

Florida Blueberry Growers Association
October 24th, 2024

Chilli Thrips Management in Strawberry



S. dorsalis



Predator Orius spp.



S. dorsalis damage



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Phytoseiid predatory mite attacking twospotted spider mite and thrips

Chilli Thrips

- *Scirtothrips dorsalis* (Hood)
- Invasive and phytophagous, parthenogenetic (Kumar et al. 2013).
- Six life stages- egg, first and second instar larvae, pre-pupa, pupa, and adult.

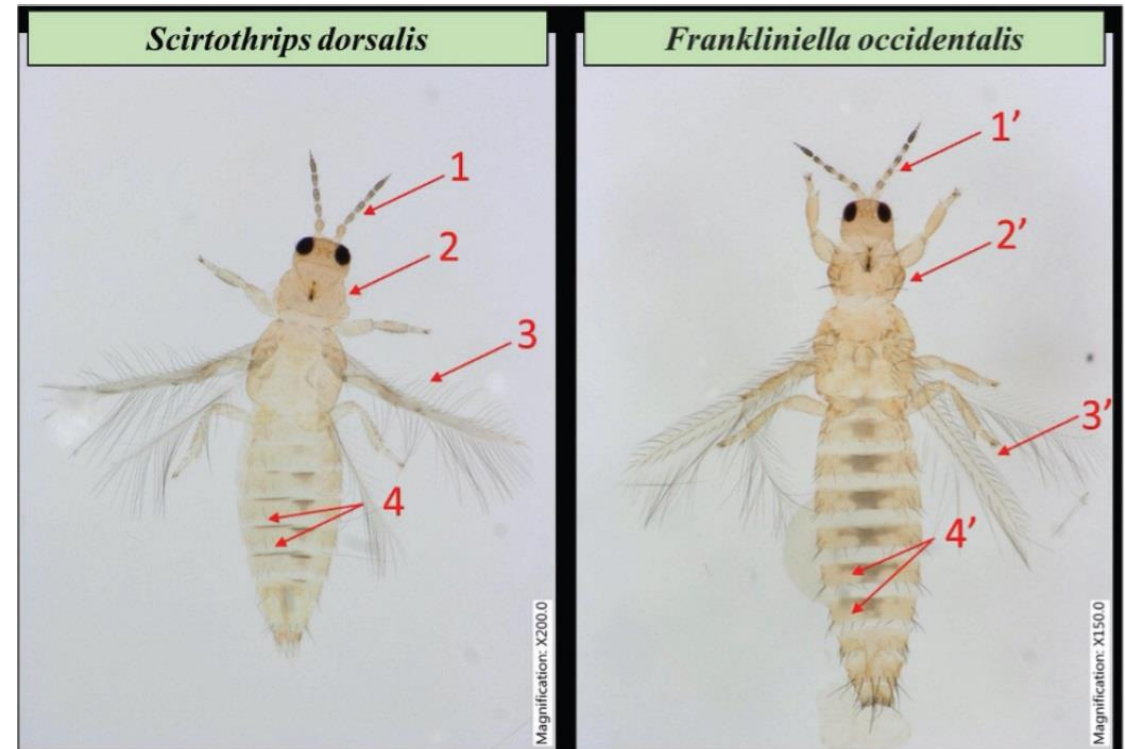


Chilli Thrips



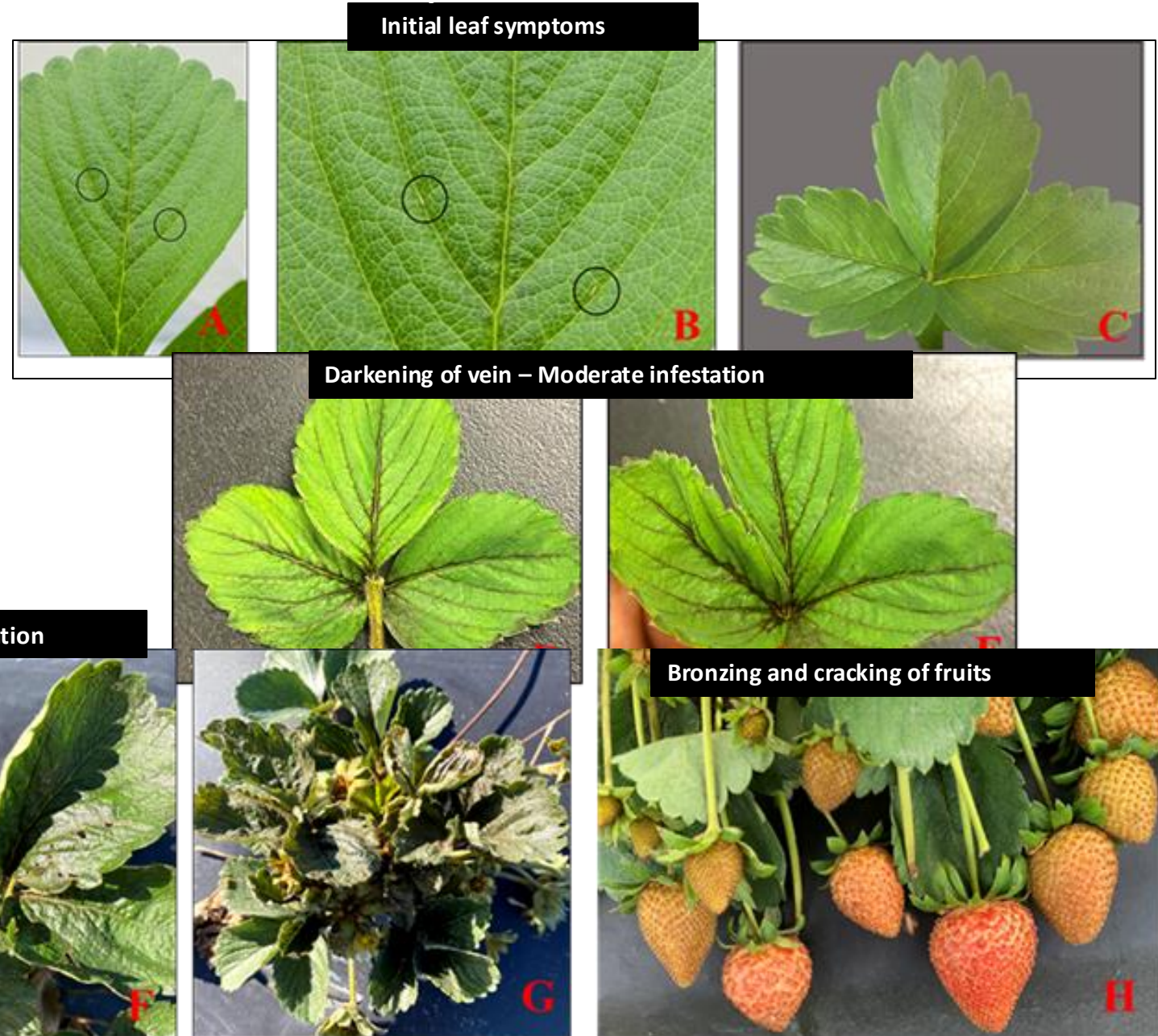
Figure 2. Worldwide distribution of *S. dorsalis*.

Credits: <https://www.cabi.org/isc/datasheet/49065#toDistributionMaps>; accessed on February 19, 2021

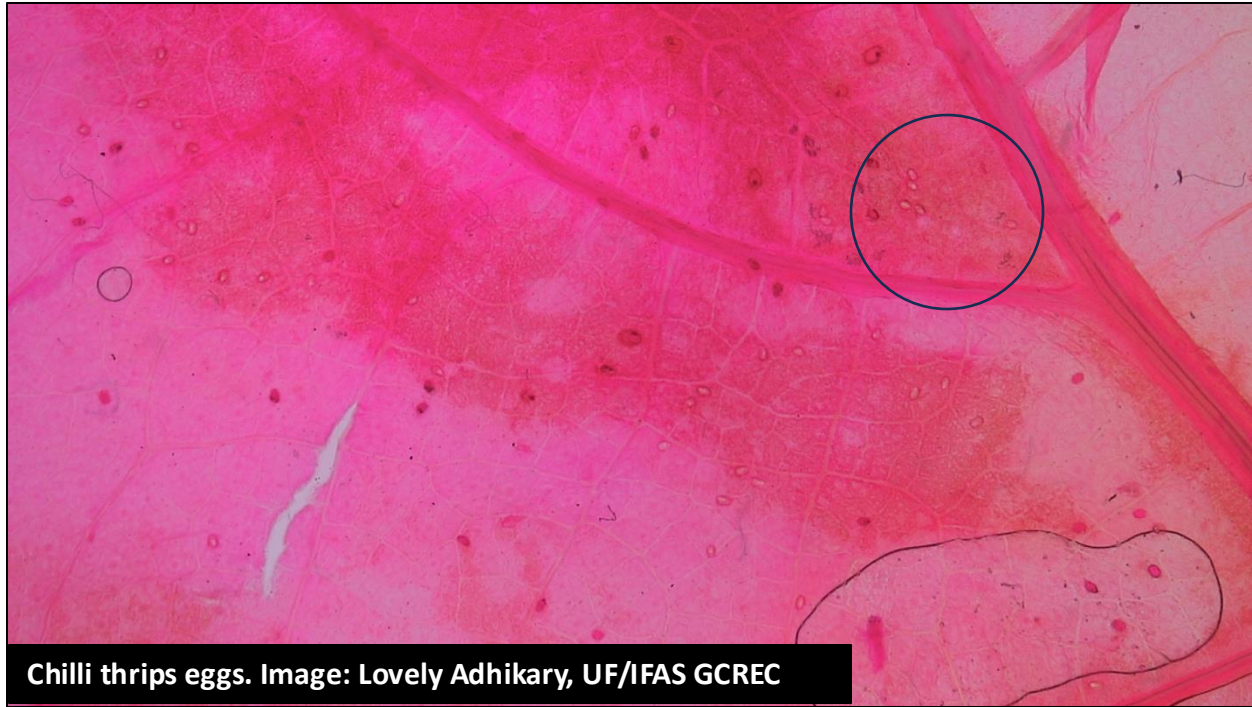


Chilli Thrips

- Infest plants early in the season.
- Heavy feeding causes necrosis of leaf veins and petioles.
- Feeding damage causes bronzing and cracking of fruits.
- Yield loss.



Chilli Thrips



Chilli thrips eggs. Image: Lovely Adhikary, UF/IFAS GCREC



Severe infestation

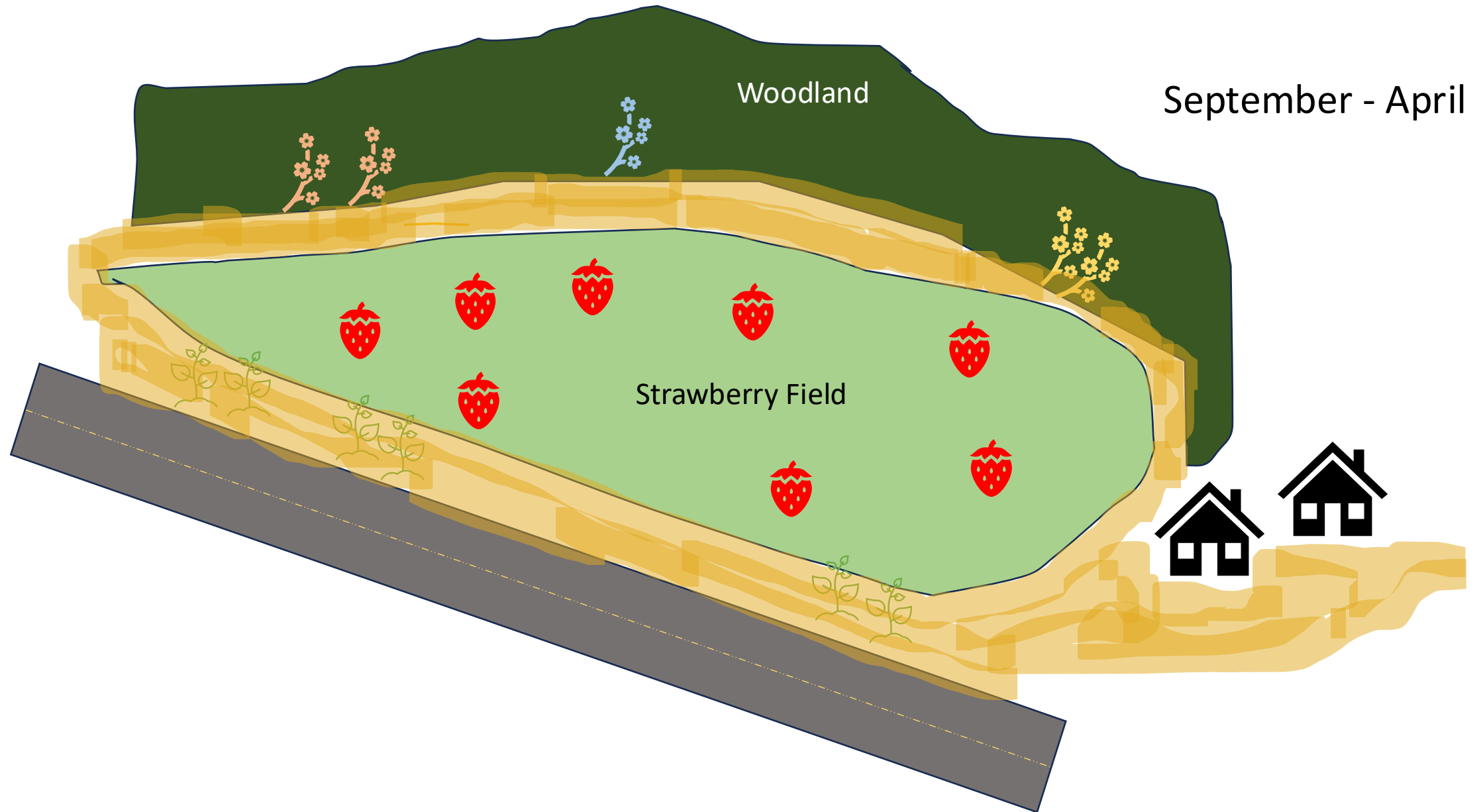


Bronzing and cracking of fruits



Expanding Host Range of *S. dorsalis*

Chilli Thrips



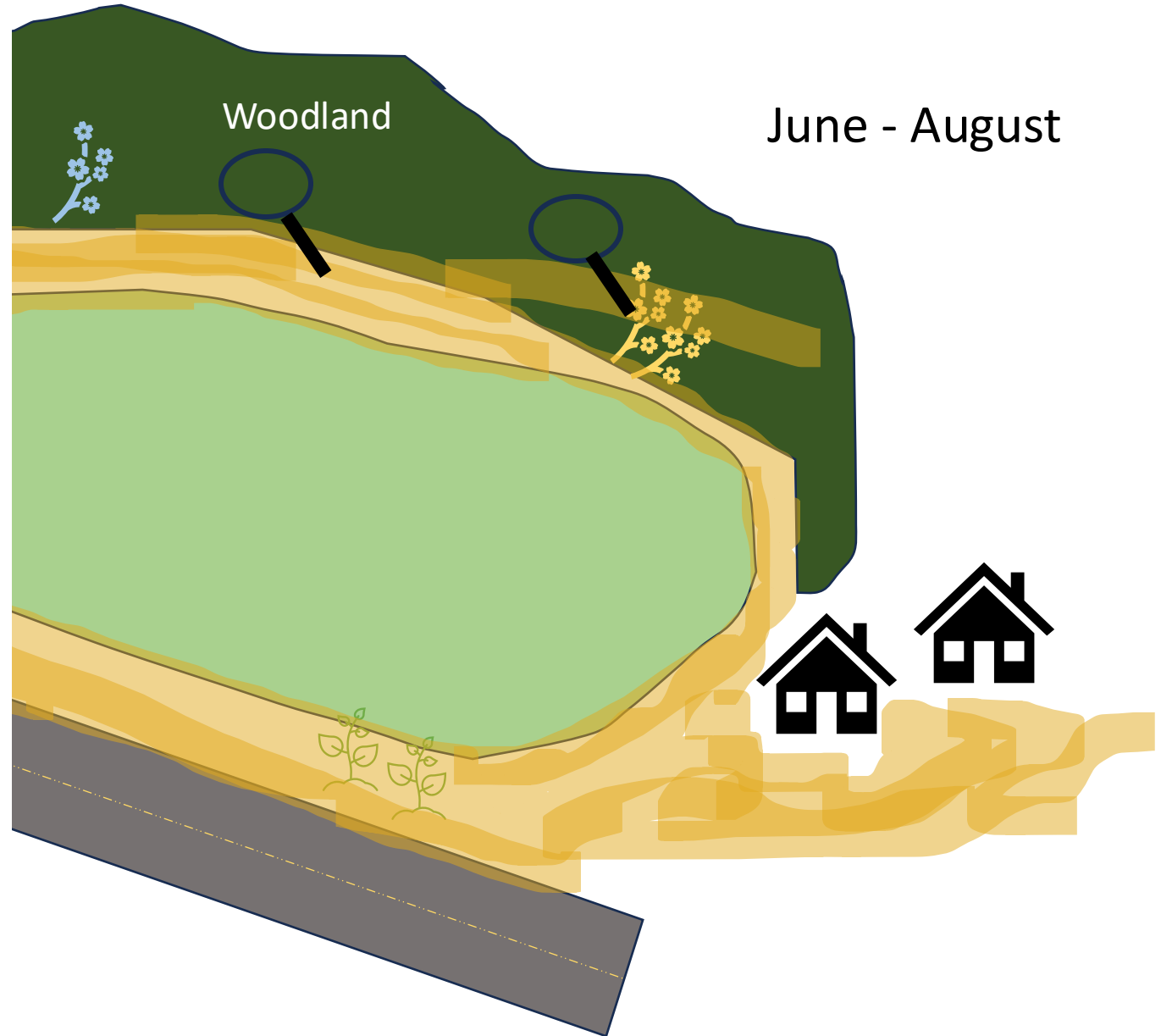
Chilli Thrips



Sugarberry



Water oak



Camphor



Laurelcherry



Laurel oak



Ragweed



Grape

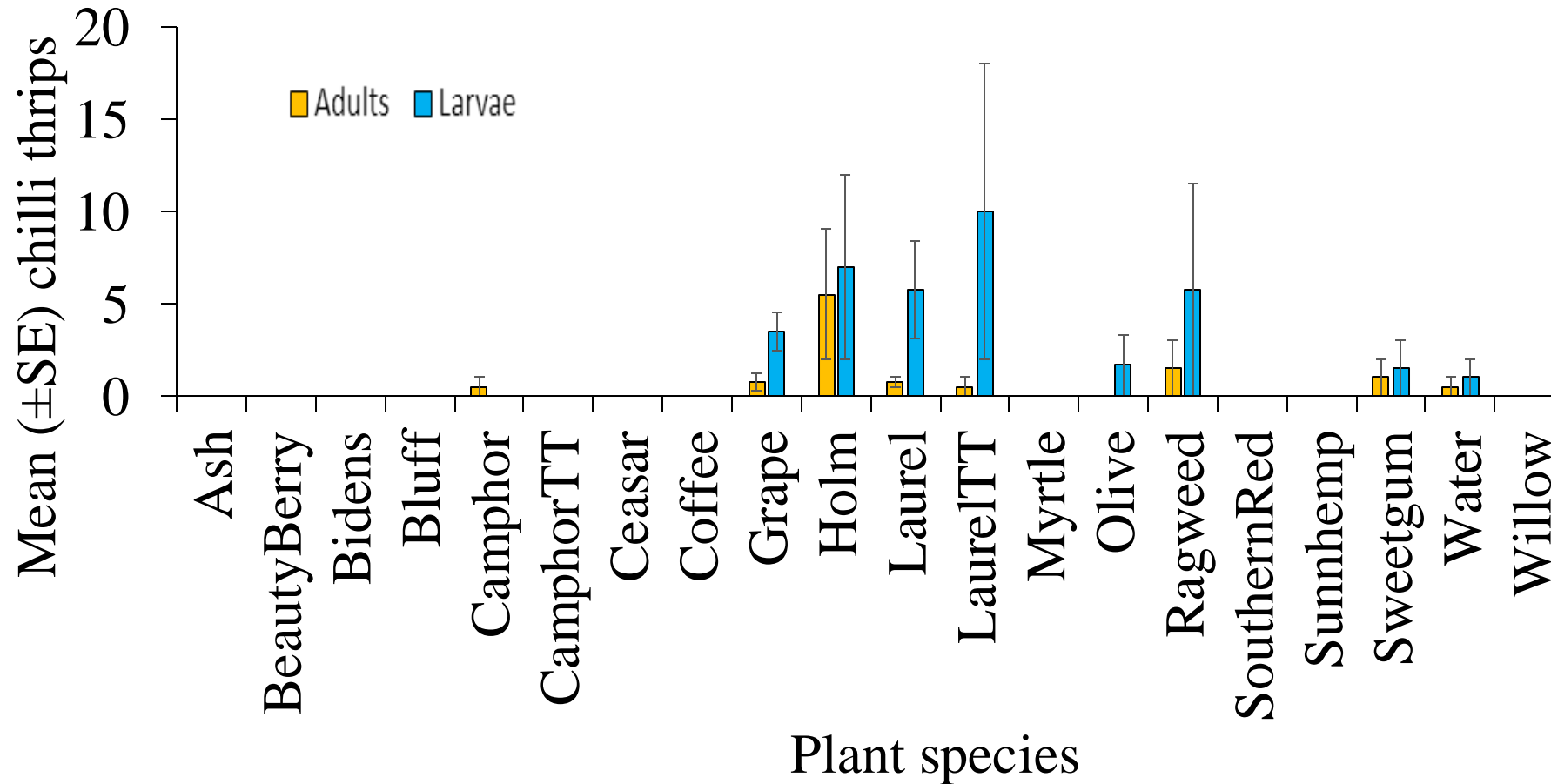


Sweet gum

Chilli Thrips

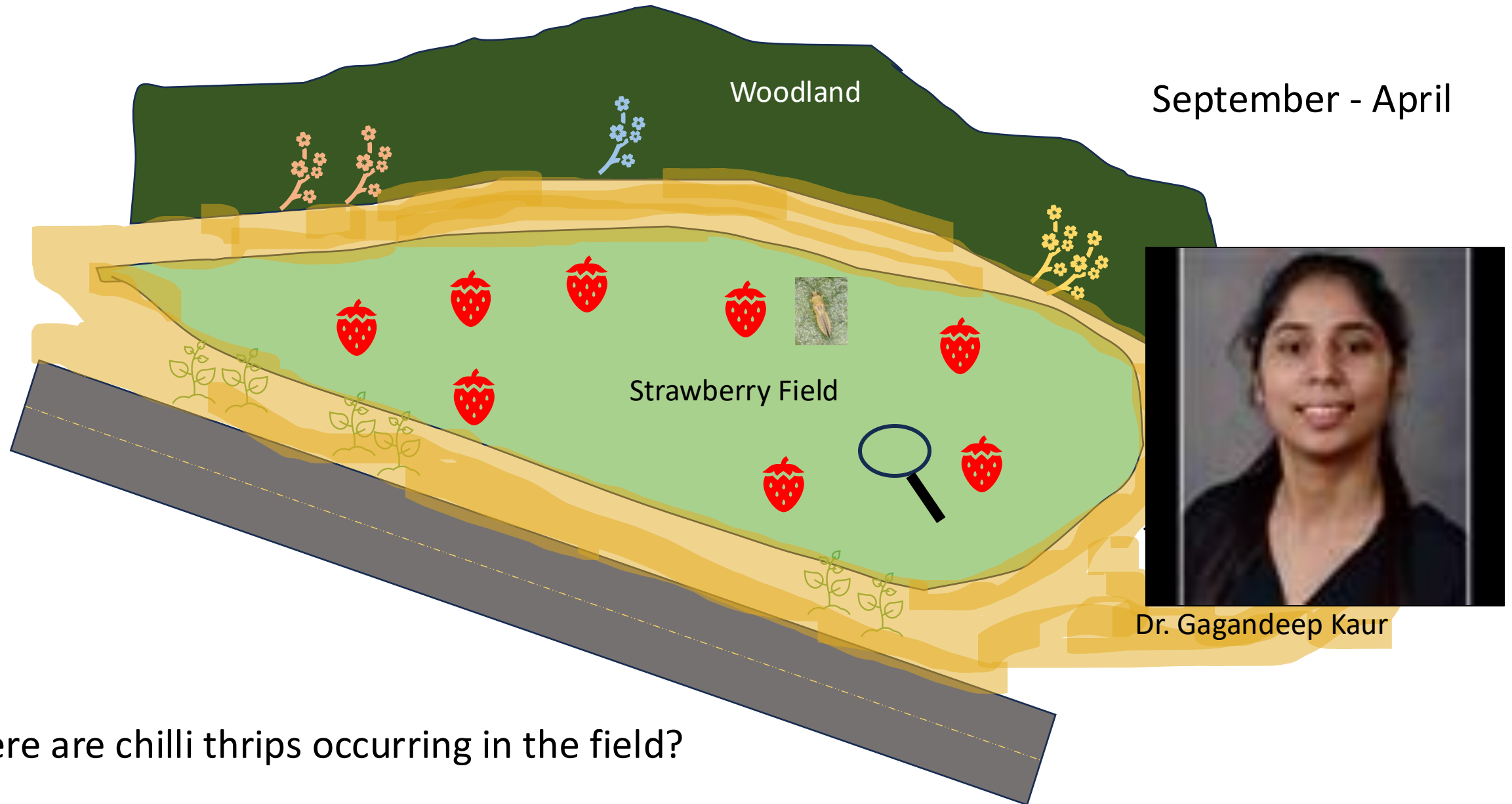
Chilli thrips present on wild trees and weeds during June and July, 2023 in woodland borders of three strawberry fields in FL.

June - August



Population Dynamics of *S. dorsalis*

Chilli Thrips



Where are chilli thrips occurring in the field?

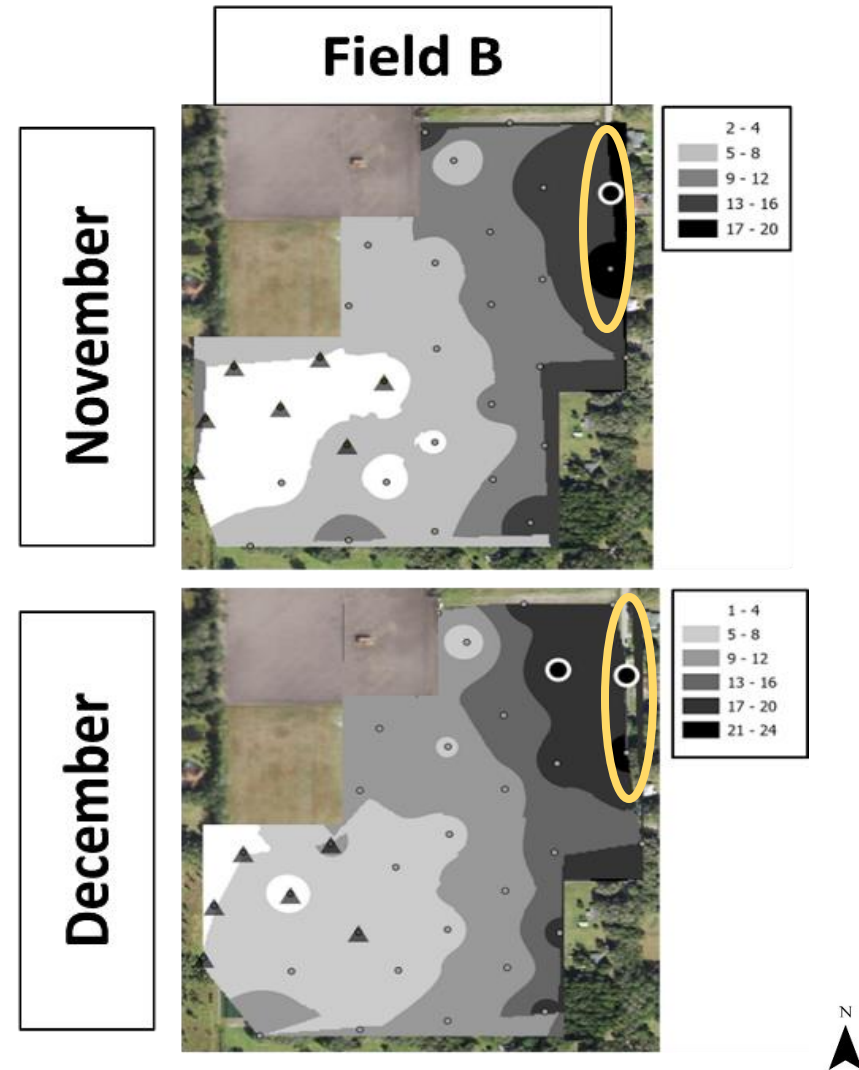
Chilli Thrips



IDW maps plotted in ArcGIS for fields B & C in 2019-20 and 2020-21 for four different sampling months.

Kaur et al. (2024). Journal of Economic Entomology.

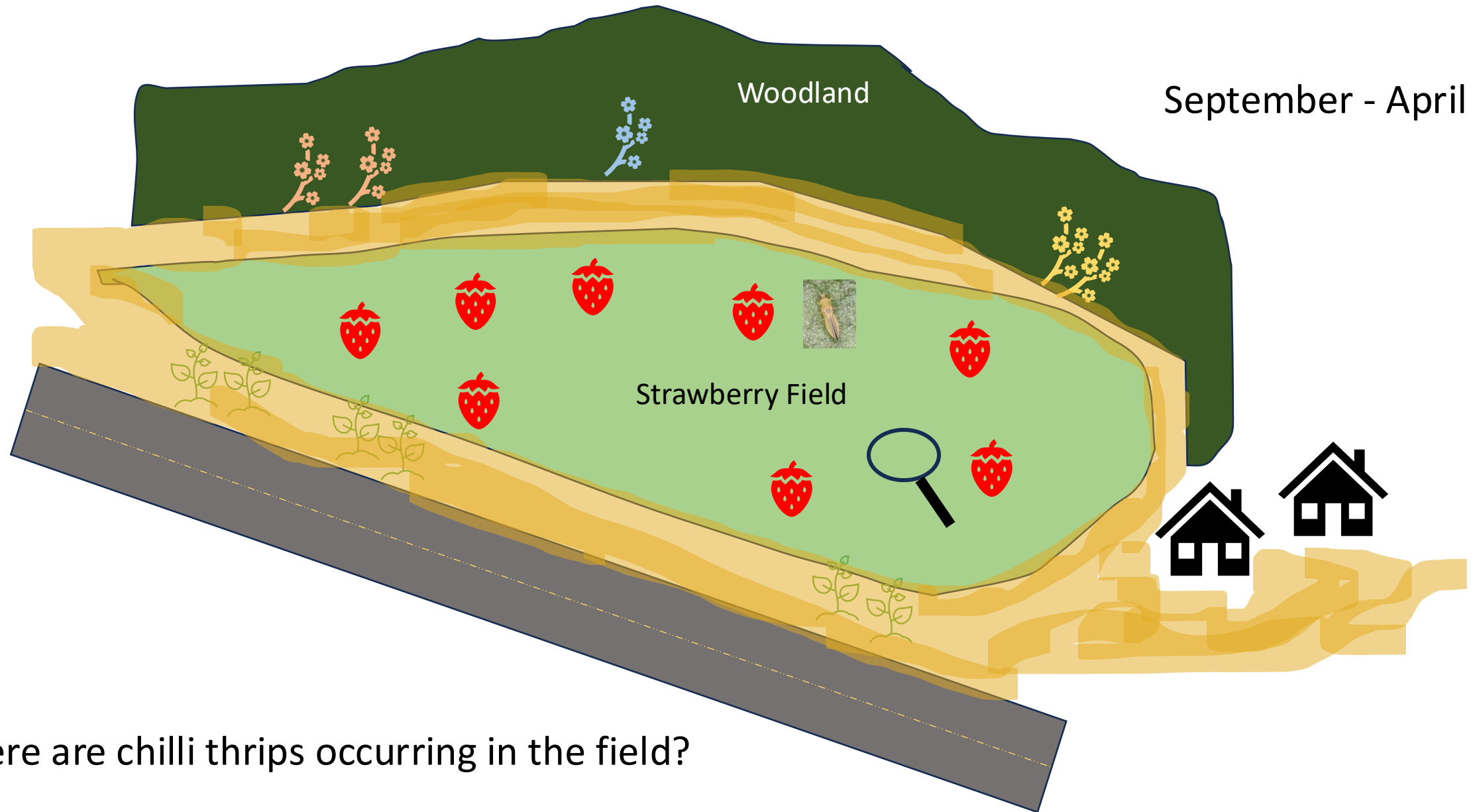
Chilli Thrips



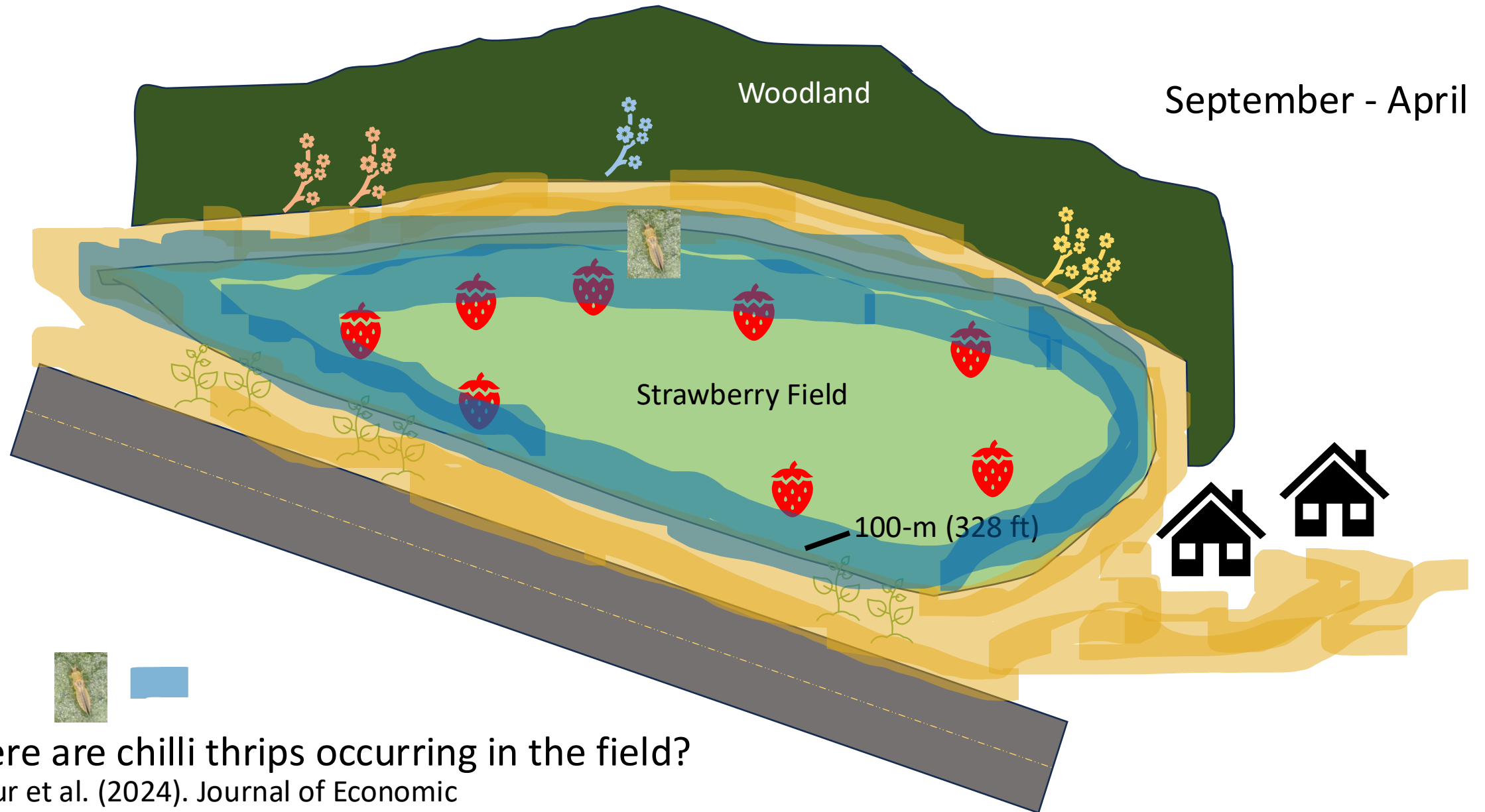
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Chilli Thrips



Chilli Thrips

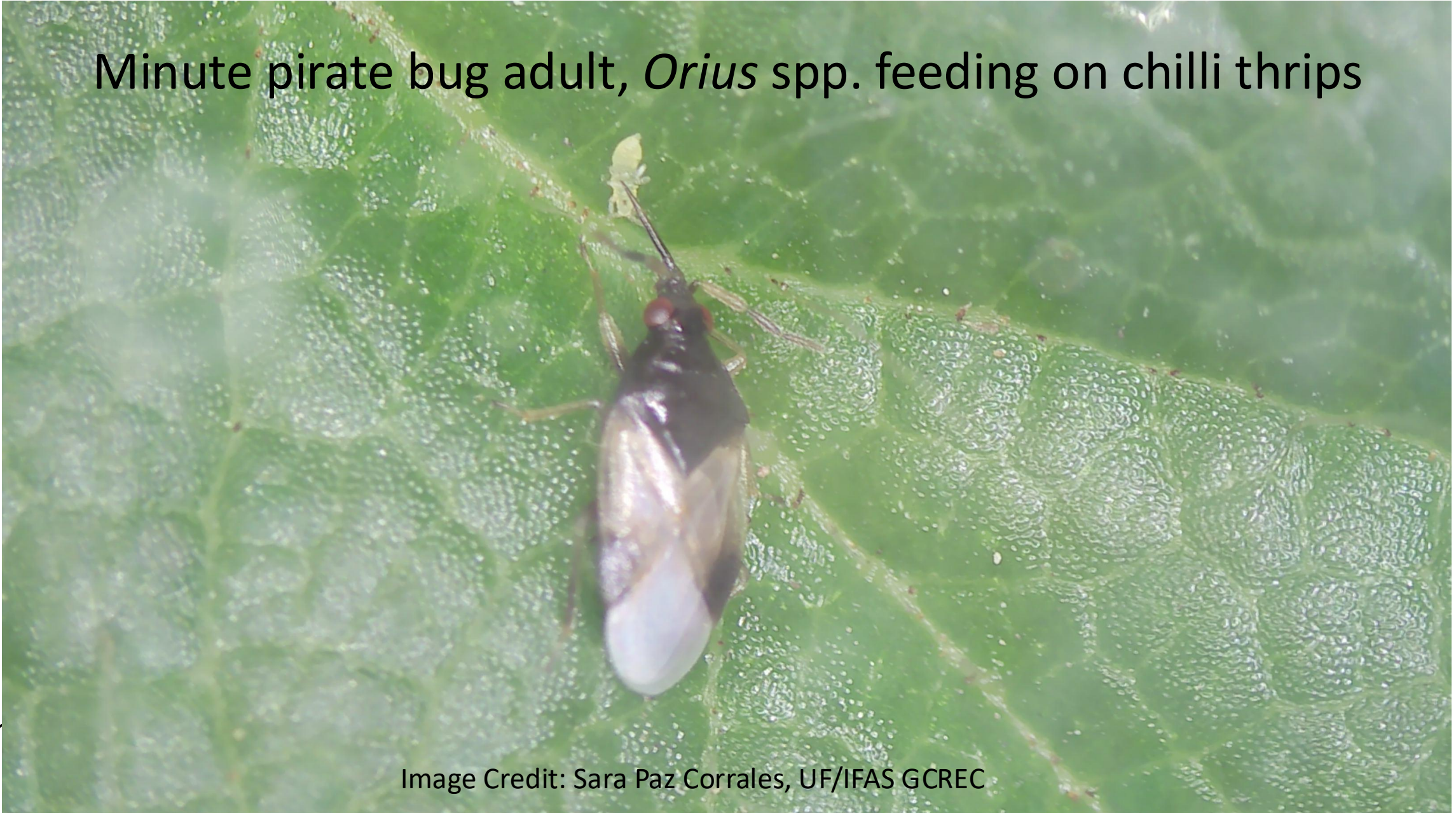


Where are chilli thrips occurring in the field?

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Chilli Thrips

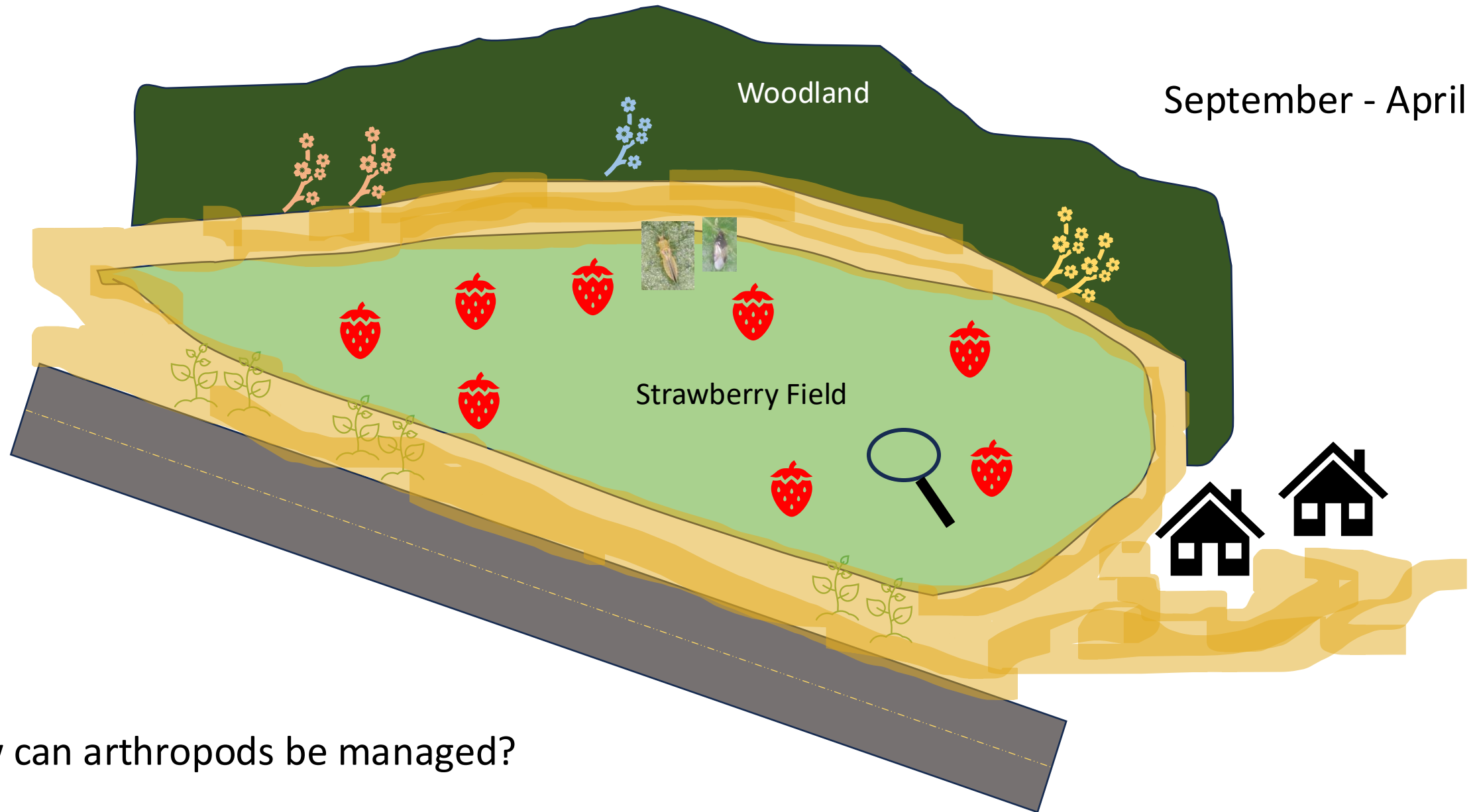
Minute pirate bug adult, *Orius* spp. feeding on chilli thrips



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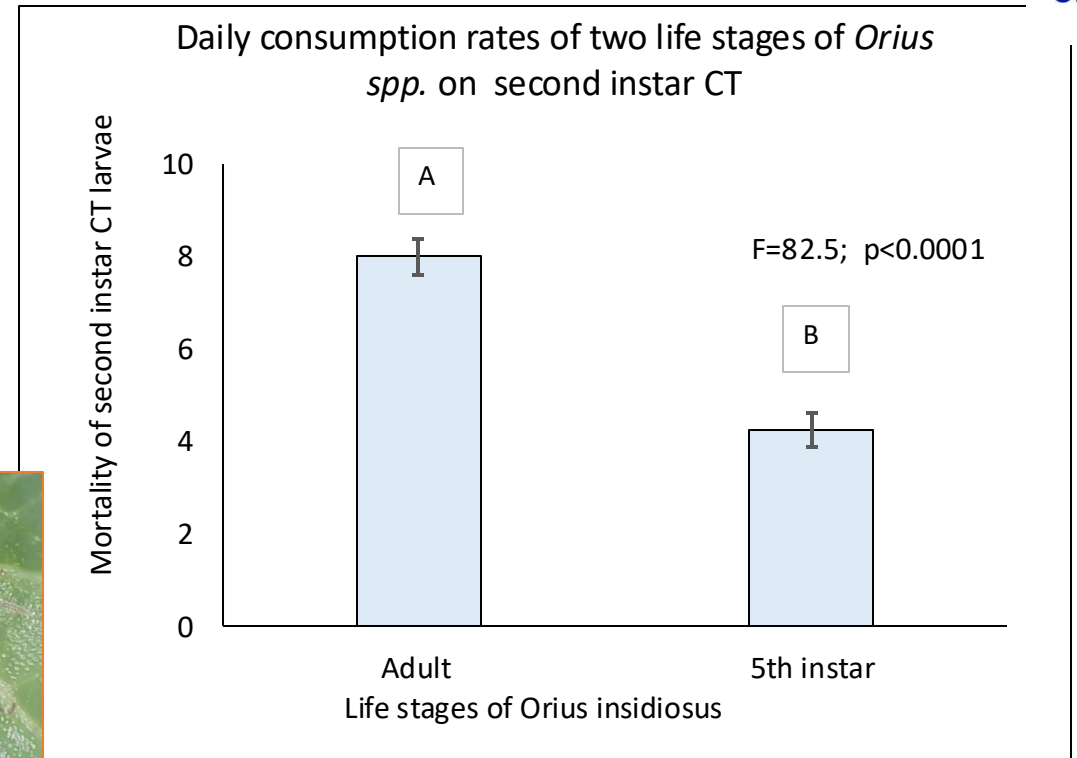
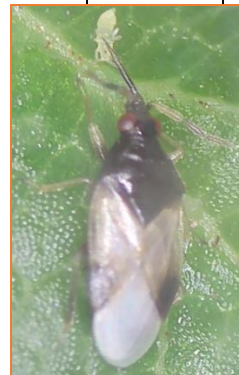
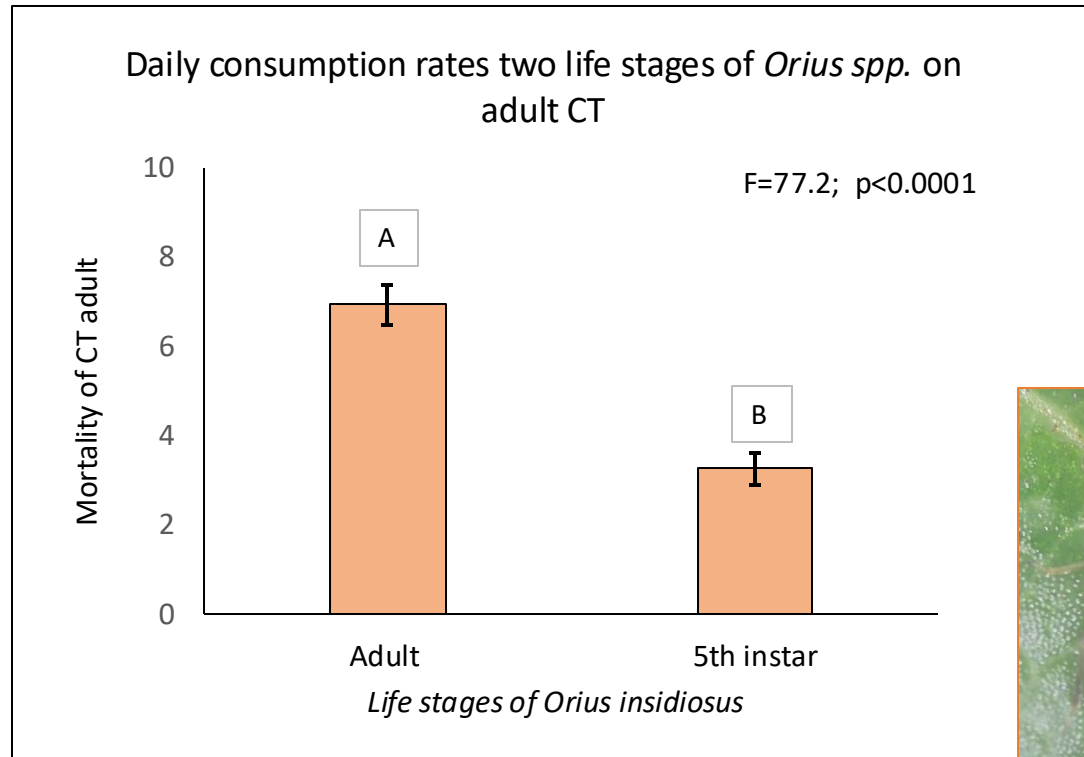
Image Credit: Sara Paz Corrales, UF/IFAS GCREC

Chilli Thrips



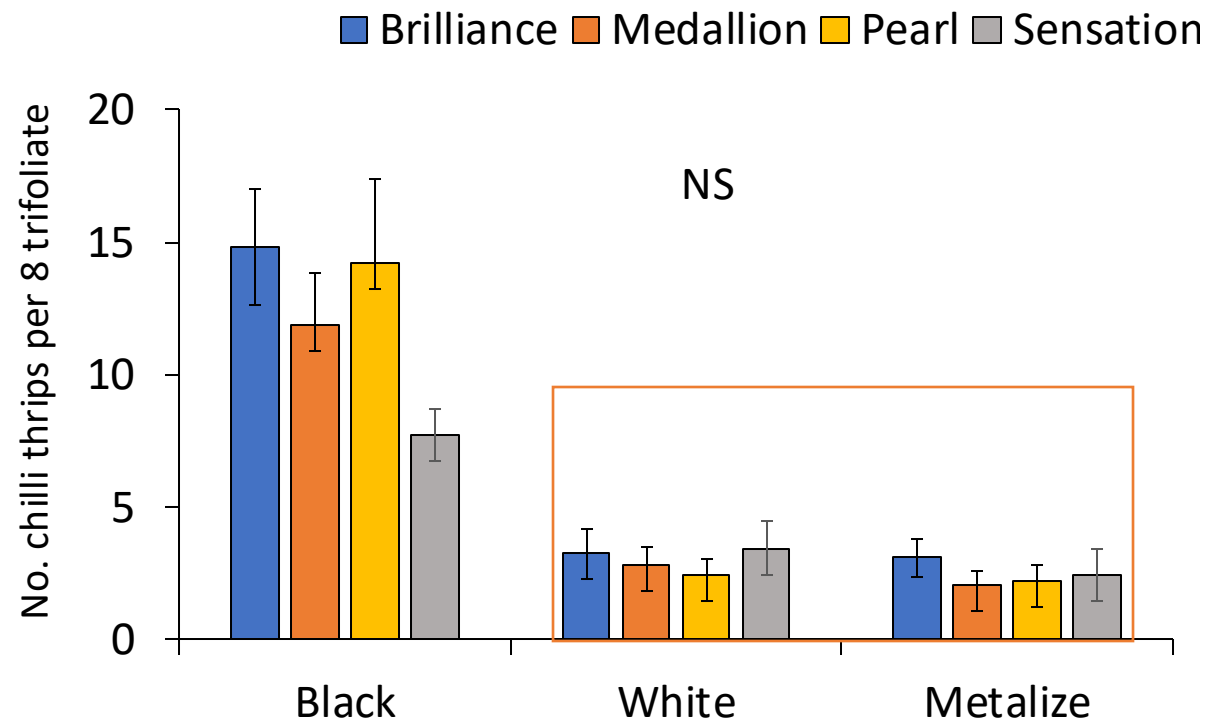
Management of *S. dorsalis*

Biological Control of *S. dorsalis*



Lovely Adhikary, UF/IFAS GREC

Cultural Control

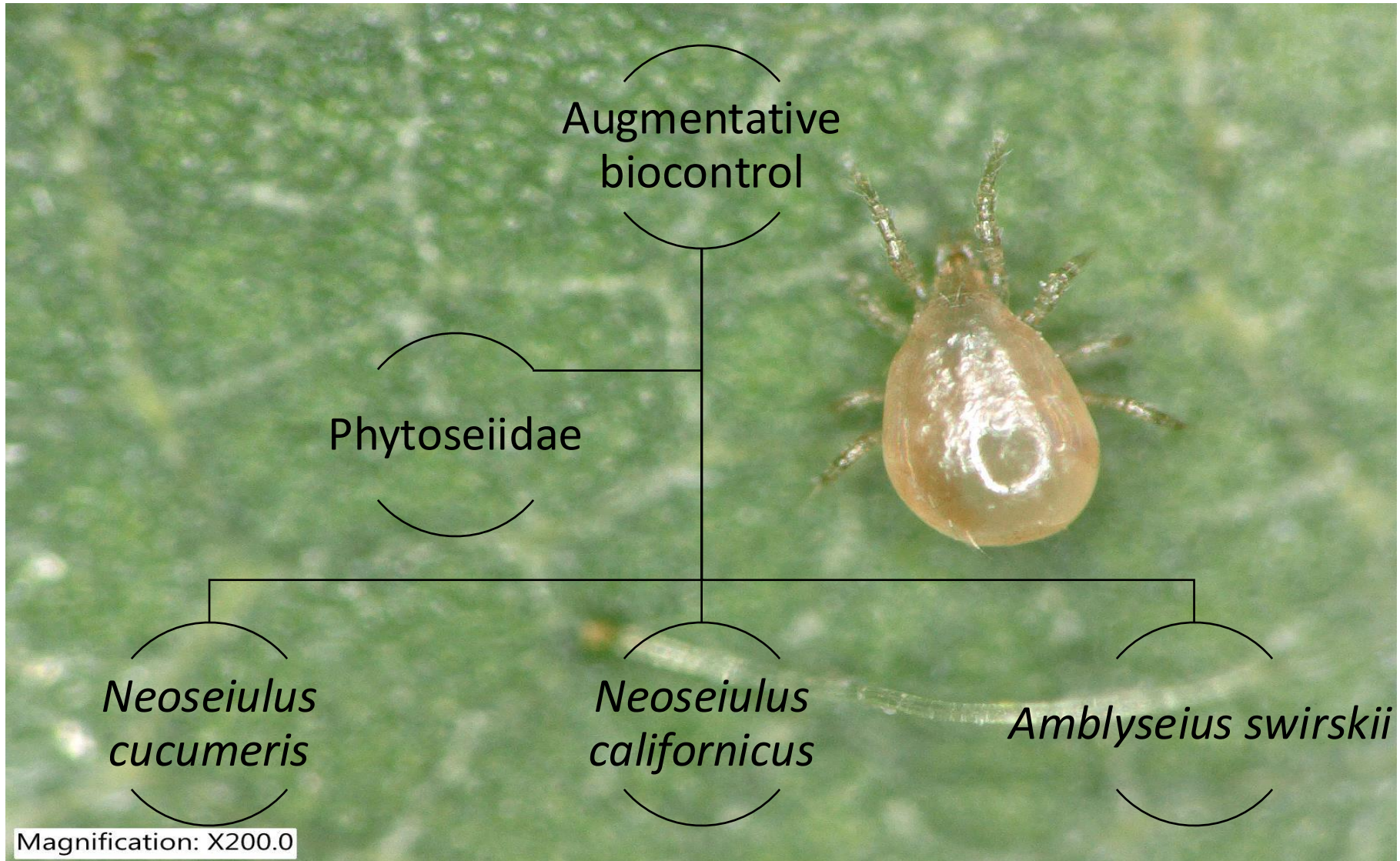


2022-2023

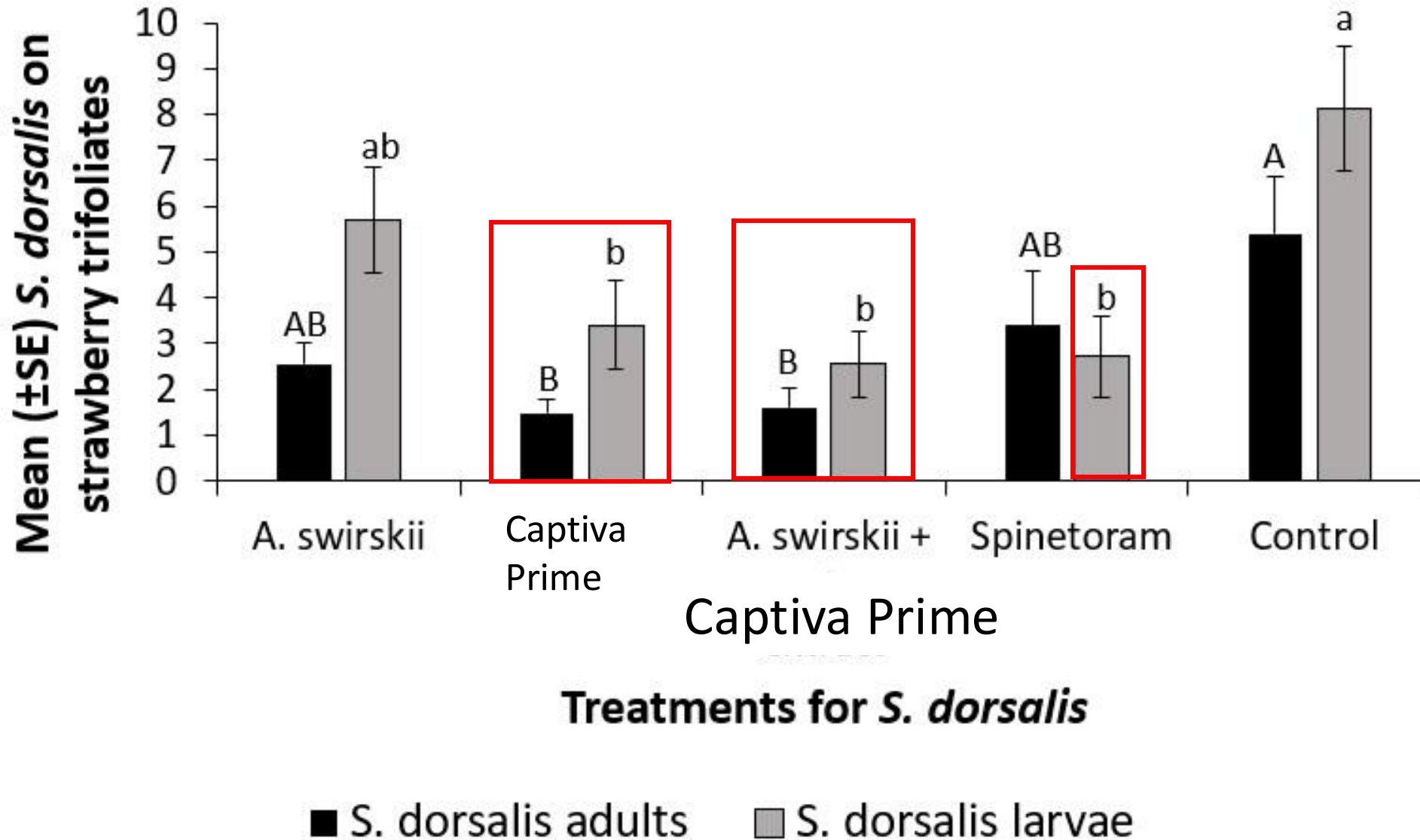


Mean (\pm SE) chilli thrips count in four strawberry cultivars planted on black, white and metallic mulch. PROC MIXED followed by Tukey-Kramer test ($\alpha = 0.05$), SAS Institute v.9.4. Gireesh et al. (in prep.).

Biological Control of *S. dorsalis*



IPM for Chilli Thrips



Lahiri et al. 2024. Journal of Economic Entomology.

<https://doi.org/10.1093/jee/toae144>

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Sriyanka Lahiri, Gagandeep Kaur, Allan Busuulwa, Field efficacy of a biopesticide and a predatory mite for suppression of *Scirtothrips dorsalis* (Thysanoptera: Thripidae) in strawberry, *Journal of Economic Entomology*, Volume 117, Issue 4, Pages 1623–1627, <https://doi.org/10.1093/jee/toae144>

Acknowledgements

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Hatch Project
No. FLA-GCR-
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Specialty Crop Block Grant Program

