

Stokes County Cooperative Extension Newsletter

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Summer 2015



Stay Busy With 4-H Summer Fun

by Matt Barber, 4-H & Youth Development Agent

A clear sign of the impending summer season usually happens inside homes across America around this time of the year. It involves your family sitting down with a checkbook and calculator in one hand while the other hand searches the internet for summer activities. You have just realized that summer is almost here, and your kids need a fun, safe place to spend their time.

Stokes County 4-H has spent the last few months putting together summer programs to help you fill that time in a fun and educational way – **2015 Summer Fun**. The 4-H does not believe in taking summers off. We are offering a huge variety of activities for our youth through June, July, and August. There will be adventurous trips and physical activities for the thrill seekers, scientific fun and experiments for the curious minds, career exploration, relaxed fun, and much more. The 4-H believes in helping youth reach their full potential and learning valuable life skills. The summer programs we offer can do just that. While lounging through the summer sounds great to most people, we say make the most of your new found extra time. You never know which program or activity might spark a lifelong passion.

It's also very important for young people to continue stimulating their minds during the months they are not in school. Just because the school doors close does not mean opportunities for growth and learning have to. This has proven to be a major problem with youth today. According to the National Summer Learning Association, all young people experience learning losses when they do not engage in educational activities during the summer. Research spanning over 100 years shows that students typically score lower on standardized tests at

the end of summer than they do on the same tests at the beginning of summer. Most students will lose about two months of grade level equivalency over the summer months. I'm a huge advocate of the importance of unstructured play, and I think there should still be time set aside for that. But planning ahead and participating in our 4-H programs could be a major factor in how well your child does when they return to school.

Parents worry about it and educators complain about it: kids can fall behind academically during the summer. Most kids enjoy having a summer break from school, but many forget what they have learned. You can encourage your child to learn this summer in fun ways. Along with the opportunities offered by 4-H, parents can:

- Take kids on walks – looking for specific things they have learned about at school.
- Help others – service learning is very important.
- Bring children to different places that stimulate learning like a museum or library.
- Do simple science experiments
- Start a garden or start cooking with your kids – find out what they are passionate about.

Martin Fischer, a famous professor of physiology, once said “All the world is a laboratory to the inquiring mind”. Take a moment to look over our summer fun brochure and see if any of our programs would be of interest to your child. In addition to a fun, safe place to spend their time, 4-H

Summer Fun participants experience many varied opportunities to learn, grow, and stretch their minds.

For more information contact Matt Barber at 336-593-8179 or mathew_barber@ncsu.edu.

Tree Fruits Present Gardeners with many Challenges

by Randy Fulk- Horticulture Agent



Apples, peaches, cherries, plums. These delicious fruits are summer favorites of many here in the south. Their natural sweetness combined with their inherent health benefits make them a backyard garden staple- almost every gardener has a fruit tree or two. That notwithstanding, most bemoan the constant care they require, the unpredictability of the crop, and whether there will even be a crop at all. Weather, insects, and fungal diseases routinely wreak havoc on our fruit crops. Further, the stop and go nature of spring reminds us we are one late freeze away from complete crop loss for the year. One must utilize every tool in the toolbox to produce high quality fruit in the face of this myriad of challenges.

The Late Freeze- Timing, as they say, is everything when planning for this eventuality. The late freeze destroys flowers and halts the fruit set process in its tracks. As our trees often get tricked into blooming too soon, a good defense is to plant later blooming varieties. For a list of recommended fruit trees for our area see NCSU Extension Publication AG-28, Producing Tree Fruit for Home Use. <http://content.ces.ncsu.edu/producing-tree-fruit-for-home-use/>.

Site these varieties on sites that tend to warm up later in the spring such as a north-facing slope. Delay pruning as late as possible. Pruning has a temporary devigorating or stunting effect. The extra 10 or so days late pruning delays bud break may be just what we need to get well past our average last frost date and ensure our trees produce a consistent crop.

Fungal diseases such as brown rot (peach), scab and rust (apple), black knot (plum), and ring spot (cherry) coupled with the generalists powdery and downy mildew are difficult to control and provide the gardener with a season-long challenge. Added to the mix are a plethora of fruit rots so varied and widespread they are often collectively referred to as the rot complex.

To combat fungal diseases start by planting resistant varieties. Manage the tree canopy to allow for maximum air flow. Begin a fungicide program early on and stick with it. For a fungicide spray program for fruit crops see the 2015 NC Agricultural Chemicals Manual. <http://content.ces.ncsu.edu/north-carolina-agricultural-chemicals-manual/> For organic fungal disease control use elemental sulfur (early season) and copper-based products (late season). When applying fungicides read and follow all label instructions to the letter and be sure to wear the proper protective clothing. Again the key is to start early. Many primary infections that eventually cause fruit rot actually begin early in the season. Thin the fruit. Fruit laying on top of other fruit is an invitation for fruit rots to occur.

For insect control, again seek out resistant varieties as a first line of defense. Proper pest identification, knowledge of the pest life cycle, and timing of control measures are all of vital importance when developing a pest control strategy. Among the major insect pests of fruit crops are

- Peach tree borer- The larval stage of this clear-winged moth affects not only peach, but also plum, cherry and all stone fruits. Properly timed trunk sprays are the best control. Scout for larvae in early summer. Once the larvae penetrate beneath the bark they are virtually impossible to control. Permethrin or esfenvalerate provide good control. Organic options are severely limited. Pyrethrins may provide some control but timing of sprays is critical.
- Plum curculio- As with the peach tree borer, this snout weevil is a generalist affecting plum, peach, cherry, pear, and apple. It is a problem pest at all life cycle stages. The adults feed on buds, flowers and newly-developing fruit. Females lay eggs in developing fruit and the newly hatched larvae use the fruit as a food source. Symptoms include deformed fruit, early fruit drop, and puncture wounds on the fruit surface. Indoxacarb provides excellent control. Non-toxic kaolin clay- marketed as Surround- is a good organic option. Also good sanitation in the form of keeping the orchard floor free from debris reduces hiding places for adult weevils to survive the winter.
- European Apple Sawfly- Lays eggs at the base of the apple flower during bloom. The larvae stage initially feeds on the fruit surface. This is the best time to control them. If they are allowed to persist they will eventually tunnel into the fruit causing it to drop prematurely. Phosmet and permethrin provide good control. As with plum curculio, kaolin clay provides an organic control option. For a list of all approved organic materials see the Organic Materials Review Institute (OMRI) listing. <http://www.omri.org/omri-lists>

The diligence and steadfastness required to produce tree fruit consistently challenges even the most seasoned of gardeners. Despite these many and varied challenges, one bite of a fresh, crisp apple makes it all worthwhile.

Summer Is Here and So Is Fresh Fruit

by Deborah Cox
Family & Consumer Sciences Agent

The store shelves and pick your own markets are starting to fill up with strawberries and soon blueberries will follow. American diets are out of balance with dietary recommendations. In 2012, Americans consumed more than the recommended share of meats and grains in their diets but less than the recommended share of fruit, dairy, and vegetables. Fruit provides vitamins and dietary fiber for a healthy diet and overall good health. Whole fruit is low in fat, sodium and calories and plays a role in maintaining blood pressure. The 2010 dietary guidelines recommend 2 cups of fruit per day. Most Americans only consume 1 cup a day. Fruit production is impacted by many factors mainly weather, water, and absence of disease (see Randy Fulk's article). Citrus canker, (Florida) citrus greening and water restrictions in California will likely impact both availability and prices in 2015. A 2-3% increase in the price for citrus next season is predicted by the USDA economic research group. However, the latest trend in fruit production is the consumer demand for fruit. Bananas, apples, and oranges account for 40% of the fruit purchased by consumers. In the

past two decades greater diversity of consumers looking for fruit for traditional ethnic dishes as well as a growing interest in healthier food production fruits such as blueberries, avocados, limes, pineapple, cherries, lemons, papayas and mangoes have increased in imports to our food supply. Another traditional rationale as to why Americans do not eat more fresh fruit is that it is too costly. Consumers claim that fresh fruit costs much more than canned or frozen fruit. And while production costs may increase 2-3%, the question remains is fresh fruit still higher than canned or frozen. The USDA now publishes an annual food price outlook on fresh vs. frozen or canned. This report looked at fresh fruit prices, rising serving size portion, and also deducted for typical food waste such as peel or rind removal to evaluate cost. Typically, of the 25 common fresh fruits purchased, 16 out of 25 fruits cost 25¢ or less per serving. The weighted average price for all fresh fruit was 18¢ per serving and the price difference between the most expensive to the least was 56¢ per serving. Apples at 4¢ per serving are consistently one of the least expensive fresh fruits while blackberries at 66¢ per serving are the most expensive. Comparing canned fruits, applesauce is the least expensive at 66¢ per pound

while canned blackberries cost \$2.71 per pound. The case is clear, fresh is less expensive because when purchasing apples you get many more servings than you will with smaller size and quantity of blackberries. In conclusion, fruit is an important part of a healthy diet. Decisions regarding fruit consumption need to be a part of every meal we plan in order to maintain adequate vitamins and nutrients for cell repair. Costs regarding fruit purchases can be met on all income levels when purchased with seasonal lower cost availability and following a healthy eating pattern.



Source: USDA - Economic Research Information Bulletin 790 Food Price Outlook, 2015 www.ers.usda.gov/data-products/food-price-outlook

Resistant Weed Advisory "Marestail"

by Tim Hambrick
Agriculture Extension Agent

The weed below is a small marestail that lived through a quart of Roundup PowerMax that also had an addition of Aim to the mix. As you can see, there is no visible damage, roughly two weeks after application. The rest of the field was very clean, save for numerous small marestail just like this one, some even smaller.

Weed resistance continues to negatively impact North Carolina agriculture and that will not change anytime soon. It's important to be very diligent in your herbicide choices - using different modes of action, making sure the herbicides you use will control the weed spectrum present, and scouting after application to determine effectiveness of the herbicides used.

From this point forward, it's probably safe to assume that most marestail will be resistant to glyphosate - meaning something will have to be added to the glyphosate burndown for marestail control. 2,4-D is an excellent addition and does a good job controlling emerged marestail. 2,4-D is cheap but does require a certain amount of time before planting soybeans. "Sharpen" is another product

that can be added to glyphosate to control emerged marestail and many other broadleaves. It can have some soybean plant back restrictions based on organic matter and soil texture so read the label carefully. Sharpen does an excellent job on marestail and offers a couple weeks of residual activity. Materials with metribuzin in them also control marestail. These products are typically PRE products and can be fall applied for marestail control through the winter.

Once soybeans have emerged, marestail control becomes more iffy. Marestail larger than 4" will be particularly difficult. Classic or First Rate tank mixed with glyphosate can do a pretty good job - assuming the marestail is probably not more than 4" tall and good coverage occurs. Those are probably the two best choices.

Continue to watch for weeds that appear to be "missed". Look to see if each miss is always the same species - if so, resistance should be explored. Look at the spray pattern, if everything around that live weed has been controlled, then resistance needs to be explored. A key is to catch a resistance issue early. If it escapes for a year or two, a lot of resistant seed can build up, causing issues for several seasons - and potentially creating a large expense issue. Rotate crops, rotate chemicals, try to move away from glyphosate as the burn-down, and use cultivation where you can, all these help manage resistance. Finally, don't be afraid to send a crew in to remove resistant weeds. Do all you can to keep them from going to seed.

As always, if you have questions or concerns, feel free to give me a call!



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