

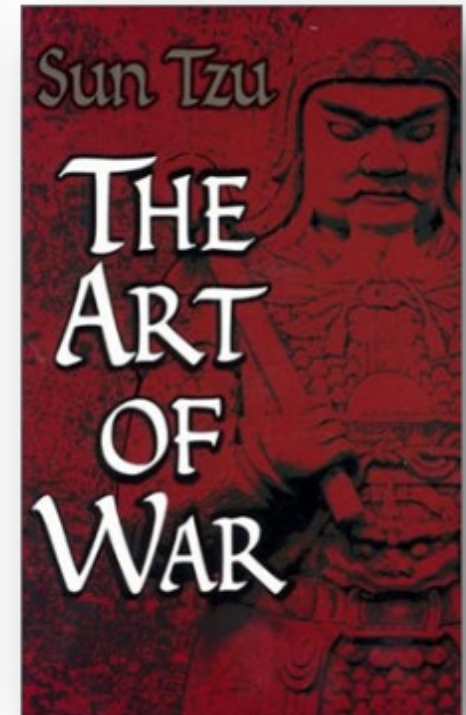
BRINGING NEW PEST MANAGEMENT TECHNOLOGY TO THE FARM: THE ROLE OF UGA RESEARCH AND EXTENSION

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UGA Research & Extension: What we do and why we do it...

- It is said that if you know your enemies and know yourself, you will not be imperiled in a hundred battles ...Sun Tzu, The Art of War (6th century BC)
- Know the crop, know the pest, know the tools, provide that knowledge to growers.



BRINGING NEW PEST MANAGEMENT TECHNOLOGY
TO THE FARM: THE ROLE OF UGA RESEARCH AND
EXTENSION

- Rootworm as a case study



Southern corn rootworm

- Well studied
 - Native...it has always been here
 - Eats many different plants
 - Immature stage lives entirely below ground
 - Requires moist soil to survive
- Where is it a problem?
- Fields with heavy textured soils and irrigation





History of rootworm management

- In the old days: DDT, diazinon, dyfonate, carbofuran, chlordane
- Chlorpyrifos registered for use in peanut in the 1980's.
 - Commonly used after that time for insect and disease management
 - Things change...
 - Better fungicides
 - Better understanding of soil insect risk
 - Chlorpyrifos use declined but continued in areas of high rootworm pressure.





A new rootworm: Banded cucumber beetle

- Poorly studied
- Not native...tropical origin, not supposed to survive freezing temperatures
- Adapted...survives GA winter
- Immatures appear to survive in soils that are not suitable for SCRW
- Increased abundance in recent years

Chlorpyrifos regulatory history

- Chlorpyrifos received increased regulatory scrutiny
 - 2015: Obama EPA announces plan to ban
 - 2017: Trump EPA responds, Um, no...we are not going to ban
 - 2019: 9th Circuit Court of Appeals says EPA must provide evidence of safety or ban
 - 2021: Biden EPA publishes rule to cancel all food use tolerances
 - 2022 & 2023: Virtually nothing growers could do to manage RW in peanut.
- UGA Peanut Entomology
 - Tested alternate chemistry
 - Studied rootworm biology
 - Met with EPA scientists
 - Wrote letters & provided use data

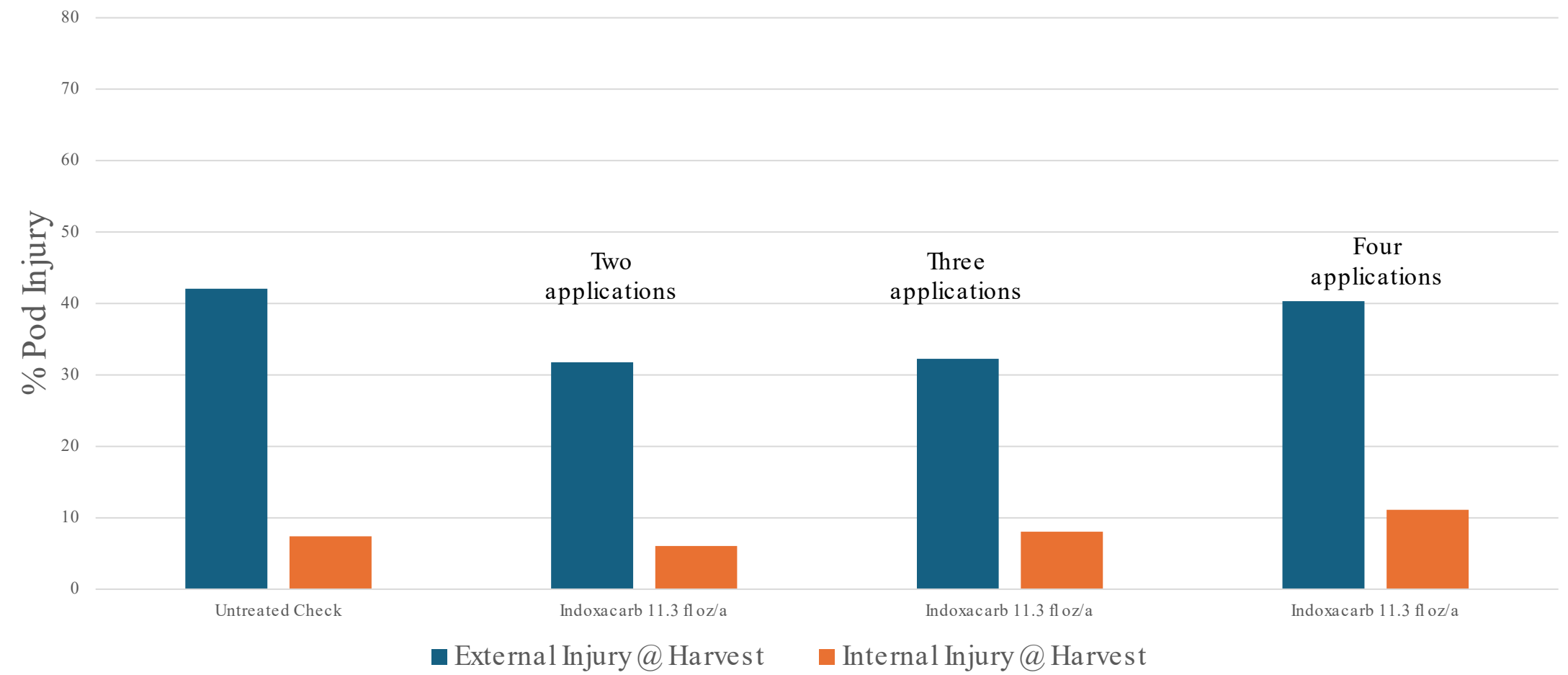


Rootworm management without chlorpyrifos?

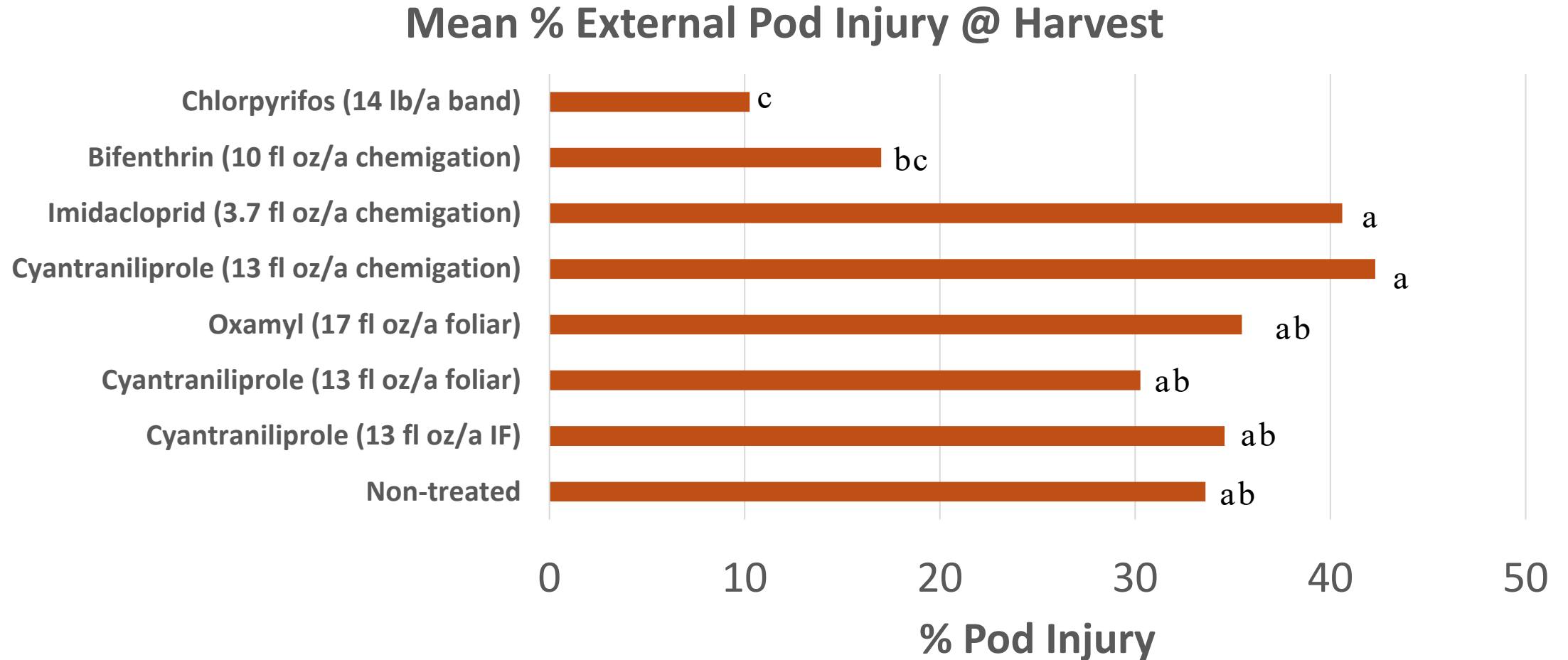
- Biology
- Risk factors
- Cultural practices
- Other insecticides



Results: foliar sprays targeting adults



Results: use patterns and AI's targeting larvae



Relationships matter...

“What do y’all need in peanut?” –Syngenta scientist at a meeting in 2018ish.


..and I said, “We need something for soil insects, especially rootworm.”




and she said, “Hmmm, I might have something for you to look at.”


UGA SWREC, Plains, GA 2021 Rootworm Trial
A22466 [G] In-furrow at plant
105 DAP



Pics of peanuts

 Syngent...eanut.pptx


 Mark Abney  SYNGENTA.COM>
To:  @SYNGENTA.COM'

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Thought you might like a visual...

Whatever that stuff is, it ain't no joke. Get me a damn label.

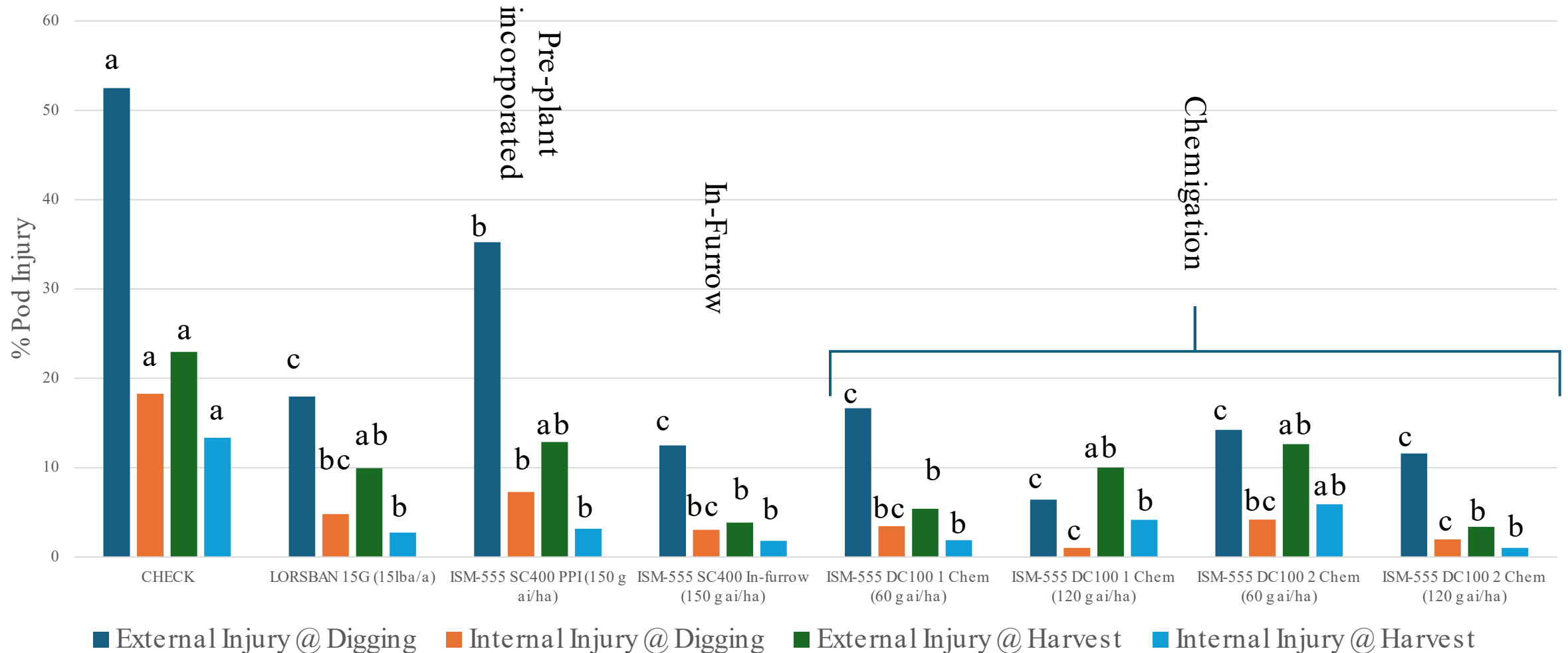
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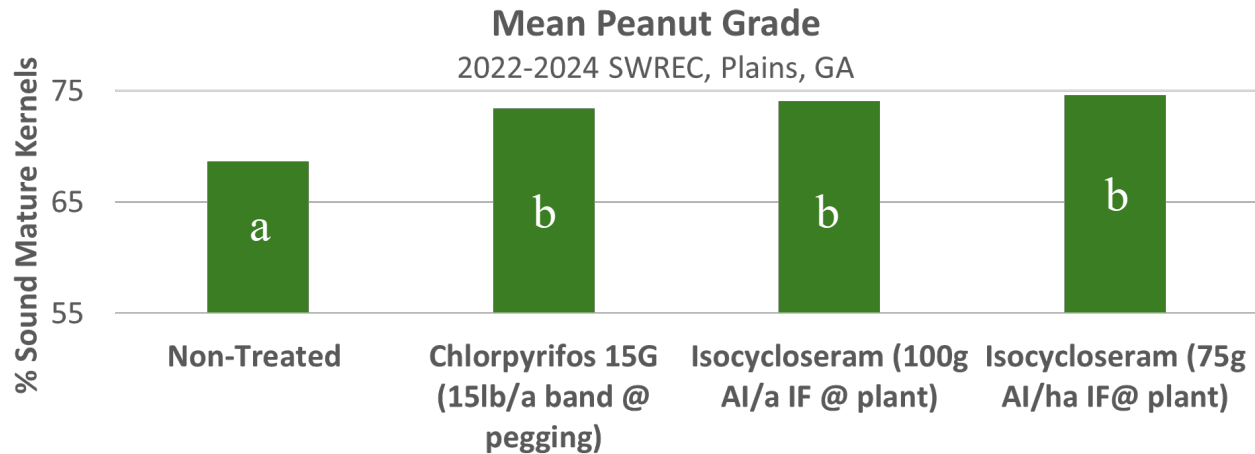
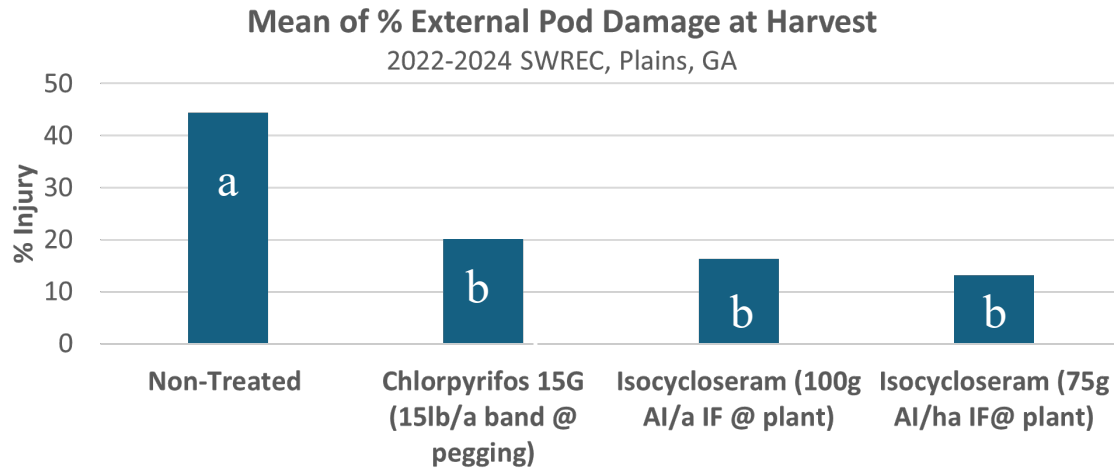
Plains, GA 2021 Rootworm Trial
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Efficacy testing.. use pattern, rate, formulation



Dialing it in...



Where we stand

- Isocycloseram applied in-furrow and chemigation has provided consistently significant reduction in pod injury
 - Provided registration support letter to EPA in May
 - Will hopefully be labeled for use in 2025
 - Initial label will not have in-furrow use
 - Need to optimize chemigation applications until in-furrow use is available





BRINGING NEW PEST MANAGEMENT TECHNOLOGY TO THE FARM: THE ROLE OF UGA RESEARCH AND EXTENSION

- So, what is the university's role...
 - Identify needs and communicate those needs to the industry and to regulatory agencies
 - Explore all options from biological to chemical
 - Develop unbiased data on best management practices
 - Provide education so growers can implement best practices

Thank You!