Field Crops Newsletter

Granville and Person County
Mikayla Berryhill

NOVEMBER 2024

NCDA&CS Pesticide Licenses

In the last newsletter, I mentioned briefly that the NCDA&CS has extended the Private Applicator Pesticide Recertification date to December 20th, 2024. This means that the typical September 30th deadline has been moved back to help farmers in the western part of the state impacted by Hurricane Helene. This was applicable to the entire state. Check your private applicators license, and if it has a December 31st, 2024, expiration date, you need to have these credits by December 20th this year.

Due to this change, there has been a delay in the dispersal of pesticide renewal letters. The NCDA&CS IT department is having to re-work their system that does the issuing of renewal letters because of the deadline extension since it was built based on that old deadline. They are still in the testing phase of this process, so it could be the month of December before folks receive their renewal letter. Howevers long as producers have their credits they don't have any reason to worry. Worst case scenario you will go into inactive status and can remain that way as long as you maintain their credit and can decide to renew your license at any time.

If you have questions about this, please reach out to me (mikayla_berryhill@ncsu.edu) or Johnny Coley (johnny_coley@ncsu.edu) and we can check on your license status. As soon as we get an update from the NCDA on renewal letters and when they will be sent out, I will let you know!

Photo 1. Corn cobs from the 2024 Granville Corn OVT site. *Photo by Mackenzie Hutson.*

2024 Corn Official Variety Trial Results

The 2024 Corn Official Variety Trial (OVT) results were released at the end of last month. As you are all well aware, this was an incredibly difficult year to grow corn, so many trial locations were unharvestable or had such poor quality that the data was not useful. The location in the north central part of NC was at the Oxford Tobacco Research Station this year, and due to the timing of planting as well as the weather we received depleted these plots significantly. Some may have seen that at the field day held there this past August. This was seen in multiple locations across the state, so data is not available for the Edgecombe, Granville, Union, or Yadkin locations this year. Sadly, this means that the only Corn OVT data this year from the Piedmont region is from the Rowan County site. However, this information may still be useful to you when choosing varieties for the upcoming year. I would encourage you to look at the statewide data, included in this newsletter, rather than single locations to get an idea of the corn varieties that perform best in a wide variety of environments.

INSIDE

This newsletter is designed to give you up to date information on crops from NC State University and other sources. For more information:

Contact

PERSON COUNTY
304 S Morgan Street
Roxboro, NC 27573

PH: 336.599.1195
person.ces.ncsu.edu

GRANVILLE COUNTY
125 Oxford Outer Loop
Oxford, NC 27565

PH: 919.603.1350
granville.ces.ncsu.edu

MIKAYLA BERRYHILL
mikayla_berryhill@ncsu.edu

Above Average Statewide Corn - All Maturities (2022-24)

Company/ Brand	Hybrid	Trait	Relative Maturity	Yield (bu/a)	Test Weight (lb/bu)	Top Yield Group %	Years in Test	% Trial Mean			
								STATEWIDE	Piedmont	Tidewater	Coastal Plain
DEKALB - Bayer Crop Science	**DKC68-35**	VT Double PRO	118	204.7	58.7	78%	3	11.00%	15.5%	5.7%	13.4%
FS System	**FS 6306T RIB**	Trecepta	113	204.9	57.4	64%	3	6.80%	7.2%	7.4%	6.0%
DEKALB - Bayer Crop Science	**DKC 113-83**	Trecepta	113	210.7	58.7	63%	2	5.80%	5.6%	3.1%	8.6%
Progeny Ag Products	**PGY 2314TRE**	Trecepta	114	210.2	57.5	56%	2	5.30%	6.2%	5.7%	4.4%
Gateway	**1913TRE**	Trecepta	113	209.1	57.4	56%	2	4.80%	7.5%	1.7%	6.1%
INTEGRA	**6493**	VT Double PRO	114	200.2	57.1	60%	3	4.30%	1.8%	4.9%	5.6%
FS System	**FS 6017V RIB**	VT Double PRO	110	199.9	56.8	40%	3	4.00%	3.7%	4.4%	3.8%
Revere Seed	**Revere 1839 TC**	Trecepta	118	203.5	56.6	57%	2	3.80%	2.3%	6.2%	2.1%
Seedway	**SW 1345TR**	Trecepta	113	189.2	57.2	38%	2	3.80%	6.0%	1.3%	4.9%
Dyna-Gro	**D58TC94**	Trecepta	118	202.2	59.2	50%	2	3.60%	-0.9%	5.5%	3.8%
Seed Consultants	**SC1112 AM**	AcreMax	111	199.4	58.5	48%	3	3.60%	7.8%	1.8%	2.1%
DEKALB - Bayer Crop Science	**DKC64-22**	VT Double PRO	114	206.7	58.9	50%	2	3.50%	2.6%	1.2%	6.4%
Dyna-Gro	**D56TC44**	Trecepta	116	200.2	58.8	29%	2	2.60%	4.6%	1.8%	2.5%
Revere Seed	**Revere 1627 TC**	Trecepta	116	190.0	58.2	30%	3	2.50%	4.7%	-0.6%	4.3%
INTEGRA	**6720**	VT Double PRO	117	188.1	59.4	26%	3	2.20%	9.1%	-1.8%	1.5%

Above average yielding hybrids that were tested for 2 or more years across all relative maturities. The % Trial Mean for these hybrids are greater than or equal to 1 standard deviation from the average. Hybrids are sorted by Statewide % Trial Mean from high to low. Top Yield Group % is the percentage of time the hybrid was in the top yield group across all locations tested in this category. For more details on these hybrids, visit ncovt.medius.re

Above Average Piedmont - Medium Hybrids (2024)

Company/Brand	Hybrid	Trait	Relative Maturity	Yield (bu/a)	Test Weight (lb/bu)	% of Trial Mean	Top Yield Group %
Gateway	**1913TRE**	Trecepta	113	195.7	57.7	19.0%	100%
FS System	**FS 6017V RIB**	VT Double PRO	110	187.9	56.1	14.3%	100%
DEKALB - Bayer Crop Science	**DKC 113-83**	Trecepta	113	186.2	58.3	13.2%	100%
Mid-Atlantic Seeds	**MA6153PCE**	Powercore	115	185.0	55.6	12.5%	100%
Progeny Ag Products	**PGY 2314TRE**	Trecepta	114	182.9	57.6	11.3%	100%
Mid-Atlantic Seeds	**MA8110TRECRIB**	Trecepta	111	182.5	56.5	11.0%	100%
Axis	**64H70**	Trecepta	114	177.7	55.3	8.1%	100%
FS System	**FS 6306T RIB**	Trecepta	113	177.7	56.3	8.1%	100%
Seedway	**SW 1345TR**	Trecepta	113	176.9	56.5	7.6%	100%
Axis	**64B18**	RR	114	176.6	55.7	7.4%	100%
Syngenta - NK	**NK1307-DV**	Duracade	113	175.3	58.3	6.6%	100%
FS System	**FS 6595V RIB**	VT Double PRO	115	173.8	57.5	5.7%	100%
FS System	**FS 6545V RIB**	VT Double PRO	115	173.2	56.0	5.3%	100%
DEKALB - Bayer Crop Science	**DKC64-22**	VT Double PRO	114	172.2	57.9	4.7%	100%
Seed Consultants	**SC1112AM**	AcreMax	111	172.1	59.2	4.7%	100%
Mid-Atlantic Seeds	**MA6094PCE**	Powercore	109	172.0	55.5	4.6%	100%
AgraTech	**711VT2P**	VT Double PRO	112	171.3	57.5	4.2%	100%
Dyna-Gro	**D54VC14**	VT Double PRO	114	171.2	57.4	4.1%	100%
Mid-Atlantic Seeds	**MA8142VT2PRIB**	VT Double PRO	114	170.7	57.8	3.8%	0%
Progeny Ag Products	**PGY 2010 TRE**	Trecepta	110	170.6	57.0	3.7%	0%
Gateway	**4914TRE**	Trecepta	114	168.2	55.9	2.3%	0%
Pioneer	**P1289YHR**	VT Double PRO	112	166.5	59.7	1.3%	0%
Augusta	**A2365**	VT Double PRO	115	164.9	55.0	0.3%	0%

The yields for these hybrids are greater than or equal to 1 standard deviation from the average. Hybrids are sorted by yield from high to low. Top Yield Group % is the percentage of time the hybrid was in the top yield group across all locations tested in this category. For more details on these hybrids, visit ncovt.medius.re

NOTE: This is from the Rowan location ONLY in 2024 due to the loss of Union, Yadkin, and Granville data from the drought

Above Average Piedmont - Late Hybrids (2024)

Company/Brand	Hybrid	Trait	Relative Maturity	Yield (bu/a)	Test Weight (lb/bu)	% of Trial Mean	Top Yield Group %
Dyna-Gro	**D60TC45**	Trecepta	120	189.9	57.5	22.1%	100%
INTEGRA	**6915TRE**	Trecepta	119	183.2	56.5	17.9%	100%
Croplan	**5682TRE**	Trecepta	116	182.1	54.8	17.2%	100%
Mid-Atlantic Seeds	**MA8199TRECRIB**	Trecepta	119	177.0	56.3	13.8%	100%
Revere Seed	**Revere 1627 TC**	Trecepta	116	175.5	58.8	12.9%	100%
Gateway	**3919TRE**	Trecepta	119	175.3	56.0	12.7%	100%
Revere Seed	**Revere 1839 TC**	Trecepta	118	174.8	57.5	12.4%	100%
Seedway	**SW 1880TR**	Trecepta	118	173.4	55.2	11.5%	100%
Progeny Ag Products	**PGY 2118 VT2P**	VT Double PRO	118	171.0	57.8	10.0%	100%
DEKALB - Bayer Crop Science	**DKC66-06**	Trecepta	116	169.4	57.2	8.9%	100%
INTEGRA	**6720**	VT Double PRO	117	166.2	59.6	6.9%	0%
INTEGRA	**6624TRE**	Trecepta	116	164.0	59.5	5.5%	0%
FS System	**FS 6947T RIB**	Trecepta	119	162.4	56.2	4.5%	0%
DEKALB - Bayer Crop Science	**DKC 117-78**	VT Double PRO	117	161.5	59.7	3.9%	0%
Seedway	**SW 1661SS**	SmartStax	116	161.1	58.2	3.6%	0%
FS System	**FS 6627T RIB**	Trecepta	116	160.7	59.1	3.4%	0%
Dyna-Gro	**D56TC44**	Trecepta	116	156.3	59.4	0.5%	0%
FS System	**FS 6634V RIB**	VT Double PRO	116	156.2	56.1	0.5%	0%

The yields for these hybrids are greater than or equal to 1 standard deviation from the average. Hybrids are sorted by yield from high to low. Top Yield Group % is the percentage of time the hybrid was in the top yield group across all locations tested in this category. For more details on these hybrids, visit ncovt.medius.re

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After the Storm: Soil Strike Team Helps Farmers Assess Land

By: Jennifer Howard – N.C. State University

In the wake of Hurricane Helene, western North Carolina faces a slow recovery. While power has been restored and roadways repaired, farmers are contending with profound changes to the foundation of their livelihood — their soil.

Last week, a team of researchers from NC State University's Department of Crop and Soil Sciences visited western North Carolina to support local Extension agents in evaluating the shifting landscape.

"The scenario up here is overwhelming," said Luke Gatiboni, NC State professor of soil fertility. "There is so much destruction that some farmers may not be able to recover some fields. Nothing is there anymore – just bedrock. It is truly sad."

Assessing Scarred Soils

The storm's heavy rains, flooding, and mudslides transformed fields across the region. In some areas, topsoil was completely stripped away, while in others, deposits coat fields in up to three feet of sediment, debris and gravel.

"It's not soil that was deposited in these fields," said Stephanie Kulesza, assistant professor of nutrient management. "It's sand, silt or gravel, depending on how the water-energy moved. And there's no variation in particle size, which can cause future challenges with holding and draining water."

Kulesza was part of a four-member NC State soil Extension strike team that assessed soil conditions at 18 farms across western North Carolina, including the six hardest-hit counties: Buncombe, Avery, Mitchell, Madison, Watauga and Yancey.

Alongside local Extension agents, the team took soil and water samples to test for contaminants and evaluate agricultural risks.

Widespread flooding breached wastewater treatment plants, septic systems, industrial areas and farms across the mountains, carrying a slurry of biological and other contaminants along with piles of tree and trash debris.

Kulesza says knowing what's underfoot is paramount to keeping farmers, citizens and animals healthy.

"This was a huge event, and human and animal health is an ongoing concern," she said. "Crops and animal forage grown in contaminated soil could expose people and livestock to harmful bacteria."

Sampling for Safety

The strike team collected multiple soil and water samples, especially from areas at higher risk of contamination. While flood waters have receded, Erin Rivers, assistant professor of water quality, said biological contaminants

Photo 2. Soil damage from Helene in western NC. *From NC State University.*

can linger for weeks or longer if there are uncontrolled contaminant sources upstream.

"Bacterial contaminants can persist in soils for 60-90 days depending on conditions, and heavy metals potentially much longer," Rivers said. "And any flooded area could have exposure, not only those with visible deposits."

Waiting until spring isn't an option for many farmers whose fields and creeks are unrecognizable. Erosion carved out streambanks and left fields with bare soil both vulnerable to additional weathering from winter precipitation. Stabilization is a top priority.

"Soil is a farmer's livelihood," Kulesza said. "They need to protect what they have from further movement. And soil amendments like lime and fertilizer need time in the soil to work."

The team has called on additional experts from NC State's College of Agriculture and Life Sciences (CALS) to advise on streambank engineering. Meanwhile, they're focusing on cover crop recommendations and soil testing. But it's not the standard North Carolina Department of Agriculture & Consumer Services soil testing most farmers know.

Complex and Costly Testing

"We're analyzing these initial soil samples not only for fertility but also for bacterial and heavy metal contaminants," Kulesza noted. "But the testing is expensive — up to $150 per sample — and for farmers who have already lost so much, it's hard to ask them to bear this cost."

Recognizing the high analysis cost at certified labs, researchers are adapting methods to enable cost-effective and rapid in-house screenings, including specialized methods and equipment for heavy metals testing and modified soil water bacterial test kits.

"These adapted methods extend our capacity to support a larger number of farmers, and in the case of the bacterial

tests, we hope to get these in the hands of Extension agents who can perform these tests in the field," Rivers said.

Kulesza's group is working on grant funding from multiple sources to fund expanded testing as well as GIS technology and field data that could be employed to identify high-risk areas for future visits.

In the meantime, initial sample test results will be shared with farmers through local Extension agents, who serve as a farmer's first-line resource. University teams will continue preparing fact sheets and decision-making tools to guide farmers' unique situations. The group expects to make additional field visits later this year.

"Some of the most fertile soils in these mountain valleys are now gone," Kulesza said. "They produced insanely high yields because of abundant water and fertility. Their loss will have a big impact on crop production if we can't restore them."

Want More Field-Based Facts?

For more field-based insights and resources, farmers can visit the NC State Extension portal for fact sheets and information tailored to their recovery needs.

The N.C. Disaster Information Center includes ongoing updates and fact sheets on soil management and planting considerations.

Connecting farmers with science-based guidance is just part of how we are growing the future.

Upcoming Events:

2025 NC Commodity Conference

January 8th-10th, 2025

- Sheraton Imperial Hotel (4700 Emperor Blvd, Durham, NC)
- Event features include keynote presentation, commodity and legislative updates, sessions and panel discussions on timely topics, award ceremony, exhibit hall, and ample opportunities to network throughout the conference and at an event reception.
- Register at www.nccommodityconference.com/

Old Belt Regional Tobacco Meeting

January 22nd, 2024 – Breakfast @ 8:30AM

- 536 Main St., Yanceyville, NC
- Breakfast and Lunch will be provided.
- Pesticide Credits and Respirator Fit Testing will be available – medical clearance required before fit test.
- Register at 2025TobaccoProductionMeeting.eventbrite.com

Upper Middle Belt Tobacco Meeting

January 27th, 2024 @ 9AM

- Franklin Plaza (279 South Bickett Blvd., Louisburg, NC)
- Lunch and snacks will be provided
- Pesticide credits will be offered.
- Soil fumigation training will be offered at the end of lunch.
- RSVP at go.ncsu.edu/uppermiddletobacco25