

The Gardener's Dirt Newsletter

June 2019

A Veggie Tale - Feature Article:



Cooking with Common Corn Smut

By: Ahira Sanchez

Program Assistant, EFNEP for Adults

My first encounter with the common corn smut as a food was in the form of a quesadilla. I was 12 years old at the time, visiting family in Tamaulipas, Mexico. One early morning, my grandfather took us on a morning excursion to his corn fields, and it was there that he introduced me with excitement to the gnarly tumors growing sporadically throughout the sea of corn stalks. At that time, I had never heard of "corn smut" and was very unaware of its unpopularity back home in the States. Any apprehension I may have felt in trying the strange and ugly galls left me as everyone around me repeatedly assured me of corn smut's amazing taste. However, my family called it huitlacoche and, until recently, that's all I ever knew it as.

When my aunt placed the quesadilla my grandmother had prepared in front of me, I noted no particular smell. The quesadilla smelled wonderful like it always does; melted cheese and corn

tortilla. As I picked up the quesadilla with both hands, the cooked corn smut, mixed with the melted Oaxaca cheese, slightly oozed out at the sides. It seemed like black ink had been added to the cheese, but I was undeterred. It was lunch time and I didn't want to refuse what *mi abuelita* (my grandmother) had lovingly prepared for her grandchild visiting from *los Estados Unidos* (the United States).

As my teeth sank into the huitlacoche quesadilla for the first time, the subtle sweet creaminess of the corn smut flooded my mouth; I knew then that huitlacoche would become a personal favorite. Upon returning back home to the States, I quickly realized that huitlacoche was not easy to come by, and so it became the occasional favorite treat. Although I recognized it



Corn Smut / Huitlacoche Quesadilla

(CLICK PICTURE FOR VIDEO)

wasn't a local favorite due to its scarcity, for years I continued to be ignorant of how truly unpopular corn smut was in the U.S. Imagine my surprise when I learned from Marshall Warren, Johnston County's Extension horticulture agent, that huitlacoche is actually known in the U.S. as corn smut, and that corn smut is not considered edible. And imagine his surprise, his eyes wide with intrigue, when I told him that in my family, we eat corn smut as a favorite treat.

Although growing in popularity as a delicacy in the U.S., the common corn smut continues to have a reputation in the U.S. for being an undesirable occurrence. In turn, the general U.S. attitude towards corn smut provides an interesting contrast to Mexico, where corn smut is a desirable and welcomed occurrence. In the attempt to eradicate corn smut, millions of dollars have been spent by the U.S. to breed corn varieties resistant to corn smut. While there are some varieties more resistant than others, there is no variety that's fool-proof; in the right conditions, any variety of corn can produce the delicate and delicious galls. Disappointing as that may seem for some, it isn't necessarily a lost cause as there is a growing demand for huitlacoche. In a 2007 study, the University of Wisconsin-Madison found that the value of huitlacoche ranged from \$.70 to \$1.68 per ear. Compare that to an uninfected ear of corn that only brings in about 10 cents an ear. For someone interested in growing specialty foods, the common corn smut might be worth looking into.

Most importantly, the common corn smut, also known as the Mexican truffle, is a dynamite of nutrition. It is not visually appealing, but it has been found to contain high levels of lysine, an essential amino acid that our bodies need and can only get through food. Recent research also shows that the common corn smut is rich in calcium and magnesium, both important for our overall health. Additionally, it has more protein than corn. If anything, we should appreciate that what the common corn smut is rich in, corn is a poor source for it and vice-versa, making them a perfect pair. Highly versatile, huitlacoche can be used in stir-frys; as a filling in tacos, quesadillas, and tamales; as a thickening agent in soups and sauces; and so much more outside of Mexican cuisine.

There are many ways to obtain corn smut. For all-year access, it is possible to buy canned huitlacoche from your nearest international grocery store. The frozen option, averaging at \$1.50 per ounce, can be ordered for mail-delivery. For the cheapest, in-season corn smut would be the best (if available in your area). However, if you happen to find those precious silver galls gracing your corn, keep in mind its fragility. As with all foods, there are specific time intervals that corn smut needs to be culled for best flavor and utility. Too immature, and it's bitter; too mature, and it crumbles, revealing dry black dusty spores meant to be carried off by air for future inoculation. If you happen to harvest corn smut at its best point, keep in mind that the sooner you use fresh huitlacoche the better as storing it long enough will cause it to go bad quickly.

For me, huitlacoche is a comfort food. It ties me back to memories of my visits to family in Mexico. Stepping into a corn field, with the sole purpose of finding *el oro negro*, the black gold as some call it, takes me back to that day when my grandfather proudly showed me his corn fields, filled with excitement upon finding huitlacoche at its perfect point. I can understand people's hesitation to even consider dining on corn smut. Visually, it is not appealing as its names, "corn smut" and "huitlacoche", imply. The word "huitlacoche", which is Nahuatl (the language of the Aztecs) in origin, has been theorized to mean "sleeping excrement". However, despite its "poopy" name and appearance, huitlacoche is scientifically proven to be more valuable than it looks.

If trying huitlacoche is something you'd like to experience but nervous to prepare yourself on your first go, my suggestion is to find the nearest Mexican taco stand and order a corn smut quesadilla. In Johnston County, we are fortunate to have a few places scattered around with this pre-Hispanic delicacy on their menu. I hope you can enjoy it as I do and appreciate what a true culinary treasure corn smut really is.

Recommended Resources:

-<https://www.pubs.ext.vt.edu/450/450-706/450-706.html>

-http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0101-20612015000200386

-<https://www.npr.org/sections/thesalt/2015/08/24/433232707/scourge-no-more-chefs-invite-corn-fungus-to-the-plate>

-<https://www.hort.purdue.edu/newcrop/ncnu07/pdfs/tracy233-236.pdf>

-<https://blog.mycology.cornell.edu/2007/11/13/huitlacoche/>

-<https://www.farmingmagazine.com/bits-and-pieces/corn-smut-unintended-revenue-source/>

Grow Native:

Amsonia



Amsonia tabernaemontana (eastern blue star)
Photo by Morigan McCarthy Brooklyn Botanical Gardens

Amsonia (Blue Star) is a genus of mostly native plants. These perennial wildflowers attract butterflies, and are deer-resistant, sun-loving plants prized for their drought tolerance and true

blue flowers. Not only are Amsonia species themselves superb, but many of the newer Amsonia (blue star) hybrids could become garden staples. Amsonia hubrichtii was named the 2011 Perennial Plant of the Year by the Perennial Plant Association for its delicate texture, blue flowers and fantastic yellow fall foliage. Amsonia hubrichtii has long been one of our favorites too.

Amsonia is a tough, easy to grow, deer-resistant, full sun perennial that tolerates a variety of garden soils. Amsonia looks great grown in a large drift but also makes a wonderful backdrop or companion plant for other garden species.

Try creating an astronomy garden that contains Amsonia (Blue Star) plus golden star (Chrysogonum), blazing star (Liatris), white star grass (Dichromena), star flower (Ipheion), star of persia (Allium), blue star creeper (Laurentia), Zephyranthes 'Morning Star', Crinum 'Stars and Stripes', Yucca 'Tiny Star' and Kniphofia 'Sally's Comet'. This constellation of color will have you seeing stars all year long.

Article reprinted with permission from Plants Delight Nursery
<https://www.plantdelights.com/collections/amsonia>

Plant Tales:

Deer Management in the Home Landscape

By: Joanne King

Extension Master Gardener Volunteer

Oh, deer! That's putting it mildly! It can be months with no visible signs of ravage. Then a long cold winter, and little food in sight, the assault occurs! Why would the deer eat every single leaf off my camellias last February, but this February they were never bothered?

I was really lucky in prior years. Due to low acorn production in the prior fall and an abundance of acorns this fall, their food supply was greatly different.

It is helpful to understand their habits. Deer breed in November with the fawns born in May. When deer have an abundant food source, they reproduce more. A doe can produce 1-4 fawns per season. A deer herd, which can exceed 120 deer, wanders within a one square mile territory.

Deer are browsers. Fertilizers and watering create the flower buds and sugars beneficial to their diet. Deer are ruminant. They consume in the browsing area (often your yard) and retreat to a safe area (the woods behind your house) where the food is processed by chewing their cud. Our landscape consists of lush lawns and plants for their food. The greenway buffer of our subdivisions provides the safe habitat or "edge" where their food can be processed.



Newswire.com, January 2017



Rutgers Landscape

Deer prefer leaves and tender shoots at ground level and up to five feet high. Their food consumption increases in the fall, as they prepare for the minimal food availability of winter. They depend on acorns or mast to fatten up. During periods of drought, when fewer acorns are produced, you might expect to see "extra" damage in late winter or early spring as the deer seek other food sources.

So what can a homeowner do?

Plant selection and design: When deer are hungry they will eat what is available. Don't give them good choices in the first place. Deer seem to dislike plants with aromatic properties. They seem to stay away from ornamental grasses and bulbs, or plants with a sticky or prickly leaf surface. Try using plants that deer seem to dislike near plants that are vulnerable. Use hardscape materials to minimize plantings. Use plantings in the open areas of your yard that draw the deer through your yard to the greenway.

Take extra care to protect or minimize tender annuals and perennials, like impatiens, caladiums, hostas, begonias, sedum, hydrangea, coleus. Better yet, enjoy these plants in pots on your porch/deck or plant them in places that can be protected.

Use fences and barriers: This option may be limited for some homeowners but useful in certain situations, especially vegetable gardens. A fence has to be high enough so the deer can't jump it. Also, they might be able to eat through wire fences if the openings are large enough.

Use repellants: Repellants, available in garden centers, are applied directly to the plant and repel by taste or odor. They should be applied and reapplied in periods of expected deer browsing or when the plant is sending off tender new growth. They need to be reapplied after a heavy rain. Repellants rely on stinky stuff, like rotten eggs, hot pepper capsicum and garlic. They can be convenient, but expensive. There are home brews that are cheaper and may be comparably effective. Deer get used to them, though, so try different ones.

Scare tactics: The use of loud noises, rustling of plastic bags, an old unwashed flannel shirt (human odor), security lights, motion detectors and dogs have been effective.

The bottom line is be mindful of when the deer are likely to be hungry. Protect what you have when the deer are most likely to be browsing or the plant is most desirable. Don't get hooked on one method of control. Above all, keep the most desirable deer food off the menu because if you offer it they will come!

For more information, check out these websites.

-<http://njaes.rutgers.edu/deerresistance/>

-<https://www.ces.ncsu.edu/files/library/71/Deer%20Resistant%20Plants.pdf>

Quick Tip:

Simple Layering

By: Barb Barakat

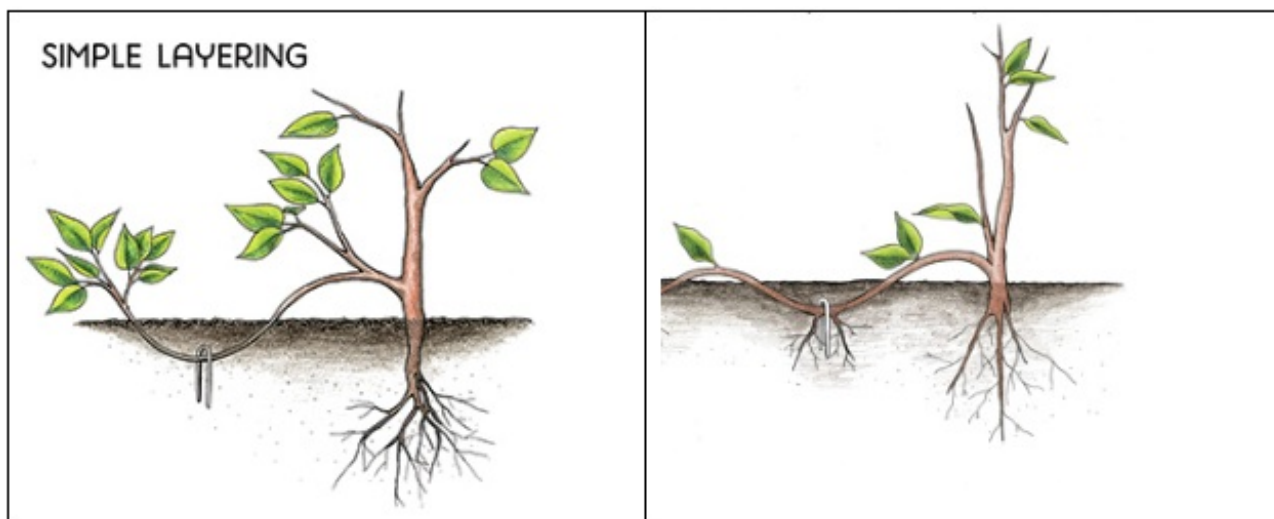
Extension Master Gardener Volunteer

On occasion I hear an 'old-timer' remark that "you never have to buy a plant . . . just see one you like on the side of the road or in a neighbor's yard, snip off a piece and voila in 3 years you have your own full size plant." Sounds great, but that's a lot of missing steps from the snip to that 3 year point. While I'm pondering that feat, I can use the plants I purchase to make more of the same for next season using a simple propagation technique called layering . . . and this is the perfect time of year to get started.

I meet best success when I layer shrubs (aka woody-stemmed plants - like gardenia, hydrangea, & loads more.) When you trim-up/prune back your plants, leave a low growing branch or 2 - branches that are growing at the soil line. Loosen the soil below the branch, use a landscape staple or a rock to hold the center of the branch slightly underground, add some soil on top. The foliage at the end of the branch remains above ground. Do NOT cut the branch from the mother plant.

Over time, the buried portion of the branch will develop its own root system and by Fall you can cut the branch that attaches it to the mother plant and dig it up. Voila, new plant.

Disclaimer - an 'old-timer' is a long-time NC gardener, not an age reference.



Reference & Images: <https://content.ces.ncsu.edu/plant-propagation-by-layering-instructions-for-the-home-gardener>

Ask An Expert:

What's Wrong with my Blueberries?

I have been getting numerous calls within the past few weeks asking, "What's wrong with my blueberries?"

I have quite a few blueberry bushes myself and I hadn't noticed a problem with them, but while I was picking the first of the ripening fruit this past Memorial weekend, I noticed a few unappetizing berries with spots that looked like someone had splattered bleach on the fruit. Immediately I realized what I held in my hand was exactly what folks had been calling me about and I knew exactly what it was: *Exobasidium* leaf and fruit spot of blueberry. I just hope my other berries as they ripen will not be drastically infected. While I would like perfectly formed blueberries, as a non-commercial grower, I'm not terribly worried because I know the fruit is still edible and just as I have been telling callers, there is a solution available. For the remedy, I just have to mark my calendar and remember next year in late February after I pruning to spray for the disease.



Exobasidium leaf and fruit spot of blueberry is an early-season, cool weather disease with infections extending from just after bud break from March until early April. The fungus *Exobasidium maculosum* causes spots on tender shoots, spots on leaves that are light green above and white below and green-to-pink spots on fruit that do not ripen normally. The affected berries are unsightly and are not marketable. Mature leaf spots have a characteristic light yellow-green halo surrounding a yellow center. As the spots develop further, the halo disappears and the center turns yellow-green, eventually, the margin of the spots turns a reddish brown and the center turns brown and necrotic. While less prevalent than the leaf and fruit spot symptoms, spots also form on young, actively growing shoots early in the season. By the end of June, almost all leaf spots will have turned necrotic, and although the pathogen may still be present on plant surfaces, the disease is no longer active. The *Exobasidium* inoculum spores overwinter on the surface of buds and shoots.

The disease is most severe in shaded locations with dense foliage and poor ventilation. Any practice that increases airflow to help dry the stems, leaves and fruit will likely result in less infection. Proper pruning in the summer and especially winter pruning is essential. The use of drip irrigation, and avoiding overhead irrigation will help with lessening the dispersal of the disease pathogen. The recommended chemical control is to apply calcium polysulfide (lime sulfur) during the late-dormant period of plant development (approximately two weeks prior to bud break). Several studies in Georgia have indicated that even a single application of lime sulfur during this period of development has the potential to almost completely control the disease on the leaves and fruit.

I love growing (and eating) my own blueberries and definitely want to keep them healthy for many growing seasons. As a reminder to myself and other blueberry growers, I will put "spray for *Exobasidium* leaf and fruit spot" in the gardening tasks checklist section of next February's newsletter!

June Gardening Tasks:



LAWN CARE

- When do you water your lawn? When the grass blades are just starting to curl and your footprints remain on the lawn when you walk on it. Applying an inch of water in the early morning allows the lawn to dry during the day. When the ground is dry, cycling the irrigation, applying a little at a time will allow the water to soak deep into the soil. It is a good time to plant new sod in damaged areas. Get your soil tested first. Come by the Ag Center for a soil kit.
- Grasses vary in their needs for nutrients, mowing height and watering. To learn how to best care for your grass type check out the Lawn Maintenance Calendar for your grass and learn how best to care for it, month by month ... This is NOT the time for planting or fertilizing fescue! Wait until the fall.
- Mow fescue at a height of 3-3 ½" to help it survive hot, dry periods. Fescue is a cool season grass that slows down in the summer and if cut too short the tender roots will be exposed to extreme heat which will certainly damage, if not kill it. Fescue has difficulty recovering from being cut too short as it is not actively growing at this time.
- Check out Turffiles at www.turffiles.ncsu.edu to see the Maintenance Calendar for your particular grass. There is also a lawn care app available at the Apple App

TREES, SHRUBS & ORNAMENTALS

- Prune climbing roses after they bloom, then fertilize them to stimulate new growth. This summer's growth carries next year's buds, so keep the plants growing vigorously! Train long shoots horizontally to stimulate more branching.
- Leyland Cypress can be under stress during the dry month of June so water during periods of drought. Avoid wetting the foliage to prevent spread of diseases.
- As soon as their foliage dies, dig bulb clumps of daffodils, crocus, Dutch iris, etc. that have become crowded. Divide and replant bulbs immediately, or store them in a cool, dry place for planting this fall. Please note that tulips and hyacinths generally don't perennialize in our area because our spring and winter is too warm.
- Give plants room to grow. Pull/transplant excess seedlings of marigold, cosmos, zinnias, etc. Growing plants need room to develop. Spacing plants properly reduces the risk of fungal diseases like powdery mildew.
- Remove faded flowers. Many annuals and perennials will stop blooming once they've started to set seed. Dead heading or removing spent flowers will prolong the bloom period.
- Pinch growing tips of ornamentals to encourage compact, sturdy, branched growth with lots of blooms.
- Protect plants from dehydration. Transplanting on overcast days, early in the morning, or late in the afternoon will reduce water loss in transplants. Keep newly planted ornamentals well-watered for the first several days. Apply a 2 to 3" layer of mulch to conserve water and keep roots cool.

EDIBLES

- Squash plants wilting? Squash vine borers may be the culprit. Check near the base of the plant for a small hole and a mass of greenish-yellow excrement. Slitting open the stem may reveal the villain - a fat, white caterpillar. It may be possible to save the plant by removing the caterpillar, then covering the injured vine with moist soil to encourage rooting.
- To control Squash Bugs, check squash, zucchini and pumpkin plants every few days and remove and destroy any eggs or squash bugs you find.
<https://chatham.ces.ncsu.edu/2017/06/check-your-garden-for-squash-bugs/>
- Warmer temperatures and longer days send a signal to spring greens that it is time to flower (bolt). At this point leaves generally do not taste as good. Once this quick process starts, there is no turning back. To delay bolting try the following. Cover spring salad greens with a cardboard box in mid-afternoon. Remove it after sunset and give the plants a slurp of water to cool them down. This procedure fools the plants into thinking the days are shorter than they actually are and can delay bolting by a couple of weeks.

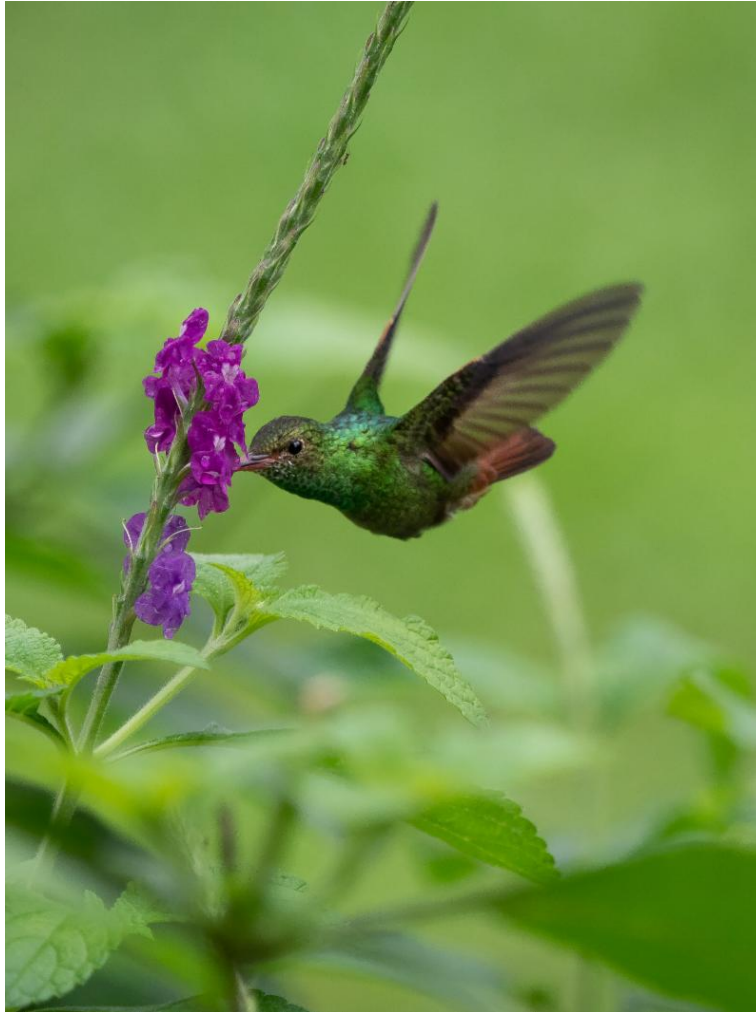
LANDSCAPE IDEAS

- June is not the best time to do major landscape planting, but you can incorporate landscape additions by installing hardscape features and artistic architectural elements that will enhance the landscape beyond just plants.
- Tropical natives make excellent additions to our summer gardens, with colorful foliage, bright flowers, and heat-loving constitutions. They can't survive our winters, but we can try overwintering our favorites indoors. Ornamental peppers and Jerusalem cherries are also heat-lovers. More exotic tropicals, such as Alternanthera (Joseph's Coat), Plectranthus (with lovely gray felted leaves), and Acalypha (Copper Plant) are also available. Visit the J.C. Raulston Arboretum at NCSU to see first-hand how tropicals can spice up the summer garden.
- Mulch flower beds and vegetable gardens now to reduce watering chores later.

Choose a mulch that will enhance the beauty of your garden.

- Keep outdoor potted plants watered as they lose a lot of moisture during the hot days. If you're going on vacation, ask a friend to check your plants regularly.

Cool Connections:



Helpful Links from N.C. Cooperative Extension Johnston County

[Additional Informative Links](#)

[Basic Steps for Home Landscaping](#)

[Carolina Lawns](#)

[NC Extension Gardener Handbook](#)

[Vegetable Gardening: A Beginners Guide](#)

Upcoming Events:



BIRDS • BEES • BUTTERFLIES AND GROWING POLLINATOR GARDENS

HOSTED BY JOHNSTON COUNTY EXTENSION MASTER GARDENER VOLUNTEERS

SATURDAY
SEPT 14, 2019
8:30AM - 4:00PM



OPEN TO ALL
GARDENERS &
NATURE LOVERS

JOHNSTON COUNTY CENTER
2736 210 HWY
SMITHFIELD, NC 27577
919-989-5380
jocomastergardeners@gmail.com
www.JoCoMGBBB.com

SPEAKERS:

CHARLOTTE GLEN - EMCEE & GROWING NATIVE
CHRIS MOORMAN - BIRDS
DEBBIE ROOS - BEES
COLLEEN BOCKHAHN - BUTTERFLIES
ANNE SPAFFORD - GARDEN DESIGN

NC STATE EXTENSION

To Register for the Event Follow Link: <https://www.jocomgbbb.com/>

Visit our

N.C. Cooperative Extension of Johnston County Page

NC State University and N.C. A&T State University work in tandem, along with federal, state and local governments, to form a strategic partnership called N.C. Cooperative Extension.

For accommodations for persons with disabilities, contact Bryant Spivey at (919) 989-5380, no later than five business days before the event.

NC State and N.C. A&T State universities are collectively committed to positive action to secure equal opportunity and prohibit discrimination and harassment regardless of age, color, disability, family and marital status, gender identity, genetic information, national origin, political beliefs, race, religion, sex (including pregnancy), sexual orientation and veteran status. NC State, N.C. A&T, USDA and local governments cooperating.

Disclaimer agrichemicals:

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 North Carolina Cooperative Extension 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 chemical. For assistance, contact your county Cooperative Extension agent.