

Vol. 4 · September 2023

The Stalk

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

Virginia Ag Expo

Faculty, staff, graduate students and undergraduate interns had a great time meeting and discussing our research with farmers, government officials, and other stakeholders at the 2023 Virginia Ag Expo. The Ag Expo was held at Land of Promise Farm in Virginia Beach, VA on Thursday, August 3, 2023. The event moves around Virginia to showcase different agricultural systems and farms and is well attended by those interested in furthering the future of Virginia agriculture. A large contingent of cutting edge technology, products, and organizations represent their stake in growing more food in the most efficient and sustainable way possible.

Continued on Page 03



Governor Glenn Youngkin and Mark Reiter enjoying Virginia Ag Expo festivities.

This issue:

VA Ag Expo

[Page 01](#)

Ag Expo Photos

[Page 02](#)

Updates from the ESAREC Director

[Page 03](#)

The Agent's Corner

[Page 04](#)

Entomology Research Update

[Page 05 & 06](#)

Soils Lab Research

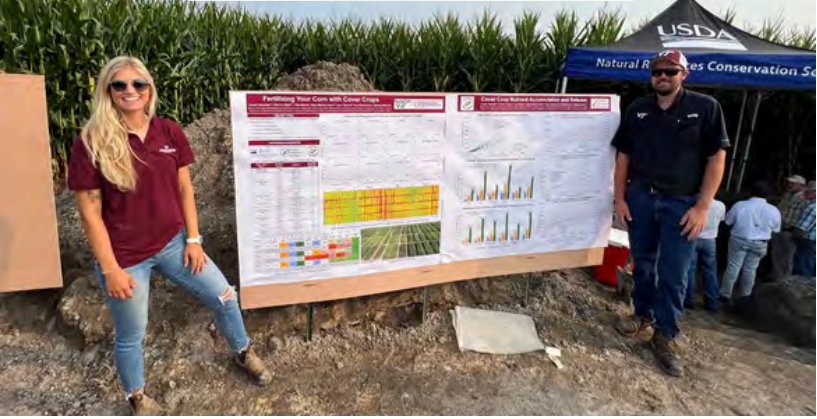
[Page 07 & 08](#)

Announcements

[Page 09](#)

Virginia Ag Expo Land of Promise Farms August 3, 2023

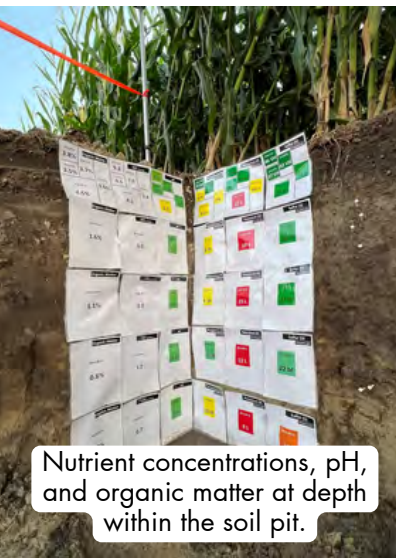
Mary Michael Lipford and Joseph Haymaker, M.S. and Ph.D. candidate, respectfully, showcasing cover crop nutrient uptake and release data from their research.



Dr. Vijay Singh, Weed Science Extension Specialist, showcasing unmanned aerial vehicle (UAV) technologies for Virginia farming systems.



Mark Reiter, Director of the Eastern Shore AREC, and Arash Rashed, Director of the Southern Piedmont AREC, discussing Virginia agriculture with Matt Lohr, Virginia Secretary of Agriculture and Forestry.



Nutrient concentrations, pH, and organic matter at depth within the soil pit.



Eastern Shore AREC crew socializing with Dean Alan Grant, College of Agriculture and Life Sciences at Virginia Tech, and Virginia Tech alumni prior to the Virginia Ag Expo.



Soil pit of highly productive farmland, Nimmo series, at Land of Promise farms in Virginia Beach, VA.

Continued from Page 01



Eastern Shore AREC tents with information were presented by Dr. Vijay Singh (Extension Specialist) and Akash Brar (Ph.D. student), focusing on unmanned aerial vehicles (UAV) and weed science along with a soils and nutrient management contingent of Dr. Mark Reiter (Extension Specialist), Joseph Haymaker and Thomas Badon (Ph.D. candidates), Mary Michael Lipford (M.S. student), and Chloe Taylor (undergraduate intern). As always, we assisted with and collaborated with the USDA-Natural Resources Conservation Services in planning and digging the soils pit; giving everyone a deep dive look into the soils of southeast Virginia. The VA Ag Expo is sponsored by the Virginia Grain Producers Association and the Virginia Soybean Association, in cooperation with Virginia Cooperative Extension and support from Virginia's soybean, corn, and small grains checkoff boards. Save the date for next year as Ag Expo 2024 will be on Thursday, August 1, 2024.

Virginia Ag in the Classroom

Virginia Ag in the Classroom (AITC) facilitates agricultural education for teachers within K-12 around Virginia to help students better understand Virginia's largest industry. On August 8, 2024, the inaugural AITC tour commenced and brought educators from around Virginia to the Eastern Shore to showcase our diverse agriculture through experiential learning. Attendees toured the Virginia Institute of Marine Sciences' Eastern Shore Lab, Shore Breeze Farm, and ventured into research plots at the Eastern Shore AREC. At the Eastern Shore AREC, education centered around potato production, weed science chemistries, plant disease management, cover crops, phosphorus management, and pollinators. More information regarding Virginia's AITC program can be found at: <https://virginia.agclassroom.org/>.



Dr. Doug Higgins, Extension Plant Pathologist, showcasing important disease pressures and prevention for Virginia sweet corn producers to Virginia Ag in the Classroom attendees.



Thomas Badon, Ph.D. Candidate, discussing phosphorus fertilizer considerations for edamame (edible soybean) and other Eastern Shore AREC grain and vegetable crops.



Akash Brar, Ph.D. student in Weed Science, helping attendees understand weed ID and control considerations for Eastern Shore growers.



The 2023 Virginia Ag in the Classroom tour contingent.



2023 ACPS Poverty Simulation

Each year Accomack County Public Schools hosts a new teacher academy and features VCE's poverty simulation as one of their experiential learning activities. We hosted the 2023 Poverty Simulation on August 19th at Arcadia Middle School. The main objectives of a poverty simulation are to foster empathy, raise awareness, and educate participants about the daily difficulties faced by those living in poverty. This year we had 50 new ACPS teachers and 20 plus volunteers participate with 95% of participants reporting that the exercise changed their views on the hardships that some families might face during the school year. The simulation helps participants gain a deeper understanding of the factors that contribute to poverty, encouraging them to think about potential solutions and maybe even policy changes.



Eastern Shore Household Water Quality Program

Accomack and Northampton County VCE Offices held their annual well water testing clinic in August with 100 samples collected. The samples were sent to the VT water testing lab in Blacksburg and we are awaiting the results. Historically, the Eastern Shore has received an overall positive yearly review of the water tested with chloride being the nuisance contaminate. Funding for Eastern Shore clinic in 2023 was provided through an EPA grant and our partnership with Southeast Rural Community Assistance Project (SERCAP). SERCAP provides technical assistance and financial assistance in the form of loans or grants for well owners to repair or replace their wells, and sometimes funding is available for water treatment devices.

2023 Eastern Shore Pest Monitoring Program

The monitoring of corn earworm and armyworm in both counties will continue for another week or so. Northampton County has seen heavy corn earworm pressure in some spots while Accomack's fall armyworm numbers are starting to creep higher. As we move into corn harvest, don't forget to continue to sweep your soybean fields for armyworm infestations. We would like to thank Helene Doughty, at the ESAREC, for contributing her scouting numbers to the weekly report.

Farm Tour - Accomack & Northampton County

Accomack and Northampton County Cooperative Extension offices are in the middle of Farm Tour planning. On Tuesday, September 19th the Accomack County Farm Tour will provide an on-farm Agricultural experience for all 3rd graders in Accomack County. The following day, September 20th the event will shift to an on-farm experience in Northampton County. At the event, 3rd graders will have a hands-on experience rotating amongst booths learning about all aspects of agriculture on a working farm. This event in the past has been praised by teachers as one of the best field trips of the year. Both offices are soliciting monetary and in-kind donations in support of this on-farm experience for the ESVA 3rd graders. If you would like to donate, please call your local Extension office. Thanks for your support!

Fall Farmer's Market Opportunity!

The Town of Exmore is hosting it's annual Fall Festival on Saturday, September 30, 2023. If you make it, bake it, grow it, sew it, shape it, carve it, can it or otherwise bring a product into being by hand this event is for you. This event is a venue to showcase and sell what you produce. Farmers, watermen, bakers, or any maker of hand crafted goods are welcome. For more information, email exmorefallfestival@gmail.com

2024 Eastern Shore Agricultural Conference & Trade Show

We have started planning the ES Ag Conference! Mark your calendars for January 24th & 25th 2024 at the Exmore Moose Lodge in Belle Haven. Sponsorship/exhibitor packets will be available on the VCE Accomack County website as well as via email to past vendors. If you are interested in becoming a sponsor or an exhibitor at our annual conference, please email tpittman@vt.edu.

Lepidopteran Insect Update for the Eastern Shore

Hélène Doughty, Research Specialist Sr., Eastern Shore AREC

Late August, early September can be a perfect storm for worm infestation in our crops with soybeans being at a particularly vulnerable stage, especially if corn earworms are present in numbers.

Corn earworm pheromone trap catch started early and with high numbers this year, although not alarmingly high everywhere. We have had higher trap catch at the ESAREC and around the lower Eastern Shore (particularly Eastville area) but all other trap catches have been relatively lower than last year.

What's the bottom line? Numbers have currently been at levels where scouting should be conducted on a regular basis. The corn earworm is a pod feeder and thresholds are low in soybeans.

Fall armyworm trap catches have been very comparable to last year although ESAREC entomology trials have experienced heavy fall armyworm damage in sweet corn.

Beet armyworm trap catches have been much higher this year at the ESAREC (by 10-fold this week compared to last year). Proper identification of this pest is necessary while scouting as its resistance issues are to be considered when making control decisions, particularly if using pyrethroids.

Fall armyworm and beet armyworm are defoliators in soybeans and thresholds are fairly low at pod fill (15% full season, 10% double crop with poor growth).



Corn earworm trap catch (2-night total) on 9 August in Eastville



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Moth trapping has had us scratching our heads as trap catches can be relatively unreliable. Between observations from trapping over the years and conversations with scouts, we have found that, at times, low catch did not necessarily reflect what is present in the adjacent crop. Over the last 2 years, we have been comparing 3 different trap styles with 4 different corn earworm lures at an on-farm site with strong evidence for trap/lure type. Further studies are needed to compare trap catch with subsequent hatch.



At the ESAREC, we are also currently testing a pheromone smart trap style combined with a mobile app.

Refer to the following VCE publications for further information on soybean lepidopteran control and thresholds:

Corn earworm biology and management in soybeans:
<https://www.pubs.ext.vt.edu/444/444-770/444-770.html>

2023 Pest Management Guide – Field Crops:
https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/456/456-016/ENTO-522D.pdf

Soybean Insect Guide:
https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/AREC/AREC-68/AREC-68-PDF.pdf

WHAT'S THAT BUG?

Hélène Doughty, Research Specialist Sr., invites you to test your entomology knowledge. Take a guess on the pest and email her your answer!
hdoughty@vt.edu



August's Answer: *Diamondback moth larva (DBM)*. DBM larvae are important pests of cruciferous crops (cabbage, broccoli, etc...) and are considered a top pest worldwide due to their ability to develop insecticide-resistant populations. The larvae are fairly small (close to 1/2 inch) and green in color. They are tapered at both ends with a pair of prolegs at the posterior end. They writhe and wiggle rapidly if disturbed.

Cover Crop Selection, Planting Dates, Seeding Rates, and Seed Mixes

Joseph Haymaker, Ph.D. candidate in Soils and Nutrient Management lab at the Eastern Shore AREC
Mary Michael Lipford Zahed, M.S. student in Soils and Nutrient Management lab
Mark Reiter, Soils and Nutrient Management Extension Specialist

Selecting optimal cover crop species to plant depends on your overall goal for your farm. If nutrient scavenging and weed suppression are your main goals, then you should plant a grass species, such as cereal rye. Conversely, if you are looking to reduce your nitrogen fertilizer inputs in your following corn crop, then planting legumes is your best bet. If you are looking for a cover crop to scavenge nutrients and help break up soil compaction, then you should plant a brassica, such as a forage radish or rapeseed. Planting a mixture of these different types of cover crops can provide you with a wider spectrum of benefits. Additionally, if you have variable growing conditions across your field, then the species in the mix more tolerant to these conditions will survive and provide cover. Mixtures can help increase your odds of having a decent cover crop stand since different plants grow best in different environmental conditions.

Our research at the Eastern Shore AREC demonstrated the ability to drastically reduce nitrogen fertilizer inputs when a legume cover crop, whether planted in monoculture or in a mixture, is planted prior to corn. We found that we could reliably accumulate well over 100 lb. N/acre, even up to 200 lb. N/acre some years from monoculture hairy vetch and legume containing mixes, which could potentially provide up to 50-100% of your corn nitrogen demands.

Early fall planting allows for the greatest potential of optimal cover crop growth and soil health building/nutrient scavenging benefits. Early planting is especially important when using brassica and legume cover crop species. Grass species are more forgiving when it comes to late season planting; however, you would still receive better establishment and growth with earlier planting. See Figure 1 for optimum planting windows for different cover crop species.

Seeding rates are dependent upon planting method. If you are aerial broadcasting (spreader, UAV, airplane, etc.), you should use a higher seeding rate than if you are planting using a drill. We have listed recommended seeding rates from the Virginia USDA-Natural Resources Conservation Services' (VA-USDA-NRCS) Planning Manual for many popular cover crop species, in Table 1.

You can find additional information on many different cover crop species, planting and management, and more at <https://southerncovercrops.org/>.



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Figure 1. Southern Cover Crops Council’s Cover Crop Planting, Growth, and Bloom Windows

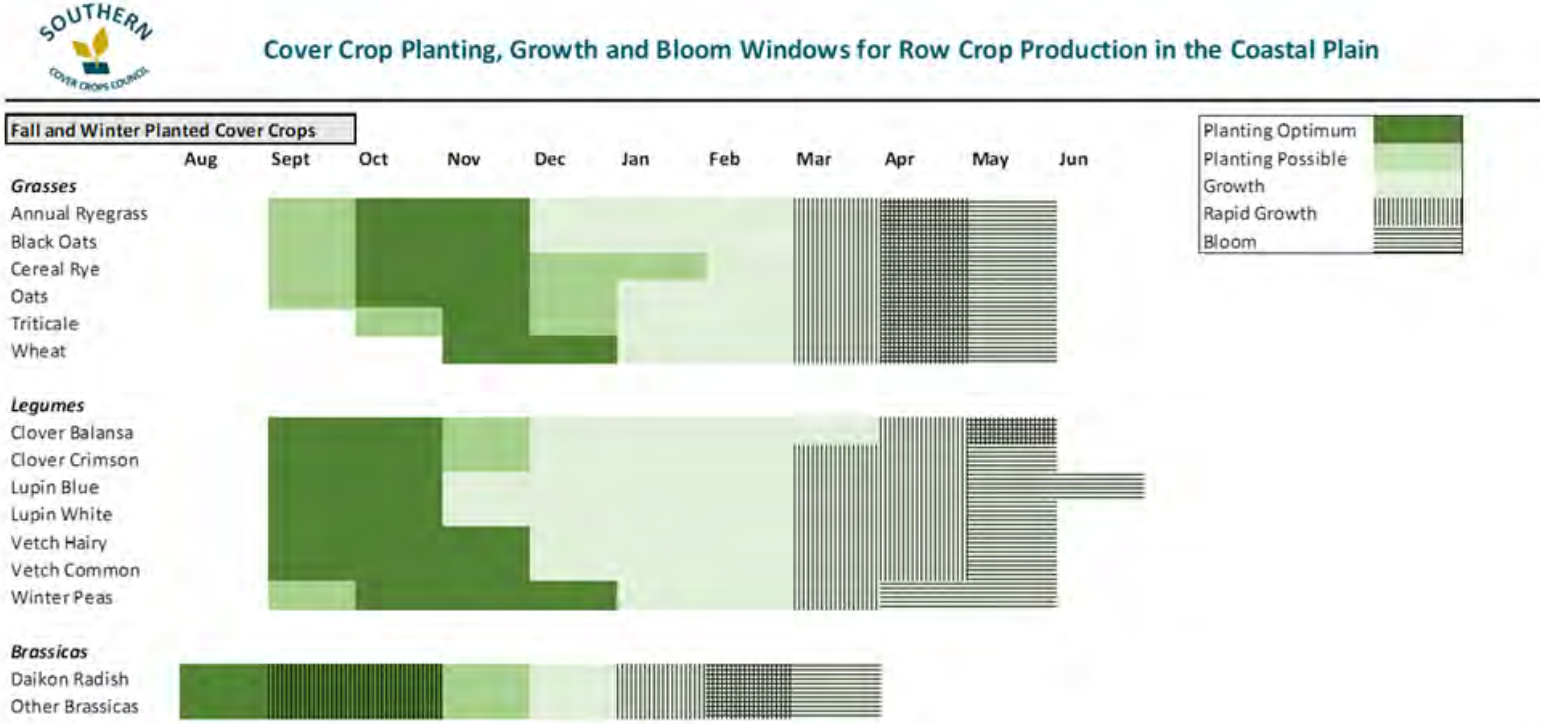


Table 1. Recommended cover crop seeding rate from the VA-USDA-NRCS Planning Manual and Virginia Agricultural Cost Share Rates for the Whole Farm Approach-Cover Crop Bundle from the Eastern Shore Soil and Water Conservation District

Cover Crop Species	Drill Rate (lb./acre)	Broadcast Rate (lb./acre)	VACS Whole Farm Cost Share Rates (lb./acre)
Cereal Rye	110	140	112*
Triticale	110	145	100*
Wheat	120	160	120*
Barley	100	140	96*
Hairy Vetch	20	30	20
Crimson Clover	15	25	20
Austrian Winter Pea	50	75	30-40
Forage Radish	8	14	6-8
Rapeseed	6	12	5-7

*Weight of 2 bu./acre of each small grain.

How many cover crop species can you ID?

Send your answers to jrhaymaker@vt.edu



Research Specialist, Sr. (Job no. 521473)

Conducts weed science research leading to efficient and effective weed control in grain, oilseed, fiber, and vegetable crops. A BS in weed science, a closely related field, or significant experience demonstrating proficiency in weed science research tasks is required. Full-time position with benefits. For more information and to apply online, visit: <https://careers.pageuppeople.com/968/cw/en-us/job/521473/research-specialist-sr>

SUPPORT



Accomack County Farm Tour Day

The donations received help cover the cost of the learning station tents, tables, chairs, lunch items, handwashing stations and port-a-potties for all ACPS third grade enrollment. Farm Tour Day is a non-profit event and would not be successful without the in-kind donations and volunteer help.

DONATE HERE: <https://link.clover.com/utshortener/drnLGg>



**2nd EXMORE
FALL
FESTIVAL**

September 30, 2023

**FEATURING
H.M. Johnson Band**



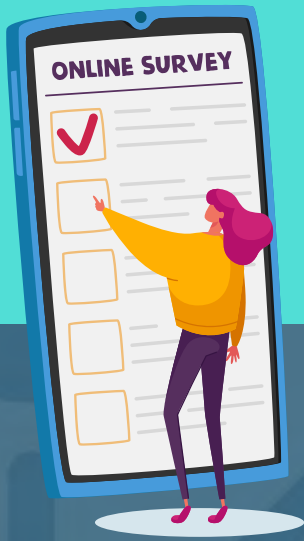
**DOWNTOWN
EXMORE**

10:00AM - 4:00PM

**LIVE MUSIC - FOOD TRUCKS -
ARTS & CRAFTS & MORE**

For more information:

Visit our Facebook page or
Email: exmorefallfestival@gmail.com



WE NEED YOUR INPUT!

Please help Northampton County Cooperative Extension by completing this survey to help us understand community needs for local Extension programming!

Use the link or QR code:
bit.ly/northamptonSA



Your participation is much appreciated and your responses will help us understand critical community issues and prioritize educational programs for Northampton County residents.





SHORE GROWN

Eastern Shore Agricultural Fair

October 7, 2023 | 10:00 AM – 2:00 PM
7247 Young St., Machipongo, VA (old Machipongo Middle School)

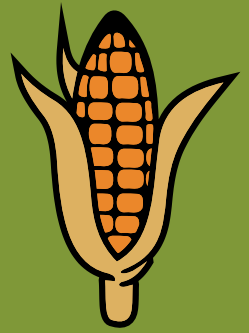
**FREE
& OPEN
TO THE
PUBLIC**

- Skillet Throwing & Keg Rolling
- Baking Competition
- Photography Competition
- Antique Tractor Parade
- Oyster Shucking Contest
- Educational booths & craft vendors
- Kids' Activities including pumpkin painting, pedal tractor competition and much more!

*Vendors,
Live Music,
Food Trucks,*

www.esvachamber.org

For more information or Vendor applications contact: ESVA Chamber at marketing@esvachamber.org



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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, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, military status, or any other basis protected by law.

If you are a person with a disability and desire any assistive devices, services or other accommodations to participate in any activity, please contact Amanda Hurley at 757-678-7946* (*TDD number is (800) 828-1120) during business hours of 8:00 a.m. and 4:30 p.m. to discuss accommodations.