

Restoring *Agave palmeri* for Bats: Rehabilitating Native Habitats in Coronado

National Memorial

Amy Gill & Elise Gornish
University of Arizona



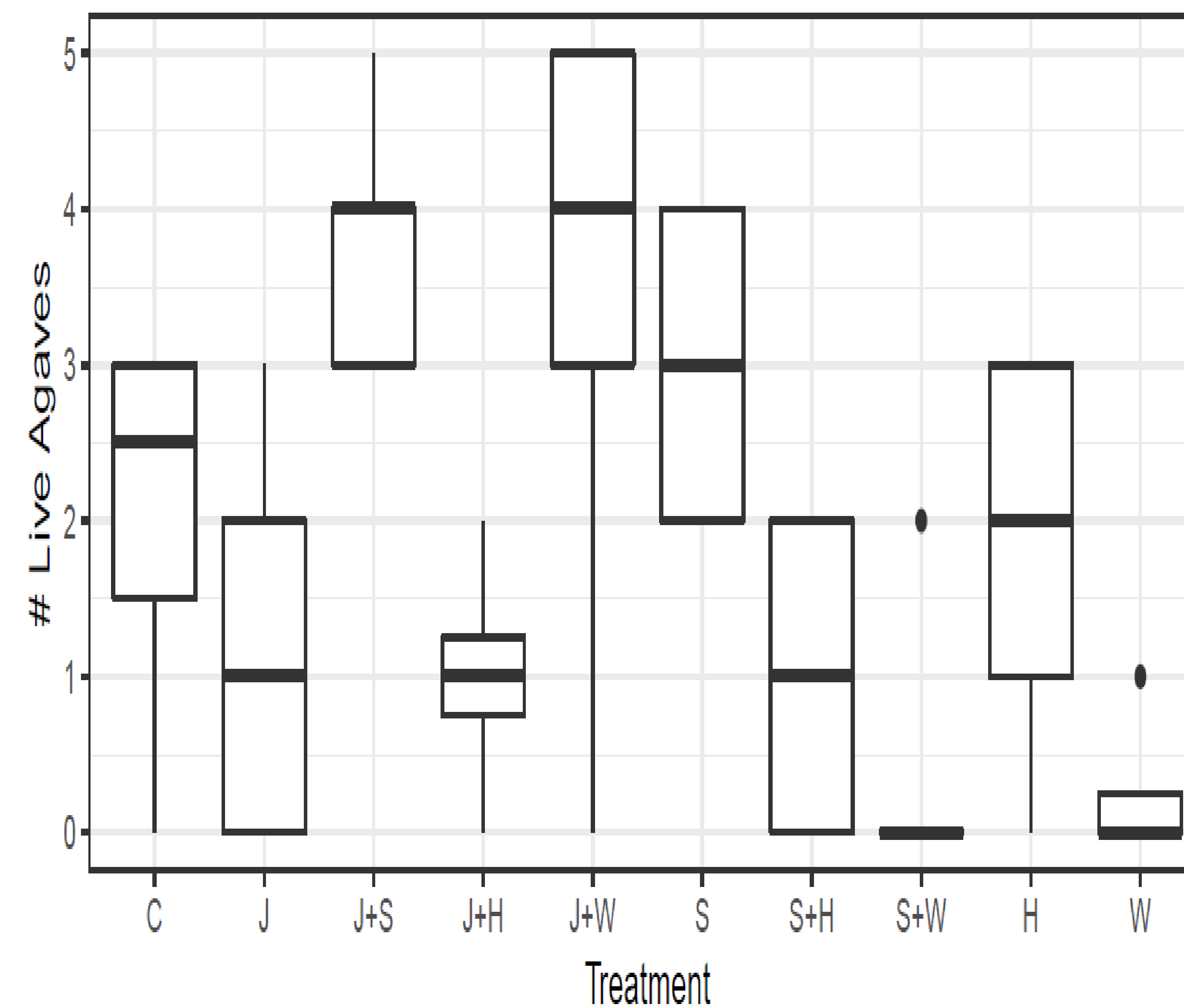
Objectives

- Restore the *Agave palmeri* plant population destroyed by US-Mexico border wall construction
- Assess and monitor the factors contributing to young Agave mortality through the set treatments
- Replenish food sources for the migrating bats

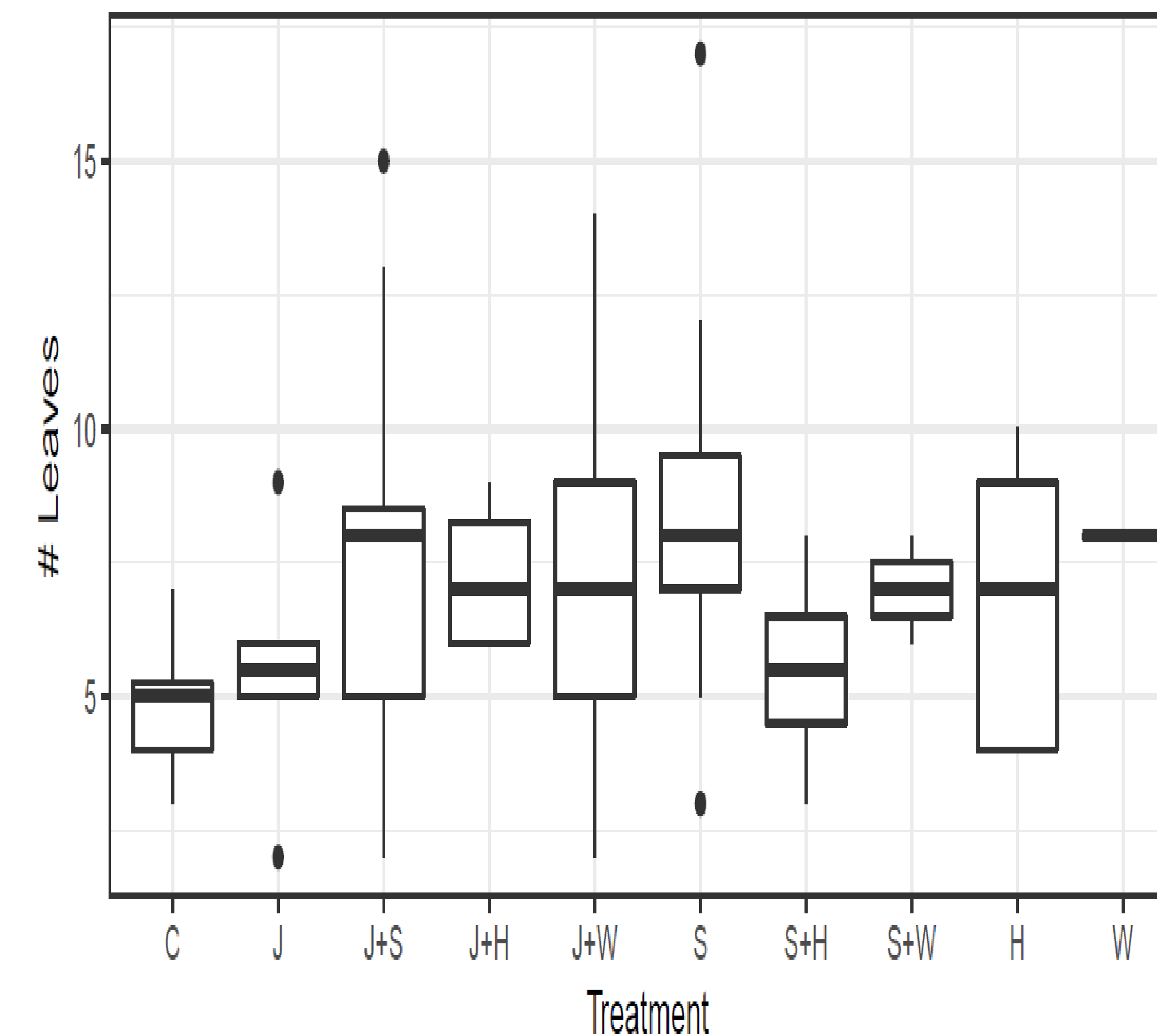
Methods

- 1200 plants were planted in six-one Hectare plots. There were 10 rows in each plot, 20 plants/per row.
- Total number of ten treatments were randomly assigned to rows in each plot.

Agave survival by treatment

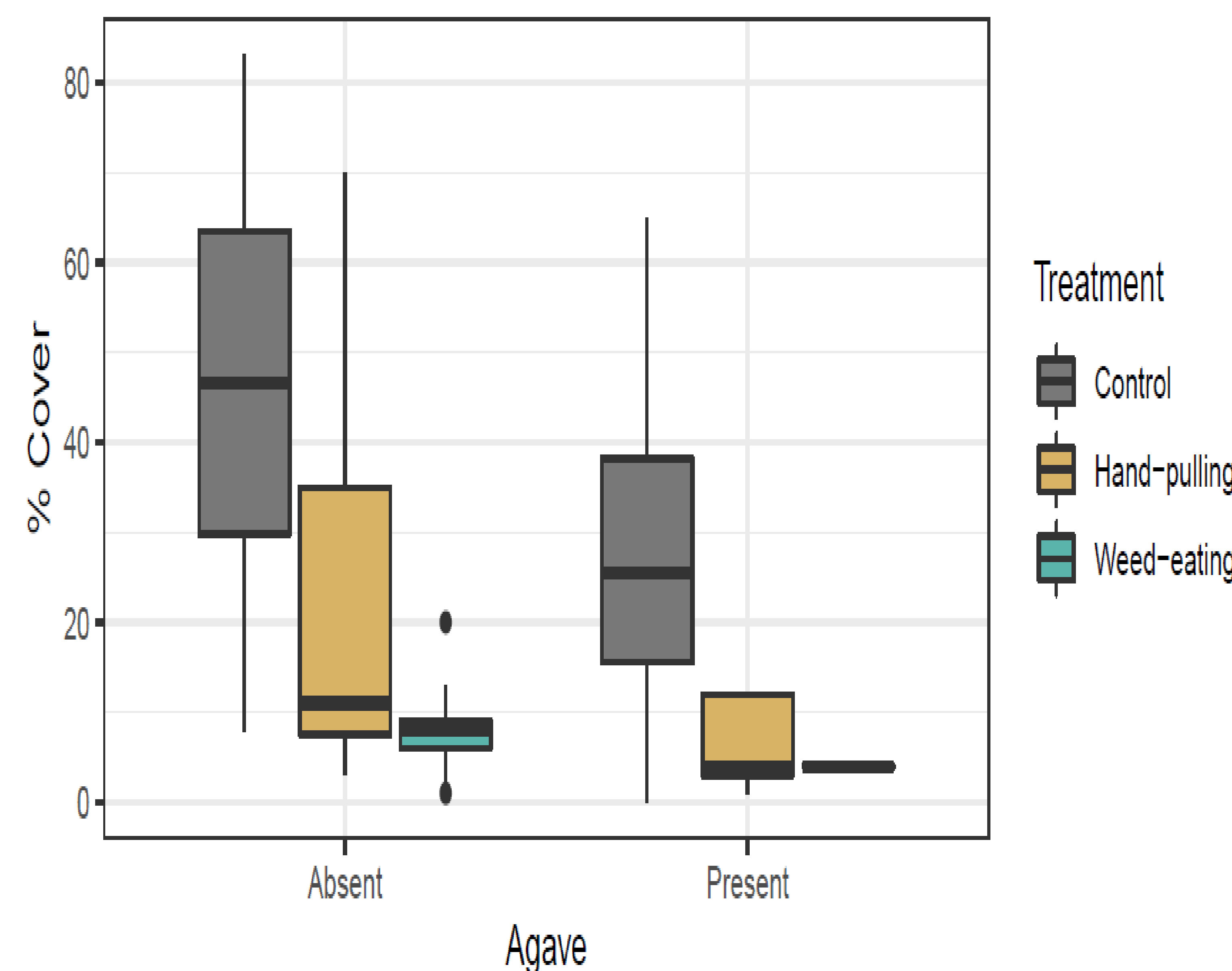


Agave size by treatment



C = Control
S = Shade cloth
J = Wire mesh to avoid Javelina herbivory
H = Hand-pulling Lehmann lovegarss
W = Weed-eating Lehmann lovegarss

% Lehmann cover by agave presence



Results

- Both, **J+S** and **J+W**, protection gave significant Agave survival responses. But, **J+S** gave more substantial results for the Agave size.
- S** alone significantly improved Agave survival and size. But, **H** and **W** alone, negatively impacted the survival and growth results.

Conclusion

- Agave plant growth is favored by the shade cloth (Pavlisca et al., 2011).
- Wire mesh obstructs the predation and would be beneficial for the early stages as most Agave survival and size significant results for **J+S**.
- Removing Lehmann lovegrass reduced the competition but exposed the plants to increased predation.
- W** treatment could be discarded as a whole. Also, **H** was the least significant treatment of all.

Reference

Pavlisca, L. L., Fehmi, J. S., & Smith, S. E. (2015). Assessing Emergence of a Long-Lived Monocarpic Succulent in Disturbed, Arid Environments

Acknowledgements

Helen Fitting, Brooke, Albert Kline and Whitney, and Jeff Oliver provided the project support.

