

March 2015



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On March 18, well over 1000 farmers and agribusiness leaders from across the state came to Raleigh to celebrate agriculture and tell its story to the legislature as part of the 2014 National Ag Day. At a rally on the capitol grounds, Commissioner Troxler, the Governor, and legislative leadership spoke of the importance, contribution, and excitement for agriculture in North Carolina. It was truly an impactful day. The Research Stations took part and provided a backdrop with four of our newest tractors on display at the Capitol as well as an afternoon reception at the Governor's Mansion.

There is another part of this story which is worth telling. March 18 was one of the few nice days we have had this spring. So, it was not the most convenient day for a visit to Raleigh for the 1000+ farmers that came as well as our research stations. But, they made the commitment to be there because it was important. On the afternoon of March 18, two of the tractors went back to the research stations, and two went to the Governor's Mansion for the reception. Those two at the Mansion were on display and stayed on the grounds of the Mansion overnight. The next morning, they were driven to the federal surplus yard, loaded on a trailer, and returned to Central Crops at Clayton.

I was at CCRS on the morning of March 19 for a meeting and saw them roll in. By the time the meeting was over, those tractors were back in full service in our research programs. One was being used to set up a new planter, with the Case IH technician on hand, and the other was used to put in a cold stress corn nursery for Dr. Major Goodman. So, even with two of our new machines spending the night at the Governor's Mansion, by 11:30am the next morning the stations were back in full swing and in fact had planted a critical, time-sensitive research trial in advance of rain that began falling Thursday afternoon.

I think that's remarkable! The new machines are much more than shiny pieces of equipment. They are used to their fullest in many capacities. Most importantly, it is the can-do attitude of the folks on the research stations that make these things happen every day, not just when we have a show to put on. Thanks to all of you. I'm proud to be associated with you.



Tidewater, An Insiders View

Tidewater Research Station, a place that is home to roughly 1,550 acres of rich, black, organic soil and is our eastern most station. A place where varying research projects are not just a job, but a lifelong passion. And a place that has as many great projects as it does great people.

Jewell Tetterton has been superintendent since 2007 and oversees everything from cotton, corn, and sunflowers, to the aquaculture, cows, and the farrow to finish hog operations. Tidewater is also known for having the only potato breeding program in North Carolina, which Dr. Craig Yencho directs. The approach is much like the one that Clinton follows for their sweet potatoes. Heirloom roots are stored for years and bred time and time again. Pollen is collected and crossed to form hybrids, and some breeds of our potatoes are sent to other states for data collection to see how it handles different soils, climates, and the environment in general. The station has a brand new greenhouse in which they start a lot of the plants before they move them to field plots.

Not only are they good with potatoes, but the aquaculture has come a long way too. So far in fact that a neighboring company has mirrored their research and used it in private industry. There are 4.5 surface acres of ponds that hold hybrid catfish, blue crabs, yellow fish, prawns, flounder, and more. These ponds are earthen fish ponds, meaning that there are no plastic edges. The station also hosts a number of events for the community, including the Relay for Life event each year.

Tidewater Research Station has many wonderful employees and all are deserving of recognition, but we want to recognize one for his dedication, his willingness to learn and apply his knowledge to his job, and for being a great employee. Wesley Stallings is the Unit Manager for the crops, greenhouse and maintenance. He has only been with the station for about two years and but has been a quick study, has a good report with coworkers, and he has helped to bring the Integrated Cropping System to where it is today. Great job Wes!



The Bioenergy Research Initiative: Industry Update

Bioenergy is renewable energy made available from materials derived from organic sources. Biomass is any organic material which has stored sunlight in the form of chemical energy. As a fuel it can include grasses, wood and wood waste, straw, manure, sugarcane, sorghum, and many other byproducts from an array of agricultural processes. Part of our focus is research on warm season perennial grasses and short rotation woody crops, and the benefits that our state could see from them as dedicated bioenergy crops.

Sam Brake, along with Allison Medlin and Charles Barrow oversee our Bioenergy Research Initiative which is housed at the Oxford Tobacco Research Station. We also have plots on sites around the state, including the Williamsdale Field Lab, the HCRS in Clinton and Castle Hayne, MHRCS at Mills River, and the Upper Mountain Research Station in Laurel Springs.

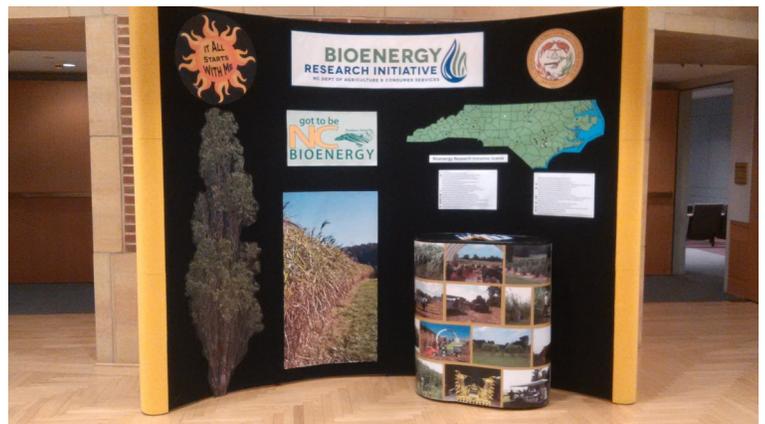
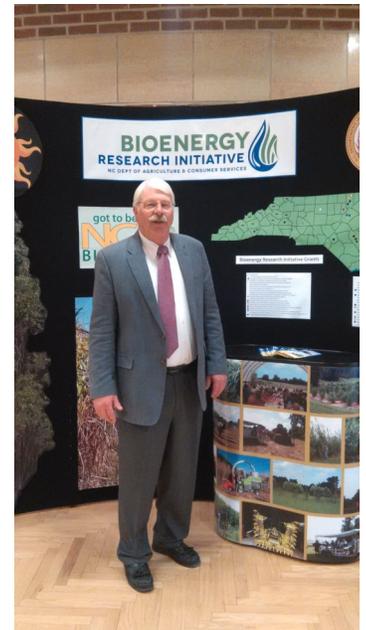
The Research and Industry Update, held at the NC Biotechnology Center, included both private and public partners with the intent to share any data or research ideas that have been amassed. With speakers such as Dr. Dennis Hazel, Dr. Carl Crozier, Dr. Robert Evans, and Dr. Tom Ranney of NC State University, and sponsors such as Murphy Family Ventures, REPREVE Renewables, NexSteppe and Biochemtex, the collaboration proved to be a valuable learning ground. Research topics included energy yields, adaptability, carbon sequestration, annual versus perennial, gene editing, hardiness, nitrogen intake, and how invasive these grasses and plants actually are.



As Commissioner Steve Troxler and Dr. Sandy Stewart stated, we are just on the cusp of this research and the accompanying trials. Most of the biomass material used can take from two to four years to reach full production. Genetic improvement is vital to this fledging industry. Some of the species that have potential as bioenergy crops are naturally sterile and require a technique called embryo rescue in order to use them to create new hybrids. Crossing diploids with tetraploids to create triploids is fascinating and tedious work, but it is necessary to breed new hybrids with sterility in order to avoid invasiveness.

With a rapidly expanding population, more and more ways to create dependable energy are going to be needed. Be it food or renewable energy sources, agricultural research is greatly responsible for leading the industry to these solutions. With the partnering of public and private industries, and the joint effort to disseminate any information collected, it leaves little doubt that a resolution will be reached in the near future.

Throughout history, farmers have been relied upon to provide food, fiber, and forest products. Now we are asking them to provide fuel in the form of renewable energy crops.



Meet Mike Morris

Mike Morris has been working for the Sandhills Research Station for 28 years as a Maintenance Technician. He was born and raised in Montgomery Co. After high school Mike attended Wilkes Community College and received an A.S. in Diesel and Equipment Technology. Using those learned skills along with a creative mind, he has created, fixed, reinvented, fabricated and welded many pieces that are currently used daily on the station. He made a hose storage reel and a shielded herbicide sprayer from scrap metal and used parts. Mike also has a passion for diesel engines, and especially loves older military pickups. He owns several personally and drives daily as his maintenance truck on the station.



He is married and has one son who shares the hobby of collecting antique chainsaws, especially the McCulloch brand. They currently have over 200 in the collection and he uses this as a way to pass on the mechanical mind to his son. He is a long time active member of the First Baptist Church in Troy, NC.

He has gone above and beyond over the years and is always willing to lend a helping hand. Thank you for your hard work and dedication and for being an integral part of what makes our division so great Mike!



Tornado Awareness Month

Tornadoes are violent by nature. They are capable of completely destroying well-made structures, uprooting trees and hurling objects through the air like deadly missiles. A tornado is a violently rotating column of air extending from the base of a thunderstorm down to the ground. Tornado intensities are classified on the Fujita Scale with ratings between F0 (weakest) to F5 (strongest). Tornadoes have been reported in every state.

Tornado Watch - Tornadoes are possible in and near the watch area. Review and discuss your emergency plans, and check supplies and your safe room. Be ready to act quickly if a warning is issued or you suspect a tornado is approaching. Acting early helps to save lives!

Tornado Warning - A tornado has been sighted or indicated by weather radar. Tornado warnings indicate imminent danger to life and property. Go immediately under ground to a basement, storm cellar or an interior room (closet, hallway or bathroom). **Some tips to stay safe and what to be on the lookout for:**

- ◇ Dark, often greenish clouds – a phenomenon caused by hail
- ◇ Wall cloud – an isolated lowering of the base of a thunderstorm
- ◇ Cloud of debris
- ◇ Large hail
- ◇ Funnel cloud – a visible rotating extension of the cloud base
- ◇ Roaring noise
- ◇ During any storm, listen to local news or a NOAA Weather Radio to stay informed about tornado watches and warnings.
- ◇ Pick a safe room in your home where household members and pets may gather during a tornado. This should be a basement, storm cellar or an interior room on the lowest floor with no windows.
- ◇ If you are caught outdoors, seek shelter in a basement, shelter or sturdy building. If you cannot quickly walk to a shelter.
- ◇ Practice periodic tornado drills so that everyone knows what to do if a tornado is approaching.
- ◇ Know your community's warning system. Communities have different ways of warning residents about tornados, with many having sirens intended for outdoor warning purposes.



William Neal Reynolds Distinguished Professors, Honorable Mentions

Since the first class in 1951, the appointment as a William Neal Reynolds Distinguished Professor has been recognized as the highest honor open to faculty members in the College of Agriculture and Life Sciences. The North Carolina Department of Agriculture and NC State University would like to recognize the following professors.:

Dr. David Jordan and Dr. Craig Yencho are now William Neal Reynolds Professors in the College Agriculture and Life Sciences at NC State. Botha are familiar faces to the Research Stations. Dr. Jordan works as the Extension Peanut Specialist and is also a prolific weed science researcher. His work is widely published. Jordan is a native of Chowan County and spent the early part of his career at Louisiana State University before returning to North Carolina. His international activities in Africa are also noteworthy as he has worked on many projects in Ghana and other African countries.

Dr. Craig Yencho is a sweet potato breeder and works a great deal at the Horticultural Crops Research Station in Clinton. Over 90% of our NC sweet potatoes were bred by Dr. Yencho and his staff. His support of the research station at Clinton as well as other sites across the state has always been generous. Recently, Dr. Yencho led an effort that landed funding for sweet potato research from the Bill and Melinda Gates Foundation.

Congratulations to these outstanding members of the NC State faculty! We are proud to be working with them on the Research Stations.

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Agriculture research in North Carolina dates back to 1877, when state legislation established the North Carolina Department of Agriculture along with "Experiment Stations" as a division of the department. Since that time, the North Carolina Department of Agriculture and Consumer Services' (NCDA&CS) Research Stations Division, in partnership with the College of Agriculture and Life Sciences at North Carolina State University and School of Agriculture and Environmental Sciences at NC A&T State University, has established 18 statewide locations.

Each facility has unique climate and soil conditions, giving researchers a living laboratory in which to investigate a variety of regional crops, forestry concerns, livestock, poultry, and aquaculture. The Division supports these studies by providing land, water, equipment, buildings, and staff who work around the clock to help build a stronger foundation for the future of agriculture.

NC STATE UNIVERSITY



Livestock Crew hauling hay at Tidewater RS

Research Stations Division would like to welcome the following employees to our division:

- ◆ David Boyd: Oxford Tobacco RS
- ◆ Lee Lyons: Oxford Tobacco RS
- ◆ Melanie Smith: Caswell Research Farm
- ◆ June Rhodes: Cherry Research Farm
- ◆ Denise Bufmeyer: Sandhills Research Station
- ◆ Terry Gray has served our agency for 30 years and will be retiring on April 1st, 2015.