a 1 km radius had no effect on predation of sentinels or on pest levels. Predation of earwigs may have camouflaged such effects.
- The common earwig is a relevant predator of pests in pear orchards. Growers were interested in the outcome of this study, and are looking for ways to stimulate presence of earwigs.