Feature Article, Feature Plant, A Veggie Tale, Quick Tip:, Ask an Expert, Monthly Garden Tasks, Cool Connections, Upcoming Events

The Gardener's Dirt

Johnston County Center **September 2016**

Feature Articles

To Till or Not to Till, That is the Question

Barb Barakat, Extension Master Gardener Volunteer

"See nature, follow nature, be nature." These Ninja guidelines aimed at a good life have application in the garden. Nature doesn't till. Quite the opposite, nature is constantly dropping organic matter on the ground, creating more soil. Where in nature do you find the richest soil? It's in the forest under the leaves! The aim of No-Till gardening is getting that process to happen in our gardens.

The Why of No-Till:

- preserves the natural integrity of the soil's structure and the environment
- improves soil health; microorganisms, fungi, worms are undisturbed
- protects against rain and wind erosion, keeping topsoil in gardens and out of rivers
- great soil = great plants!

If you are building beds from scratch, choose a sunny location and cut vegetation short. Then, layer from bottom to top with cardboard, 2-3" wheat straw or crushed leaves, 2-3" grass clippings, ½" manure or compost. Repeat 2-4 times to reach desired height and top with mulch. While you can plant right away, it will

take about 3 years for the bed to decompose and become fully established.

In your existing beds, stop tilling and start mulching! No-Till gardening requires 7-10" of mulch a year, 3-4" in the spring and 4-6" in the fall. Yes, that is a lot of mulch! I grow my own mulch by planting cover crop, such as rye, crimson clover, and/or vetch, in late fall. Actually, I plant a cover crop anytime I have unused garden space!

It's essential to chop and drop (bend and leave in place) cover crop after it flowers, but before it seeds. In No-Till gardening, the mulch is in place first; then simply part the mulch to sow seeds and fold it back in place as seedlings take root. Amendments such as lime, compost, rock phosphate, and/or wood ash, can be top or side dressed.

Whether it's called Permaculture, Layer, Lasagna or No-Till gardening, I've been using this bed building technique for 4 years. I grow crop after crop. My soil is getting richer, not depleting and my harvest is bountiful. Thank you, Nature, for showing me the way!

Mow & lay thick cardboard to kill current plant life.
photo courtesy of littlegreenwheelbarrow.com

Pile loads of a variety of green & Brown organic matter on top-compacts to 1/2 piled height.
photo courtesy of sweetgrace.typepad.com

Cover with wheat straw, water & let nature do the rest. It will be ready for spring planting.
photo courtesy of permaculturesunshinecoast.files.worpress.com/2011/05/zaiacamera1105200111331.jpg

Sources:
http://extension.oregonstate.edu/gardening/layer-compost-lasagna-style-no-till-gardening
http://learn.eartheasy.com/2009/01/no-till-gardening/
http://www.backtoedenfilm.com/

Growing Under Cover

Barb Barakat, Extension Master Gardener Volunteer

photo courtesy of www.mccc.msu.edu

photo courtesy of www.linkedin.com/pulse/use-cover-crops-improve-soil-rahul-pagar

Environmentally sustainable gardening starts with building healthy soils. A cover crop is planted primarily to enrich the soil. It's grown over the winter between cash crop seasons and can serve as mulch for the cash crop.

Here's what cover crop does for your soil:

- increases fertility by drudging up/fixing nitrogen N, sequesters carbon & other micronutrients
- increases biological activity - microbes, worms, beneficials
- improve soil structure - insulates, anchor & aerates soil, prevents erosion & compaction
- generates biomass/mulch, reduces weeds & the need for fertilizer, improves soil health

It's easy to get started growing a winter cover crop. Plant it in September or October when your cash crop is being harvested. The most essential step of growing a cover crop is not the beginning but the ending, to stop its growth before it goes to seed in the spring. Wait until it's fully flowered, but not yet making seed, then bend or break it and leave it in place. The root stays in the soil to decompose; the stem and leaves stay on top as mulch. Wait 2 weeks, then plant your cash crop within the mulch. This is not for the tidy-hearted, its beauty is in the environmental benefit!

Cover crops comes from these 3 plant families:

- Legumes - nitrogen fixing and improve water holding capacity. I grew crimson clover and hairy vetch (domesticated)
- Brassica - grows a large taproot that can break through & aerate the soil bringing up deep level nutrients. I chose from radish, mustard, collards (I did leave a few collards flowering for my early beneficials.)
- Grasses - fast growing, produces loads of biomass, goes dormant but resurges in spring, suppresses weeds. I chose rye & winter wheat.

By mixing your own cover crop cocktail, your soil can benefit from the strengths of each plant family. Last year, I experimented with several blends, but my favorite is 40% rye and winter wheat, 20% crimson clover, 20% hairy vetch, 20% mustard/collard/radish. I simply mixed the seed, threw it (with downward force) on the beds, raked it in lightly, & watered. It's recommended to use a different blend in a 3 year rotation. Johnny Seed and www.groworganic.com are great sources for seed.

I love growing cover crops. When I go out to my winter gardens that are green and thriving with no bare soil exposed to the elements, I feel connected and motivated to plan an even more diverse and productive warm weather garden!

Sources:
Guide for Planting Forage Crops in NC

http://edgecombe.ces.ncsu.edu/
SARE Topic Room
http://www.sare.org/Learning-Center/Topic-Rooms/Cover-Crops

Feature Plant - "Choice Plants" Selection

Pink American Beautyberry

***Callicarpa Americana* 'Welch's Pink'**

Choice Plants Series - JC Raulston Arboretum

photo courtesy of
JC Raulston Arboretum

Ornamental fruiting plants are used all too infrequently in the landscape with the exception of a few hollies and a handful of other plants. An often overlooked but exceptionally showy group are the beautyberries (Callicarpa). Most beautyberries are native to Asia but there are a few that occur naturally in North America as well. One of the showiest of this group, C. americana, or American beautyberry is native to the southeastern United States and is among the easiest of plants to grow.

Callicarpa americana is native from Maryland south to Florida and west to Oklahoma and Texas. It typically makes a large shrub to about 6' (8') tall with lavender-pink flowers in summer followed by bright magenta-purple ¼" fruits in fall. The dense clusters of fruit make a ball 2"-3" in diameter which completely encircle the stems at every leaf node. White fruiting forms are also found in the wild.

Plantsman Matt Welch found a pink fruited form in East Texas. We received our plant from David Creech of the Mast Arboretum at Steven F. Austin University in Nacogdoches, Texas. This selection was thought to be a hybrid between the typical purple form and a white berried plant. Interestingly though, all seedlings from 'Welch's Pink' are true to type and will be pink-fruited-not the expected outcome if this were truly a hybrid. 'Welch's Pink' has pink flowers throughout the summer followed by pastel pink fruits from September lasting well into winter when the birds will eventually pick it clean.

Pink American beautyberry will grow in conditions ranging from shade to sun and will tolerate both dry and very wet soils making it an excellent candidate for rain gardens or most any spot in the garden. In exposed, dry sites the leaves will wilt during the hottest parts of the day and may burn along the edges. Fruiting is best in a bright location but the berries will often fade a bit if the sun is too intense.
'Welch's Pink' beautyberry does not seem to grow quite as large as the species but is otherwise similar in most aspects. It can be pruned during winter after the fruits are gone to control height and shape. It is easy to grow in most landscape situations and is a welcome addition to wildlife gardens, native gardens, and anywhere where late season and winter color is desired. When planting, make sure to keep your beautyberry watered until it is established, generally for about the first year. Once established, it should tolerate most conditions and is mostly pest-free.

A Veggie Tale

Growing Peanuts

Arachis hypogaea

Tina Stricklen, Extension Master Gardener Volunteer

photo courtesy of Tina Strickland

photo courtesy of Tina Strickland

photo courtesy of wiki pics

Last fall, I visited the Fuquay-Varina garden of Brie Arthur, a local, up-and-coming garden advocate. She promotes food-scaping - the art of integrating edibles into the landscape. As you can imagine, her lot was packed full of plants. Tucked into a border, I saw a cluster of low-growing, pea-like foliage hugging the edges of the garden. She pointed out they were peanuts and only a month away from harvest.

I thought, "Gosh, I want to try that at my house!" It turns out that growing this plant is as functional as it is fun. Since peanuts are legumes, they fix nitrogen in the soil. The plants are attractive, too. Being related to a pea, their foliage is showy and blue-green in color with delicate yellow blooms. What's more, the pods grow below ground and when they are ready to harvest you simply dig them up.

Be sure to give these heat-loving plants at least one inch of water a week while the pods are forming through the summer. Once they are mature and the foliage begins to yellow, watch for a few dry days in October to harvest from the dry soil. You can dig up and lay them out on the garden, allowing them to sun dry for several days. Alternatively, you can cure the peanuts by hanging the whole plants with pods in a dry shed or garage for a few days but beware of mice! Pull the pods from the plants and continue to dry for 1 or 2 weeks and store in a well-ventilated container.

You can roast, boil or cook them in oil. Brittle is nice and so is peanut butter. Whichever way you choose to prepare this legume, it is a nutritional power house that tastes great too.

The Particulars

Soil Type	sandy, loose, well-drained
Light Requirements	full sun
Soil Ph	6.5
Planting Depth	1 to 1.5 inches
Spacing	6 to 8 inches apart; row spacing 24 to 36 inches apart
Germination	within a week
Days to Maturaty	130 to 150 days
Other Names	ground nuts, monkey nuts, goobers

Sources:

http://www.southernexposure.com/peanuts-ezp-67.html
http://www.ipm.iastate.edu/ipm/hortnews/1997/5-2-1997/peanuts.html
http://www.motherearthnews.com/organic-gardening/how-to-grow-peanuts

Quick Tip:

Taming Unruly plants

Marshall Warren, Horticulture Extension Agent

There are many perennials with beautiful flowers you may hesitate to plant fearing they'll get too tall, grow out of bounds and flop over. The striking and beautiful Obedient Plant (Physostegia virginiana) comes to mind with its tendency to be unruly with tall flower stalks sometimes falling over and lending an unkempt look to the flower bed. A solution to help keep plants similar to the Obedient plant "obedient" is to surround it with steel edging. Suspending a section of green coated wire fencing about one foot above the plants before the new growth starts will help keep it upright and inbounds as it continues to grow. If you prepare for their unruly behavior at planting time, they will be stand-up additions to your garden all season!

photo courtesy of Marshall Warren

photo courtesy of Marshall Warren

Ask The Expert

Applying Pre-emergence Herbicide

Amy Barker and J.C. Neal, Department of Horticulture Science NCSU

"How do I know if I am applying the right amount of granular pre-emergence herbicide to control weeds in my landscape planting beds?"

The best herbicides will not provide effective weed control if not applied accurately and uniformly. Too little product results in poor weed control, an increase in hand weeding, and too much can injure your plants.
To obtain the correct dose, your spreader will need to be calibrated. Spreader calibration is essentially a very simple process: (1) measure the width of spread, (2) apply the granules to a small area, (3) measure the amount applied to this area, (4)

photo courtesy of Marshall Warren

compare this to the desired dose and adjust the

spreader settings until the desired output is obtained. Simple, right? However, in practice, this is easier said than done.

Calibration Step 1: Determine the Effective Swath Width
Granular spreaders do not distribute the same amount of material across the width of the treated area. More granules are deposited directly in front of the applicator than at the edges. Consequently, when applying herbicides, the applicator will have to overlap the applications. For this reason, you need to determine the effective swath width. The effective swath width will be narrower than the entire width of spreader throw. Note: see links for details.

Spreader Calibration, Step 2: Determine the Application Rate
Bins, trays, and pots are useful for collecting granules when determining swath width. However, our research indicates that they are not a reliable way to calculate the application rate. Instead, it is better to weigh the amount of herbicide applied to a known area, and then adjust the spreader settings to obtain the desired dose. Note: see links for details and how to calculate.

Tips for using hand held spreaders

- Maintain consistent walking and cranking speed.
- Use center rudder position only. Do not use the spreader held at an angle.
- Refill the hopper when the level drops to about 25% full. Don't wait until it runs out.
- Start walking and cranking before opening the hopper.
- If the wind is 5 mph or more, don't make the application. Wait for a calmer day.
- When using lower spreader settings, don't walk back and forth, spread granules by walking in the same direction, using a parallel pass method. This keeps application of granules uniform.
- Calibrate your spreader!

Sources:
https://content.ces.ncsu.edu/calibrating-hand-held-granular-spreaders
https://content.ces.ncsu.edu/herbicide-dose-calculations-for-landscape-islands
https://content.ces.ncsu.edu/using-a-hand-cranked-hand-held-spreader

Monthly Garden Tasks

September Garden Tasks

GENERAL REMINDERS

- Collect soil samples for testing, so that you'll know how much fertilizer and lime to add this fall. Test your lawn, flower beds and vegetable garden. Testing should be done once every 2-3 years.
- Clean up and throw away any diseased plant material. Do not throw it in a compost pile. Leaving infected plant material on the plants or where it fell on the ground provides a source of reinfection for next year.

- Prepare plants for dormancy. Plants need time in the fall to slow down and prepare for the winter, so do not apply nitrogen (N) fertilizer or prune after July. Consider applying potassium (K) fertilizers which increase winter hardiness.
- Divide spring and summer blooming perennials that are overgrown, such as daisies, daylilies, creeping phlox. This is an easy way to enlarge your garden without purchasing more plants. Dig the plants, gently separate into smaller clumps

and replant immediately. They'll have plenty of time to get re-established before next spring.
- Set out cool weather annuals for winter color. In addition to pansies and ornamental cabbages, other cool weather ornamentals such as dianthus, snapdragons, dusty miller, and ornamental sage look great throughout the winter. Wait to plant spring bulbs till chillier fall weather arrives.
- Start fall vegetables such as lettuce, spinach, collards, and cold crops.

LAWN CARE

- Check out the Lawn Maintenance Calendar for your grass and learn how best to care for it. http://www.turffiles.ncsu.edu/
- Quick Tip for fertilizing cool season fescue lawns: Fertilize on Labor Day, Thanksgiving and Valentine's. Fescue lawns are green and growing during the cool months of fall, winter, and spring. Use a slow-release fertilizer.
- Plant fescue seed to fill in bare spots or rejuvenate your lawn. The best time to plant fescue seed is September 15 - October 15. Contact us for a publication on lawn care and renovation and get your soil samples in!!
- Overseed common bermuda lawns with ryegrass in late September if you want to keep your lawn green all year.
- Control winter weeds with a pre-emergent herbicide applied around mid-September on lawn and shrub plantings.

LANDSCAPE IDEAS

- Think ahead to next fall and consider plants that will provide autumn color. Trees such as ginkgo, red maple, southern sugar maple, Japanese maple, sourwood, crape myrtle and tulip poplar have outstanding autumn foliage color.
- The flowers of Sasanqua camellias and autumn-flowering chrysanthemums contribute much to the colorful autumn scene.

  Don't forget the brilliant red foliage of rabbit eye blueberries. The berries of pyracantha, nandina, viburnum, beautyberry and many hollies provide bright accents into winter. Look for interesting plants in the nurseries and plant them this fall.

Cool Connections

NC Extension Gardener Manual

Past Issues of Gardeners Dirt

NCSU Publication Links

NC Extension Gardening Portal

NC Extension Plant Database

Going Native (Selecting and Planting Native Plants)

NCSU Pruning Trees and Shrubs

Cooperative Extension Search

photo courtesy of Pixabay

Upcoming Events

2016 Clayton Harvest & Music Festival
The Master Gardener's will have a booth on September 17, 2016 from 9am-5pm
In downtown Clayton, NC

Southern Ideal Home Show
The Master Gardener's will have a booth on September 23-24, 2016
At the NC State Fairgrounds

Doug Tallamy - Making a Difference, One Yard at a Time
Saturday, September 24, 2016 at 1pm.
An afternoon with Doug Tallamy, Author of "Bringing Nature Home".
Tickets are $10 each. Email **info@capefearaudubon.org** for more information

"Our Gardens in a World of Change"
Western North Carolina Gardening Symposium, Thursday, October 12
DoubleTree Hotel Asheville-Biltmore
The registration form with full program details is on www.buncombemastergardener.org

NC State Fair
Thursday, October 13, 2016 through Sunday October 23, 2016

Doug Tallamy: Restoring Nature's Relationships at Home Sunday, October 30, 2016 at 1pm(Public Reception), Presentation starts at 2pm
Admission is FREE but registration is required. Register by phone at 910-295-1900.

NEWSLETTER EDITED BY: Brooke Taylor

*** If you would like to receive this newsletter monthly via email, send an email to mhwarren@ncsu.edu asking to be added to "The Gardener's Dirt" email list.

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Home Horticulture in Johnston County, NC

Johnston County NC Extension Master Gardener Volunteers