



Processing Insect Pests 2023-2024

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Bringing SCM into a Field



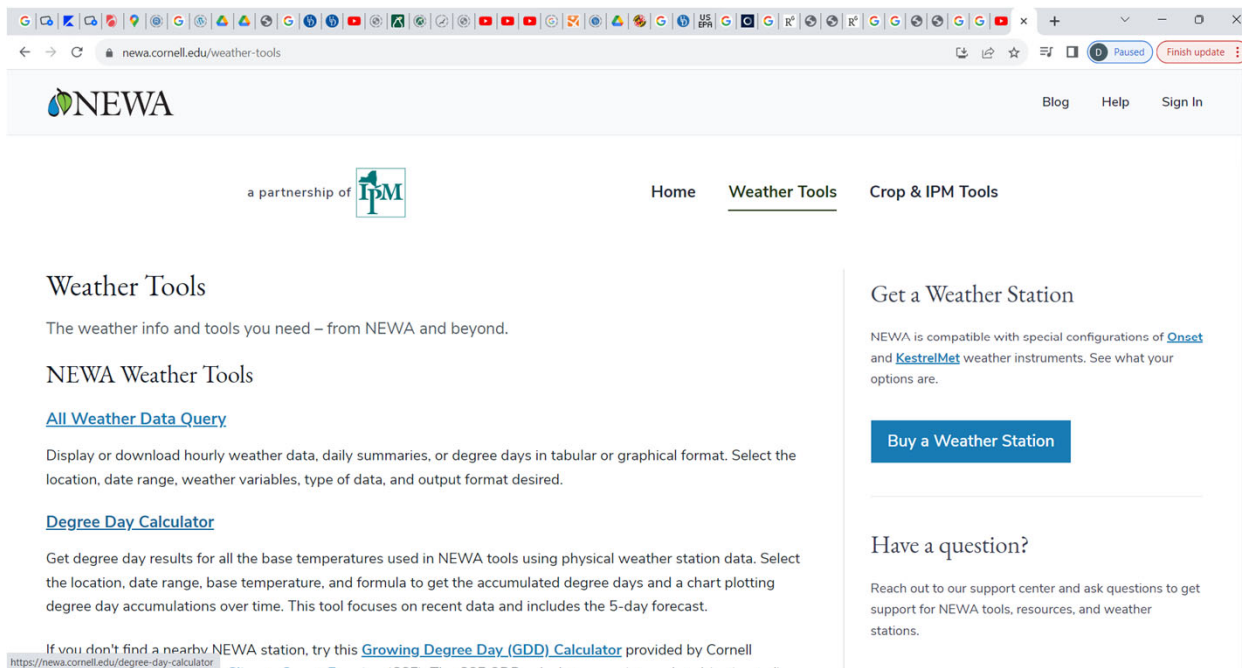
Getting Off To the Right Start

- Plant Warm
- Plant at Right Depth
- Plant at Right Time
- Plant with Protection



Plant at the Right Time

- Degree Day Models



The screenshot shows the NEWA (New England Weather Network) website. The header includes the NEWA logo and navigation links for Home, Weather Tools, and Crop & IPM Tools. The main content area is titled "Weather Tools" and describes the site's purpose: "The weather info and tools you need – from NEWA and beyond." It lists several tools: "All Weather Data Query", "Degree Day Calculator", and "Growing Degree Day (GDD) Calculator". Each tool has a brief description of its function. For example, the "Degree Day Calculator" tool allows users to select location, date range, base temperature, and formula to get accumulated degree days and a 5-day forecast. A footer note mentions that if a nearby NEWA station is not found, users can try the "Growing Degree Day (GDD) Calculator" provided by Cornell.



Cartoon by Celia Muntz

Berries

[Top of page](#)

Blueberry Maggot. Optimize monitoring for blueberry maggot (*Rhagoletis mendax*) with this base 50°F BE degree day tool that predicts adult emergence and enhances your ability to use IPM to determine if insecticide treatments are needed.

Strawberry Diseases. Optimize fungicide applications for strawberry fruit rot diseases. The tool predicts the optimal timing of fungicide applications for Anthracnose and Grey Mold based on temperature and rainfall. The model can be used from bloom through harvest in Day-neutral and June-bearing plantings of strawberries.

Field Crops

[Top of page](#)

Alfalfa Weevil. Follow base 48°F degree day accumulations to track alfalfa weevil (*Hypera postica*) life stages as part of your alfalfa forage management program.

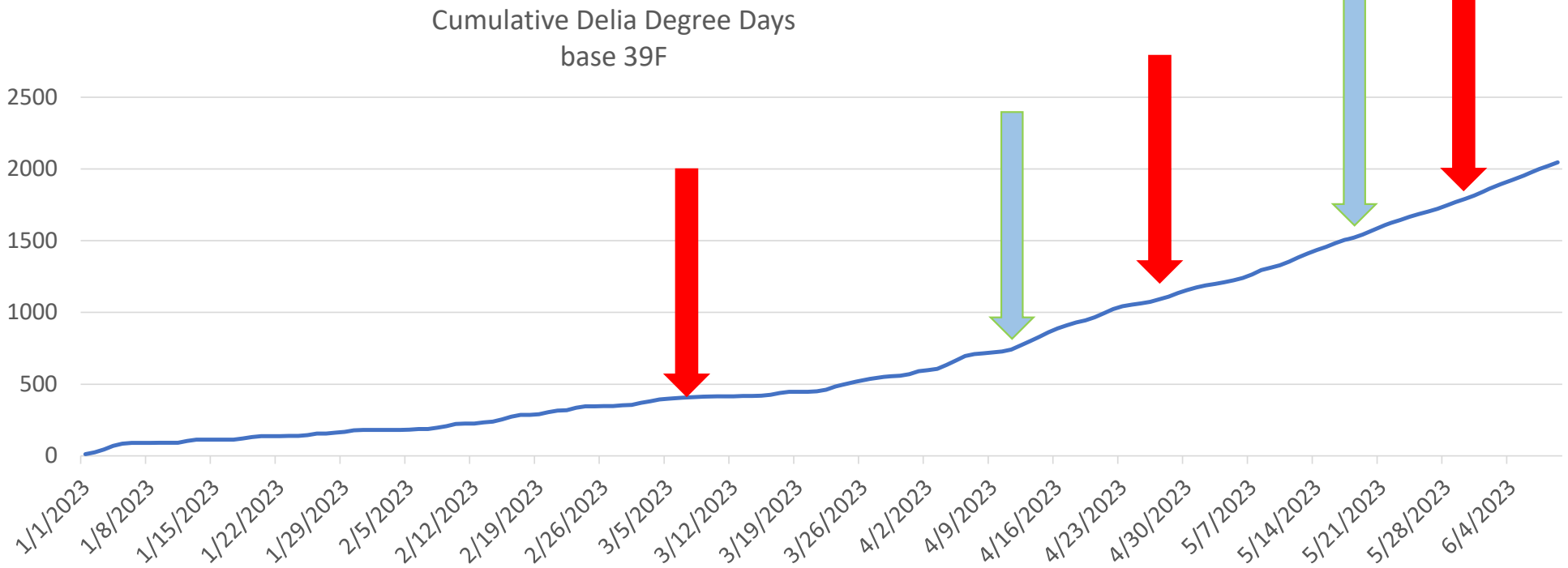
Black Cutworm. Coming 2025.

Seedcorn Maggot (Improved predictions are coming in 2023 and 2024). Monitor adult seedcorn maggots in the spring to avoid planting when maggots are in the soil. [New York State Integrated Pest Management](#) and the [Poveda Lab](#) at Cornell University are working to improve this model specifically for New York State field crop producers.

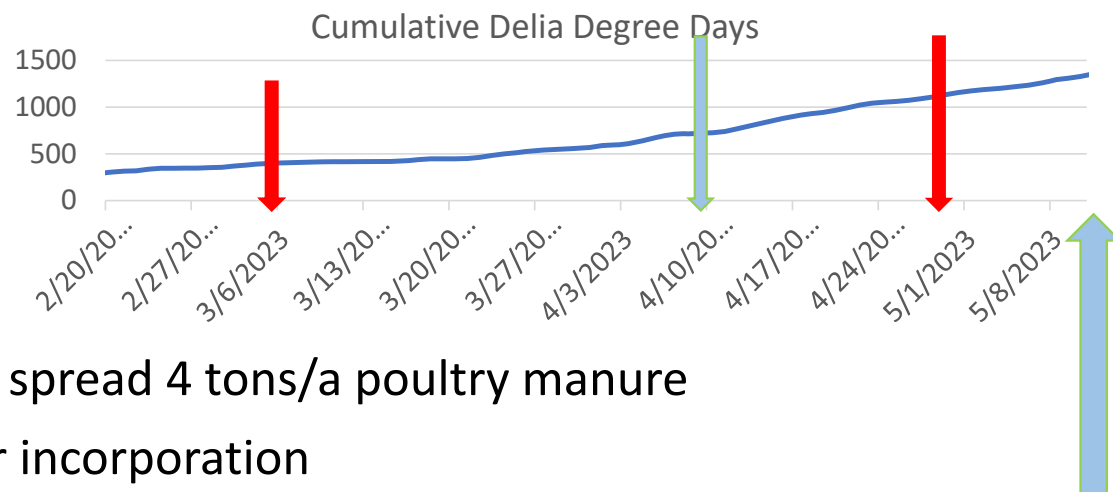
True Armyworm. Coming 2025.

Western Bean Cutworm. Track western bean cutworm adult moth flights to efficiently schedule your monitoring and management efforts. Daily base 3.3°C degree days, accumulated degree days from March 1, and current flight completion status are provided.

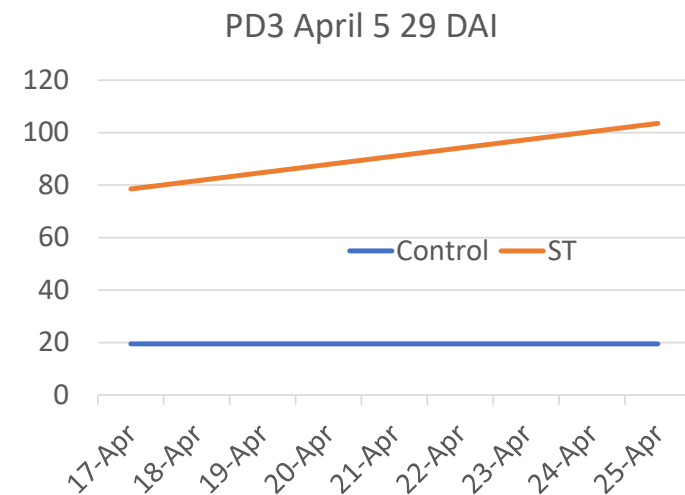
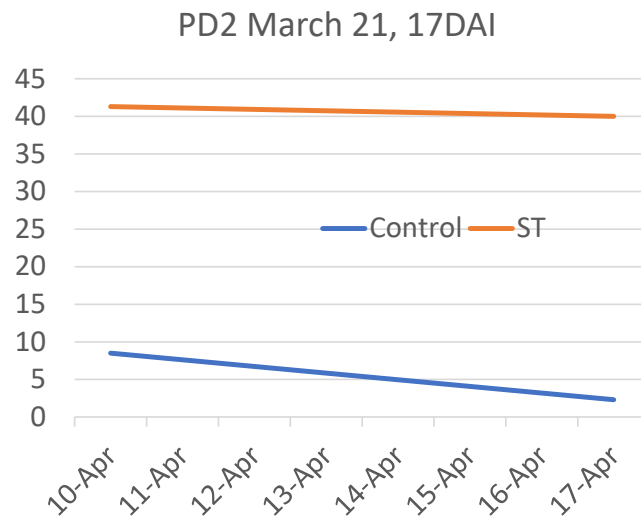
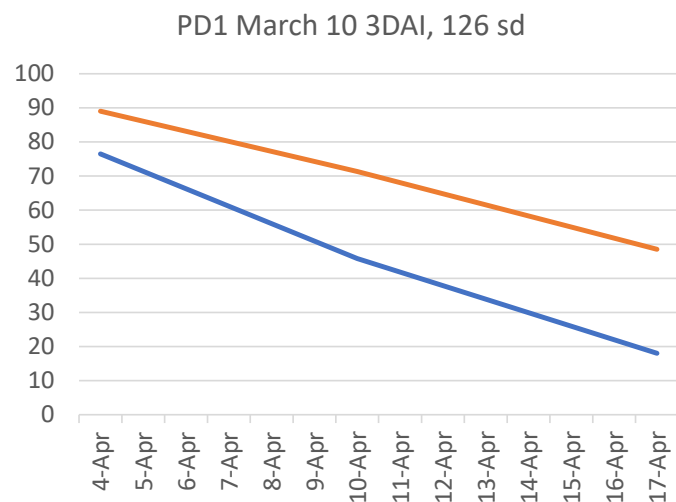
Seedcorn Maggot Degree Days



Planting Date Study 2023



- Incorporated Austrian winter peas March 7, spread 4 tons/a poultry manure
- Old Recommendation to plant 3 weeks after incorporation

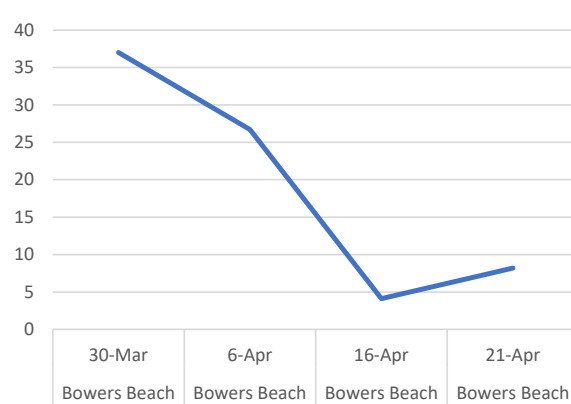


SCM 2023 Field Survey

- AgBio Delia lures, replaced weekly beginning at planting
- The idea was to compare trap catch with pea root damage



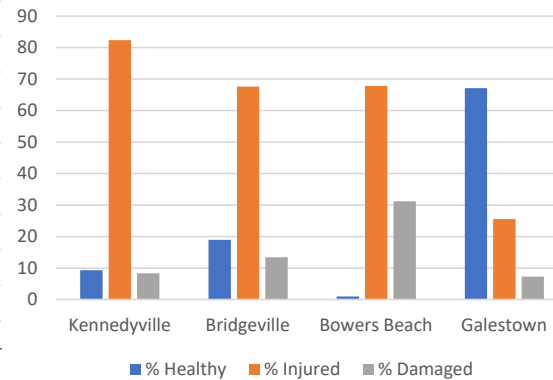
Bowers Beach SCM/Day



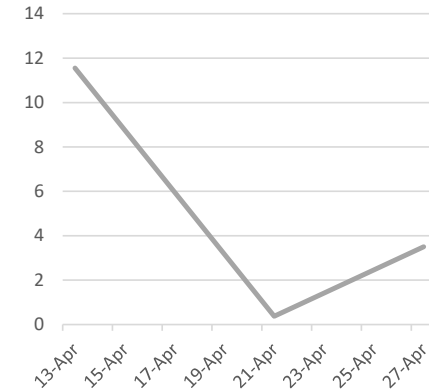
Bridgeville, DE



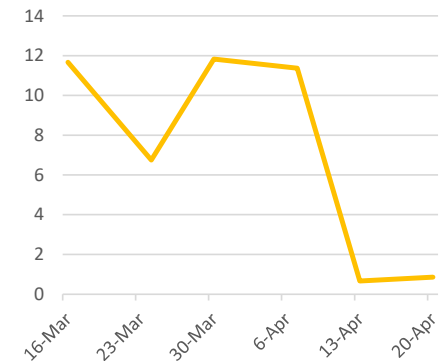
% Root Injury



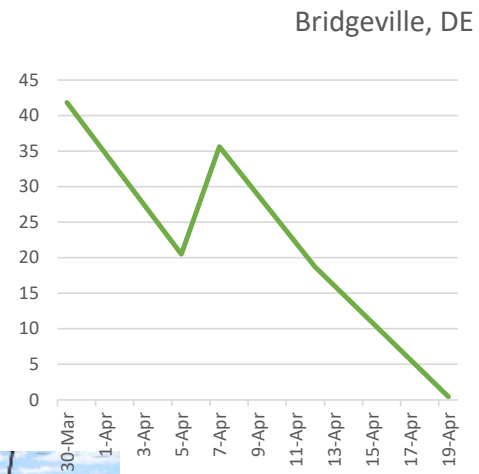
Galestown, MD



Kennedyville, MD



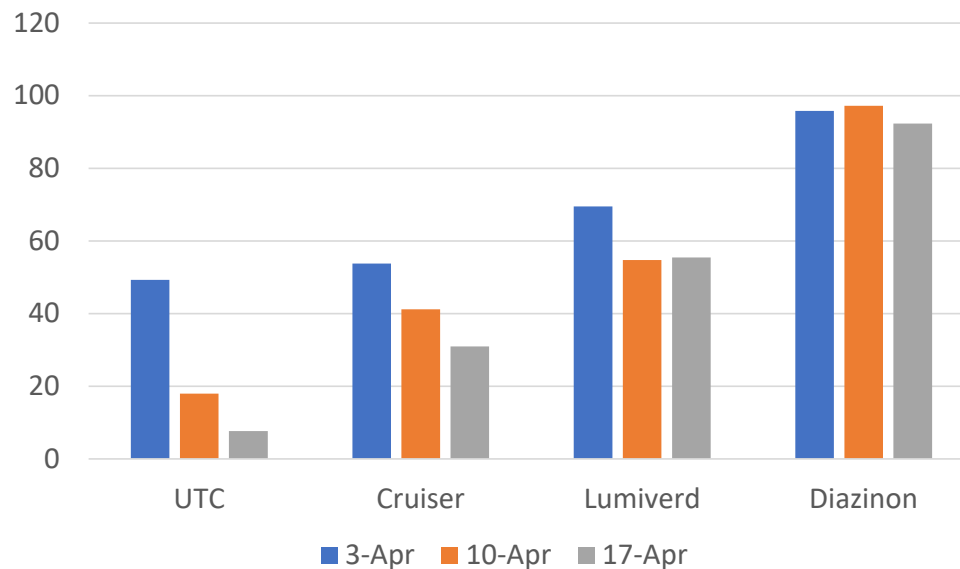
Bridgeville Peas



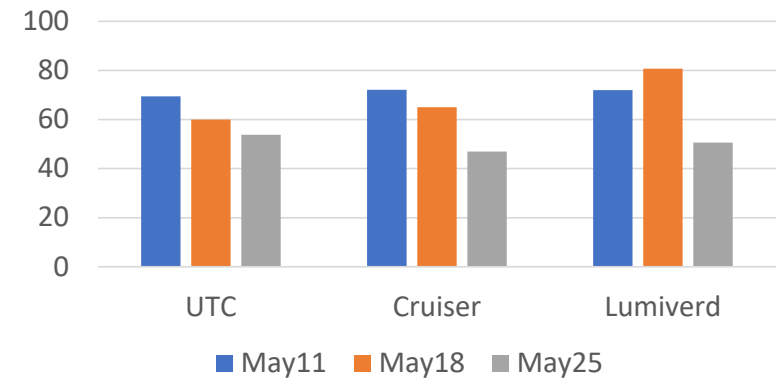
Plant With Protection: 2022 and 2023 Trials

- Incorporate cover crop (2023) and poultry manure (2023 and 2022) at peak fly emergence, plant 4-7 days later
- Looking for alternatives to Cruiser
- When would Diazinon be valuable? Esp. with Melons?
- Lumiverd = spinosad

Pea SCM1, March 9, max = 126

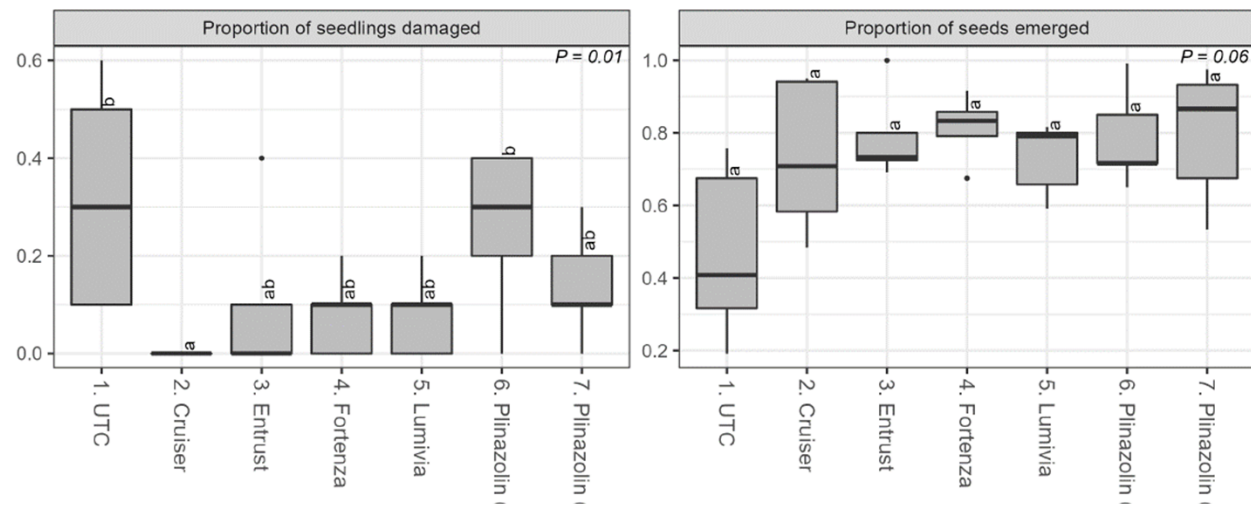


Pea SCM2, April 25, max = 126

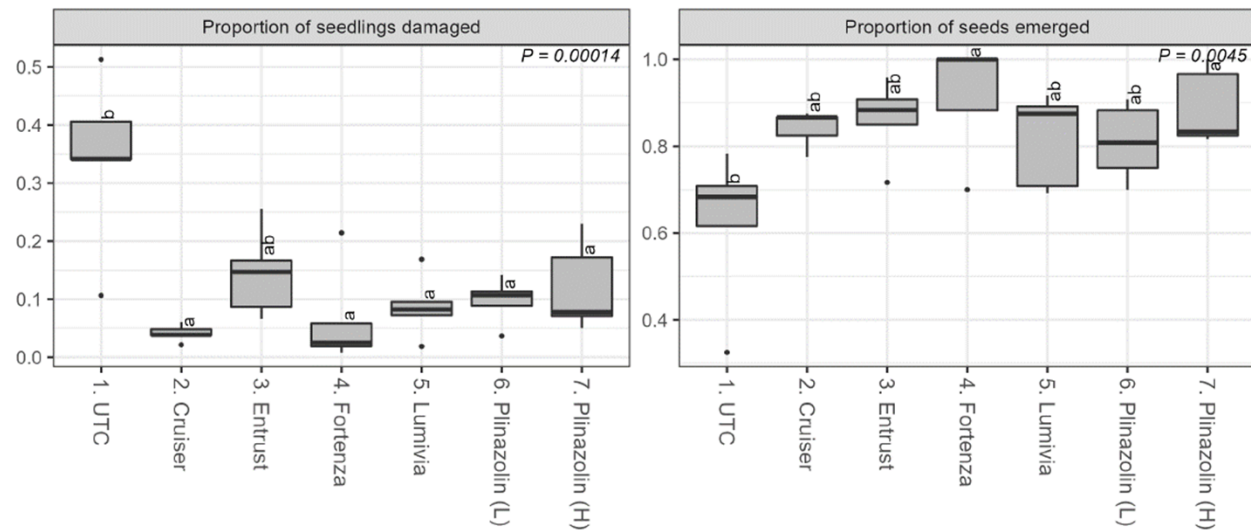


- Russel Groves, WI
- Entrust = Spinosad
- Fortenza = cyant.
- Lumivia = chlorant.

AARS Syngenta Green Bean SCM Trial (1st planting)

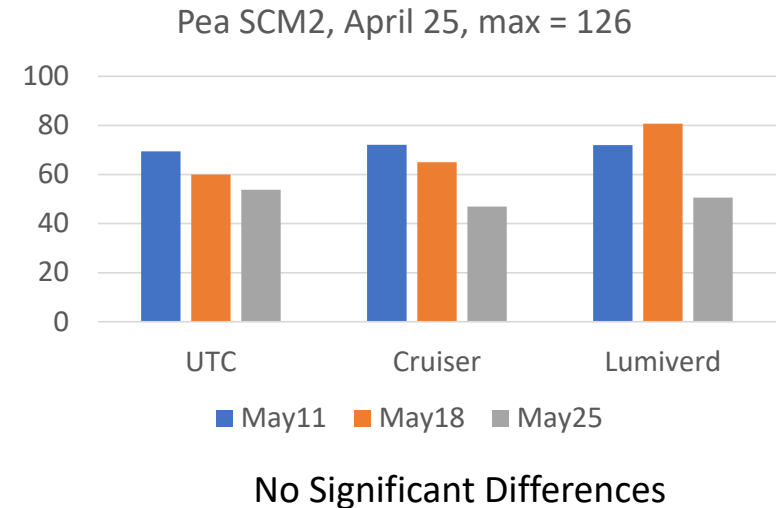
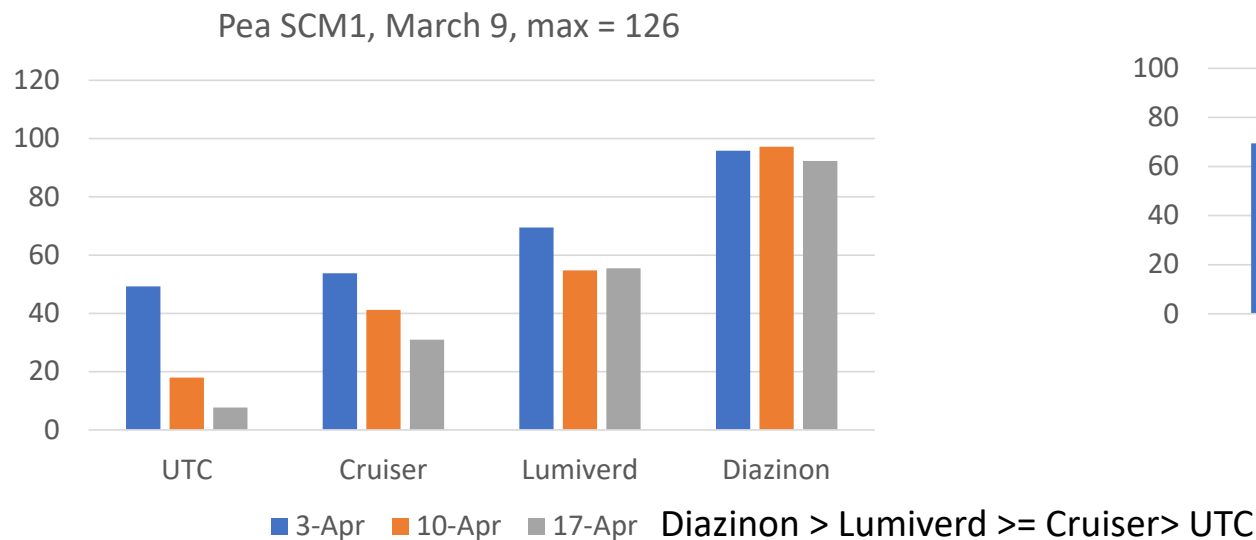


AARS Syngenta Green Bean SCM Trial (2nd planting)



Extreme Pea Damage

- Looking for alternatives to Cruiser
- When would Diazinon be valuable? Esp. with Melons?
- Lumiverd = spinosad



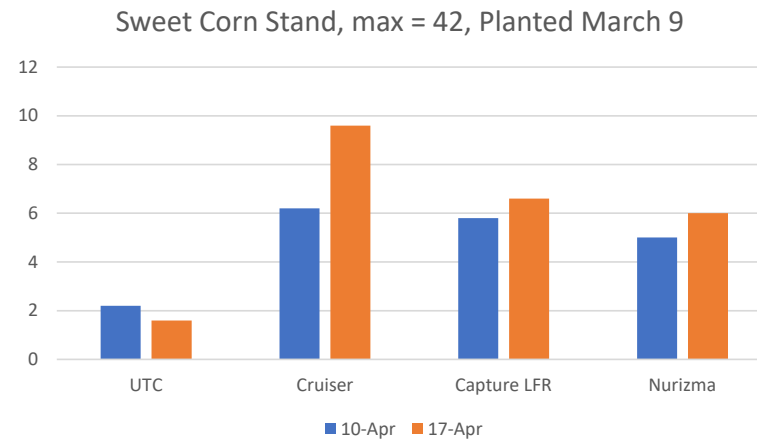
SCM Plans 2024

- Obj 1: SCM Traps to identify peak fly activity periods
 - Correlate Traps, DD, Root Damage
- Obj 2: Evaluate soil applied insecticides and seed treatments for efficacy
- Obj 3: Survey melon producers who experience SCM damage to transplants
 - When ground worked
 - When plastic laid
 - Treatment to soil or transplants?
- Obj 4: Fact sheet




Sweet Corn: Testing In-Furrow Materials

- Multiple freeze events = unhappy sweet corn



Seedcorn Maggot

- Focus on 2023, 2024
- Extension videos:
- 2023 damage less than 2022; still visited snap bean and soybean with heavy damage; pea injury widespread but seemed to be relatively minor



Seed Corn Maggot Control

UDEExtension
1.57K subscribers

Subscribe

552 views 1 year ago GEORGETOWN

Seedcorn maggot is one of the earliest crop pests in the mid-Atlantic. In this video, David O. ...
seedcorn maggot's pest status, biology, and management considerations for this pest, as v

SCM Objectives 2024

- Obj 1: SCM Traps to identify peak fly activity periods
 - Correlate Traps, DD, Root Damage
- Obj 2: Evaluate soil applied insecticides and seed treatments for efficacy
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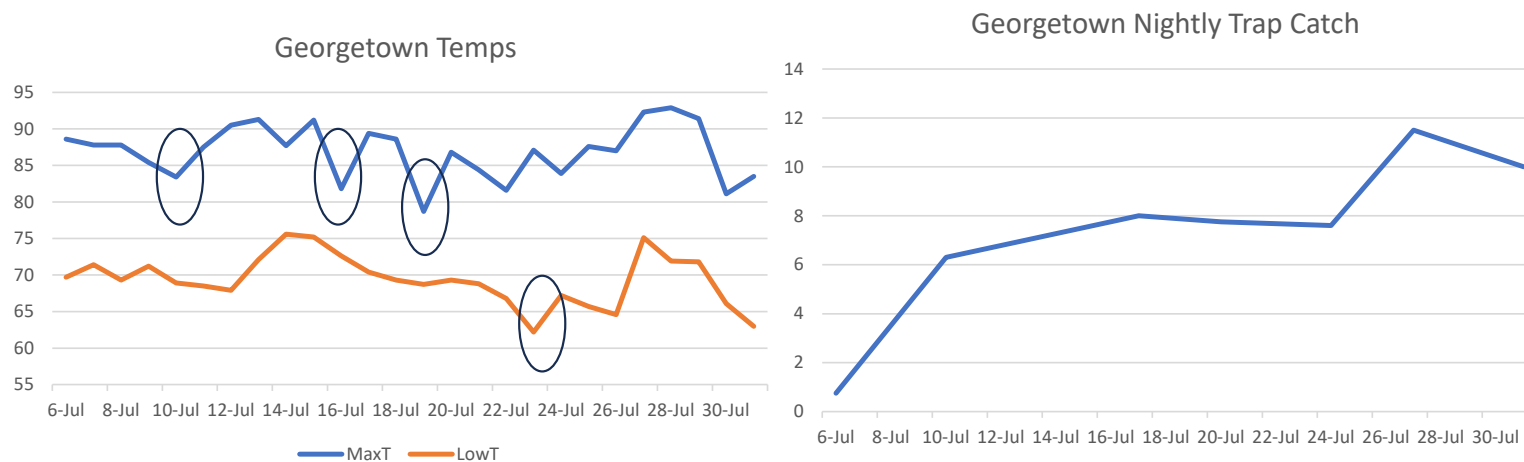


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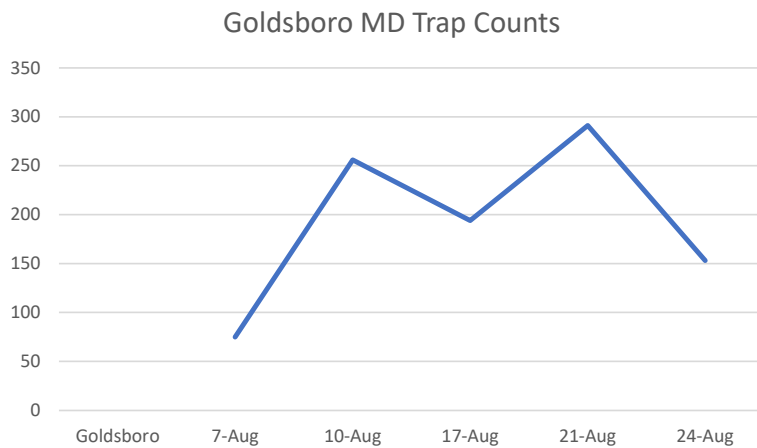
Sweetest Insect Pest: Corn Earworm

- 2023: some sites with high pressure early, multiple sites with very low pressure or with cooler weather



Some Sites with Extremely High Pressure

- Site next to blooming lima bean

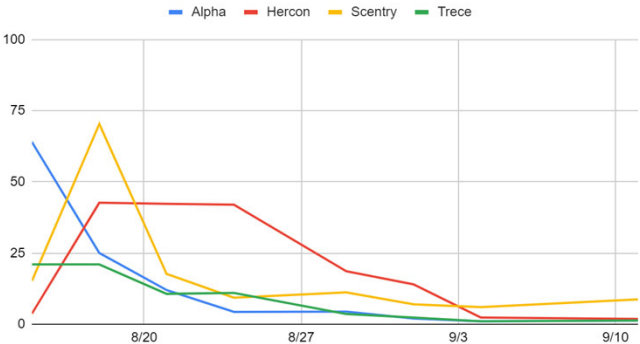


Not to be outdone...700+
moths in 2 nights by Helene
Doughty, VA's new
Northampton Ag Agent

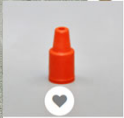
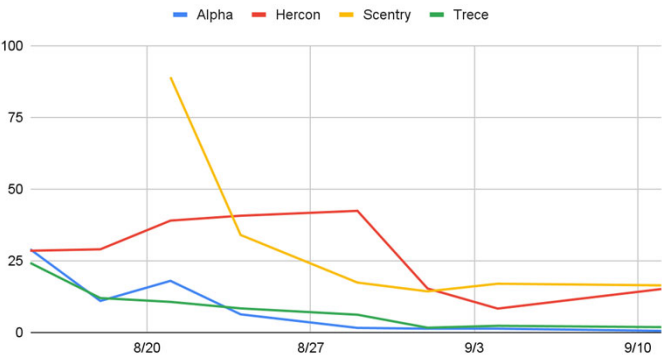


Trapping Comparison

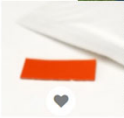
Scentry Trap Nightly Catch



Cone Trap Nightly Catch



TRECE PHEROCON
TOBACCO BUDWORM
(TBW) LURES, 3/CS
GL/TR-3122-03
US\$6.18

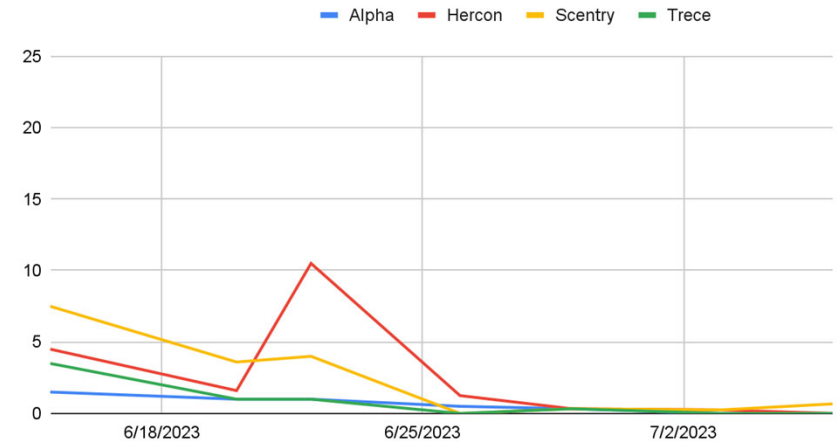


HERCON LURETAPE CORN
EARWORM, 10/CS
GL/HC-3138-10
US\$21.38

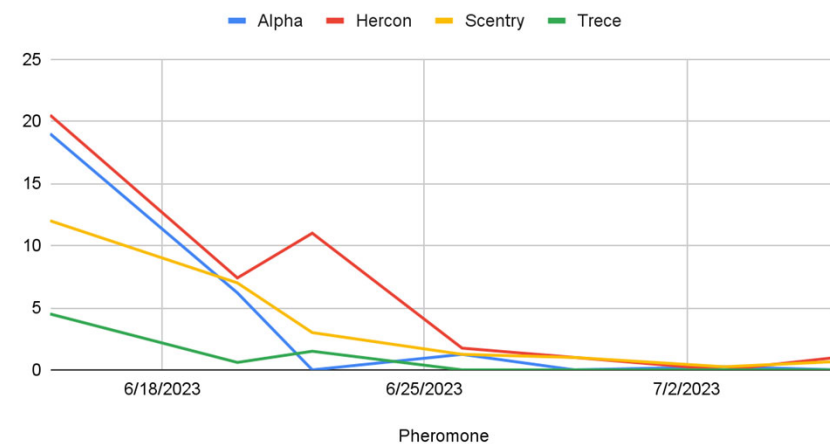
Trapping Comparison

- Generally, wire cone traps more efficient, especially with low populations
- Scentry traps affordable, but more difficult to deploy and maintain
- Hercon and Scentry lures seem to be more reliable – based on multiple trapping locations (Brian Nault lead)

Scentry Trap Nightly Catch

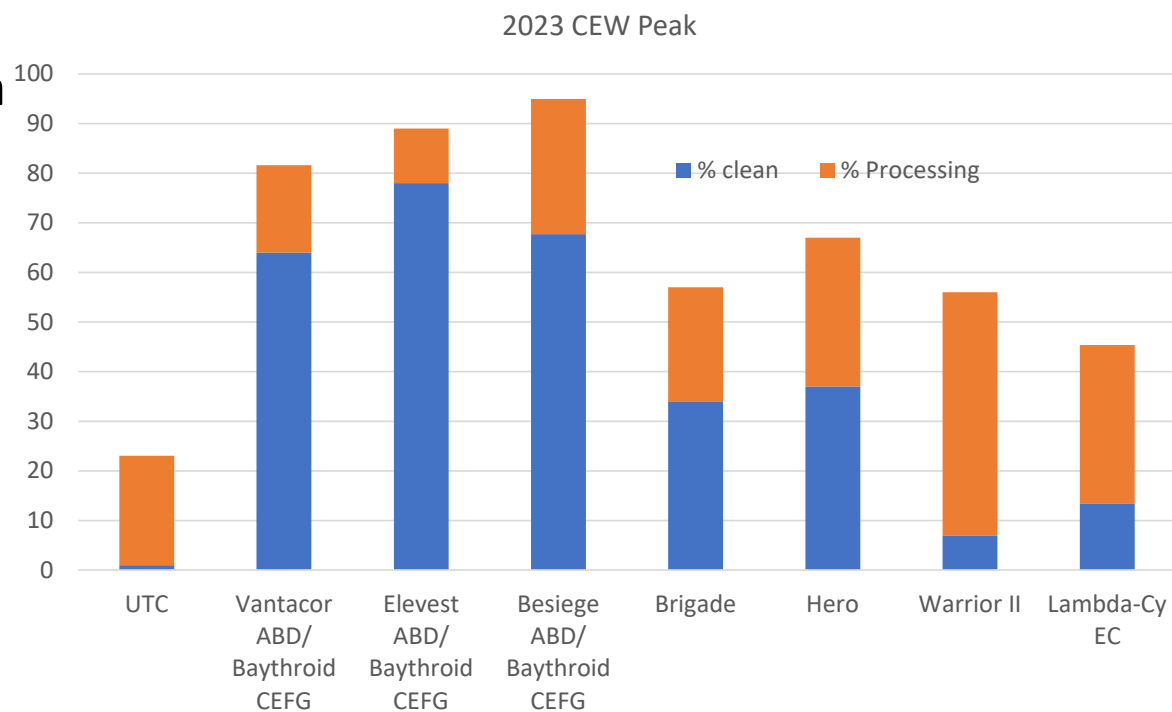


Cone Trap Nightly Catch



Recommended Spray Program

- Unless Fall Armyworm present, wait until first silk to begin treating
- Besiege or Elevest alternated with a pyrethroid mix
- Do not rely on pyrethroids or Lannate alone
- Vantacor / Coragen eVo – pollinator and beneficial friendly, sometimes does well alone, sometimes lets things slip



Exciting Times Ahead

- Specialty Crop Research Initiative grant, UMD lead
- Objectives:
 - monitor resistance to Bt and foliar
 - Pheromone lure and longevity
 - Trap placement
 - Dynamic threshold recommendations and forecast
 - Cost/benefit returns for spray programs



MAGNET
INSECT ATTRACTANT TECHNOLOGY

ALTERNATIVE PUPAE DESTRUCTION

Attract and Kill option for Bollgard®3 Resistance Management Plan (RMP)

2023 – 24 SEASON

✓ Alternative to mechanical cultivation for pupae destruction compliance	✓ Allows for direct drilling of rotation crops immediately after harvest	✓ Targets adult moths before they lay eggs
✓ Assists in fulfillment of RMP compliance in later season cotton	✓ No cultivation or soil disturbance: aerial application only	✓ RMP still requires slashing or mulching of crop



Pricing – \$49/ha +GST for the full program, including insecticide (Jemvelva® technology - spinetoram). Does not include application cost.



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What To Do About FAW?

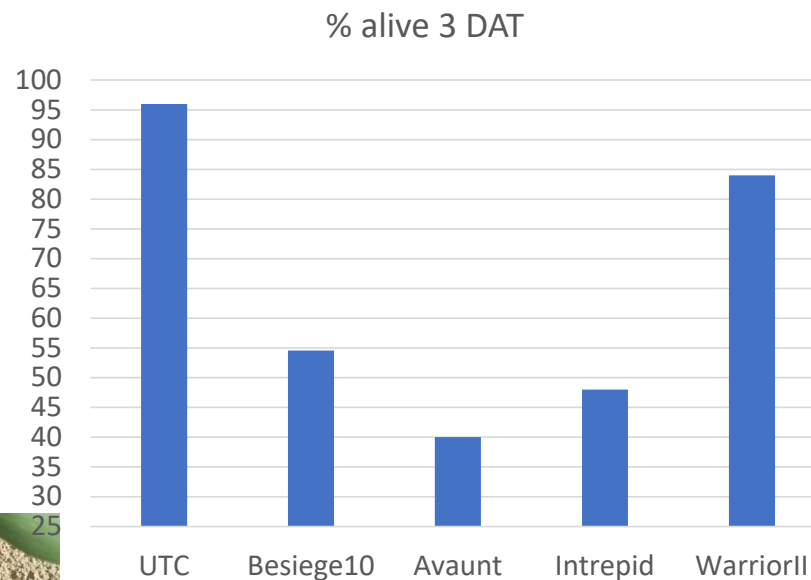
- Threshold is 15-30-15% infested plants
- Confirm it is FAW AND still present.



Not FAW. Diabrotica beetle feeding with rectangular, threadlike or grainy frass



Larvae already left. Whorl leaves pushing out without feeding



Young larvae/ windowpaning on husk leaves before or just at silking

Final Notes

- Coragen eVo
- Shenzi
- Insect Trapping Survey and Corn Earworm Fact Sheet

Acknowledgements

- Gary Calloway, Vincent Farms; Justin Prystajko, Tom Godfrey
- Trapping location partners – SCM and CEW
- USDA NIFA CPPM EIP 2021-70006-35651
- 2023 Crew: **Morgan Malone**, Calista Turman, Irene Ernest, Danielle Watkins, Jase Hudson, Richard Monaco
- Agrochemical Industry
- IR-4
- USDA-NIFA CPPM EIP
- DDA- Specialty Crop Block Grant
- Sussex County

