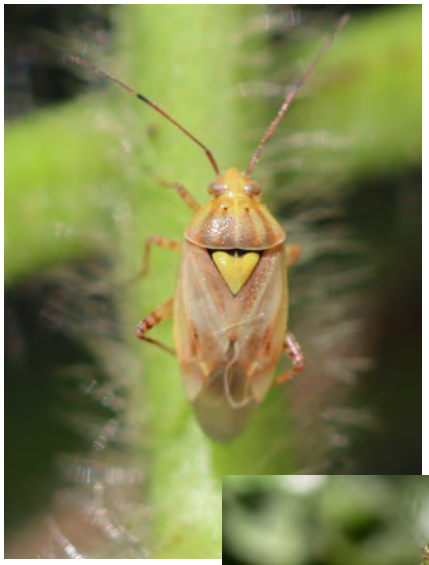
Strawberry pest update

Sarah Zukoff



Lygus bugs (peltolude)

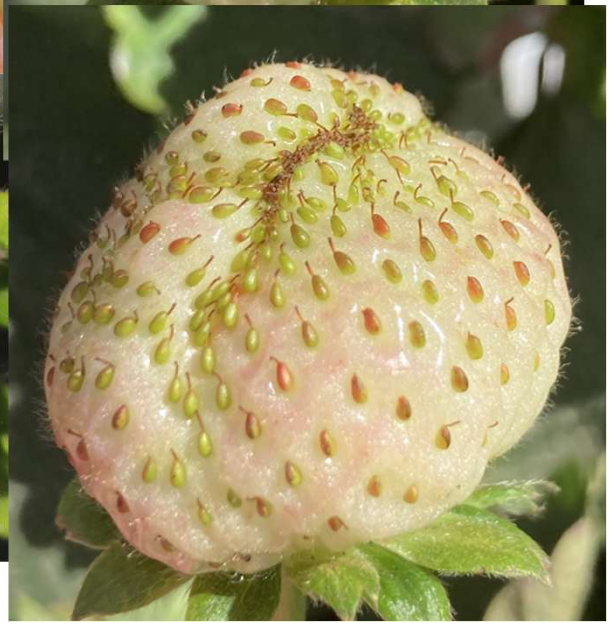












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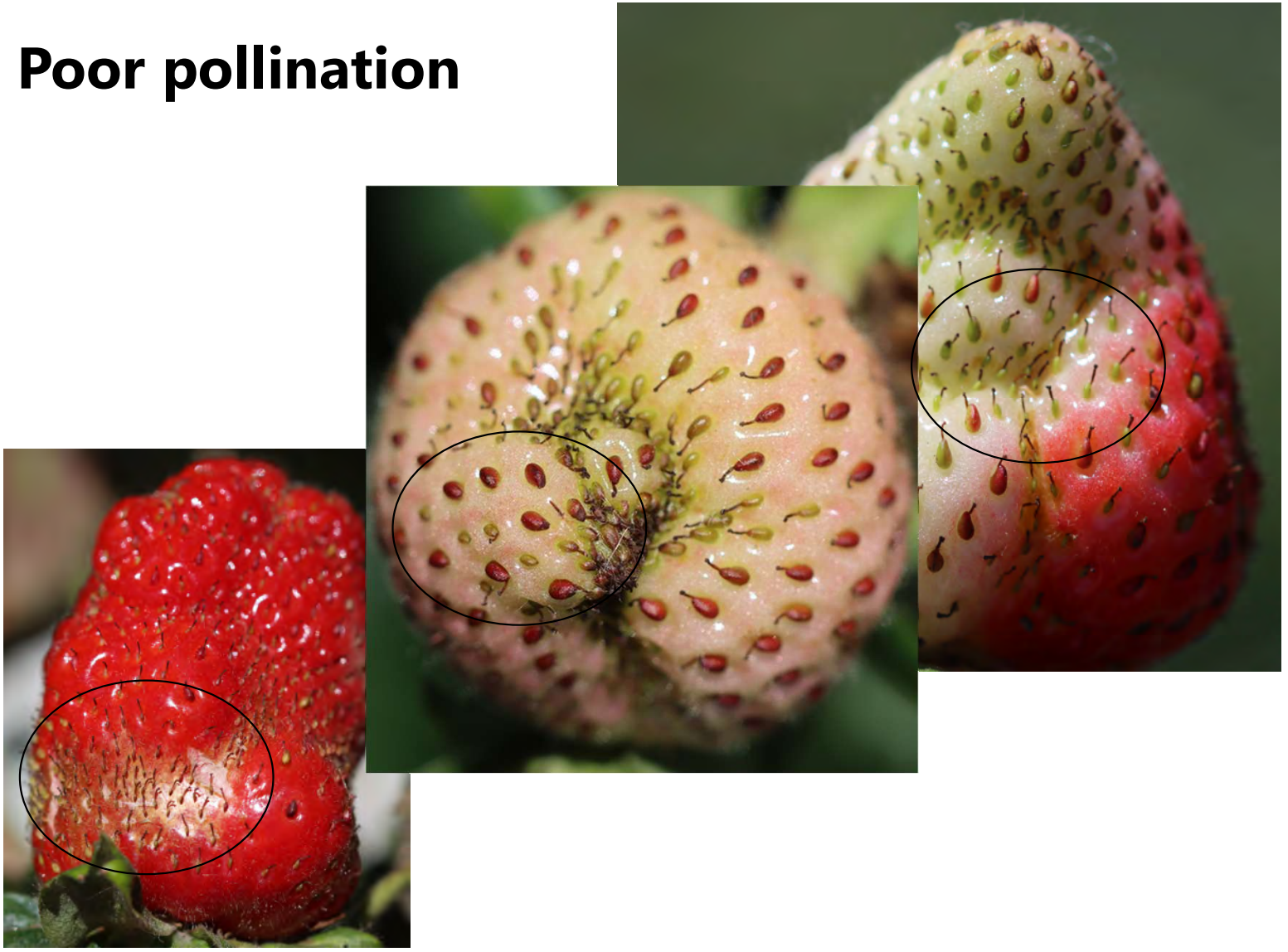




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Which is peltolude/lygus bug damage?

Poor pollination



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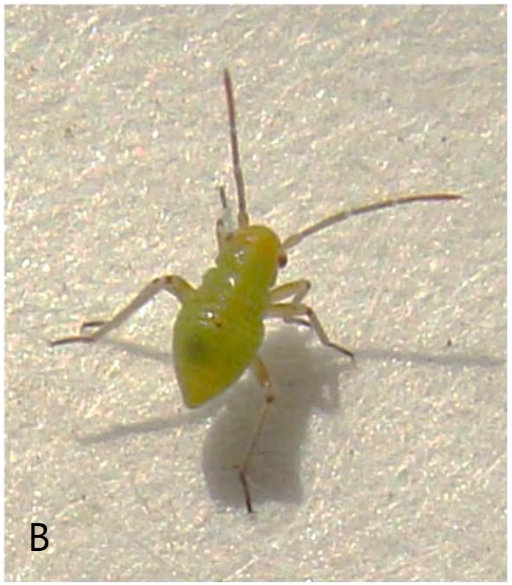




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Which one is a lygus bug/peltolude?

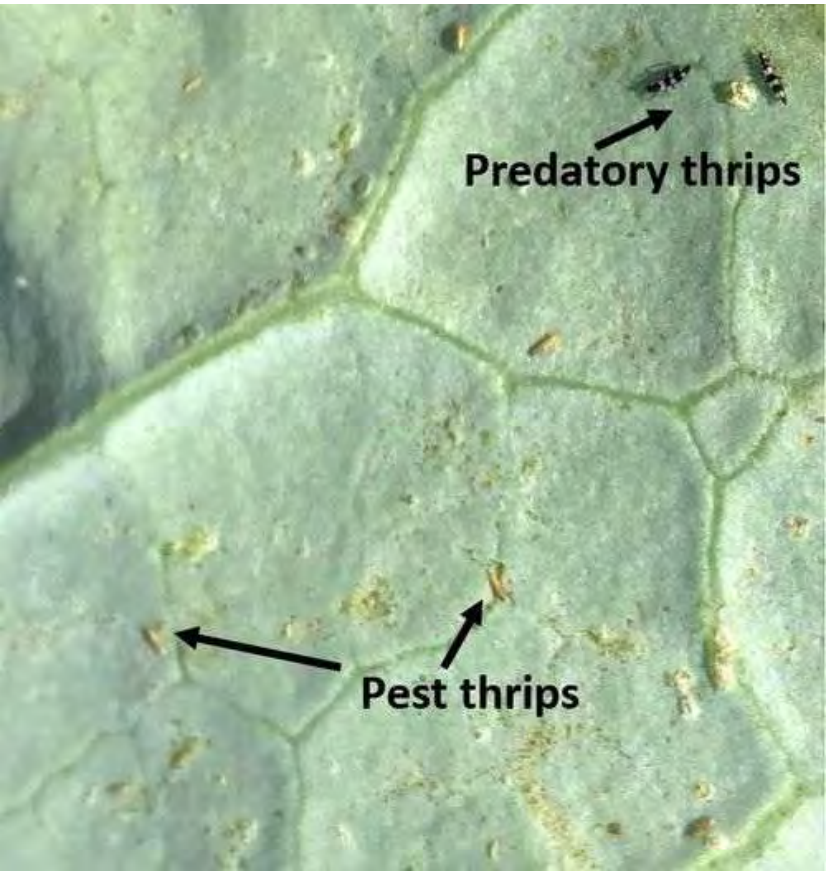




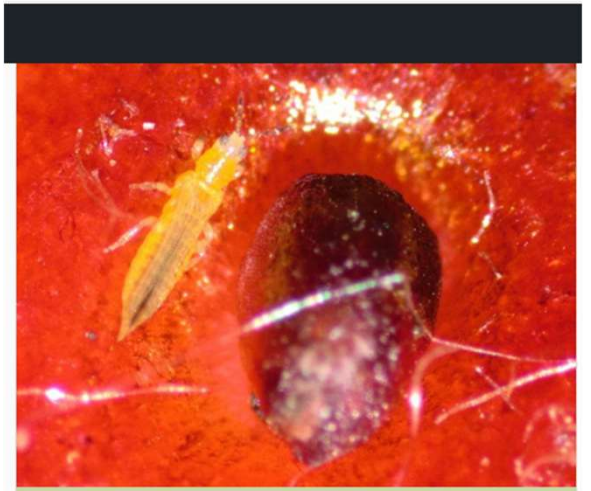


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Ripsiäiset/thrips







Mature thrip feeding on ripe strawberry.



Mature thrip feeding on ripe strawberry.

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Ripsiäiset/thrips

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Type I bronzing from thrips



Type III bronzing: Environmental stress

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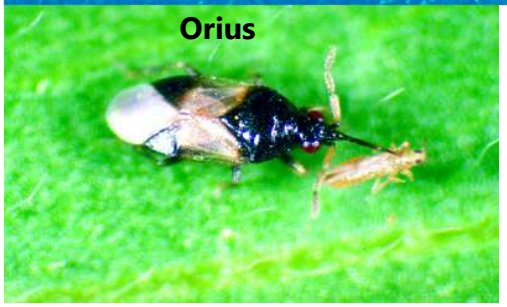


Controlling Ripsiäiset/thrips



Beneficial nematodes









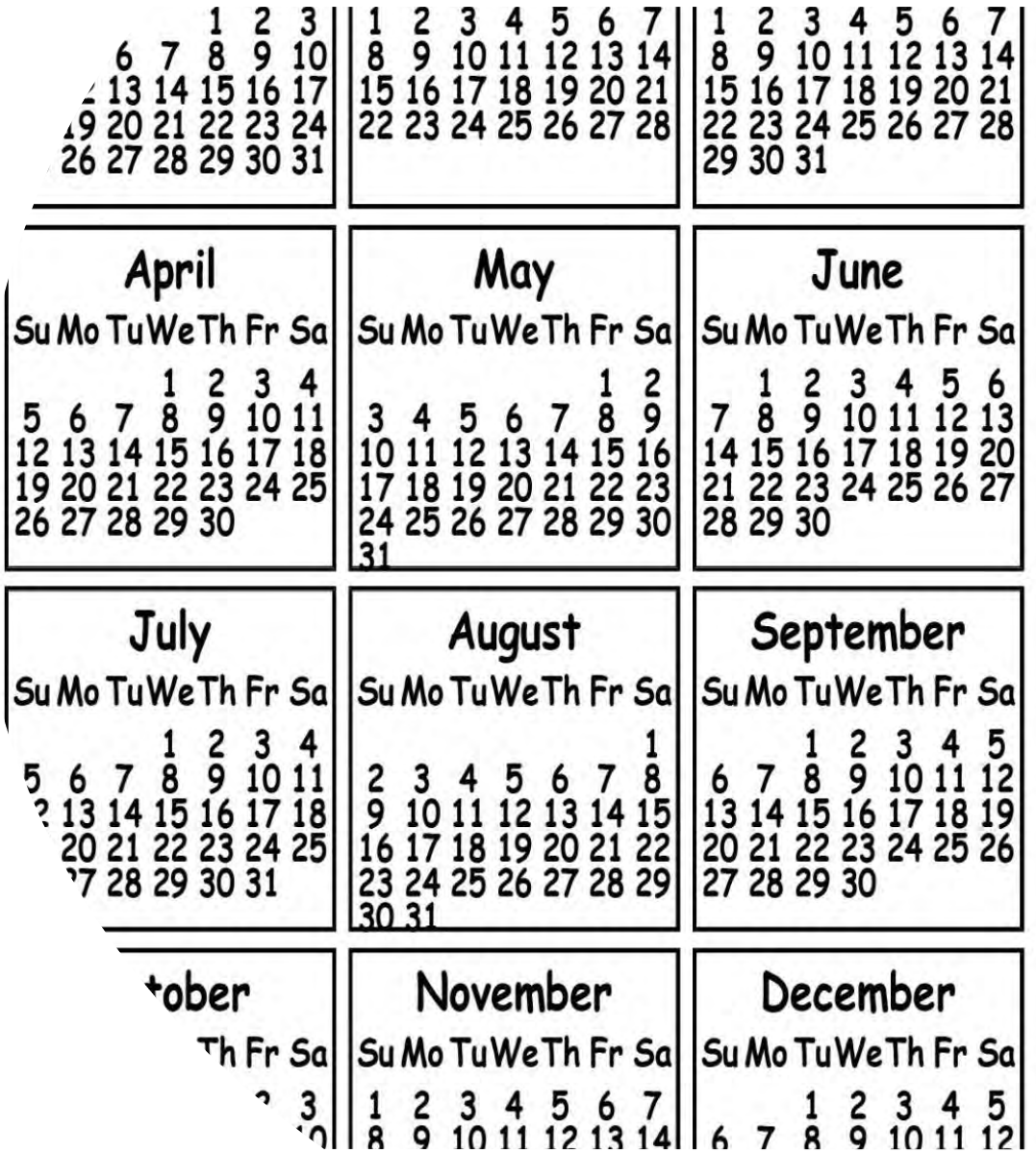
Loose materials if the thrips population is high



sachets if thrips pressure is low

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Predators need to be put out EARLY and every few weeks throughout the pest season

















Species	Where it feeds	Typical host range	Finland status (practical view)	Main concern	Concern level
Strawberry aphid (Chaetosiphon fragaefolii)	Young leaves, undersides of leaflets, along veins, crown region	Primarily Fragaria spp.	Established but not necessarily abundant everywhere. True strawberry specialist. Present in Finland.	Virus transmission	High
Melon/cotton aphid (Aphis gossypii)	Young leaves, flowers, growing points	Extremely broad host range	Likely occurs regularly but often arrives from other hosts. More important in protected crops.	Virus transmission, honeydew	Moderate
Green peach aphid (Myzus persicae)	Tender growth, undersides of leaves	Hundreds of plant species	Common in Finland generally, but strawberries are not its preferred crop. Often a visitor rather than a resident.	Virus transmission	Moderate
Potato aphid (Macrosiphum euphorbiae)	Leaves, petioles and shoots	Very broad host range	Fairly common in northern Europe. Can colonize strawberries but usually not strawberry-specific.	Direct feeding, honeydew	Low-Moderate
Glasshouse-potato aphid (Aulacorthum solani)	Young tissue, flowers, leaves	Broad host range	More relevant in tunnels and greenhouse production.	Feeding damage, virus transmission	Moderate in protected crops
Shallot aphid (Myzus ascalonicus)	Young tissues and runners	Many horticultural plants	More often associated with protected production. Less likely to be a major field issue.	Feeding damage	Low
Strawberry root aphid (Aphis forbesi)	Roots and crown area (often ant-associated)	Primarily Fragaria spp.	Probably overlooked rather than absent. Worth remembering because feeding is hidden belowground.	Plant weakening, ant associations	Low-Moderate

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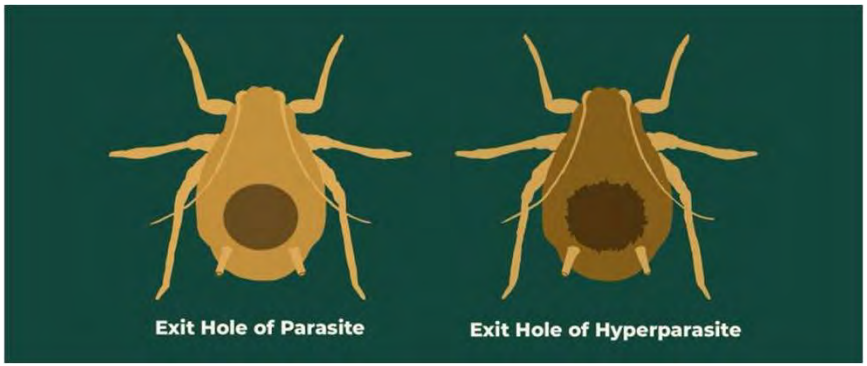


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Strawberry aphid
Chaetosiphon fragaefolii

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Exit Hole of Parasite
Exit Hole of Hyperparasite


TikTok
@ rewildingsuburbia

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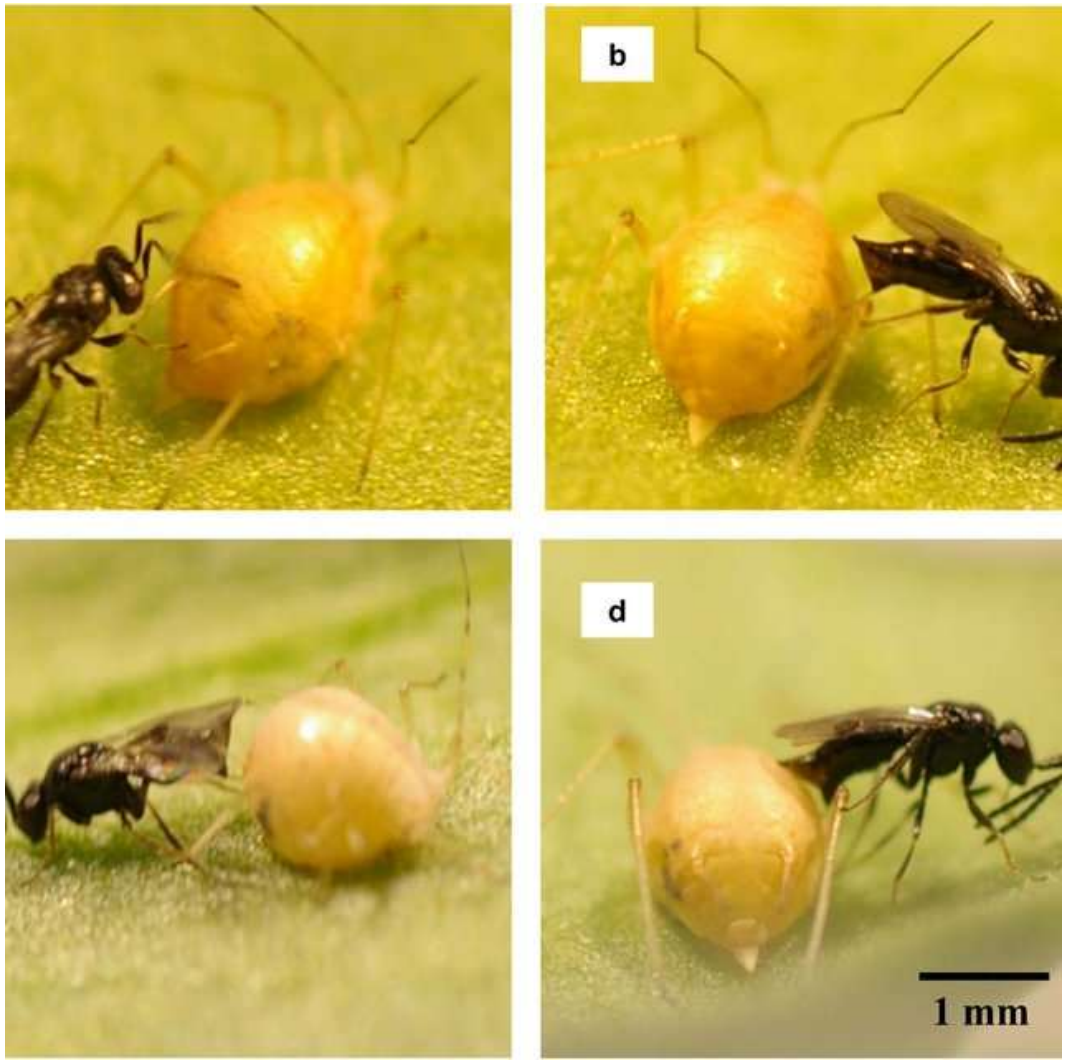
Parasitoid wasps







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Evaluating Holobus flavicornis as a predator of spider mites in strawberries









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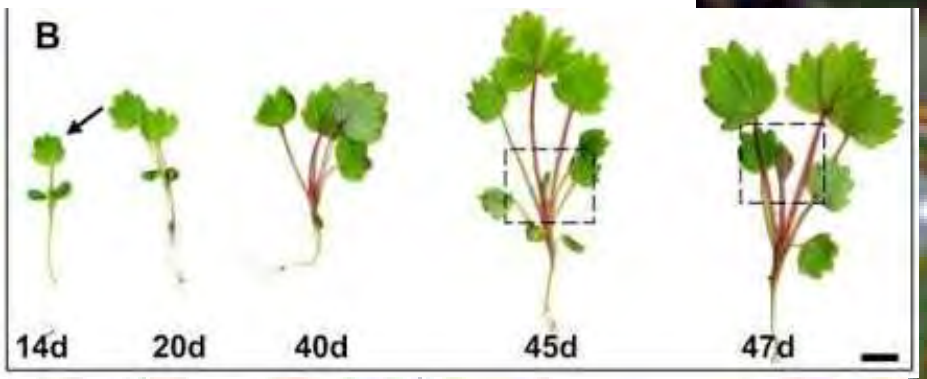
strawberry mite or cyclamen mite (*Phytonemus pallidus*)
mansikkapunkki

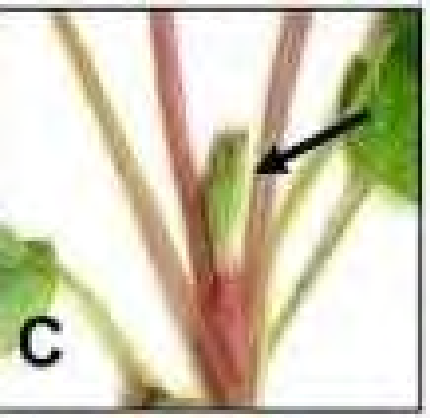


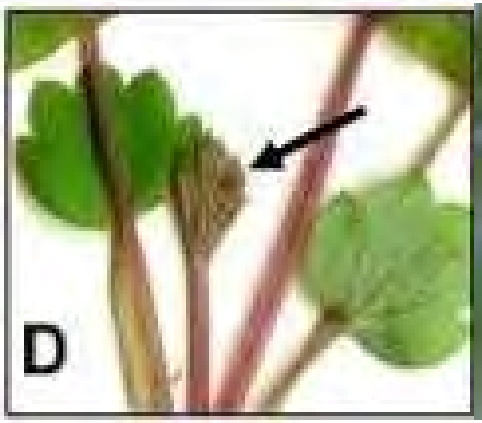


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strawberry mite or cyclamen mite (*Phytonemus pallidus*)
mansikkapunkki









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0=Healthy. No symptoms





3=Moderate. All new growth is deformed; significant reduction in leaf size, and "compact" plant appearance





2=Light. Distinct curling on most new leaves; slight stunting of the central crown.

1=Very light. Barely perceptible curling on young 1-2 leaves



4=Severe/Dead. Growth points are destroyed or brown; flowers fail to open or abort entirely

Old strawberries

New strawberries



HOW DO THEY SPREAD?

INFESTED TRANSPLANTS

Mites can be introduced with nursery material.

NEW PLANTINGS NEAR OLD FIELDS

Mites move when new rows are established next to old, infested plantings.

BEES & OTHER INSECTS

Bees and other insects can occasionally transport mites between plants.

REMOVE ALL GREEN STRAWBERRY MATERIAL

and leave the area free of strawberry plants for at least **2 WEEKS** before planting new rows nearby.

Luke



PREVENT INTRODUCTION

Treat nursery plants before planting

(Dormant or nursery transplants before planting)

CONTROLLED ATMOSPHERE TREATMENT

35°C | 50% CO_2 | 10% O_2

48 hours

OR

HOT WATER TREATMENT

46°C

2.5 minutes

99% mite mortality

No negative effects on plant growth when treated properly.

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BIOLOGICAL CONTROL



Predatory mite:

Neoseiulus cucumeris

- One of the best-studied biological control agents for strawberry mites
- Can suppress populations by up to 80% in tunnels and greenhouses
- Field studies have reported substantial yield increases where *N. cucumeris* successfully suppresses mites
- Often provides benefits into the following season—plants typically yield more marketable fruit the year after treatment

Program early and release preventively for best results.

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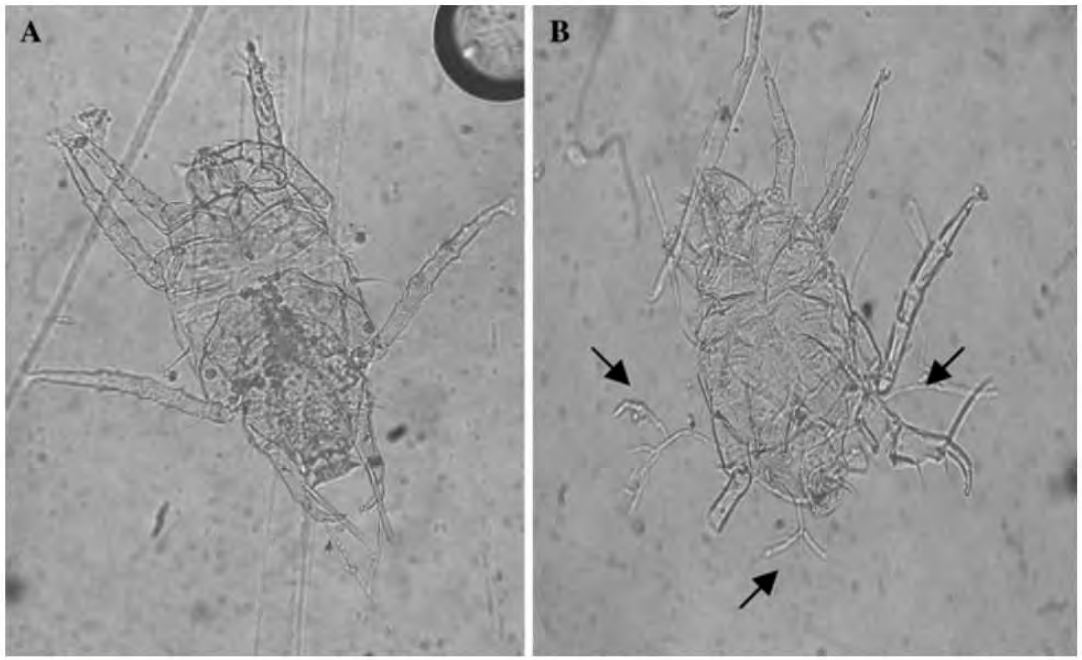
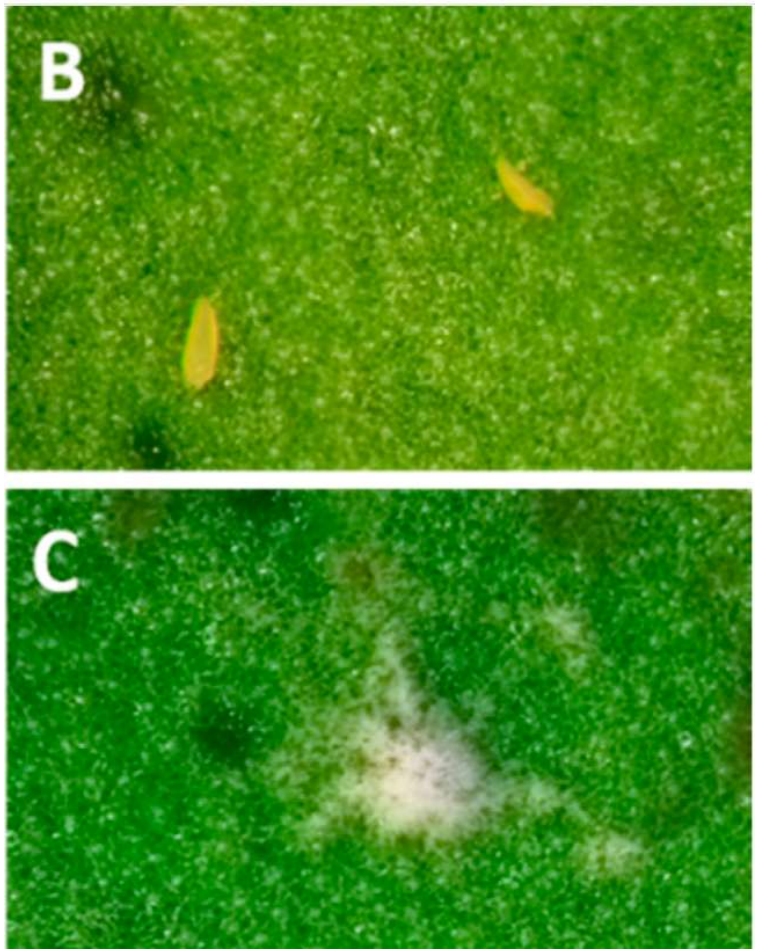


Fig. 4 Broad mite cadavers under the light (stereo) microscope: (**A**) Uninfected mite, no fungal mycelium inside the cadaver (control). (**B**) Mycelium of *Metarhizium anisopliae* CKM-048 extruded out of the infected cadaver (indicated by *arrows*)

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Fungus + predatory mites=?

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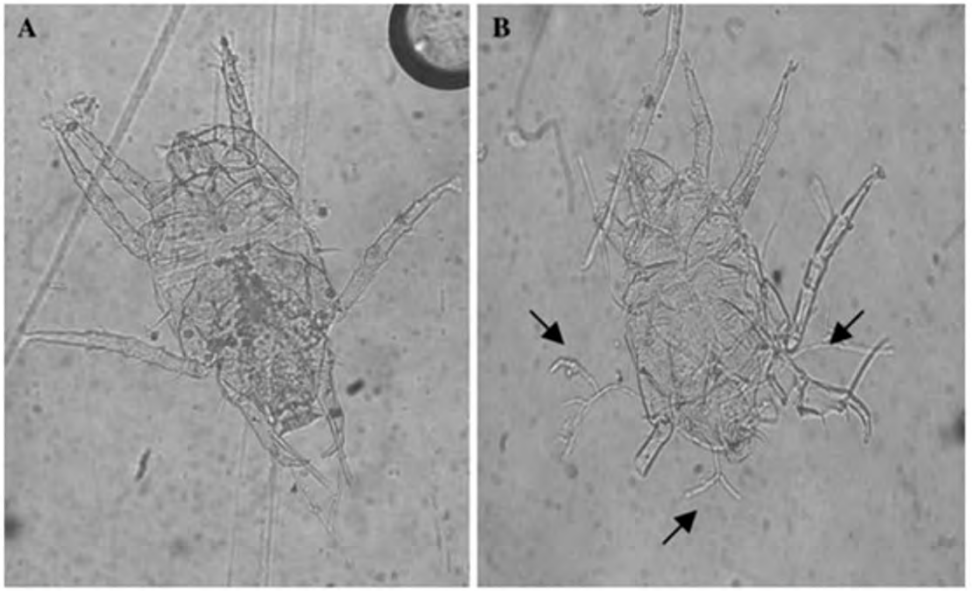


Fig. 4 Broad mite cadavers under the light (stereo) microscope: (**A**) Uninfected mite, no fungal mycelium inside the cadaver (control). (**B**) Mycelium of *Metarhizium anisopliae* CKM-048 extruded out of the infected cadaver (indicated by *arrows*)

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Project Objectives
(Meta-Punkki: Strawberry Mite IPM)

1. Test and optimize biological control strategies across laboratory, greenhouse, and field conditions
2. Evaluate
    1. Fungal sprays
    2. Root treatments
    3. Predator–fungus interactions







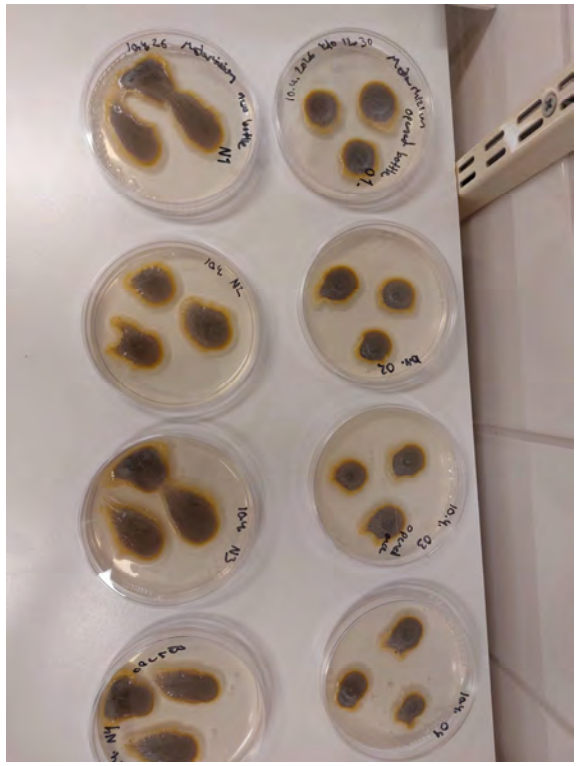


Methods development









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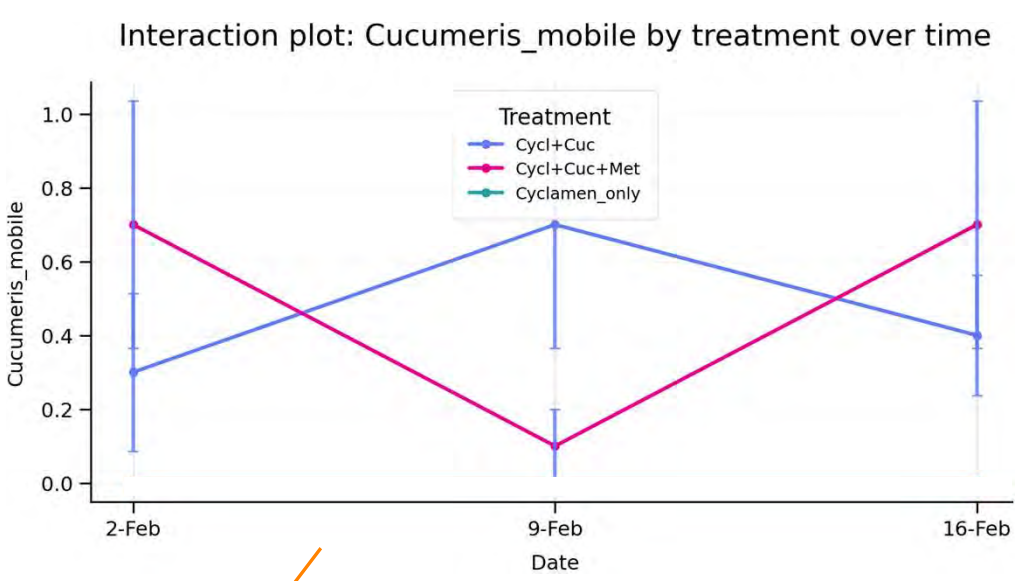


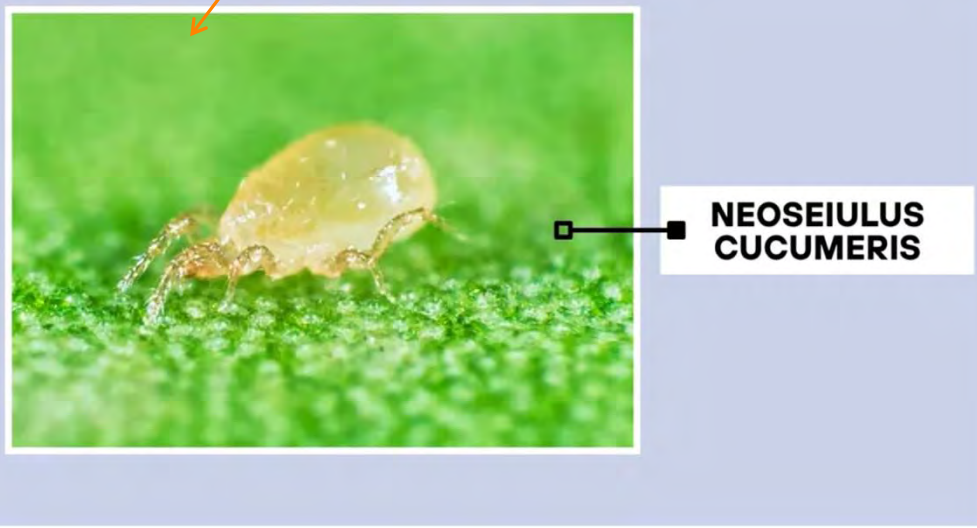
Full scale

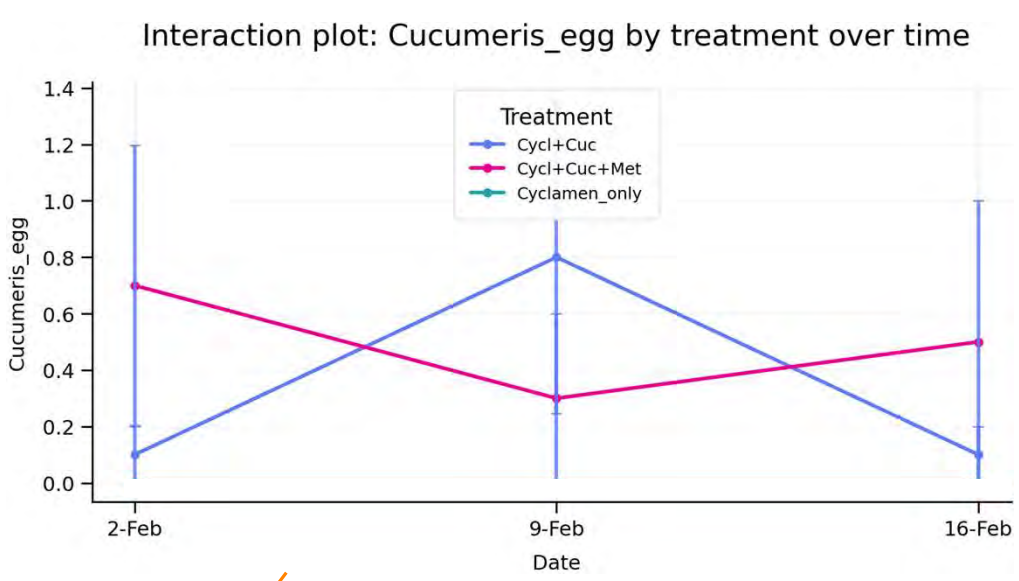


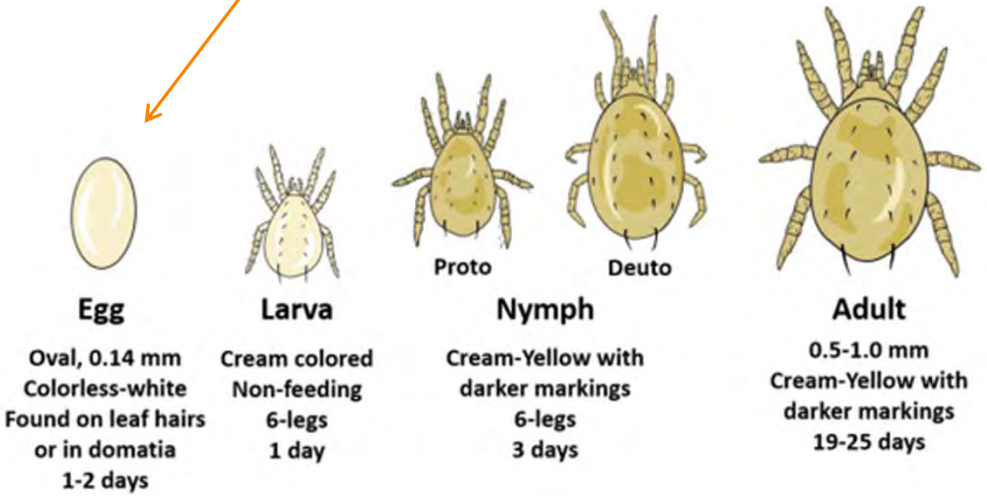
LALGUARD M52 OD study

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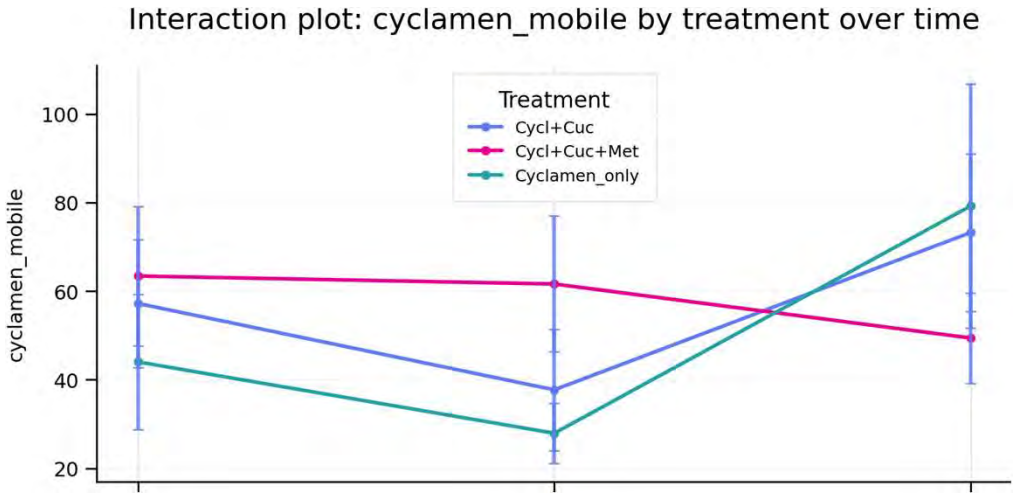


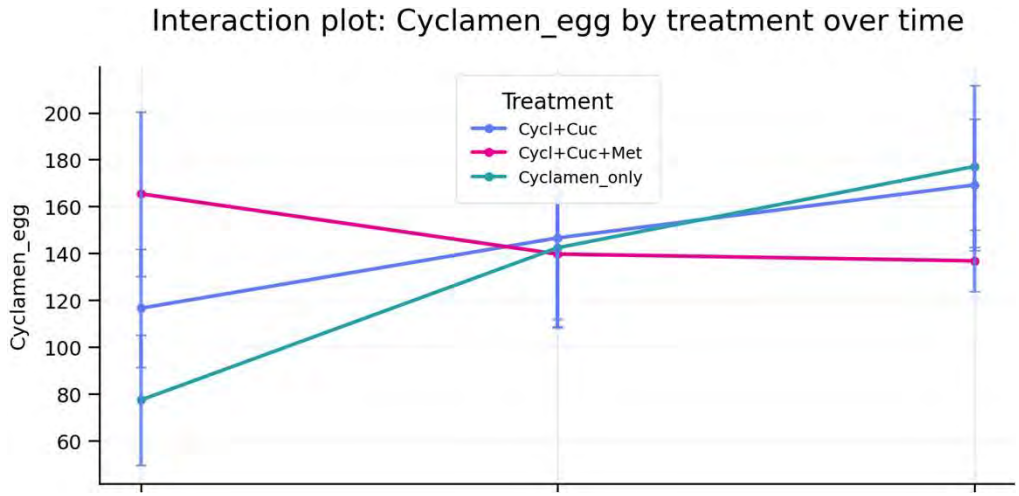


LALGUARD M52 OD study

LALGUARD M52 OD study







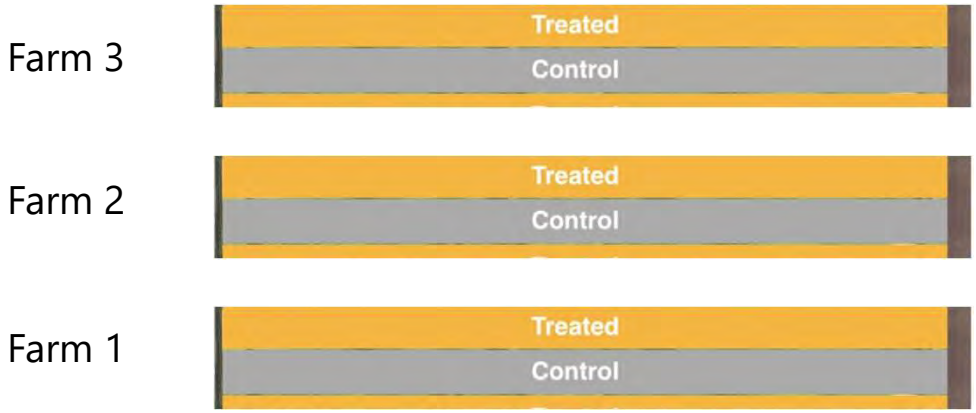
2026 Field Study

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LALGUARD M52 OD

Preventative spraying strategy

- 2-3 spraying at 5 days interval in May (after brushing)
- 2-3 spraying at 5 days interval in June/July, if the mite population grows)
- 2-3 sprayings at 5 days interval after harvesting period (August)



2026 Validation & Optimization

2027 Implementation & Expansion