

BACKGROUND

Insect diversity is threatened by the use of broad-spectrum chemical applications to control pest populations.

Insectary strips can reduce the use of chemical sprays by attracting more beneficial insects to biologically control pest populations.

Native wildflowers have the potential to support more insect diversity by providing more diverse source of nectar and pollen.

There is limited information on how native wildflowers effect insect diversity in the Lower Rio Grande Valley.



OBJECTIVE/HYPOTHESIS

Objective of this study is to determine if incorporating native wildflowers in the farm edges attract beneficial insects compared to control.

We hypothesized that native wildflowers would attract higher number and diversity of beneficial insects compared to control.

METHODS

Treatments

Sunn hemp, native mix, and control
Replicates: 6 each

Insect collection and identification

- Pitfall traps
- Pollinator traps
- Sticky traps
- Insect identification based on orders and function within the agroecosystem
- Relative Abundance calculation



PRELIMINARY RESULTS

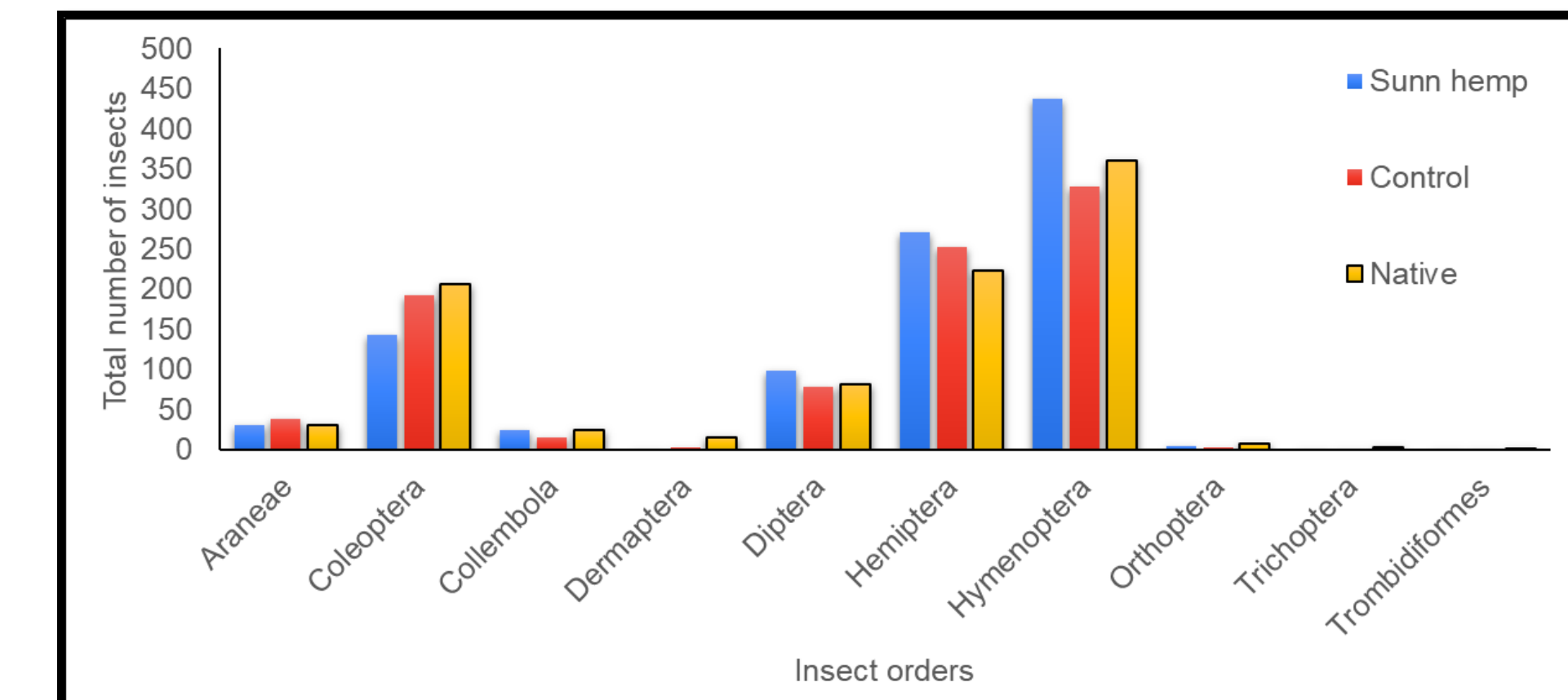
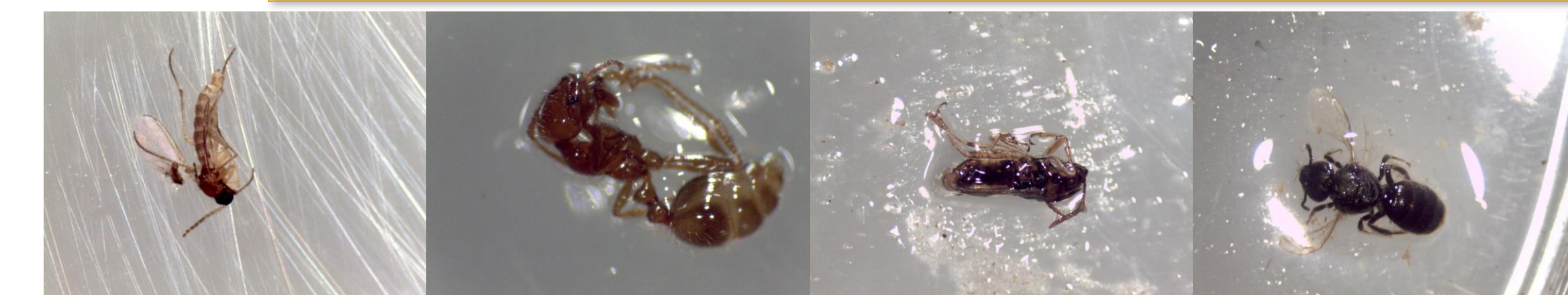


Figure 2. Total number of insects collected in each treatment by insect order.

There was a significant difference in the total number of insects among different treatments.

The order Hymenoptera was the most abundant out of all the listed orders. This was a mix of pollinators such as bees, and predators such as ants. The sunn hemp treatments had the abundance compared to native and control treatments.

Hemiptera was the second most abundant order, which chiefly constituted of sucking type insects such as aphids and stink bugs. While the difference between the treatments is less pronounced, sunn hemp had greater abundance compared to others.



ACKNOWLEDGEMENTS

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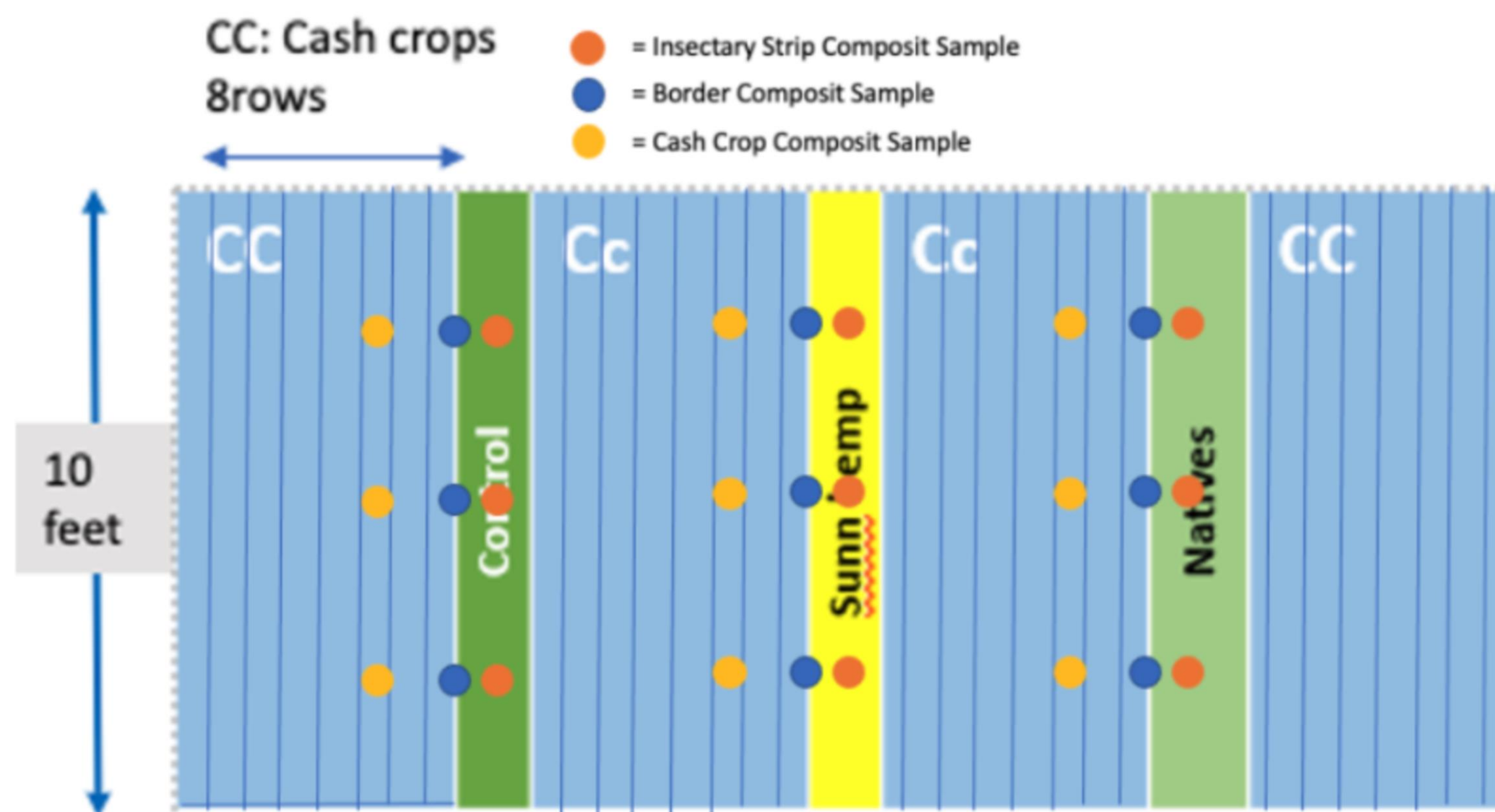


Figure 1. Experimental design illustrating different treatments and sampling locations in the field.