Agricultural Update

News from NC Cooperative Extension, Craven Center

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Upcoming Events

Important Note: *Registration deadline for events listed below will vary from as few as 24 hours prior the event to as much as 3-4 days prior the event so please register as much in advance as possible. Also, while attendance is open to anyone, meals, when served, will only be provided for those that register in advance.*

2026 Blackland Farm Managers Tour - This event will be held on August 5,2026 in Beaufort County along Peoples Road, located between Bath and Burbage Crossroads. This year's event will be hosted by Scattered Acres and Poole Farms. The format for this year's tour will look very different from past events. Attendees will have the freedom to move at their own pace through exhibits, research plots, live demonstrations, and sponsor tents. NC State University Extension specialists will be on-site presenting a wide range of timely and relevant topics, while agricultural industry representatives will showcase the latest products, hybrids, and varieties directly in the field. Additional information and registration is found at the Blackland Farm Managers Association webpage.

Crop Status

In spite of the lack of rainfall, most crops are generally good. Since subsoil moisture is essentially non-existent (We are about 10 inches below normal since January 2026 and we ended about 7-8 inches below normal in 2025), we'll need to relay upon frequent rainfall events to sustain this crop. To date, this has occurred. Below are some general comments about select crops.

Tobacco: Most tobacco fields are larger than anticipated given the extremely dry soils. Plants are generally healthy, although some TSW is beginning to be evident. In fact, TSW ranges from less than 5% in some fields to over 20% in others. The fourth generation of thrip flight has occurred so continue to watch for TSW. Should Target Spot begin to emerge, recall that two best performance of fungicides in NCSU trails were Excalia at 2.0 oz/ac followed by Excalia at 2.0/ac followed by Quadris 12 oz/ac. The next best treatment was Excalia at 2.0 oz followed by Quadris at 12 oz/ac followed by Excalia at 2.0 oz/acc. Rotating products provided the best results.

Corn: Corn growth stage varies greatly across the county. This is not the result of weather. Rather, crop stages varies according to planting date. Even with difference in stage, corn generally looks good. Within a few weeks, most will begin reproductive stage. Rainfall during this period will be critical. It also merits to monitor now for stinkbugs. Threshold values will vary by the stage of the corn. Read more in the article written by Dr. Dominic Reisig, *Stinkbug Management in Corn* . Given the extremely tight margin for profit, it would be wise to consider whether any additional inputs are actually needed for corn. Yes, if an insect threshold is met, one should treat. However, including a fungicide automatically, because one is applying a product anyway is questionable. NCSU Plant Pathologist, Dr. Daisy Ahumada, wrote an article, *Considerations for Fungicide Applications in North Carolina Corn.* This article shows that about 46% of the time a fungicide is applied, it provides a significant yield response. Furthermore, if one uses the current prices and yield for the Fungicide Return on Investment Calculator, only two products even show a slight positive economic gain.

So, this means one has about 50% chance of having a significant yield increase and an extremely small probability of having a positive economic increase. Review the chart below

and make your own decision.

Fungicide Cost vs Benefit								
Fungicide	Appl. Rate (ac)	Appl. Cost ($/ac)	Product Cost ($/ac)	Total Cost ($/ac)	Yield Preserved (bu/ac)	Expected Net Benefit ($/ac)	Breakeven Cost ($/ac)	Breakeven Probability (%)
Revytek	8 fl oz	10.00 $	22.50 $	32.50 $	7.1	$4.79	$37.29	67.7%
Topguard EQ	5 fl oz	10.00 $	12.50 $	22.50 $	4.53	$1.28	$23.78	54.5%
Miravis Neo	13.7 fl oz	10.00 $	22.50 $	32.50 $	6.14	-$0.28	$32.22	47.9%
Tilt	4 fl oz	10.00 $	2.50 $	12.50 $	2.27	-$0.57	$11.93	46.6%
Trivapro	13.7 fl oz	10.00 $	20.00 $	30.00 $	5.17	-$2.83	$27.17	33.9%
Quilt Xcel	10.5 fl oz	10.00 $	10.00 $	20.00 $	3.13	-$3.59	$16.41	35.4%
Headline AMP	10 fl oz	10.00 $	15.00 $	25.00 $	3.84	-$4.86	$20.14	19.1%
Lucento	5 fl oz	10.00 $	17.50 $	27.50 $	3.91	-$6.98	$20.52	10.0%
Adastrio	8 fl oz	10.00 $	20.00 $	30.00 $	4.06	-$8.70	$21.30	14.7%
Delaro	8 fl oz	10.00 $	20.00 $	30.00 $	3.97	-$9.14	$20.86	13.7%
Source: https://connect.doit.wisc.edu/cpn-roi-tools/								

Soybean : During April and May when soils were very dry and the temperature warm to hot, some opted to plant soybean rather than corn. As such, we have some soybeans that have already overlapped the rows yet others still to be planted. All of these soybeans still have high yield potential since soybean maturity allows us this planting window. Perhaps the only advice that seems pertinent is to make sure you apply the appropriate product suited for the soybean herbicide traits. Seems simple enough but as humans, we make mistakes! So, ensure that you use glyphosate on glyphosate tolerant soybeans. Use the auxin products on auxin tolerant soybeans. For all, especially the 2, 4D and dicamba products, make sure that spray drift does not leave YOUR field. Neighboring fields may not tolerate these products!

Cotton: The cotton crop is perhaps the hardest to evaluate. It appears that the first planted fields have emerged and are growing rapidly. The latter planting dates emerged either during the extreme heat and hot, dry soils or were “drowned” by recent excessive rainfall. Some of these fields merit serious consideration for replanting. Having thusly stated, this is not really economically feasible and we are past a reasonable planting date. Regrettably, some cotton herbicides will not allow replanting into other crops so our choices are extremely limited. Should you find yourself in this situation, failed crop insurance may be a reasonable option.

Peanut: Generally peanuts were planted timely and somehow found enough moisture to germinate. Thrip migration may continue to be a risk so continue monitoring. Otherwise, simply keep weed management optimal as we have in years past (Great job folks!). Having thusly said, there are a few isolated field with less than an ideal plant population. If possible, spot replanting is preferred. Simply note these areas and realize the potential for a later maturing plants in these areas when you examine for digging dates in the fall.

Data Centers & Agricultural Impact

For those that have not been keeping up to date regarding the growth of data centers, it may be surprising to learn that data center construction is growing rapidly within the US. There are several agricultural related concerns that merit consideration. First, data centers use a tremendous amount of water to cool the equipment. This water is not recycled. Rather it is virtually 100% lost to evaporation. As such, if data centers are utilizing farmland as well as making withdrawal of water from rivers or ground water, then it is competing with agriculture for natural resources.

Secondly, data centers require a lot of infrastructure and support. The amount of energy used can be massive. As such, power lines, cables, and easements are necessary. All of these may negatively impact the ability of nearby farmers to operate.

There are many other considerations, but just as with solar energy production, data centers offer both positive and negative aspects for rural communities and farmers. Currently, within NC, most centers appear to be within Western NC. This trend may remain or it may change. However, it merits monitoring the growth, electricity demand, land use, and water usage of these centers.

If interested in more details, view the discussion offered by the short video offered by Pennsylvania State University, Agriculture Meets Hyperscale AI

Realignment of Fertilizer Use and Purchase: Something to Think About….

Historically, farmers have been able to purchase fertilizer and crop production inputs just prior to planting. Dealerships have purchased large quantities and stored them for us. While convenient, this has a risk. It assumes that the dealerships purchased adequate supplies at a time when prices for these inputs were at a price point agreeable to the farmer using them. Too it assumes that supplies are adequate and that transport will be available. This year, we learned this is not always the case.

The conflict between the USA and Iran effectively resulted in destruction of urea plants as well as limited shipping ability worldwide. Compounding this situation, sulfur is a critical component in the formation of nitrogen and phosphorous fertilizer. However, the sulfur compounds used to make fertilizer is also used to mine rare earth and other metals. The world economy was very willing to purchase these sulfur compounds at rates incredibly higher than normal due to the expanding demand for technology (computers, chips, AI, etc.) and the tightening shipping ability. In stark contrast, fertilizer manufacturers (even those within the US) could not afford to purchase these limited sulfur compounds so fertilizer production was slowed or ceased. The net results of just these two factors resulted in rapidly increasing fertilizer cost.

Regrettably, even should the conflict with Iran end, prices and availability of fertilizer may not change. Consider, as example, that a ton of these sulfur compounds has been $200/ton and could be used to extract 1 ton of urea that has a market value of $350/ton. (Price for these sulfur products have been assumed. Actual price ranges is currently $450-750/ton). This is a good investment for a fertilizer production company that leaves room for ample profit for the company. Now consider that this same ton of sulfur compound can be used to extract 1 ton or copper or other metal generally worth $13,000/ton (this price is valid). The return on investment to purchase the sulfur compounds resulting in sales of metals literally destroys that of fertilizer. As such, those extracting metals are more than willing to pay double or triple the price for these sulfur compounds but fertilizer producers are unable to compete for the needed compounds to make fertilizer. If demand for metals continues, this is not likely to allow a price decline in these sulfur products.

In addition to increased prices for fertilizer within the next few years, supply may also be limited. Little fertilizer is actually mined or created within the US. We must rely upon foreign trade partners for much of our fertilizer needs. In years past, we were a priority customer. However, in the global market today, we are not. We are indeed within the top 5-10 countries,

depending upon the type of fertilizer product yet the USA is only about 10% of global fertilizer use. So strictly speaking from a demand perspective, leading countries are China, Brazil, India. This creates a pricing competition for manufacturing companies and the USA does not always win, depending upon many factors, including the value of the country's currency. Given that natural gas, urea and other refineries were destroyed in Iran and that Russia and Ukraine continue to battle, the availability and prices of fertilizer may still be questionable.

Should the USA decide to begin production of urea or other fertilizer, we could indeed. We have an abundant source of natural gas and the ratio of natural gas to nitrogen is about a 1:1 conversion with little energy usage. However, with regulatory restrictions, it would take 5-7 years for a plant to be completed and would cost millions of dollars. Currently we have nobody willing to make this investment. It simply is too big of a risk to assume the demand will remain strong enough to warrant years of construction and millions of dollars.

Like many things in life, finding ways to reduce fertilizer cost for farmers is not always an easy fix. Geopolitical events and policy are complicated. Too, each country supports their current farming community differently. The point is that the USA government, farmers, farmer organizations, and businesses are all examining ways to reduce fertilizer cost and increase availability. So far, efforts have not been successful.

The "take home message" for these comments is to alert you that as you farm this year and into the next several years, you will need to evaluate fertilizer usage carefully. Things are not likely to improve. Low commodity prices with increasing fertilizer prices simply means that we can no longer afford to aim for a high agronomic yield. Rather we will have to evaluate what we consider to be the most economic yield (Read more on this below).

Another means that may aid production is to purchase early. For those that can afford to do so, placing orders and making payment for fertilizer in November or December may provide a great saving to the operation rather than waiting for a "spring" price. In some cases, one may actually need to receive and store the fertilizer so make sure you have ample storage. While this may take re-evaluating cash flow, it may reduce fertilizer cost.

NC Chamber of Commerce provided an excellent overview of this situation and information provided to Congress. If you would like to watch this video, check the website, Ag Allies Fertilizer State of Play Webinar.

Defining Economic Yield vs. Agronomic Yield

For years we used what is termed an "agronomic yield" to provide nitrogen (N) rate recommendations. To some extent, other fertilizers followed this same philosophy but we also have excellent soil testing for nutrients other than N. So, let's concentrate only on N to evaluate and define an "economic yield" N rate.

Assume one applies 155 lbs./ac of actual N and yields 170 bu/ac for corn. Dividing pounds of N applied by the yield provides the N-Use Rate (155 divided by 170 = 0.91). The point of this exercise is to alert us whether we are using too little or too much N . Ideally, one should aim for a N-Use Rate between 0.7-1.0. In this case, the lower the number, the better. If the number is much above 1.0, it means that N is not the yield limiting factor. Something else is limiting yield and the rate chosen is in excess of what the corn could use.

Next, assume the 170 bu/ac corn was sold at $5.25/bu for net sale of $892/ac. The price of N is $500/ton (assumes 184 gallons). If one applied 48 gallons per acre of N to make this 170 bu/ac, this relates to about $130/acre of total N cost. Thus, the cost of N per unit (in this case, bushel) produced is about $0.76/bu ($130/ac divided by $170/ac = $0.76/bu). Now assume we increased our N rate to 170 lbs./ac. Following the same steps and formulas, our N cost per unit is now $1.0/unit. In this example, when one applies the additional N rate of 170 lbs./ac compared to 155 lbs./ac, one gives up about $12/ac of profit. For each 1,000 acres of corn produced, this results in a profit loss of about $12,000.

Recall that one can actually use lower N rates. In studies within Pamlico, Onslow and Craven, rates as low as 100-120 lbs/ac N resulted in 150-180 bu/ac. Rates of 140-160 lbs/ac N resulted in 170-199 bu/ac. The data can be reviewed in the article, *Corn Nitrogen Study: Comparison of Grower Nitrogen Rate To ± 25% Rates*.

Essentially, the point is that one should seriously examine whether you actually need or benefit from "extra" fertilizer. Nobody is suggesting you not aim for high yield. However, the luxury of aiming for highest yield no longer exists while commodity prices are low and inputs are high. Until such time that prices change, we need to examine each fertilizer (and other inputs) using this same type of evaluation. If any input or management is not returning a profit, then one cannot continue to use this product or management strategy.

New Requirement of USDA Programs?

One of the NCSU faculty noted that some of the newer USDA programs, (such as "Farmers for Soil Health" incentive program) now require growers to report yield and value of commodities enrolled in the program. This should not be a "deal breaker" but it at least merits alerting you. Specifically, the contract states:

"*The Producer may be required to provide data about the marketing of production crops produced on Enrolled Fields to support programmatic reporting to USDA. NFWF will share this data only with USDA, and will do so only in an anonymized and aggregated fashion. These data include the volume and value of production crops sold from the Enrolled Fields, the buyers of these production crops, and the premiums received (if any) for these production crops."*

Again, this should not cause concern. It is mentioned so that you would be aware and can be prepared to provide this data upon request.

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Mike Carroll	252-639-5140
Mark Eubanks	252-639-5147
Kristi Welke	252-639-5142

Note, to be blunt, while this number will ring us directly, we are seldom in the office during summer months. As such, our mobile may indeed still be the quickest way to reach us between now and fall. As always, if you call our cell and get voicemail, we are either with a

client, in an area with no cell service, or are conducting some or event. Please leave a message and we will return your call. Better yet, text us a short message with details!

NC Farm Help Line

Tariffs, low economic prices, unpredictable weather, age, labor problems, and many other factors contribute to stress of farming. In fact, whether we like it or not, agriculture has one of, if not the highest, accidental death rates due to equipment use, as well as the highest suicide rate for occupations. Do consider potential impact of things that can be a negative influence on production but please don't worry about things you cannot change! If you find yourself depressed, well, we can listen! If you are not comfortable discussing issues with us, help is available 24/7, through the Help Line that connects individuals experiencing a crisis or in need of other help with resources including mental health, financial, legal, farm safety/health, Cooperative Extension and more at 844-325-3276 or online at https://ncfarmstress.org/crisis-and-resource-lines/. Additionally, for tobacco producers, legal or labor assistance is available free from **GAP Connections**

Disclaimer

Recommendations for the use of agricultural chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by the NC Cooperative Extension Service nor discrimination against similar products or services not mentioned. Individuals who use agricultural chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage regulations and examine a current product label before applying any product.

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https://diversity.ncsu.edu/report-a-concern/

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https://www.usda.gov/oascr/program-complaints

Welcome to your monthly agricultural newsletter from N.C. Cooperative Extension. We are committed to partnering with communities to deliver education and technology that enriches the lives, land, and economy of North Carolina. This month, we bring you the latest seasonal updates, practical production tips, and information about upcoming educational meetings designed to support your farming operations and help you succeed.

Learn More

Our production tips section provides practical, evidence-based farming advice tailored to the current

season. From soil management and pest monitoring to crop scheduling and livestock care, these tips are designed by Extension specialists to help you maximize productivity and sustainability on your operation. Whether you work with field crops, vegetables, fruits, or livestock, you'll find actionable guidance to optimize your management practices and profitability this season.

Research-Based

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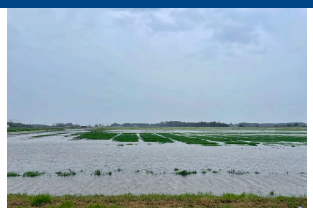

Upcoming educational meetings and workshops this month provide hands-on learning opportunities. Connect with your local Extension office in Craven County for event details, or visit our website to register and stay informed.

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