

NORTHEAST OHIO AGRICULTURE NEWSLETTER

Your Weekly Agriculture Update for
Ashtabula and Trumbull Counties

June 4, 2024



Barley starting to turn color Trumbull County.

In This Issue:

- Regional Updates May 28 – June 2, 2024
- Lep Monitoring Network – Last Week for Black Cutworm and True Armyworm Update #7
- The Ag Law Harvest
- Beat the Heat Before It's Too Late: Cooling Strategies for Dairy Cattle
- Frequent Mowing Puts Poisonous Weed Into Survival Mode

Hello Northeast Ohio Counties!

Welcome to June! An all too familiar pattern with rain has been present this planting season. Some locations have received several inches of rain over the last couple of weeks, and others have received none. Despite this, most of the region has been planted.

As we enter the summer months, be aware of heat dangers as you work. Drink plenty of water, stay sun safe, and take regular breaks. Heat stress can sneak up on you, so be aware of the danger signs. Visit the following link for more info <https://agsafety.osu.edu/newsletter/ag-safety-stat/july-2017/injury-prevention/preventing-heat-stress-illness>

Stay safe!

Lee Beers
Trumbull County
Extension Educator

Regional Updates: May 28 – June 2, 2024

By Lee Beers, Gigi Neal, Jordan Penrose, Nick Eckel, Stephanie Karhoff

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2024-17/regional-updates-may-28---june-2-2024>

Planting progress is still variable across the state, but the weather last week provided another window for field activities. Hear from Ohio State University Extension Educators and Specialists on crop conditions and pest issues across the state.

Northeast – According to Lee Beers of OSU Extension Trumbull County, about 75-85% of northeast Ohio is planted. Soybean is between VE and V2 growth stages and in good condition, though slugs continue to be reported in no-till fields (Figure 1).



Emerged corn is also in good condition and is anywhere between VE and V3 with increasing weed pressure in fields that did not use a residual herbicide. The main weed species present are pigweeds, common lambsquarter, and yellow nutsedge. In wheat and other small grains, cereal leaf beetle is present and causing foliar damage in affected fields (Figure 2).



Figure 1. Slugs identified in no-till soybean fields in northeast Ohio. Photo courtesy of Lee Beers.

The main field activities this past week were planting, spraying, and manure application. Some growers took advantage of a three-day window to make hay, but overall weather has not been conducive for making dry hay in the area.

Southwest – Gigi Neal reported that planting progress continues, and the area is now approximately 75% planted. Growers were also able to bale hay between rain events and continue nitrogen side dressing in corn. Emerged corn and soybean

stands are in good condition, but some fields are suffering from poor weed control. Some replant did occur in the region, including a soybean field damaged by an herbicide misapplication. (Figure 3).

Southeast – Jordan Penrose of OSU Extension Gallia County shared that the southwest region is nearly finished with planting and dry conditions allowed for the making of hay and baleage. The majority of emerged soybean fields are in good condition and between VE and VC growth stages. This past week, slug damage was also reported in Licking County. Corn stands are in good condition and are reaching the V2 growth stage. Area Extension Educators noted cocklebur being identified in some pastures.

Northwest – OSU Extension Wood County Extension Educator Nick Eckel reported that the region is on average 70-80% planted, with areas in Henry, Wood, and Sandusky Counties further behind due to wet conditions. Corn is VE – V6 across the region, and soybean ranges between the VE and V2 growth stage. In wheat, some lodging has occurred, and true armyworm was identified in Paulding County. So far reports of Fusarium head blight or head scab have been minimal, but growers feeding out livestock with wheat straw should avoid infected fields to minimize mycotoxin risk. True armyworm was also observed in Van Wert County after the first cutting of hay, and potato leaf hopper was seen in unharvested alfalfa fields in Putnam County. Emerged soybean and corn are in good condition, though some earlier planted corn fields are showing signs of sidewall compaction likely due to suboptimal planting conditions.



Figure 2. Cereal leaf beetle damage in wheat. Photo



Figure 3. Soybean stands exhibiting herbicide damage. Photo courtesy of Gigi Neal

Lep Monitoring Network – Last week for Black Cutworm and True Armyworm Update # 7

By Stephanie Pflaum, Amy Raudenbush, Mark Badertscher, Lee Beers, CCA, Trevor Corboy, Dirk Dempsey, Mary Jo Hassen, Alan Leininger, Clifton Martin, CCA, Beth Scheckelhoff, Kyle Verhoff, Brooks Warner, Jacob Winters, Kayla Wyse, Curtis Young, CCA, Andy Michel, Kelley Tilmon

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2024-17/lep-monitoring-network---last-week-black-cutworm-and-true>

After rounding out our seventh and final week of monitoring for black cutworm and true armyworm in Ohio, it can be noted that this past week, Trumbull County saw the highest average of BCW pests, while Van Wert County has continued its streak of seeing the highest average of AMW pests. Despite nearing the end of the season for these pests, it should be noted that Van Wert saw a drastic jump in AMW pest numbers this past week, averaging a whopping 10.8 pests per trap, with the max number in one trap hitting 23 true armyworm moths.



Black Cutworm

The statewide average for BCW pests decreased from 1.3 during the week ending on May 27th to 0.61 for the week ending June 2nd. Counties with the highest averages included Trumbull (6.5), Hardin (5.5), and Van Wert (5.2) (Figure 1). Counties with high trap numbers throughout the season should pay close attention to and plan to scout for BCW larvae. When scouting for BCW larvae, closely monitor fields with broad-leaved weeds, specifically chickweed, from when corn is planted until it reaches the V6 growth stage. For more information on how to scout BCW please visit: https://aginsects.osu.edu/sites/aginsects/files/imce/ENT_35_14_BCW.pdf

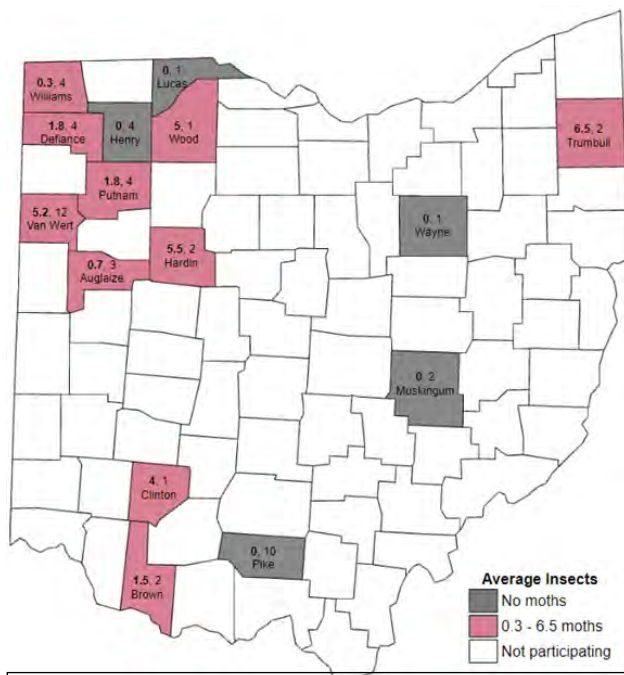


Figure 1. Average black cutworm (BCW) moths captured from May 27th to June 2nd. The bold number on the left indicates the average moth count for the week, followed by the standard number on the right which indicates the total number of active traps set up in that county.

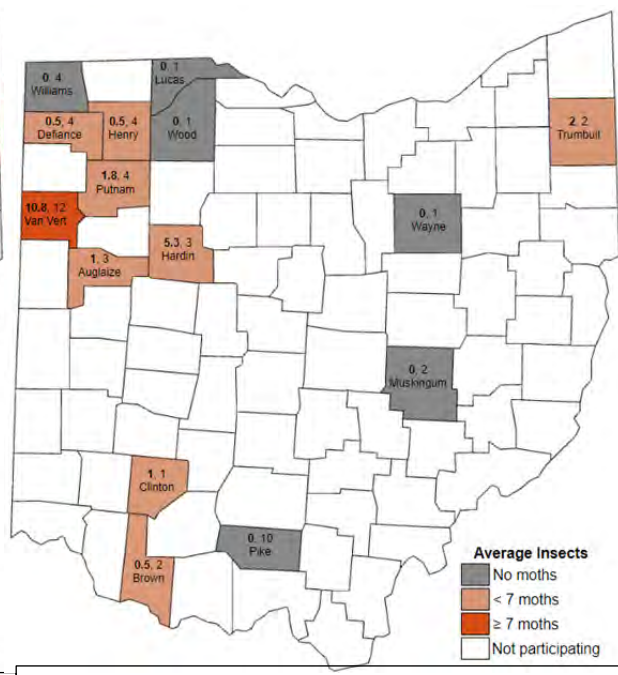


Figure 2. Average true armyworm (AMW) moths captured from May 27th to June 2nd. The bold number on the left indicates the average moth count for the week, followed by the standard number on the right which indicates the total number of active traps set up in that county.

True Armyworm

Similar to the previous trend we have been seeing, the statewide average for AMW decreased again from 1.5 moths for the week ending May 27th to 0.43 for the week ending June 2nd. Counties with the highest averages this week included Van Wert (10.8), Hardin (5.3), and Trumbull (2.0) (Figure 2). As previously mentioned, be sure to scout fields after corn is planted in counties that have had high averages thus far, especially in fields that were previously planted to cover crops.

It is also important to be scouting hay fields for AMW larvae at this time (Figure 3). Recently a field in Van Wert reported high numbers of AMW larvae. For more information on the True Armyworm and the threat they pose to Ohio crops, please visit: <https://agcrops.osu.edu/newsletter/corn-newsletter/2020-18/true-armyworm-infestations>

Start Scouting for Corn Earworm

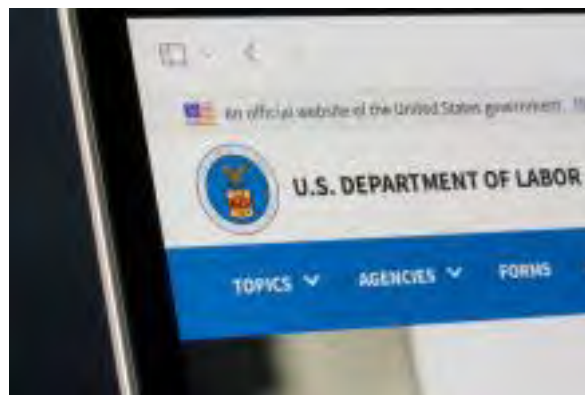
As mentioned in last week's newsletter, this will be out last week scouting for black cutworm and true armyworm pests in Ohio, and it is important to be prepared and ready for our next seasonal pest coming. For In next week's newsletter, expect to see reports beginning on the corn earworm (CEW) pest. To learn more about corn earworms, check out one of our previous newsletters: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-27/corn-earworm-field-corn-watch-molds>

The Ag Law Harvest

By Jeffrey K. Lewis, Esq.,

Source: <https://farmoffice.osu.edu/blog/fri-05312024-830am/ag-law-harvest>

With Memorial Day behind us, the unofficial start of summer is here, and we are back to bring you another edition of the Ag Law Harvest. In this Harvest we discuss OSHA's proposed workplace heat hazard standards, DOL's new H-2A Farmworker rule, an interesting income tax credit in Colorado, and a proposal to limit Ohio property tax increases.



OSHA Advances Proposed Rule to Mitigate Workplace Heat Hazards.

The U.S. Department of Labor's Occupational Safety and Health Administration ("OSHA") announced that it is advancing a proposed rule to mitigate workplace heat hazards, following unanimous approval from an advisory committee. The rule aims to protect workers from heat-related illnesses and fatalities, particularly in agriculture. While OSHA works to finalize the proposed rule, OSHA "continues to direct significant existing outreach and enforcement resources to educate employers and workers and hold businesses accountable for violations of the Occupational Safety and Health Act's general duty clause, 29 U.S.C. § 654(a)(1) and other applicable regulations." Assistant Secretary for Occupational Safety and Health Doug Parker explained that as OSHA moves through the regulatory process, "OSHA will use all of its existing tools to hold employers responsible when they fail to protect workers from known hazards such as heat. . ." Since 2022, OSHA's National Emphasis Program has conducted nearly 5,000 inspections to proactively address heat-related hazards in workplaces with high heat exposure.

The agency prioritizes inspections in agricultural industries employing temporary H-2A workers, who face unique vulnerabilities. Employers are reminded that they are legally required to protect workers from heat exposure by providing cool water, breaks, shade, and acclimatization periods for new or returning workers. Training for both workers and managers on heat illness prevention is also essential.

Department of Labor Finalizes and Publishes Rule Enhancing Protections for H-2A Farmworkers.

The U.S. Department of Labor (“DOL”) announced a final rule to strengthen protections for H-2A farmworkers. The new rule titled “Improving Protections for Workers in Temporary Agricultural Employment in the United States” includes the following provisions:

- *Adding new protections for worker self-advocacy:* The final rule enhances worker advocacy by expanding anti-retaliation protections and allowing self-organization and concerted activities. Workers can decline attending employer-led meetings that discourage union participation. The rule permits workers to consult legal and other key service providers and meet them in employer-furnished housing. Additionally, workers can invite guests, including labor organizations, to their employer-provided housing.
- *Clarifying “for cause” termination:* The final rule clarifies that a worker is not “terminated for cause” unless the worker is terminated for failure to comply with an employer’s policies or fails to adequately perform job duties in accordance with reasonable expectations based on criteria listed in the job offer. Additionally, the rule identifies five conditions that must be met in order to ensure that disciplinary and/or termination processes are justified and reasonable: These five conditions are: (1) the worker has been informed, in a language understood by the worker, of the policy, rule, or performance expectation; (2) compliance with the policy, rule, or performance expectation is within the worker’s control; (3) the policy, rule, or performance expectation is reasonable and applied consistently to H-2A workers and workers in corresponding employment; (4) the employer undertakes a fair and objective investigation into the job performance or misconduct; and (5) the employer corrects the worker’s performance or behavior using progressive discipline.
- *Seat Belts:* Any employer provided transportation must have seat belts if the vehicle was manufactured with seat belts. All passengers and the driver must be wearing seat belts before the vehicle can be driven.
- *Ensuring timely wage changes for H-2A workers:* The final rule establishes that the effective date of updated adverse effect wage rates is the date of publication in the Federal Register.
- *Passport Withholding:* The final rule prohibits an employer from holding or confiscating a worker’s passport, visa, or other immigration or government identification documents. An employer may, however, hold a worker’s passport for safekeeping only if: (1) the worker voluntarily requests that the

employer keep the documents safe; (2) the employer returns the documents to the worker immediately upon their request; (3) the employer did not direct the worker to submit the request; and (4) the worker states, in writing, that the three conditions listed above have been met.

The final rule is effective on June 28, 2024. However, the DOL has made it clear that H-2A applications filed before August 28, 2024, will be subject to the current applicable federal regulations. Applications submitted on or after August 29, 2024, will be subject to the new rule. For more information, visit the DOL's "[H-2A Employer's Guide to the Final Rule 'Improving Protections for Workers in Temporary Agricultural Employment in the United States.'](#)"

Colorado Establishes State Income Tax Credit for Qualified Agricultural Stewardship Practices.

Beginning in 2026 Colorado farmers and ranchers will be able to qualify for an income tax credit for actively engaging in conservation stewardship practices. [The newly enacted legislation](#) creates three different tiers of income tax credits.

- **Tier 1:** A state income tax credit equal to at least \$5 and no more than \$75 per acre of land covered by **one** qualified stewardship practice, up to a maximum of \$150,000 per tax year.
- **Tier 2:** A state income tax credit equal to at least \$10 and no more than \$100 per acre of land covered by **two** qualified stewardship practices, up to a maximum of \$200,000 per tax year.
- **Tier 3:** A state income tax credit equal to at least \$15 and no more than \$150 per acre of land covered by **at least three** qualified stewardship practices, up to a maximum of \$300,000 per tax year.

However, only \$3 million worth of tax credits can be issued in one tax year. Any claims for the tax credit beyond the \$3 million dollars are placed on a waitlist in the order submitted and a certificate will be issued for use of the agricultural stewardship credit in the next income tax year. No more than \$2 million in claims shall be placed on the waitlist in any given calendar year. Additionally, only one tax credit certificate may be issued per qualified taxpayer in a calendar year, and the taxpayer can only claim the credit for up to three income tax years.

Ohio House of Representatives Proposes Joint Resolution to Limit Property Tax Increases for Ohio Property Owners.

The Ohio House of Representatives have [proposed to enact a new section in Article I of Ohio's Constitution](#). Section 23 would limit property tax increases on Ohioans. Under the proposed change, the amount of real property taxes levied on a parcel of property cannot exceed the amount of tax levied on that parcel in the preceding year plus the rate of inflation or four percent, whichever is lower. There are some exceptions that allow a one-time increase in property tax liability in

excess of the four percent limit. The exceptions include: (1) when a parcel is divided; (2) the expiration of a tax exemption, abatement, or credit that applied to the parcel in the preceding year; or (3) when a building is completed or significantly improved and is added to the tax list on the parcel. We will continue to closely monitor how the proposed resolution fares in committee and beyond. If the resolution passes both chambers of the Ohio Legislature, the proposed change would be voted on in the November 5, 2024, election.

Beat the Heat Before It's Late: Cooling Strategies for Dairy Cattle

By Dr. Grazyne Tresoldi, Assistant Professor, Animal Welfare, Department of Animal Sciences, The Ohio State University

Source: <https://dairy.osu.edu/newsletter/buckeye-dairy-news/volume-26-issue-3/beat-heat-its-late-cooling-strategies-dairy-cattle>

Feels like summer has already arrived in Ohio, and the National Weather Service has already predicted above-normal temperatures for this season. Moving recently from California to Ohio, I found it to be much warmer than expected, reminiscent of the sticky summers in Brazil. While I'm not a fan of comparing animals to humans, it's important to remember that cattle start to feel warmer much earlier than we do and way before it hits the bulk tank. By focusing on the behavioral and physiological responses of dairy cattle, you can identify those animals experiencing high heat load early on. Coupled with the adoption of appropriate mitigation strategies, this proactive approach can help reduce losses and maintain cow comfort.

Cattle communicate discomfort through various behaviors. You may notice they shift their use of resources like lying in stalls, eat less, become more inactive, and exhibit higher respiration rates, often followed by panting, which starts with a simple drool string (Picture 1). To accurately assess this discomfort, it is important to measure these behaviors systematically for at least a few hours (about 6 hours) over a few days to capture weather variations. This simple assessment can highlight the strengths and weaknesses of your facilities, enabling you to make informed decisions. Don't have the time? Don't worry! I am preparing a team of students to help you with that!

The solution to mitigate high heat load is clear and consistent across climates: shade, soakers, and fans. During summer, cattle enjoy shade and avoid sunny areas during peak heat. Additionally, combining fans to increase convective heat loss with misters or soakers to promote evaporative cooling is the most effective way to cool cattle. For enhanced efficiency and effectiveness, it's

recommended to place both soakers and fans together at the feed line (Picture 2), as air removes more heat from a wet cow than a dry one.

Turning on soakers earlier helps cows keep cool from the start and is more efficient than trying to cool them down once body temperature has already risen. In temperate climates like Ohio, cattle start feeling hot usually when the air temperature is about 72°F or when the Temperature-Humidity Index (THI) is above 65. To ensure water is turned on and off only when needed by the animals, automated controllers help keep things consistent. These controllers should be placed in the barn to capture the weather conditions experienced by cattle. Wetting cattle for 30 sec (enough to soak their coat) every 4 to 5 minutes and using fans that deliver a wind speed of 9 to 10 ft/sec (~3 m/sec) at the animal level is ideal. Higher flow rates result in larger droplets and more water sprayed per unit of time. While lower flow rate soakers (e.g., 0.4 gal/min) can abate heat, the fine droplets can drift to the bunk and affect feed quality. Therefore, using soakers that deliver larger droplets is preferred. Both 0.9 and 1.3 gal/min nozzles effectively cool cows, but using 1.3 gal/min has been shown to result in an extra 3 lb/day of milk per cow.

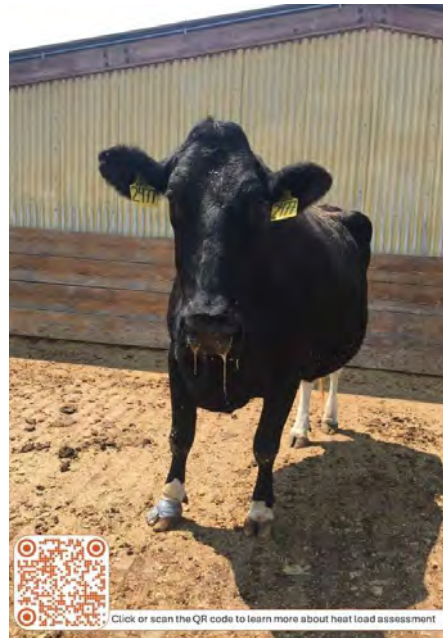
If your barn is not ready for this summer, the combination of the above items is also effective in waiting areas near the milking parlor. Research I have conducted in the past showed that a 45-minute cooling session reduced body temperature for 50 to 75 minutes, depending on the volume of water applied.

Cooling strategies for other categories of dairy cattle, such as calves, growing heifers, and dry cows, are less studied but still essential beyond providing shade alone and plenty of drinking water.

There is a misconception that calves are more resilient than other life stages; however, researchers have found that they are more sensitive to high heat load, even in temperate climates like ours. For calves housed outdoors, it's crucial to offer additional overhead shade and enhance airflow by elevating hutches or adding openings to improve air exchange (Pictures 3 and 4, respectively). In barn settings, mechanical ventilation systems like fans help facilitate air movement to aid calves in directly dissipating heat.

Dry cows are indeed more resilient than lactating ones; however, research has shown that combining sprinklers with forced air during the dry period can effectively reduce heat stress and improve the performance of fresh cows. Moreover, these interventions have demonstrated long-term benefits for the unborn offspring, including increased milk yield in their future lactations.

Would you like more information about something else? Send your questions my way at Tresoldi.3@osu.edu or through your county Extension educator. As a newcomer to Ohio (and the Midwest), I am eager to hear about your achievements and concerns. I would love to visit your dairy with a team of students to assess how your animals are coping this summer. Additionally, I am collaborating with a team of researchers, and we would love to hear more about your weather-related concerns and how they have been impacting your dairy farm.



Picture 1. String drooling, as pictured, usually appears before other panting signs like open mouth and tongue out. For more details on how to assess panting you can visit: <https://tuckerlab.ucdavis.edu/heat-stress.html>. (Source: Grazyne Tresoldi)



Picture 2. Fans and soakers placed together at the feed line are more efficient than either alone, reducing the need for excessive soaking overall. (Source: Grazyne Tresoldi)



Picture 3. Calf hutch with a concrete block elevating its back. (Source: [Moore et al., 2012](#))



Picture 4. Calf hutch with adjustable ventilation at the back. (Source: Calf-Tel, <https://calftel.com>)

Frequent mowing puts poisonous weed into survival mode

Source: <https://www.sciencedaily.com/releases/2024/06/240603195751.htm#>

A study published in Nature's *Scientific Reports* has found that frequent mowing of *Solanum elaeagnifolium* may help create a "superweed."

Solanum elaeagnifolium -- also known as silverleaf nightshade -- can be found from south Texas to South Africa and Greece, infesting fields and soaking up valuable nutrients intended for cash crops. The weed with purple flowers -- sometimes white and light purple -- has prickly spines and poisonous berries.

Relatives of the plant, including *Solanum ptychanthum* or black nightshade, and *Solanum carolinense*, or Carolina horsenettle, also produce toxic berries and are native to Arkansas. It's a family that also includes some friendly crops such as tomatoes, potatoes, peppers and eggplants.

Rupesh Kariyat, an associate professor of entomology and plant pathology with the Arkansas Agricultural Experiment Station, has been studying silverleaf nightshade for more than a decade. Kariyat began the study while at the University of Texas Rio Grande Valley, when he and his graduate student Alejandro Vasquez took on what turned into a five-year, two-part study to observe the effects of frequently mowed silverleaf nightshade. Kariyat joined the experiment station, the research arm of the University of Arkansas System Division of Agriculture, in 2022.

Although studies have often highlighted weed fitness and defense traits resulting from disturbances like mowing, most were limited to foliar, or leaf, defenses, Kariyat said. That changed when Vasquez and fellow master's biology students at the University of Texas Rio Grande Valley monitored fields of mowed, unmowed and frequently mowed silverleaf nightshade in and around Edinburg, Texas.

"Alejandro's question was, 'how do these flowers differ between mowed and unmowed plants?'" Kariyat said. "And does that have consequences for the insects that actually feed on them?"

Self-defense strategies

Findings in both studies showed that the more silverleaf nightshade was mowed, the more it developed ways to avoid destruction, Kariyat said. The taproot went down further, nearly 5 feet deep, in the first generation of mowed plants. More spikes popped out on the stem as a defense against caterpillars feeding on the flowers. The flowers became more toxic to caterpillars, leading to less pressure from natural predators.

Like time bombs, the plant produced some groups of seeds that germinated faster and others that were delayed. This "staggered" germination was the plant's way to ensure survival over the long haul.

"You are trying to mow these plants so that the plants are getting eliminated," Kariyat said. "But what you are actually doing here, you are making them much worse, much stronger."

Tilling areas with silverleaf nightshade also spreads the plant because the rhizomic roots, like many weeds, can propagate asexually over multiple years and growing seasons.

The observations of mowed, unmowed and frequently mowed areas with silverleaf nightshade provide evidence that could prompt further studies by weed scientists on best management practices, Kariyat said.

Since the studies focus solely on silverleaf nightshade, Kariyat said other weeds -- even the plant's family relatives -- may or may not react the same way to frequent mowing. However, the study does provide more insight into the defensive capabilities of plants pitted against human disturbance.

"This should be something that we consider when we make management plans," Kariyat said of the plant's defenses. "Management practices need to be better understood using the ecology and biology of the species and the other species which interact with them."

Kariyat and Vasquez published their results in April with an article titled "Continuous mowing differentially affects floral defenses in the noxious and invasive weed *Solanum elaeagnifolium* in its native range." Vasquez, now an entomology and plant pathology Ph.D. student at the University of Arkansas, was the lead author. Co-authors included Kariyat, Alexa Alaniz, and Robert Dearth, founding director of the School of Integrative Biological and Chemical Sciences at the University of Texas Rio Grande Valley.

"As scientists, we want our research to be accessible and applicable to anyone, and mowing is a concept the world at large can understand," Vasquez said.

The initial study was published in 2021 with an article titled "Local adaptation to continuous mowing makes the noxious weed *Solanum elaeagnifolium* a superweed candidate by improving fitness and defense traits." The lead author for that study was Jesus Chavana, with co-authors Sukhman Singh, Bradley Christopherson, Alexis Racelis, Vasquez and Kariyat, all with the University of Texas Rio Grande Valley at the time.

CFAES

Thursday

JUNE

13

at 6:00 PM

Bloomfield Livestock Auction
2211 Kinsman RD NW
North Bloomfield, OH 44450

BEEF QUALITY ASSURANCE (BQA)

This program offer the opportunity to earn your certification or renew you expiring one. The certification cycle is 3 years.

Haley Shoemaker and Noelle Barnes will cover a multitude of topics, including carcass quality, injection protocol, and animal handling, that will provide your BQA certification and ultimately impact your success at marketing.



**BLOOMFIELD
LIVESTOCK
AUCTION LLC.**

Call 330-638-6783 to RSVP

**Please arrive at least 10 minutes
prior to 6:00 PM**

This free program is made possible by a generous donation from the Hertzler Family Trust.

 **THE OHIO STATE UNIVERSITY**
EXTENSION