If you're interested in saving a few dollars on your monthly water bill and conserving one of our most precious natural resources, try implementing some of the tips below. The seven categories used to organize these pointers are identified in the NC Cooperative Extension Service’s publication *Water-Wise Works!* This brochure, which is available online*, is a helpful guide to creating a landscape that uses water efficiently.

1. **Select plants that will thrive**

Use drought-tolerant plants in your garden. Think xeriscaping or plants that can withstand long, hot, dry periods. Consider agave, cactus, yucca, salvias, ornamental grasses, and even herbs. Native plants that don’t require lots of water and drought-tolerant exotics are a good bet.

2. **Prepare the site**

First, get a free soil test if you haven’t had one recently. Soil tests provide the information needed to ensure the correct soil pH and nutrient balance. Contact the Extension Service office for more information. Second, incorporate organic matter such as compost into the soil prior to planting. This improves drainage and provides plants with nutrients. When planting, build a ring or collar of soil at the drip line of the new plant. When water is applied to the base of the plant, the ring will hold the water near plant roots.

For hardscape areas of your landscape, paths made of porous material (for example, pine bark or gravel) allow water to seep into the ground instead of running off into the street or drain. Angle and slope paths so any water runoff drains into surrounding beds.
3. **Manage your turf**

Always follow directions carefully when applying fertilizers or herbicides, and apply these at the correct times. Cut your grass at the right height. To learn more about caring for the type of grass growing in your yard, visit NC State [http://www.turfMiles.ncsu.edu/Turfgrasses/Default.aspx](http://www.turfMiles.ncsu.edu/Turfgrasses/Default.aspx) or see the Cooperative Extension Service’s Carolina Lawns booklet, available at [http://www.turffiles.ncsu.edu/PDFFiles/004175/Carolina_Lawns.pdf](http://www.turffiles.ncsu.edu/PDFFiles/004175/Carolina_Lawns.pdf). You may also want to consider reducing your turf grass area to cut down on the amount of watering needed to maintain a green lawn.

4. **Apply mulch**

In addition to making your landscape look great, mulch helps retain moisture in the soil and reduces the growth of weeds, which compete with your plants for water. Apply 2” of mulch in perennial and annual beds and 3” of mulch around trees.

5. **Water efficiently**

Group plants by water needs. Plants that need more water should be placed closer to the house, while more drought tolerant plants should be placed further from the house. “Thirsty” plants should be grouped together so you don’t water drought-tolerant plants unnecessarily. A bonus: plants will do best if given the amount of water they need—not more, not less. To water newly planted trees and larger shrubs, apply water directly to the root area. Options include using a hose that’s just trickling water, watering bags, or five-gallon buckets with holes in the bottom that allow water to drain slowly. For smaller plants, you can cut the bottom off a 2-L soda bottle, bury the neck and top part of the bottle near the plant, and then pour water into the bottle. This directs water to the roots, which helps use water more efficiently. Watering at the base of the plant reduces evaporation and the chance of mold spores or soil-borne diseases being splashed onto leaves.

6. **Irrigate efficiently**

Drip irrigation and soaker hose systems do a more efficient job of watering than aboveground sprinklers. Sprinkler heads broadcast water through the air, and on a hot day, much of that water evaporates before it gets to its intended target. Drip systems utilize emitters can be placed close to the root system, getting the water right where it is needed. Use a timer with your irrigation system, and set it to water at dawn or dusk to reduce evaporation. Better yet, consider investing in a smart controller, which applies water based on plant needs and weather. Be sure to maintain your irrigation system; check for leaks and make sure there is no runoff on sidewalks or streets.

7. **Capture rain water**

By harvesting rainwater, you can irrigate plants in your landscape even during drought conditions when watering may be restricted. Use rain barrels and/or cisterns, which come in a wide variety of price ranges. Don’t overlook some other ways to recycle water, too. If you wash dishes by hand, the rinse water can be used to water plants. One local gardener’s container plants benefit from the water she recycles after rinsing produce. [http://www4.ncsu.edu/~bfair/waterwiseworks.pdf](http://www4.ncsu.edu/~bfair/waterwiseworks.pdf)
FEATURE PLANT
Perfect Plant for the Late Planter!
by Nikki Whitt
If you are a late bloomer in the garden world, fear no more! *Hibiscus syriacus* is a great plant to plant this late in the season if you would still like to have some color in your garden! *Hibiscus syriacus*, or most commonly referred to as “Rose of Sharon” or “Althea,” is a perennial tree shrub that is native to the warm temperatures of Eastern Asia, but has now found a useful habitat in the Eastern and Southern portions of the United States.

The flowers that produce from Althea are particularly large blossoms that start showing in late July through September. There are a variety of colors that bloom including white, violet, blue, pink, and magenta. They can even bloom in combinations of these colors! The blossom is a 5-petaled solitary showy blossom that makes onlookers take a second glance at it!

Rose of Sharon is a deciduous shrub growing 8 to 10 feet high with a width of 6 to 8 feet. This plant is multi-stemmed with vertical branches that seem to reach up to touch the sky creating its vase-shaped figure.

*Hibiscus syriacus*, with its fragrance and dense wood, is used in the landscape to attract wildlife such as hummingbirds. You can also use the wood to make platters, bowls, and dishes.

If any of this sparks your interest in growing *Hibiscus syriacus*, make sure to culture the plant correctly. This plant loves sun, so full sun is the best! If you do not have a spot in your yard with full sun, you should be aware that this plant is still tolerant of partial shade. It can grow in nearly all types of soil and can be easily transplanted from container to ground or from ground to ground. Rose of Sharon thrives in hot weather. If you so choose, pruning annually will make the flowers larger in size. When pruning in late winter or early spring make sure to remove any dead stems as well.

You can use this plant in bulk by making it into a shrub border around your house or even as a screen. It looks beautiful in mass plantings and in some cases you can use *Hibiscus syriacus* as a small tree.

Works Cited


UPCOMING EVENTS

**Family Fun in the Environment Series** - for parents and children ages 5 - 12. Cost is $15/day or $45 for 4 sessions. Sessions will be held at the Arboretum Brick Building from 2:00pm to 3:30pm  An Adult MUST
accompany each youth  
**July 10** - Learn about tree history through activities.  
**July 17** - Learn how humans and plants help each other survive  
**July 24** - Learn how to identify plants and use these skills on a tree hunt  
**July 31** - Learn how to compost in your own backyard  

**Tours in July include:**

**Wine Tour, Wednesday, July 11 - 9:00am - 5:00pm:** We’ll begin our trip with a tour of Hinnant Family Vineyards and a wine tasting. After that, we’ll proceed to County Squire Restaurant and Winery for our lunch, and end the day at Gregory Vineyards for a demo and tasting! This will be a wonderful way to relax as well as learn about viticulture in our area. $20 / Lunch on your own

**NC Museum of Life and Science and Duke Homestead, Wednesday, July 18, 2012 - 8:30 am - 5:30 pm**  
Arboretum Mobile Unit / Durham  
$20 / Lunch on your own

The NC Museum of Life and Science is filled with incredible displays. From indoor exhibits featuring weather science (including a tornado chamber) to an insectarium to sound science to the Magic Wings Butterfly House we’ll view plants of all kinds and the butterflies that depend on them for their sustenance, to an outdoor wildlife park, gardens and petting zoo. This trip has something for everyone!

Following lunch on our own at the Museum’s Café, we’ll travel to Duke Homestead, a North Carolina Historic site featuring Washington Duke’s home, well- and smokehouse, tobacco factory, and a visitor’s center with 5,500 square feet of exhibits of the history of tobacco.

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**YARD VILLAIN**

*Entomosporium Leaf Spot*

*Entomosporium maculatum*  
by Shawn Banks

Mostly known for it's problems on red tip photinia where it nearly wiped the plant out of the landscape in the south, *entomosporium leaf spot* may also infect other members of the rose family (Rosaceae) including pyracantha, loquat, flowering and fruiting pear, Indian hawthorn, quince, and others. The plants affected the most are red tip photinia and Indian hawthorn. According to trials conducted in Alabama, the following cultivars of Indian hawthorn show excellent resistance to this disease ‘Dwarf Yedda’, ‘Olivia’, ‘Indian Princess’, ‘Snow White’, and *Raphiolepis x delacourii*. There may be other resistant cultivars available.

Small spots that start out red, maroon or purplish-red on the upper and lower sides of the leaf characterize the disease. These spots expand to have a gray center with a colored halo or ring around it. In the center of the ring black spots, which are the fruiting bodies that contain the spores, appear. During rainstorms or when using overhead irrigation, a lot of spores are splashed out and blown from one leaf to the next by available wind. New spots appear on the leaves in about 10 to 14 days. Because it is most active during periods of moist cool weather it spreads the most in the spring and fall, but may also spread during warm rains in the winter or cool rains in the summer. In severe cases, the leaves will drop
off the plant causing early defoliation in some cases.

The best way to control this disease is to use plant cultivars that are resistant to the disease. Next is sanitation. Sanitation practices should include cleaning any and all fallen leaves off the ground. In some cases, pruning severely infected branches will need to be done, removing any spots that may be on the stem. In less severe cases, the disease can be controlled with preventative chemical sprays beginning in the spring as new growth emerges and continuing every 10 to 14 days until hot dry weather arrives in June. To get a list of chemicals, visit one of our resources or contact the local office of Cooperative Extension.

Resources:


WHAT’S IN SEASON

Zucchini
*Cucurbita pepo*
by Shawn Banks

This is a squash I remember from my childhood as being such a prolific producer that once it started producing we had zucchini every day either for lunch or dinner. Mom would try to disguise this plant in many different ways, she would slice it into strips and place it next to the cucumbers on the vegetable tray for the unsuspecting to munch on as a snack. She would make bread with it and serve it as a “special treat”. Toward the end of the season when most of us had had our fill of zucchini she would get sneaky and grate it up and slip it into soups and spaghetti sauce. Now that I live in the south I find I enjoy some fried zucchini on occasion.

So how to grow this prolific producer. After the last chance of frost (around the end of April) plant seeds directly into the ground about 1 inch deep and about 12 to 18 inches apart. Keep the soil moist until the seedlings begin to emerge from the soil. Then keep them watered about every two to three days. To encourage fruit production use a fertilizer formulated for flower and fruit production right after seedlings emerge from the soil. The plants should begin flowering and producing fruit about 4 weeks after the seedlings emerge. The best production from the plant will be the first three to four weeks after production begins. To continue having a large harvest, plant a few more plants every two to three weeks. Stop planting about two months before the first frost (in our area this is around the end of October).

Some common insect pests that may attack zucchini include squash bugs, squash vine borer, and cucumber beetle. In a small garden, hand picking the bugs and beetles may be the quickest and easiest way to keep these off the plants. For those who are a little squeamish about hand picking, diatomaceous earth also works against these two pests. Borers are sneaky and get into the vine without notice. A sign that the vine has borers is a wilting plant when there is plenty of soil moisture. When this happens look for orange frass coming out of the stem, cut the stem lengthwise and remove the larva from the stem, then cover the stem with a little soil to encourage it to produce more roots. There are chemicals that can be sprayed to control each of these insects such as carbaryl and esfenvalerate. When using chemicals be sure to read the label for
the pre harvest interval (PHI) or time to wait after spraying before harvesting.

Harvest zucchini when the fruit is about 8 to 10 inches long. If you miss a few and they get a little large, the squash is still good as long as the skin is shiny in color. If the skin looses its shine the fruit is beginning to mature which means the skin will be tough and the seeds will be developing a hard seed coat. This makes them less palatable.

Here is a recipe that will help you get rid of all that extra squash.

**Recipe**
Summer Garden Vegetable Medley

Wash and thinly slice about 4 cups of any variety of green or yellow squash. Wash and chop 1 bell pepper, 6 green onions and 2 tomatoes (you may add mushrooms, eggplant, cabbage or other vegetables you have on hand too).

Heat 1 tablespoon olive oil in skillet. Add peppers and onions. Cook 2 minutes. Add other vegetables and continue cooking for 5 minutes.

Sprinkle with 1 teaspoon cumin seeds, salt and freshly ground black pepper. Delicious served hot or cold.

Recipe copied from [http://www.theproducelady.org/recipes/#zucchini](http://www.theproducelady.org/recipes/#zucchini)

**Reference:**
A Bountiful Garden: Arizona Cooperative Extension


Insect control information from Clemson University: [http://www.clemson.edu/extension/hgic/pests/plant_pests/veg_fruit/hgic2207.html](http://www.clemson.edu/extension/hgic/pests/plant_pests/veg_fruit/hgic2207.html)

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**JULY GARDEN TASKS**

**GENERAL IDEAS**

- **Water deeply** but infrequently, this will encourage deep rooting of plants for better drought resistance.
- **Control fungal diseases** which flourish in hot and humid weather by keeping irrigation water off foliage. The best time to water is early morning. This allows the sun to dry water from foliage. Watering in early evening creates damp foliage all night, which encouraging the development of fungal diseases.
- **Help reduce the mosquito population** by emptying any containers with standing water. Mosquito larva can grow in shallow water, like plant saucers that do not dry completely.

**LAWN CARE**

[http://www.turffiles.ncsu.edu/](http://www.turffiles.ncsu.edu/)

- **When should 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. Watering too often encourages a lawn
with a shallow root system that cannot handle drought well. Apply an inch of water, in the early morning. Set your timer for 4 am if you can.

**Grasses vary in their needs.** Check out the Lawn Maintenance Calendar for your grass and learn how best to care for it, month by month ...

- Bermuda - [http://www.turffiles.ncsu.edu/articles/tf0016.aspx](http://www.turffiles.ncsu.edu/articles/tf0016.aspx)
- Centipede - [http://www.turffiles.ncsu.edu/articles/tf0019.aspx](http://www.turffiles.ncsu.edu/articles/tf0019.aspx)
- Zoysiagrass - [http://www.turffiles.ncsu.edu/articles/tf0020.aspx](http://www.turffiles.ncsu.edu/articles/tf0020.aspx)
- Tall Fescue - [http://www.turffiles.ncsu.edu/Maintenance_Calendars.aspx#00017](http://www.turffiles.ncsu.edu/Maintenance_Calendars.aspx#00017)

- **Keep fescue mowed at a height of 3 - 3 1/2 inches** to help it survive hot, dry periods. It is a cool season grass that slows down in the summer. If it is cut too short the tender roots will be exposed to extreme heat which will certainly damage, if not kill them. It is also difficult for fescue to recover from cutting too short as it is not actively growing at this time.

- **Repair Warm-Season Lawns:** Bermuda, Zoysia, and centipede are growing strong by now, making it easy to see spots that are weak or weedy. Pull weeds and patch bare spots if you haven’t already.

- Established fescue lawns naturally go semi-dormant in the heat of July. Established fescue can survive up to three weeks without water, but will need a drink if it doesn’t rain by then! Water only when grass shows sign of wilt (footprints show when grass is walked on). Fescue planted last fall will need watering every week. See the Fescue Lawn Maintenance Calendar (link above).

**TREES, SHRUBS & ORNAMENTALS**

- When you visit your roses, clip off leaves that show early evidence of blackspot - a common fungal disease that causes black spots on leaves. Put the spotted leaves in the garbage (not in the compost pile.)
- When gathering cut flowers to bring indoors, cut stems early in the day. Bring them indoors and recut the ends while they are submerged in a sink of water.
- **Don’t use Japanese beetle traps.** The pheromones in the traps often attract beetles that would not otherwise visit the area. To control a particularly pesky group of beetles, go hunting for them in early morning and shake them into a bowl of soapy water to get rid of them.
- Keep potted plants watered! Plants in pots outside may need daily watering in the heat of summer.
- Pinch out the tips of garden mums to encourage lower, compact plants with many flowers.
- Start stem cuttings of geraniums and leaf cuttings of succulents to be potted for use as house plants this winter.
- **Propagate shrubs by rooting cuttings.** Semi-hardwood cuttings of Azalea, Camellia, and Holly can be taken this month. The wood should be hardened enough that the stem breaks when bent. [http://www.ces.ncsu.edu/depts/hort/hil/hil-8702.html](http://www.ces.ncsu.edu/depts/hort/hil/hil-8702.html)
- **Prune spent crape myrtle blossoms** to prolong the flowering period.
- Sooty Mold on the crape myrtles will make the leaves appear dark and sooty or almost uniformly charcoal gray.
Sooty mold grows on honeydew (the sticky leftovers) from aphids. Control the aphids, and the mold will wash off.

- Powdery Mildew makes leaves appear gray and powdery. It’s a common problem which disfigures the foliage, but doesn’t kill the tree.
- Hand-pick bagworms off evergreens. Pesticides are not effective once the caterpillars are safe in their bags.
- Remove vigorous upright sprouts growing from tree roots ("suckers"), or from the upper surfaces of tree branches ("water sprouts"). Pruning the sprouts out directs the tree’s energy into desirable growth.
- Weed when it’s easy. Weeds are easier to pull when the soil is moist, so wait until after a soaking rain or irrigate the area first. The roots of desirable plants can be injured by pulling large weeds nearby so pull those weeds in late afternoon or on cloudy days, and water the area afterward to help injured plants recover.
- Start seeds for cool-weather annuals indoors in July/August for fall planting. Try foxglove, pansy, alyssum, snapdragons, ornamental cabbage (kale), and primroses. Pansy seeds germinate well when stored in the refrigerator (not freezer) for 10-14 days before planting.

**VEGETABLES & FRUITS**

- **Pinch out the tips of blackberry shoots** when they reach about 4 feet tall. This helps form a tidier hedgerow for easy picking.
- Soon after tomatoes begin to set fruit, give them a boost of fertilizer to keep them vigorous and productive. Most of the new varieties are heavy producers if provided with good nutrition and adequate soil moisture.

**LANDSCAPE IDEAS**

- **Deckscape**: Play with colors, textures, and the placement of furniture on your deck or patio. Use container-grown plants, windsocks and sculptures to change or fine-tune your color scheme and overall feel.
- **Think strategy**: Now that deciduous trees and shrubs are in leaf, survey your landscape critically. Do you have too much? too little? are plants too low where screening is needed? So tall a view is blocked? Take photographs and make plans to add or move shrubs this fall. Don’t do it now.

**WILDLIFE**

- **Put out a bird-bath**: Keep it filled with fresh water. Change it once a week to minimize mosquitoes. Birds will pay you back by eating lots of insects!
- Think twice about squashing caterpillars; many turn into butterflies. This is just one example of what swallowtail caterpillars look like. This is a swallowtail butterfly(right). Swallowtail caterpillars (left) love parsley, so set out a few extra plants to share with them. A pan of moistened pebbles or sand will attract butterflies.

**“Must Read” - Important Information**

If you have any garden questions that you need answered, send and email to icemastergardener@gmail.com, or call 919-989-5380

If you would like to receive this newsletter electronically through email, please contact Shawn Banks at shawn_banks@ncsu.edu.