Exploring Factors Influencing Residents' Adoption of Pollinator-Friendly Gardening Practices

Cody Gusto, Colby Silvert, Dr. Laura Warner, Dr. John Diaz

Grant Project PI: Dr. Rachel Mallinger

UF|IFAS UNIVERSITY of FLORIDA

AGRICULTURAL EDUCATION AND COMMUNICATION

For more information, please contact Cody Gusto at cgusto@ufl.edu

Background

- The process of urbanization drives significant land-use changes, which frequently contributes to floral resource losses (i.e., reduced flower abundance, diversity, quality, or temporal availability)

  - *Reduced floral resources may result in lower fitness for both wild bee and honeybee populations, homogenized bee communities, and reduced bee immunity (Timberlake et al., 2019; Goulson et al., 2015)*

- The direction of ecological impact from developed landscapes is not a foregone conclusion

  - *Emerging evidence suggests that developed, urban habitats can be more supportive of pollinator richness than less developed, rural habitats (Theodorou et al., 2020)*

- In addition to a greater understanding of landscape design, management, and other local-scale factors, there is a need to better understand Florida residents' attitudes and perceptions towards pollinator gardening barriers to maximize impact

Purpose

- Objective 3 in a multi-objective NIFA grant project to evaluate factors (both ecological and socio-economic) shaping pollinator conservation outcomes

- The primary goal of this study was to explore socio-economic barriers and salient strategies/solutions related the enhancement of pollinator gardening

Methods

- Elicitation phase of a two-phased examination

- Focus group recruitment facilitated through social media, with posts shared on county Extension channels and other FB pages
  - *Posts included an online screening questionnaire to ensure inclusion criteria met and to segment participants by gardening experience/interest*
  - *$50 Visa gift card incentives*

- Three virtual focus group sessions facilitated with 20 residents from a pool of +1,300 across three FL counties (Hillsborough, Leon, Marion)

- Thematic analysis conducted within NVivo

- Analyst triangulation, peer debriefing, and audit trail reporting used to improve trustworthiness of findings (Lincoln & Guba, 1985)

Results

- Core **barriers** related to:
  - Limited knowledge/information access
  - Social norms (neighbor/HOA perceptions)
  - Upfront financial investment(s)
  - Time and labor burden(s)
  - Trial and error capacity
  - Yard characteristics (e.g., limited space/excessive Shade)

- Core **strategies/solutions** related to:
  - Developing neighborhood/HOA buy-in/support
  - Pre-installation research/planning
  - Information sourcing/skill building
  - Sourcing seeds/plants

- Focus group findings triangulated with rapid literature review evidence to generate final list of salient themes

Conclusions & Next Steps

- Overall, participants across gardening experience and interest categories **strongly support** pollinator gardening practices

- **Social norms** (e.g., HOA ordinances), **time/knowledge requirements**, and **financial cost** perceived as significant barriers

- Agreement on solutions that build upon existing practices, experiences, and examples to potentially scale up

- A survey informed by these themes was developed and disseminated. Analysis of these results is currently underway

References

- Goulson, D., Nicholls, E., Botías, C., & Rotheray, E. L. (2015). Bee declines driven by combined stress from parasites, pesticides, and lack of flowers. *Science, 347*(6229), 1255957

- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. sage.

- Theodorou, P., Radzevičiūtė, R., Lentendu, G., Kahnt, B., Husemann, M., Bleidorn, C., ... & Paxton, R. J. (2020). Urban areas as hotspots for bees and pollination but not a panacea for all insects. *Nature communications, 11*(1), 1-13.

- Timberlake, T. P., Vaughan, I. P., & Memmott, J. (2019). Phenology of farmland floral resources reveals seasonal gaps in nectar availability for bumblebees. *Journal of Applied Ecology, 56*(7), 1585-1596.

Acknowledgements

UF|IFAS UNIVERSITY of FLORIDA

CLUE | CENTER FOR LAND USE EFFICIENCY