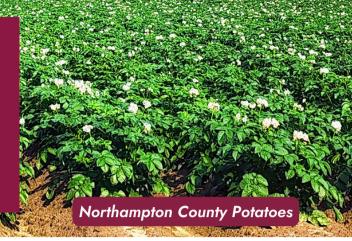
Vol. 7 · June 2024

# The Stalk

Accomack & Northampton County Cooperative Extension Eastern Shore Agricultural Research & Extension Center



### Welcome to our new Assistant Farm Manager

We welcome Makenzie Shifflett as our new Assistant Farm Manager at the Eastern Shore AREC. Makenzie comes to us from E.&J. Gallo Winery where she was an intern that executed research demonstrations for varying grape management strategies that included canopy density, leaf water potential, soil moisture, nutrient management, and disease monitoring. Prior to her internship with Gallo Winery, she was a student gardener at Hahn Horticulture Garden and assisted the Meat Science Center with online order fulfillments while she obtained her BS in Agribusiness Management with a minor in Horticulture at Virginia Tech. Prior to attending Virginia Tech, Makenzie was Assistant Manager at Jackson River Garden Center in her hometown of Covington, VA. Her hobbies include exploring the outdoors and spending time with friends and family.

The Assistant Farm Manager assists with operations and maintenance on the 220-acre Eastern Shore AREC with three resident faculty members, graduate students, post-docs, and technical support staff conducting research for crops economically important to the Eastern Shore of Virginia that includes fresh market tomato, snap beans, potato, soybean, wheat, corn, among others. The individual in this position is responsible for assisting with farming operations at the AREC in a coordinated manner with faculty, staff, and graduate students as required to achieve the applied research and extension mission.



The mission includes oversight and maintenance of land, equipment and infrastructure, procurement of agricultural and related supplies, sale of excess agricultural commodities, record keeping and required reporting as necessary for research and regulatory requirements, weather equipment maintenance and reporting. Makenzie started work on May 28, 2024. Welcome Makenzie!

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Theresa Pittman - Accomack County ANR Agent Hélène Doughty - Northampton County ANR Agent









#### **Giant Pumpkin Growing** Workshops!

Virginia Cooperative Extension is introducing new competitions at the 2024 Eastern Shore Agricultural Fair, including a giant pumpkin face-off. In preparation, Accomack and Northampton County ANR agents have developed workshops to teach youth and adults how to mammoth size prize pumpkins! Four sessions were offered both in counties from May 28 to June 1 at various locations. Youth were given a pumpkin record book with activities and to follow the progress of their pumpkin development while adults learned tips and techniques on the science and unusual process of growing a giant pumpkin.



Come pick up your giant pumpkin seeds at your local extension office to compete on October 5th!

# **Agents' Calendar:**

"Working for the Wellbeing of Our Communities!'

## On-Going VCE Efforts in June

- June 1st: Accomack / Northampton Giant Pumpkin Growing Wrkshp June 3/ ISTRO 2024 Venue Review / Meeting
- June 4: ESCC Career Fair / VCE Soybean Trial Planting
- June 4: ESSWCD Director Training / North. Farm Bureau Meeting
- Jun 5-6: GAP Certification Mentor Process Training, Farmville, VA June 10: Monthly VCE/ESAREC Planning Meeting
- June 11-12: Farm Business Managment Training (HD), Suffolk, VA June 11-12: Volunteer Managment Training (TP), Richmond, VA
- June 20: Accomack Farm Bureau Meeting
- June 25: ESSWCD Board Meeting
- June 27: ESSWCD 2025 Cost-Share Kickoff Breakfast
- June 28: Precision Ag Conference Tidewater AREC Ongoing:

# Regional Shared-use kitchen Needs Assessment and Comprehensive

- International Soil Tillage Research Conference Project Management (2024 ISTRO, Virginia Beach Sept. 23-27)
- Agricultural commodities competitions at the ES Ag Fair
- Slug trapping research to evaluate slug population density.
- Pheromone Trap Insect Monitoring





## **FOLLOW US** ON SOCIAL MEDIA

Northampton

@vce\_northampton

Accomack

@vce\_accomack

Theresa Pittman - Accomack County ANR Agent Hélène Doughty - Northampton County ANR Agent





### Research Project: Salinizing Irrigation Water and use in ESVA Produce

Eastern Shore VCE Agents in collaboration with the School of Plant and Environmental Sciences at Virginia Tech are conducting a research project funded by USDA to enhance water quality and food safety in Virginia.

The goal of our project is to better understand the salinity of irrigation waters in Virginia and find out whether small increases in salt concentrations change the survival of Fecal Indicator Bacteria (FIBs) and foodborne pathogens. As part of this project, we are collecting irrigation water samples from all over Virginia to learn about the current salt concentrations.

Ultimately, we hope to use this information to determine if increasing salinity is linked to increased presence of FIBs, help farmers develop mitigation strategies, and maintain the health and safety of Virginia produce.

Irrigation samples from 8 pivot/reel rain systems were taken on May 29th.



## Is your FARM required to have a VDACS Produce Safety Inspection??

All farms within Virginia that grow, harvest, pack or hold produce intended for human consumption and for sale will need to register their business with the Virginia Department of Agriculture and Consumer Services (VDACS) Produce Safety Program.

Extension Office for more help with the FDA

Produce Safety Rule



#### **Should I Replant my Soybeans?**

Emergence issues, flooding or drought event, insect pressure can all contribute to poor stand in any crops. Soybeans have suffered from slug pressure again this year in a few fields, and the questions is often posed: "Should I replant?". After taking some stand count data in the particular field that experienced poor stand and oftentimes large gaps between plants, and carefully weighing the pros and cons, the decision was made to replant. Stand count numbers can be collected by counting the number of emerged plants over a distance of 17ft and 5 inches for 15" spacing, and 17ft and 5" X 2 for 30" spacing in both good and poor stand areas (in this case 10 areas for each were recorded), and then averaging these numbers (while also taking into account other factors).



Theresa Pittman - Accomack County ANR Agent Hélène Doughty - Northampton County ANR Agent





## Early Corn Earworm Activity on the Eastern Shore for 2024



Corn earworm is a devastating pest of many crops in Virginia, including soybean, snap beans, tomatoes, sweet corn and cotton on the Eastern Shore.

This native moth pest can successfully overwinter as pupa in Virginia when winters are relatively mild. Virginia crops will also get the usual dispersal of moths coming up from the southern states after mid-July that will lay eggs on many crops that flower in late summer.

VCE agent Helene Doughty, in Cape Charles, VA on the Eastern Shore recorded high numbers in the corn earworm moth trap placed there. This icould be some early warnings of a potentially bad corn earworm year but every year is different and many factors impact the population level.

VA Association
of Agriculture
Extension
Agents
Summer Tour
Middle Peninsula
& Northern Neck
May 21st-22nd











Theresa Pittman - Accomack County ANR Agent Hélène Doughty - Northampton County ANR Agent





## 2024 Eastern Shore Sheep Shearing Program Recap - May 23rd, 2024













The 2024 Eastern Shore Annual Sheep Shearing is an opportunity for all the sheep growers on the Shore to share the cost of having a professional shearer visit their farm. The Sheep on the Eastern Shore are shorn right before it starts getting hot. A sheep is caught by the shearer, from the catching pen, and taken to the shearing board. Machine shears operate in a similar manner to human hair clippers in that a power-driven toothed blade, known as a cutter, is driven back and forth over the surface of the sheep and the wool is cut from the animal. Sheep shearing is also considered a sport with competitions held around the world. Depending on the size and condition of the sheep, a professional shearer will take less than two minutes to shear the wool from the sheep.

Thank you to Emily Chamelin from Aerie Farm for coming down to Northampton and Accomack counties to sheer 40+ sheep, including several Hog Island sheep, and one long haired goat!

#### WHAT'S THAT BUG?

Hélène Doughty, Northampton ANR agent, invites you to test your entomology knowledge. Take a guess on the pest and email or DM your answer! hdoughty@vt.edu





Our previous "What's That Bug" were, as most guessed right, a slug (or actually 2 slugs in this photo). Slugs are mollusks that are pests of field corn and soybeans (and many other hosts) in April and May when conditions can still be cool and wet. They feed on the emerging plants and can cause a lot of damage to soybeans while field corn can outgrow the damage in warm weather. When at rest, they tend to curl up into a dome shape as seen here.

## **JOIN OUR TEAM**





Associate Extension Agent
4-H Youth Development - Accomack

Careers at Virginia Tech - (Job no. 528372) work type: Administrative & Professional

please visit this link and apply online:
<a href="http://tinyurl.com/papr98ek">http://tinyurl.com/papr98ek</a>

Virginia Cooperative Extension is a partnership of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and local governments. Its programs and employment are open to all, regardless of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, military status, or any other basis protected by law.

Theresa Pittman - Accomack County ANR Agent Hélène Doughty - Northampton County ANR Agent





# Be on the lookout for allium leafminer in spring onions, garlic, or leeks from Dr. Tom Kuhar, Professor of Entomology

The allium leafminer (ALM), <u>Phytomyza gymnostoma</u> (Loew) (Diptera: Agromyzidae), is an invasive fly species that was first recorded in the U.S. in Pennsylvania in 2015. The pest attacks onions, garlic, and leeks where the larvae (maggots) feed on plant tissue by mining the plant causing wilting and possible death. This new pest to the mid-Atlantic area is a long grey-black fly with a distinctive yellow or orange patch on the top of its head, yellow sides and "knees" (femurtibia junction), and white halteres (knobs as second pair of wings). The larvae are a typical whitish maggot. Adult females repeatedly puncture leaves with their ovipositor, resulting in a line of small white dots. Leaves can be wavy, curled and distorted. Larvae mine leaves and move into bulbs and leaf sheathes where they pupate.



Allium leafminer larva

This invasive pest was recorded in southwest Virginia in 2021 and has been found in Montgomery, Carroll, Botetourt, and Bedford Counties as well as the Richmond area. We have this pest folks! Help us track the spread of this invasive pest in The Commonwealth. Call you ANR extension agent if you encounter these symptoms!





## **UPDATES**

FROM THE ESAREC DIRECTOR

Dr. Mark Reiter, Director, Extension Specialist



### 2024 CALS AREC Faculty Tour



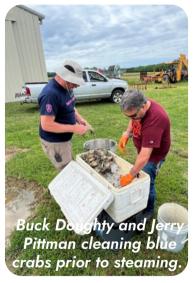
Faculty, staff, and administration from the College of Agriculture and Life Sciences (CALS) at Virginia Tech visited seven Agricultural Research and Extension Centers (ARECs) on a whirlwind tour around Virginia from May 15-17, 2024. Visits ranged from exploring the Cyrus McCormick Farm and Workshop Museum at Shenandoah Valley AREC, to the Small Grains Field Day at Eastern Virginia AREC, to touring potato, broccoli, wheat, and cover crop experiments at the Eastern Shore AREC. While on the Eastern Shore, attendees had a meal that showcased the Eastern Shore's finest products that included steamed blue crab from the Chesapeake Bay, middle neck clams from seaside, fried chicken, snap beans, new potatoes, brownies (wheat), wine from Chatham Vineyard, beer from Cape Charles Brewing Company, and potato vodka made from Eastern Shore of Virginia potatoes. Accomack County is #1 in production for wheat, 3rd for vegetables (potatoes, snap beans,

tomatoes), 3rd in production for poultry, and 4th in farmgate value for aquaculture. Northampton County ranks 1st in Virginia for vegetables (potatoes, snap beans, tomatoes), 1st in value for aquaculture, and 4th in Virginia for wheat production per the 2022 USDA Agricultural Census.

A special thank you to Buck Doughty and Jerry Pittman for preparing and cooking our seafood along with a great demonstration on how to properly eat blue crab. We also thank The Association of Eastern Virginia Agricultural Producers, Inc. for sponsoring our beverages.









Jerry Pittman
demonstrating the
most efficient
methodology for
picking a
Chesapeake Bay
blue crab. Jerry is
married to
Accomack County
Extension Agent
Theresa Pittman.



Attendees
were treated
to a drone
demonstration
at the ESAREC
research farm

## **UPDATES**

#### FROM THE ESAREC DIRECTOR

Dr. Mark Reiter, Director, Extension Specialist





### Research Needs Assessment for CALS

The <u>College of Agriculture and Life Sciences</u> at Virginia Tech has launched a comprehensive research needs assessment survey, aimed at steering the future direction of its agricultural research initiatives. This strategic effort is currently underway, and the survey is open until fall.

The <u>survey</u>, <u>open to faculty</u>, <u>students</u>, <u>industry partners</u>, <u>and stakeholders</u>, seeks to identify the most pressing research needs within the agricultural sector. It covers a range of topics, including sustainable farming practices, crop science, animal husbandry, agricultural echnology, and the life sciences.

Mary Burrows, associate dean of research and director of the <u>Virginia Agricultural Experiment Station</u>, emphasized the importance of this endeavor.

"In a rapidly evolving world, it's crucial that our research stays ahead of the curve," Burrows said. "This survey will help us align our resources with the most urgent and impactful areas of agricultural research."

Participants have until fall to complete the survey, which can be accessed online at <a href="bit.ly/VAES Survey">bit.ly/VAES Survey</a>. The college anticipates releasing the findings in late 2024 with the goal of implementing new research projects that reflect the community's needs and priorities.

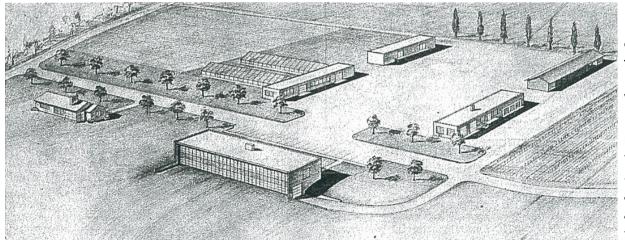


https://virginiatech.questionpro.com/VAESSurve

## Eastern Shore AREC Facility Planning Study: Coming Soon

We have great news coming from Richmond as an Eastern Shore AREC facility planning authorization was included in the recent budget passed by the state legislature and signed by Governor Youngkin that will go into effect on July 1, 2024. The planning authorization awarded \$1 million to plan for facility improvements that will include detailed cost estimates and drawings of new and upgraded facilities for the Eastern Shore AREC in Painter, VA. Plans will include permanent housing for graduate students and interns, a pesticide management facility, a shop area to fit more modern equipment, asbestos removal, and other improvements needed on 1955 era buildings.

A big thank you to Delegate Rob Bloxom (District 100; represents Accomack and Northampton counties; party of Virginia Beach) and Senator Bill DeSteph (District 20; represents Accomack and Northampton counties; parts of



Norfolk Virginia and Beach) for being patrons of these amendments in the Virginia House of Delegates and Senate. We look forward improving applied research and Extension facilities on the Eastern Shore to continue making agriculture more efficient and productive in the future!

## **UPDATES**

FROM THE ESAREC DIRECTOR

Dr. Mark Reiter, Director, Extension Specialist







#### Riley Bull

Riley Bull is interning with the Plant Pathology lab this summer at the Eastern Shore AREC. Riley is currently attending William and Mary.



#### Luke Duer

Luke Duer will be working in the Soils and Nutrient Management lab this summer at the Eastern Shore AREC. Luke recently graduated from Broadwater Academy and will attend Virginia Tech in the fall, where he will be majoring in Crop and Soil Sciences in the School of Plant and Environmental Sciences. Luke likes to hunt, fish, and play sports.

The International Soil Tillage Research (ISTRO) Conference. Organisation ISTRO2024, is only a few months away! We look forward to welcoming scientists and students from around the world to showcase Virginia agriculture and the progressive strides we are making towards sustainable farming practices. Visit our website to submit an abstract for presentation, register, or find more information and ways to sponsor our conference. All are welcome! We look forward to seeing many of you in September 2024 in Virginia Beach, Virginia, USA!



Find more information here:

https://www.arec.vaes.vt.edu/arec/eastern-shore/istro-2024-22ndconference.html





VIRGINIA AGRICULTURAL EXPERIMENT STATION EASTERN SHORE AGRICULTURAL RESEARCH AND EXTENSION CENTER VIRGINIA TECH.

## Weed Science Specialist Day – Herbicide options for corn and soybean

Dr. Vijay Singh, Assistant Professor & Extension Specialist, Weed Science

On a recent weed science specialist day, Vijay Singh discussed weed management options in corn, and soybean, and provided updates on new herbicide products/premixes.

Dr. Singh discussed how herbicide resistance issues have led to increased cost of \$25 - \$50/ acre for weed management in recent years. Previous surveys conducted in Virginia indicate that 25-30% growers adopt stewardship practices



and recommended strategies only after confirmation of herbicide resistance, which is late for dealing with this issue. Growers need to adopt preventive strategies, alternate herbicide programs, and integrated weed management approaches in their routine.

## Read More from Dr. Singh HERE

## **ANNOUNCEMENTS**



# Work at Virginia Tech!

Join our team at the Virginia Tech Eastern Shore Agricultural Research and Extension Center in Painter, VA! We are currently looking to fill three positions to help us out with our applied research and Extension activities.

#### Mechanic (Job posting #529483)

The mechanic position supports the Agricultural Farm Manager in the maintenance, repairs, and upkeep of agricultural machinery, fleet vehicles, buildings, and performs fieldwork that includes driving tractors, combines, planting, irrigation, and similar at the Virginia Tech Eastern Shore AREC. A high school diploma or equivalent is required. The candidate must have knowledge regarding agricultural systems, farm or experiment station experience, or education in repair and maintenance of agricultural equipment and vehicles, or relevant experience in repairs and maintenance. The candidate should have a working knowledge of farming practices, grounds maintenance, and the ability to work outside in varying types of weather.

To apply, please visit: <a href="https://careers.pageuppeople.com/968/cw/en-us/job/529483/mechanic">https://careers.pageuppeople.com/968/cw/en-us/job/529483/mechanic</a>

#### Field & Lab Aide (Job posting #529657)

This is a part-time position, 1500 working hours maximum allowed per year, located at the Eastern Shore Agricultural Research and Extension Center (AREC) in Painter, Virginia. The position assists faculty, staff, and graduate students with establishment, maintenance, and data collection for agricultural research plots and laboratory analysis. Basic math and computer skills along with knowledge of farm practices and equipment is required. To learn more and apply, please visit: <a href="https://careers.pageuppeople.com/968/cw/en-us/job/529657/field-lab-aide-eastern-shore-arec">https://careers.pageuppeople.com/968/cw/en-us/job/529657/field-lab-aide-eastern-shore-arec</a>.

#### **Hourly Wage Intern**

Working with us during summer months is a great way to learn more about scientific research while earning some cash! Interns work with faculty, staff, and graduate students stationed on the Eastern Shore of Virginia to conduct research experiments and Extension outreach that benefit the local Eastern Shore community. A desire and interest in the environment, agriculture, biology, and related disciplines is desired. Disciplines include weed science, plant pathology, soils, and nutrient management. These positions are flexible and are a perfect first-time summer job, ideal for current students enrolled locally (i.e., Eastern Shore Community College), or for students home during summer break. To learn more or to apply, please email <u>ESAREC@vt.edu</u>.

## **ANNOUNCEMENTS**







# **NORTHAMPTON 4-H** SUMMER CAMP







Open to youth ages 9-13

425 (Scholarships are available for Eastern Shore youth)







4-H camp is a week-long residential camp held at the Airfield 4-H Educational Center in Wakefield, VA with Suffolk, Greensville-Emporia and Accomack.

### REGISTRATION FORM & DEPOSIT DUE BY JUNE 15

Visit the Northampton 4-H website:

https://sites.google.com/ vt.edu/northampton4-h



Contact Northampton 4-H Agent Erin Morgan at emorgan2@vt.edu or 757-678-7946 x2

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	Amanda Hurley	Unit Support Staff	amandalh@vt.edu	757/678-7946
	Faculty/Staff	Title	Email	Work/Cell Phone
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VIRGINIA AGRICULTURAL EXPERIMENT STATION
EASTERN SHORE AGRICULTURAL
RESEARCH AND EXTENSION CENTER
VIRGINIA TECH.

Virginia Cooperative Extension brings the resources of Virginia's land-grant universities, Virginia Tech and Virginia State University, to the people of the commonwealth. VCE provides education through programs in Agriculture and Natural Resources, Family and Consumer Sciences, 4-H Youth Development and Community Viability.

The Virginia Tech, Eastern Shore AREC is committed to supporting commercial vegetable, grain, oilseed, and fiber production throughout the Commonwealth of Virginia. Centrally located on Virginia's Eastern Shore, the center conducts basic and applied research on more than 25 agricultural crops.

Virginia Cooperative Extension is a partnership of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and local governments. Its programs and employment are open to all, regardless of age, color, disability, sex (including pregnancy), gender, gender dentity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, military status, or any other basis protected by law.

#### Weed Science Specialist Day - Herbicide options for corn and soybean

Dr. Vijay Singh, Assistant Professor & Extension Specialist, Weed Science

On a recent weed science specialist day, Vijay Singh (Assistant Professor and Extension Specialist, Virginia Tech) discussed weed management options in corn, and soybean, and provided updates on new herbicide products/premixes. Dr. Singh discussed how herbicide resistance issues have led to increased cost of \$25 - \$50/ acre for weed management in recent years. Previous surveys conducted in Virginia indicates that 25-30% growers adopt stewardship practices and recommended strategies only after confirmation of herbicide resistance, which is late for dealing with this issue. Growers need to adopt preventive strategies, alternate herbicide programs, and integrated weed management approaches in their routine.

In Virginia, there are three major weed species (Marestail, Palmer amaranth, and common ragweed) in corn and soybean. Marestail can be easily controlled by combining cover crops and preemergence herbicides. After the termination of cover crops, growers generally skip residual/preemergence herbicides due to residue layer. However, studies have indicated that application of residual/ preemergence herbicides over the top of dead cover crop biomass generally leads to better weed control. Application at this stage compensates for the low biomass cover and open spaces in the field. Since growers use Roundup Ready corn and soybean, application of glyphosate (Roundup) is common for burndown and postemergence applications. However, ammonium sulphate (AMS) should be added (1.5 to 3 lb/A – dry, 2.5 to 5 gal/ 100 gal – liquid) to enhance the efficacy of glyphosate. Lower amounts of AMS may not be effective. Adding AMS can also help with glufosinate's (Liberty) efficacy, especially under low humidity or high pH water.

For corn at preemergence stage, use herbicide tankmixes/ premixes with two or more than two mode of action (group of herbicides). It is suggested to include atrazine (group 5 herbicide) in tankmix with Dual magnum (group 15 herbicide). Add group 27 herbicides for additional control of emerged weeds. Few examples of premixes which are effective on weeds and has combination of two or more group of herbicides are Acuron, Bicep, Lexar/Lumax, Harness extra etc. For postemergence in corn, applications will be effective when corn is less than 12" and weeds are less than 4" tall. Examples, of postemergence premixes are Acuron GT/ Halex GT (group 15 + 27 + 9), Capreno/ Realm Q (group 2 + 27), Kyro (group 4 + 15 + 27). These herbicides can control group 2 and group 9 resistant weeds. Tankmixes or premixes with group 9 should be used only on glyphosate resistant crop technologies. Addition of atrazine (group 5) will improve weed control. However, when using tankmixes/premixes, do not exceed 2lb atrazine in a single application or 2.5 lb per year.





Figure: Weed management in corn, where (1) represents non-treated control, and (2) represents excellent control throughout the season using suggested premix herbicides. Studies were conducted at

Eastern Shore AREC, Painter, VA

For preemergence applications in soybean, use tankmixes or premixes with herbicides of group 14, 5, 15, and 2. Few examples of premixes are Antares Complete (group 14 + 5 + 15), Warrant Ultra (group 15 + 14), Zidua Pro (group 15 + 14 + 2), Tendovo (group 15 + 5 + 2), Authority elite/BroadAxe or Authority Supreme (group 14 + 15). These herbicides can control group 2 resistant common ragweed, marestail, and other glyphosate resistant weed species (e.g. Palmer amaranth). Postemergence herbicide applications are highly dependent on herbicide-resistant technology (Roundup ready, LibertyLink) or stacked trait technology (e.g. Enlist Duo, Enlist E3) used. Example, selecting Enlist E3 soybeans allows application of 2,4-D choline, Roundup and Liberty. Addition of Liberty or other herbicides (e.g. Enlist herbicides, select max) to glyphosate provides significantly better weed control compared with glyphosate alone. Choose herbicideresistant technology which provides more flexibility and options to apply. Conventional herbicides that can be used on any soybeans include Cobra, Reflex, Ultra Blazer, and Basagran. Postemergence herbicides should also include a product that provides residual control of Palmer amaranth, such as fomesafen (Reflex), Dual, Outlook, Warrant, or Zidua. For grasses - Assure II/Targa, Poast, and Select can be used but to avoid antagonism (reduced grass control) from broadleaf herbicides, spray grass herbicides 2-3 days before the broadleaf herbicide or wait 7 days after the broadleaf herbicide application.

#### New herbicide products/ premixes which will be available from 2024

**Liberty Ultra 1.76SL** (glufosinate [Liberty]; group 10; BASF) is considered the next generation of Liberty herbicide and will be more effective than the current formulation. For example, 24 fl oz of Liberty Ultra will be equal to 32 fl oz of current Liberty formulation.

Roundup PowerMAX3 (Bayer) is a new glyphosate formulation (4.8 lb ae) with unique surfactant. New herbicide (PowerMax3) rate of 20 fl oz will be equivalent to 22 fl oz of PowerMAX (0.75 lb ae/A).

**Reviton 2.83SC** (tiafenacil); group 14; Helm) can be used in a burndown program before field corn, soybean, or wheat. Corn or wheat can be planted immediately after application; wait 7 days to plant soybean if using 2–3 fl oz., and at least 4 months to plant other crops. Addition of glyphosate improves the performance.

**Kyro 3.07CS** (acetochlor [Warrant] + topramezone [Impact] + clopyralid [Stinger]; groups 15, 27, 4; Corteva) is an encapsulated formulation and provides foliar and some residual control of annual grasses and broadleaves when applied POST up to 24" tall field corn at 45 fl oz/A

**Maverick 2.04SC** (pyroxasulfone [Zidua] + mesotione + clopyralid; groups 15, 27, 4; Valent) has a wide application window from PRE to 18" tall corn and provides foliar and residual control of many annual grasses and broadleaves at 14–32 fl oz/A

**Storen 3.2ZC** (S-metolachlor [Dual II Mag.] + pyroxasulfone [Zidua] + mesotrione [Callisto] + bicyclopyrone; groups 15, 27; Syngenta) is a new premix of four active ingredients but it does not contain atrazine. It can be tankmixed with atrazine to enhance the efficacy. It can be applied from PRE through POST (V8 growth stage) in field corn.

Zalo 2.57SL (quizalofop [Assure II] + glufosinate [Liberty]; groups 1,10, AMVAC) is a premix that provides both annual broadleaf and grass control in soybean. Mixing Assure II with

glufosinate improves its grass activity. A typical use rate will be 32 fl oz/A and can be used with other herbicides to broaden its spectrum of control.

**Tendovo 4.14ZC** (s-metolachlor [Dual Mag.] + metribuzin + cloransulam [FirstRate]; groups 15, 5, 2; Syngenta) is a residual herbicide product for soybean. It can provide both PRE and POST control with use rates of 1.5–2.1 qt/A on medium soils. It can be tankmixed with other herbicides.

For complete list, pls refer to information compiled by Dwight Lingenfelter and John Wallace (Penn State University) <a href="https://extension.psu.edu/whats-new-for-agronomic-weed-control-in-2024">https://extension.psu.edu/whats-new-for-agronomic-weed-control-in-2024</a>

For more information on herbicide recommendations and plant back time period and herbicide labels, pls refer to Weed Management Guide https://www.pubs.ext.vt.edu/content/dam/pubs\_ext\_vt\_edu/456/456-016/ENTO-566-E.pdf