Developing Snail Management in Citrus Groves

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Take Home Message:

- Baits are currently the best tool for *Bulimulus* snail management.
- *Bulimulus bonariensis* activity began in mid-April 2023 and has been continuous since that time.

Effort Statement: Beginning in January 2023 with funding from CRDF, we began monitoring snail population activity. In the latter portion of 2023, we will be looking for evidence of naturally-occurring predators for this pest.

Summary: *Bulimulus bonariensis* (*sporadicus*), a land-dwelling snail, has been impacting several industries throughout central and north Florida including citrus. Damage from this pest largely comes from irrigation jets thereby reducing the amount of water getting to roots and consuming young tree foliage in individual protective covers (IPC). Snails and slugs are challenging to control through topical pesticides. To date, the most effective controls for this group of pests come in the form of baits. Previously, we evaluated several pesticides and molluscicidal baits and chemistries under laboratory conditions. None of the topical chemistries tested, including bifenthrin and carbaryl, impacted the snails. Baits with metaldehyde, sodium ferric EDTA, and iron phosphate killed over 90% of snails in laboratory trials. This is promising and field trials are currently underway. To inform timing of management practices, we are currently monitoring *B. bonariensis* populations throughout central Florida. We expect that timing bait applications to periods of population growth will have a greater impact on the overall snail population than random applications. Monitoring began in late fall of 2022 and first emergence of juveniles was documented in mid-April. Since this time, steady mixed age populations have been recorded at all sites. Along with monitoring, we are evaluating two types of traps for helping growers determine when to time management activities in the future.

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