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Master Gardener | Johnston County

The Gardener's Dirt Newsletter

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Feature Article

Inventories, Assessing and Planning for a Garden

By Silvia Caracciolo, Extension Master Gardener Volunteer

Winter's gray skies and chilled air invite time inside to dream and plan for a successful vegetable garden in the spring. If you are a beginner, planning a garden can seem a bit overwhelming at first. Understanding number of daylight hours needed, types of soils, irrigation, amendments, tools, spacing and type of garden beds are a few of the many things to consider.

As I dream of spring, scouring beautiful seed and garden catalogs, it is easy to get caught up in a world of fantasy. Some items seem like something you would want but upon further investigation prove not the wisest choice. The wide variety of vegetables you might grow can be enticing, but consider the things you actually like to eat! Pheromone traps are an example of something that draws insects to your garden and may in fact cause more problems. It is important to do your homework and seek advice from experienced gardeners. Be sure to check your existing inventory of seed varieties and their viability before placing your order.

How does your garden grow? Understanding the needs of your plants is certainly important. Once you have some experience you will learn what works. This information helps build a better and more productive garden for future years. This is part of assessment - what works and what doesn't. What crops were most successful and what you don't want to try again, or should you try a different variety? If possible purchase local varieties which are already acclimated to your area or zone.

Soil is the heartbeat of the garden and should be tested. Assessment of the soil can be easy as pie and it's free April through November. The free soil sample kits are located at the Johnston County Agricultural Center. Instructions on how to take a good soil sample are included in the packet. Amending the soil to meet plant needs is a vital step to your plan to get your growing season off to a fruitful start.

Keeping a journal of information will build knowledge over time. The journal will also keep beds in check for crop rotation. It can help with assessment/documentation of pest and disease problems on the crops. Documentation of pest and disease problems alerts you to the time of year to look for repeat offenders. At the beginning of the season, record planting dates, then document heights, tags, diagrams, costs, amendments, rainfall, watering schedules and any other information that can help you stay on top of the growing season and be useful to look back upon for future reference.

Going beyond the simple tasks of planting and growing by keeping inventories, assessing accomplishments, along with some advance planning can not only help grow a successful garden but help grow a novice backyard gardener into an expert!

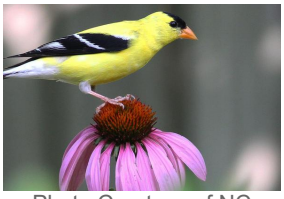

Photo Courtesy of NC Audubon Society

Grow Native

Bringing Nature Home - Part 1

By Katie Maynard, Extension Master Gardener Volunteer

According to Doug Tallamy, in his book **Bringing Nature Home**, human impact on the landscape is destroying nature, resulting in significant population losses and even extinctions of plants and animals. Not in some distant land, but right here. As Dr. Tallamy, the chair of the Department of Entomology at the University of Delaware, presents it, our personal landscape really is the last option for the survival of insects and many species of plants and animals. Do you remember how many birds were around when you were a kid? Remember driving anywhere in NC on a summer night and the ungodly number of dead insects on your windshield? How about last summer?

Insects are the primary way that energy captured by plants is transferred to other animals. 90% of all insects that eat plants require native plants to complete their development. If you remove insects from an ecosystem, the ecosystem will collapse because, so many other creatures depend on insects for food. For example, 96% of all birds rear their young on insects. Baby birds depend on insects.

Doug Tallamy presents facts that lead to the conclusion that we are

losing our wildlife. With ever growing human populations, we are killing our biodiversity and wildlife habitat at an alarming rate. As invasive exotic species take over more and more of our land there are fewer and fewer insects and birds and other wildlife.

- About 90% of insect species eat plants of just three (3) or fewer plant families. They only eat plants that they co-evolved with, i.e. native plants and are unable to eat alien plants.
- Carolina Chickadees, along with most birds, do not feed their babies seeds. They bring insects, mostly caterpillars, at an average rate of 1 every 3 minutes! That is over 6000 caterpillars to raise one brood!

Because 83% of the U.S. population lives in cities or suburbs, and in 2003 the consensus by experts was that only 3 to 5 percent of our land remains undisturbed habitat, biodiversity will have to survive in those areas in which we live if it is going to survive at all. Truly natural areas are gone nearly everywhere, and biodiversity cannot survive in our parks and preserves. These small habitats can only support tiny plant and animal populations which are vulnerable to local extinction.
Plants protect their leaves with toxic chemicals. Insects can survive after eating those chemicals only after they have evolved physiological mechanisms for detoxifying them. This requires a long evolutionary history between insects and their host plants. Native insects only have such histories with native plants. Every time we plant an alien plant, we are reducing the local insect population and thus depriving the birds and wildlife of the food they need to survive and reproduce. Studies have shown that areas overrun with alien plants produce 35 times less caterpillar biomass, the most popular insect food for birds. Alien plants used in the ornamental trade support 29 times fewer species of caterpillars than native ornamental plants.

In Part 2 we will discuss how we, as individual gardeners, can begin to reverse some of the damage we have done and rebuild our biodiversity. We must act quickly to save the remaining plants and animals that sustain the ecosystems upon which we all depend.

*His book **Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens** was published by Timber Press in 2007 and was awarded the 2008 Silver Medal by the Garden Writers' Association. **The Living Landscape**, co-authored with Rick Darke, was published in 2014.*


Photo Courtesy of

Good or Bad?

Pop Up Plants

By JoAnn King, Extension Master Gardener Volunteer

JoAnn King

I coined a new phrase, "Pop Up Plants". As it suggests, these are plants that just seem to pop up in your landscape, most often where you don't want them. But sometimes, these free plants become a welcome addition. There are many evergreens that produce fruit or seeds, including Nandina, Ligustrum, Cleyera, Mahonia, Hollies, and even pine trees. Birds are great for propagation. Often their work ends up in an unwanted site, but sometimes you get lucky.

Nandinas produce beautiful red clusters of berries in the winter. The birds love them, and once digested and returned to Mother Earth, the seeds produce new plants. Nandinas found at the base of the shrub can be easily pulled out when newly sprouted. New plants that are left in a more open space or wooded area can be left to develop. Here's a photo of a nandina that is conveniently living among tree roots and a drainage area filled with rocks. It looks pretty and helps with the drainage.

I have several wavy leaf ligustrum that have little dark blue berries in the winter. Many people prune this type of shrub but if left alone they will provide food for birds. My neighbors have a large oak with some azaleas underneath. An evergreen plant was growing inside and left undetected until it exceeded the height of the azalea. "What's this?" they asked. I quickly offered to take it off their hands. It pulled right out of the ground and I potted it and planted it a year later. Here it is, taking up residence in my yard.

I have a cleyera japonica, 'bronze beauty'. The berries propagate under the plant, and it is easy to pull out unwanted ones. If left to grow, they can be replanted in a desirable place.

Last but not least, my favorite is this mahonia that sprung up from a neighbor's plant. It clearly ended up in the wrong place, so close to the other plants. Mahonias have spiked leaves, making it very difficult to handle, worse than a holly. But the flower is just beautiful.

Although pop up plants take longer to mature than nursery stock (five-ten years vs. three years), they have the advantage of adapting to its growing space as a seed. They often end up in spaces that would be very difficult to dig sufficiently for a more mature plant. And here's the best part: These plants I reference are shade loving, low/no maintenance evergreens that deer don't eat. You just have to wait for them to be sizeable. And did I say that they are free?

Photo Courtesy of Pixabay

Quick Tips

Clean Tools

By Silvia Caracciolo, Extension Master Gardener Volunteer

Rinse with water after each use.

Dry before putting them away.
Next we'll use them on the spruce,
But this will happen another day.

Some may need a hard bristle brush,
To clean away the clay.
Our garden will stay green and lush.
Help keep the disease away.

Put them in a bucket of sand,
With some linseed oil.
Keep the edge nice and grand.
They won't rust and spoil.

Photo Courtesy of Marshall Warren

Landscape Horticulture

DIY Hardscape Construction

How to install your own paver walkway or patio

Marshall Warren, Horticulture Extension Agent

Have you ever dreamed of having a patio where you can relax and entertain friends, or an elegant walkway that leads you through your garden landscape? And have you thought that it was out of reach because of the perceived cost or your lack of knowledge and skills to do it yourself? That dream can become a reality when you realize that you can install it yourself. You just need to understand some basic construction skills and the knowledge of how to install pavers. Once you understand the principles and steps to installing pavers, with a little effort, you will soon enjoy the fruits of your labor. Whether you plan to install brick, stone, or interlocking concrete pavers, having a step by step guide should simplify the process. Even if you feel you can't do the work yourself and need to hire a landscape professional, it's a good idea to be familiar with the process.

Planning the area to be paved is your first step. You can draw out your design to scale on paper or just layout the design on the ground with a garden hose or with stakes and string. Remember that the proposed area around the pavers should have positive drainage and not pool water and the pavers themselves should have enough slope so water will run off. Calculate the square footage of the area so you can figure the number of pavers and other materials needed. Add about 5 to 10% to this figure so you can allow for extra pavers needed due to the loss when cutting pavers. Having the square footage will help you to estimate the cost of supplies, equipment and tools needed to complete the project.

Materials that are needed for your patio or walkway are: geotextile

fabric, 4 to 6" depth crush n run gravel base, a perimeter edge restraint, 1' deep coarse bedding sand, pavers, polymeric jointing sand. Some of the basic tools and equipment needed are: tape measure, brick hammer, chalk line or string, builders level, marking crayon or pen, wheelbarrow, push-broom, shovel, screed rail and 2x4 screed board, 1" diameter metal or PVC pipe, hand and/or vibrating plate tamper, a sheet of plywood, and a tool to cut pavers. Some of these tools and equipment can be rented.

Establish the final height of the pavers and remember that there should be a 2% slope of the pavers to drain water, basically for every 4 feet, you should slope down one inch. The area will need to be excavated to accommodate the gravel base and pavers. Calculate the total depth of excavation needed; compacted base - 4 to 8", compacted sand base - 5/8", and add your paver thickness. On average, you will need to excavate 7 to 9" deep. Excavate the area several inches wider than your final dimensions, compact the soil base and install the geotextile fabric. Then add the crush n run gravel in 2" depths, wet the gravel and then compact each layer with a hand tamp or for larger areas, use a vibrating plate tamp machine. The depth of the base gravel should reflect the pedestrian or traffic use. Check to make sure the compacted gravel is level and sloped to grade with your final established height. Install the edge restraints along the outer edges of your patio or walkway. The edge restraints can be made of plastic, metal, wood or pre-cast concrete. Lay down the screed rails along the edges and/or 1" piping over the base material which will allow for an even depth of the coarse bedding sand. Before laying the pavers, place a layer of bedding sand over the compacted base material and use the 2x4 screed board to level across the sand to establish a smooth uniform layer of sand. Move the piping along as you go and try not to compact the sand. Fill in the voids with sand when the pipe is removed.

Begin laying the pavers in a pattern and design of your choosing, all the while being careful to stay on the pavers avoiding walking on the sand or disturbing its smoothness. Use a guiding string and constantly measure and check as you lay the pavers to make sure your joint patterns are straight. If the pavers need to be cut to fit, you can use a diamond saw, a masonry chisel, or mechanical splitter and always wear safety glasses. After all the pavers are installed, lay a piece of plywood over the pavers and tamp them with a hand tamp or a mechanical vibratory plate tamp. This compaction step will set the pavers into the sand. After this step, spread a layer of the polymeric jointing sand and sweep into the joint cracks. Lay plywood over the pavers and tamp again to settle the polymeric joint sand into the cracks, repeat this step twice, sweeping the joint sand in the cracks between each of these steps. Sweep or gently blow off all the remaining polymeric joint sand off the surface of the pavers. Lightly apply water over the surface to set and harden the polymeric joint sand. This type of joint sand will prevent weeds from growing between the cracks. Your job is complete!!! Now it is time to relax and enjoy.


Photo Courtesy of Pixabay

Monthly Gardening Tasks

January Gardening Tasks

LANDSCAPE IDEAS

● Plants less than one year old may need some supplemental water to get through the winter.
● Watering well just before a cold snap helps plants survive bitter temperatures.
● Plants with scale insects or spider mite infestations can be treated now with horticultural oil products.
● Some evergreen shrubs like boxwood, gardenia, and nandina can be pruned now. To reduce camellia petal blight, collect the fallen flower petals and put them in the compost pile.
● Perennials like daylilies, Shasta daisy, and peony can be divided when the ground is dry enough to be worked.
● When searching through seed catalogs look for key phrases like "heat tolerant" and "tolerates humidity".

EDIBLES

● Prepare the vegetable garden for planting in February by removing weeds and adding compost.
● If you haven't already, look through seed catalogs for vegetable varieties that aren't easy to find in our area.
● Consider starting some cool season crop seeds in a cold frame to get a jump on the season.
● Mulch strawberry beds with 2-3 inches of wheat straw for winter protection. Remove mulch in spring when blooms appear.
● Asparagus crowns can be planted through March. New plants should not be harvested for 2-3 years.
● Prune fruit trees now through March or when the buds begin to break.


Photo Courtesy of Pixabay

Cool Connections

Helpful Links

Read more»


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Upcoming Events

Become a Master Gardener - **Application DEADLINE January 12!**

Fruit and Nut Tree Pruning Workshop Demonstrations - February 3, 2018 (Two Demonstrations at Separate Locations in One Day!)

Blueberry and Grape Production and Pruning Workshop - February

17, 2018

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