Summer 2015

SOLUTIONS

Newsletter of the Alamance County Cooperative Extension Service

Inside This Issue:

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Extension Is Hot!

Mark S. Danieley, CES Director

Extension is hot! Hot is a little hard to describe when talking about Extension so I pulled out my handy thesaurus. When I looked up the word hot in my thesaurus one of the synonyms was passionate. OK, passionate might work. I think the staff at Alamance Cooperative Extension is passionate about what we do.

We will come in early, stay late or work on the weekend if that is what it takes to get the job done. We always try to be pleasant and helpful when answering the telephone or working with our clients in person. If we don't know the answer to your question, we will find it.

I think passionate also describes our clients. There is no doubt that our farmers love what they do. They work very hard and the hours are definitely not 8-5. They plant crops without knowing what the price will be when it is time to harvest and market the crop. Some years they make a little money and some years they don't. However, farmers are eternal optimists. There is always next year and another opportunity to have a successful harvest.

Passionate also describes many of our home gardeners. It may be their lawn, their flower garden, a favorite tree or a tomato plant. They take great pride in whatever they are growing and are very concerned when there is a problem. We have a large number of calls this time of year about vegetable gardens. People love their vegetable gardens and they don't really do it to save money on the family grocery bill. At least I have never saved any money by growing my own vegetables. I garden because I love to watch the garden grow and get great enjoyment from sharing the garden's bounty with others.

Last but not least is the 4-H program. There is no doubt that people are passionate about 4-H. Any one that participates in 4-H activities whether it is the leaders, volunteers or the children has the opportunity to learn and grow. The presentations I watched at the recent 4-H District Activity Day were very impressive. The skills and the confidence these children are gaining through the 4-H program will serve them well in the future.

Mark S. Danieley

Calendar Updates

Thurs.,	Jul. 9	10:00	THINK GREEN THURSDAY - Preserving Your Bounty
Sat.,	Jul. 18	8:30 - 3:00	NC Beef Cattle Field Day, Waynesville
Thurs.,	Jul. 23	10:00	THINK GREEN THURSDAY - Fall Vegetable Gardening
Fri.,	Jul. 31	5:30	Summer Grazing Workshop, Wilkins Farm, Burlington
Thurs.,	Aug. 6	10:00	THINK GREEN THURSDAY - Hydroponics
Thurs.,	Aug. 20	10:00	THINK GREEN THURSDAY - Fall Lawn Care
Thurs.,	Sept. 3	10:00	THINK GREEN THURSDAY - Scree Gardens
Thurs.,	Sept. 24	10:00	THINK GREEN THURSDAY - Planting Trees and Shrubs
Thurs.,	Oct. 8	10:00	THINK GREEN THURSDAY - Plants With Fall/Winter Interest

For more information and to register
Call 336.570.6740 or visit
http://alamance.ces.ncsu.edu/

NC State University A&T State University COOPERATIVE EXTENSION
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The Heat Is On!

by: Mark Danieley, Horticulture Agent

Summer is a challenging time for plants. It doesn't matter if we are talking about the lawn, vegetable garden or newly planted shrubs and trees. Hot weather causes plants to dry out fast and most of the time our normal rainfall is not sufficient to meet their needs. It may come as a surprise to you, but July is typically the wettest month of the year. Of course that is an average and some years we don't get that much rain. When we do though it usually comes in the form of a thunderstorm and most of the rain runs off and doesn't soak into the ground. There will be times when you should water after a thunderstorm to make sure the soil is sufficiently moist to support good plant growth.

We'll start our discussion about watering with your lawn. Our average fescue lawn would like to have about an inch of water per week. It is possible to water the fescue less frequently and still have a decent lawn. Fescue normally goes dormant during hot weather and if it is not watered it usually won't die, but it will look a little brown. If you do decide to water your lawn ideally that amount of water should come in one day. The idea is to water thoroughly, but not frequently. The soil should be moist down to a depth of at least six inches after watering. Frequent light waterings promote shallow root growth which can lead to turf injury.

One problem that some folks have is that their soil won't absorb an inch of water at one time. The trick is to apply just enough water at any one time so that it can be absorbed and doesn't run off. That will take some trial and error on your part to figure that out. The best method is to place some short straight sided cans where the sprinkler is running. After 20 or 30 minutes, turn the sprinkler off and measure the water in the cans. That will give you an idea of how much water is being applied in a set amount of time. If you have a 1/3 of an inch of water in the can after 20 minutes, then it will take an hour to get an inch of water. Unfortunately you may not be able to water for an hour without run off. Your schedule may be to water for 20 minutes then turn off sprinkler and wait an hour for the water to absorb. You would repeat the process as many times as needed to apply the amount of water necessary while minimizing run off.

Vegetable gardens also need about an inch of water per week. As the plants grow and the weather gets hotter it may take 1½ inches of water per week. One thing you definitely don't want to do in a vegetable garden is use a sprinkler. Wetting the foliage of vegetable plants especially tomatoes is asking for trouble. That promotes disease and will increase the amount of fungicides required to control the disease. Drip irrigation or soaker hoses are the best way to water the garden. The water is applied to the soil where it is needed and the foliage stays dry.

The frequency of watering the garden will depend on the size of the plants and weather conditions. Just like the lawn, you want to water thoroughly, but not frequently. Squirting a little bit of water on the garden every day is not a good idea. Water enough to moisten the soil down to a depth of 6-8 inches, then let the garden dry down some before watering again.

Newly planted shrubs and trees aren't as forgiving as our lawns and gardens. Vegetable plants and most turf grasses will give you an indication of when they are thirsty. They will wilt or lose their color and will almost always recover if they are watered. Some of the broadleaf ornamentals will do the same thing, but wilting in shrubs and trees can also be a sign of over watering or root rot. Some of the evergreen shrubs won't show signs of water stress until it is too late. Unfortunately, there isn't an easy way to know when many new shrubs and trees need water. The best method is to feel the root ball. Your fingers are the best moisture meter you can use. If the root ball feels moist, then you don't need to water. If the top 1-2 inches is dry, then it may be time to water. Once you have made the decision to water,do it thoroughly and then let the soil dry down some. You can't water too much at one time, but you can water too often.

4-H: On Fire for Community Service!

Erin Bain, 4-H Agent

One of my favorite parts of the 4-H pledge is when we promise to give "our hands to larger service." 4-Hers here in Alamance County and around the State find new ways to live up to this idea and give back all the time. I am constantly impressed by the innovative ideas and commitment that our young people and volunteers exhibit and the fact that they are always so generous with their time, talents, and other resources to help make the world around them a better place. This month, I want to highlight some of the community service projects that our 4-Hers here in Alamance have been working on lately as well as some upcoming programs that will allow our kids to continue to improve their clubs, their community, their county, and their world.


Operation Christmas Child boxes

"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has." – Margaret Mead

Throughout the last year, the reinvigorated Dogwood Teen 4-H Club has built their focus around developing their leadership and community service in a variety of ways. They have undertaken a number of projects, many of which were generated through the passion that some of their members have about a particular cause. They have committed to helping out with everything from feeding our local homeless population by baking cookies for Allied Churches to painting and cleaning up at the historical farm at Cedarock Park. This summer, several of the older members of the club will be volunteering for Habitat for Humanity, and the club will also be hosting a 4-H Summer SHINE event to collect items and pack boxes for the Operation Christmas Child Project. Operation Christmas Child sends shoeboxes of both necessities and fun items to children in a number of disadvantaged countries around the world.

Another project that was recently completed was collecting comfort items such as books, blankets, and stuffed animals as a part of a new 4-H initiative aimed at helping the homeless youth of North Carolina; Operation Night, Night, Sleep Tight. According to the NC Coalition to End Homelessness, 22% of the homeless people in North Carolina are children. We often take all that we have for granted, and this program following along with the Citizenship North Carolina Focus theme of "Stand up. Speak out. Do Something." is encouraging even more 4-H youth across the State to get involved in service projects that have special meaning for them and will make great impacts on their communities in the future. Here in Alamance alone we collected an estimated 300 items to contribute to this effort and are very excited to see what the final numbers are from around the State.

I am so very grateful to work for an organization that continually strives to help our young people develop their hearts for service to others. Our 4-Hers who undertake these types of projects are not simply meeting a requirement for school or trying to pad their resumes with service hours, but they truly are developing a desire to help make the world around them a better place every day. It is amazing to see what they are able to accomplish!


A few of our Donations for Operation Night, Night, Sleep Tight from one of our youngest 4-Hers.

How Hot Is Too Hot: Understanding Heat Stress Conditions in Cattle

Lauren Langley, Livestock Extension Agent

Summer is here in North Carolina and with that comes 90°F+ days, high humidity, and heat stress. Every year, once temperatures begin climbing over about 70° F, cattle begin showing signs of stress related to high temperatures, especially when being moved or handled. There are three primary elements that are critical in hot weather situations: intensity of heat, duration, and opportunity to cool down at night.

You need to be aware of the signs of heat stress in cattle:

- Reduced grazing activity during normal grazing periods (early in the morning or evenings).
- Crowding under shade or around stock tanks. Remember that crowding intensifies the problem.
- Panting and increased salivating.
- Rapid breathing. Use the following as a gauge: Moderate heat stress– 80-120 breaths per minute (bpm), Strong heat stress– 120-160 bpm, Severe heat stress– over 160 bpm
- Decreased or lack of normal movement.

Cattle do not perspire (sweat) well like humans do. They have to use the respiratory system to remove excess heat from their system. This is particularly true in heavily haired breeds or English/Continental European breeds versus Brahman (Zebu) cattle. Once you have identified heat stress signs in your cattle, now what? You need to develop a plan to have in place to help with weathering hot, humid periods and minimizing production losses.

Steps to Developing a Plan:

- Identify those cattle which are high risk such as newly arrived cattle, recently weaned calves, dark-hided cattle, etc. and take precaution in helping reduce their heat load.
- Provide fresh, clean drinking water at all times.
- Make sure there is enough natural shade or provide shade structures.
- DO NOT handle or process cattle in hot weather if at all possible. If you have to handle or process cattle, do it between midnight and 8am and never after 10am.
- If cattle are confined, use a sprinkler system to help cool them.
- Feed and supplement because often nutrient intakes will be depressed.

Source: Dr. Stephen B. Blezinger, Nutritional and Management Consultant, Cattle Today Article

Hot Crops and Water

By: Dwayne Dabbs, Field Crops Agent.

As the weather gets hotter during the summer, things really kick into high gear on the farms here in Alamance County. It will be time for small grain harvest to begin, farmers will be planting double-cropped soybeans, and tobacco will be plowed for the last time.

If you have ever talked to a farmer, one of the paradoxes you will always hear is that it is either too dry or too wet. The majority of the times both are true, simply because every farmer has multiple crops that are in different stages of growth. I want to talk about the crops need for water, and sometimes the reasons why the crop doesn't need water.

Most crops without fail have to have water to grow and survive, but different crops require water at different times to get the highest yields at the end of the growing season. Ideally, the farmer will get rain right after it is planted, helping the seed to germinate and break through the soil. If the ground is very dry the seed will sit there and will not grow. Some seeds can wait until a shower of rain comes, but it depends on which crop it is as to how long it will wait.

Most crops that are grown in Alamance County are grown for their seed. Seed crops need the most water at pollination and the window for these crops to get that rain is short, sometimes a week, maybe two weeks. For example, in corn you will likely see tassels shooting up out of the top of the plant. This is one of the times when corn has to have rain. Those tassels create the pollen and this is a stage where the corn has to have water to set seed.

In the Weeds: Hot Ponds

Dwayne Dabbs, Pesticide Coordinator

With the weather heating up, pond weeds generally will thrive. So, if you have a problem coming on your pond, please bring me a sample of the weeds that are growing there, so that I can figure out what it is and we can discuss control options. Some pond weeds need to be treated earlier in the season; if you wait, it may be next year before you can get effective control of these weeds.

To Beat the Heat, Turn It Up!

~Chris Stecker, Horticulture Technician


Pepper display at the NC State Fair

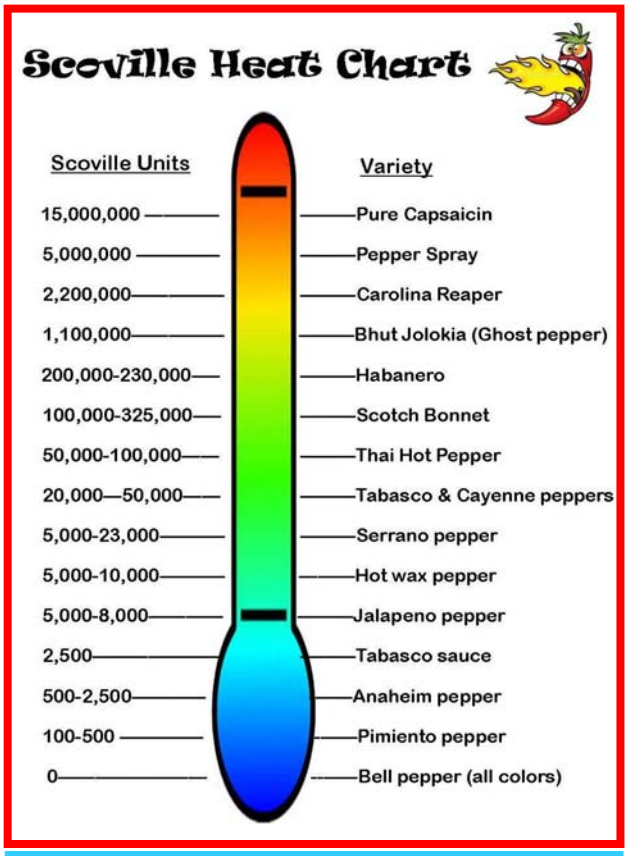
When temperatures rise, cool off with a nice, cold cup of… salsa?! That's right, spicy foods can help you cool off.

Fortunately, hot weather is pepper weather as all members of the Capsicum genus thrive when temperatures rise. Peppers like it hot, but not all will light your fire. As long as the pepper is spicy enough to make you sweat a little, the cooling effect will happen.

So, how do you know how spicy the pepper will be without tasting? Lucky for you, in 1912 American pharmacist Wilbur Scoville developed a scale to measure the pungency of chili peppers or other spicy foods as reported in Scoville heat units (SHU), a function of capsaicin concentration. The scale is known as the Scoville Organoleptic Test.

In Scoville's method, an exact weight of dried pepper is dissolved in alcohol to extract the heat components (capsinoids), then diluted in a solution of sugar water. Increasing concentrations of the extracted capsinoids are given to a panel of five trained tasters, until a majority can detect the heat in a dilution. The heat level is based on this dilution, rated in multiples of 100 SHU.

Not the most exact science, but the chart at right should give you an idea of the relative spiciness among the various peppers. Note that, with a Scoville rating of 0, bell peppers are the least spicy and at the top of the chart is pure Capsaicin, followed by pepper spray at 5 million SHU. Smokin' Ed's Carolina Reaper® made global headlines in November 2013 when this super hot pepper, cultivated by Ed Currie in Rock Hill, South Carolina, was awarded the Guinness World Record for the World's Hottest Chili. It's SHU averages at 1,569,300!



Taking the Sting Out..

So you tried the Carolina Reaper and now your mouth is on fire? You may be tempted to reach for a glass of water or beer to tame the heat, but go for a big glass of milk, instead. There's a protein found in milk called casein that can actually pull the capsaicin compounds away from the nerve receptor binding sites in your tongue. No milk on hand? Try yogurt, cottage cheese, or ice cream. If dairy isn't an option, a piece of bread or a forkful of cold cooked rice can do the trick as well.

Pico de Gallo (Literally "Rooster's Beak")


Carolina Reaper

3 lbs. ripe tomatoes, dipped for 30 seconds in boiling water, then peeled, seeded and chopped.
1 to 2 fresh jalapeño peppers, seeds and ribs removed, finely chopped*
1 large or 2 small cloves garlic, smashed with 1 teaspoon coarse salt to make a paste.
1 onion, chopped
1 can chopped chilies (optional)
1 tsp. dried oregano
1/2 bunch cilantro, large stems removed, leaves coarsely chopped (about 1/2 c)
Juice of one lime
Mix together in no particular order, serve with tortilla chips.
Guacamole: Mix about 1/2 cup Pico de Gallo with the meat of 2 soft, ripe avocados and an extra dash of lime juice.

*For a spicier salsa, leave the seeds and ribs in. Like it even hotter? Swap your favorite hot pepper for the jalapeño. Carolina Reaper anyone?

Recipe is from *The Garden Plate, Recipes by Alamance County Master Gardeners*, available at the Extension office. If you'd like to can or freeze your salsa, visit this link for instructions and some great recipes from NC State: *http://www.ces.ncsu.edu/depts/fcs/pdfs/FCS516WAccessibleApril09.pdf*