



# Successful Gardening through Extension

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Comments or Questions? Please call or email:  
Shawn Appling, Associate Extension Agent ANR,  
Horticulture: Culpeper County Office at  
(540) 727-3435 Ext. 355 or [ashawn6@vt.edu](mailto:ashawn6@vt.edu)

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## Establishing Turfgrass

Our location in the northern piedmont means cool-season turfgrasses are the best option for this area. The cool-season turfgrasses recommended are Kentucky bluegrass and tall fescue; a blend of both turfgrasses is recommended compared to planting just one or the other. The decision between seed (Figure 1) or sod depends on environmental conditions, season of desired establishment, time constraints, and financial considerations.



Figure 1. Turfgrass establishment from seed.  
Photo by Shawn Appling

Establishment from seed is best done in late summer or fall; from late August through September. Any later and the turfgrass of choice may not establish before the hard freeze comes in October. Early spring establishment from seed can lead to damage caused by weeds such as crabgrass and summer drought. Sod can be planted year-round as long as the ground is not frozen in the winter and supplemental irrigation is available in the summer. The establishment of sod in the middle of summer during periods of extreme heat is not recommended.

Soil tests are recommended before any soil preparations are undertaken. These tests will provide recommendations for fertilization and lime (a soil pH of 6.2 is recommended). Please contact your local extension office for forms and instructions for taking soil samples. This would also be a good time to control perennial broadleaf weeds and grassy weeds through mechanically removing the weeds or by using herbicides. Tilling the soil to a depth of four to six inches is recommended; along with incorporating two thirds of the fertilizer to be applied from the soil test recommendation. The remaining one third should be applied to the surface just before sowing the seed.

Sod should be laid as soon as possible after it arrives at the site; it should not remain stacked for longer than 36 hours. The sod should be laid in a staggered pattern. Make sure the edges of the sod are touching because weeds can sprout in the gaps if the sod is placed improperly. Roll and

water the sod to make sure good contact is made between the soil and the roots. Make sure to irrigate as necessary until the roots are established.

Recommended seeding rates for Kentucky blue grass are two to three pounds per 1,000 square feet. Tall fescue should be seeded at four to six pounds per 1,000 square feet. If using a blended mix, following the rates recommended on the bag. After calculating the amount of seed required, divide the seed in half. Sow the first half in a north/south direction and then sow the remaining half in an east/west direction. Cover the seed lightly by raking and rolling the seed to ensure good contact with the soil. The surface should then be covered with straw or a similar mulch at a rate of one and half to two bales per 1,000 square feet. Irrigation will be needed to maintain a consistent soil moisture during the first 30 days of sowing. Begin mowing when the turfgrass is one third taller than the intended mowing height (usually two to three inches for cool-season turfgrasses).

For more information, please view the following articles or contact your local extension office:

- *2016 Pest Management Guide Home Grounds and Animals*, Virginia Cooperative Extension (VCE) Publication ENTO-69P. 2016. <http://pubs.ext.vt.edu/456/456-018/456-018-15-Home-grounds-and-animals.pdf>.
- Aveni, Marc; D. Chalmers. *Aerating Your Lawn*. VCE Publication 430-002. 2013. [http://www.pubs.ext.vt.edu/430/430-002/430-002\\_pdf.pdf](http://www.pubs.ext.vt.edu/430/430-002/430-002_pdf.pdf).
- *Establishing Lawns*. VCE Publication 426-718. 2009. [http://www.pubs.ext.vt.edu/426/426-718/426-718\\_pdf.pdf](http://www.pubs.ext.vt.edu/426/426-718/426-718_pdf.pdf).
- Goatley, J.M.; D.R. Chalmers; J.R. Hall III; R.E. Schmidt. *Lawn Fertilization In Virginia*. VCE Publication 430-011. 2009. [http://www.pubs.ext.vt.edu/430/430-011/430-011\\_pdf.pdf](http://www.pubs.ext.vt.edu/430/430-011/430-011_pdf.pdf).
- Goatley, Mike; S. Askew; D. McCall. *Fall Lawn Care*. VCE Publication 430-520. 2015. <http://www.pubs.ext.vt.edu/430/430-520/430-520-pdf.pdf>.
- Hall III, John; D. Relf; P. Carry; J. May. *Calibrating Your Lawn Spreader*. VCE Publication 430-017. 2009. [http://www.pubs.ext.vt.edu/430/430-017/430-017\\_pdf.pdf](http://www.pubs.ext.vt.edu/430/430-017/430-017_pdf.pdf)
- *Selecting Turfgrass*. VCE Publication 426-719. 2009. [http://www.pubs.ext.vt.edu/426/426-719/426-719\\_pdf.pdf](http://www.pubs.ext.vt.edu/426/426-719/426-719_pdf.pdf).

## Soil Testing

Sending off a soil sample for testing is a good practice to incorporate into your landscape, vegetable garden, and/or orchard design process. A soil test can give you recommendations on how much fertilizer and lime are needed for your particular situation. Applying the correct amounts of fertilizer and lime lead to less runoff into streams and rivers; lessens the risk of leaching into the ground water and can save money by not purchasing fertilizer and lime that is not needed. The Virginia Tech Soil Testing Laboratory provides you recommendations on the amount of phosphorus (P), potassium (K), calcium (C), magnesium (M), and on the five micronutrients needed for healthy plant growth; along with a lime recommendation dependent on the pH of the soil. The pH may need to be lowered or raised depending on the plants to be grown. If for example you are growing blueberries, the pH may need to be lowered by using a form of sulfur; but if you are planning to grow turfgrass the pH may need to be raised by applying lime.

Use a soil sampling probe (Figure 2), garden trowel, shovel, or spade that is stainless steel or chrome-plated. Do not use a brass, bronze, or galvanized tool because the soil samples can become contaminated with copper or zinc. The soil samples taken should be mixed in a clean plastic bucket that has not been used to store chemicals or fertilizer; cross-contamination can result, which will skew the soil testing laboratory results.

Soil samples should be taken a few months before preparing a landscape bed, lawn, or vegetable garden. This allows for sufficient time for the fertilizer and/or lime applied to make the necessary adjustments to the soil profile. Samples can be collected at any time of the year but fall is one of the better times because it allows time for soil adjustments; and it also avoids the busy spring season when most samples are sent into the testing laboratory.

Soil samples should be a composite of the soil in the growing area being tested. At least 10 sub-samples should be taken in a zig-zag pattern. The soil depth of the sub-samples differs depending on the part of the landscape being scrutinized. Soil samples being taken in established lawns should be taken at a depth of two to four inches. Samples from around trees and shrubs should be taken at a depth of six inches; include soil from around the drip line of the tree and/or shrub and the soil under the canopy. Areas being prepared for fruit crops or vegetables should be sampled at least down to six to eight inches or the tillage depth. Sampling at the depths mentioned above will result in a soil test that represents the requirements of the whole rooting zone. Test results for soils in the piedmont and mountain regions of Virginia should be sufficient for two to four years. Areas to be avoided when collecting samples include consistently wet areas, yard or landscape borders, ditches, brush piles, burn sites, severely eroded slopes, and pet areas. Contact your local extension office for forms, soil sample boxes, instructions for filling out the form, and for assistance interpreting the results of the soil test.

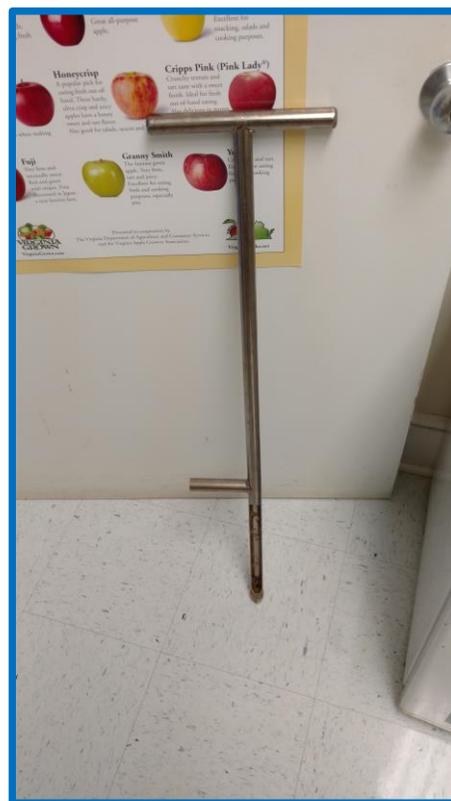


Figure 2. Soil testing probe.  
Photo by Shawn Appling

For more information, please view the following articles or contact your local extension office:

- *College of Agriculture and Life Sciences, Department of Crop and Soil Environmental Sciences – Virginia Tech Soil Testing Lab.* Virginia Tech. 2016. <http://www.soiltest.vt.edu/>. Assessed 23 August 2016.
- Hunnings, J.; S. Donohue; S. Heckendorn. *Soil Sampling For The Home Gardener.* VCE Publication 452-129. 2011. [http://pubs.ext.vt.edu/452/452-129/452-129\\_pdf.pdf](http://pubs.ext.vt.edu/452/452-129/452-129_pdf.pdf).

## Using Cover Crops in the Vegetable Garden

Cover crops can become an important part of the home vegetable garden, when used in conjunction with rotating different plant families. Using cover crops can help starve out unwanted pests including insects and diseases that attack foliage and roots. The pathogens are usually very host specific and can be starved out without the vegetable plant they prefer to attack. Soil erosion can also be slowed or stopped by using cover crops; instead of leaving bare soil. Before the growing

season starts, cover crops can be tilled into the soil and will eventually decompose leading to an increase in soil organic matter which decreases the need for supplemental fertilizer. This saves the homeowner money and helps decrease fertilizer runoff into streams and rivers; leaching into groundwater. All of these benefits make cover crops a great option for the vegetable garden.

There are both cool-season and warm season cover crops. Cool-season cover crops can be sown in late August through early October. A combination of oats, rye (not turfgrass rye), or wheat

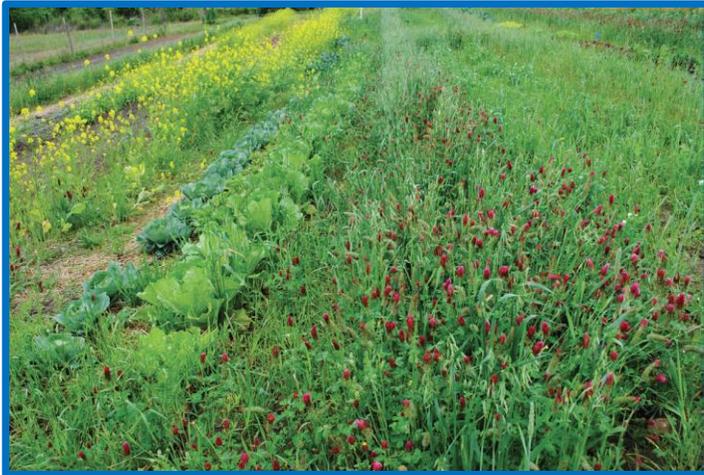


Figure 3. Combination Cover Crop. Photo courtesy of Robert Westerfield. University of Georgia Extension

can be planted with clover or winter peas (Figure 3). Clover and winter peas have the added benefit of being legumes. Legumes are able to take nitrogen from the air and make it available in the soil for plants to use. The recommended amount of seed to sow in the garden is three to four pounds of oats, rye, or wheat with a quarter pound of clover or winter peas per 1,000 square feet. A summer cover crop is good for allowing the garden area to rest and it can help fight disease as mentioned earlier. Buckwheat, cowpeas, millet, sorghum, or soybeans would be options to consider during the summer

months. These crops are usually planted in late April through May. Suggested rates are between one to five pounds per 1,000 square feet. The cover crop can be tilled into the soil at the end of the summer growing season and help build up the soil organic matter for vegetable plantings in the years to come.

The garden bed should be tilled and raked to prepare a good seed bed. After sowing the seed, maintain a consistent moisture in the soil until the seeds have germinated and become established. No supplemental irrigation should be needed during the growing season. Using the cover crops mentioned can help increase soil organic matter, decrease soil erosion, help control or at least slow the spread of diseases that attack foliage and roots of vegetable plants leading to a healthier soil in the vegetable garden.

For more information, please view the following articles or contact your local extension office:

- Prunty, R. *Building Soil Organic Matter with Cover Crops*. VCE Publication 2906-1381. 2009. [https://pubs.ext.vt.edu/2906/2906-1381/2906-1381\\_pdf.pdf](https://pubs.ext.vt.edu/2906/2906-1381/2906-1381_pdf.pdf).
- Rasnake, M.; W. Dunwell; L. Weston. *Winter Cover Crops for Kentucky Gardens and Fields*. University of Kentucky Cooperative Extension Publication ID-113. 1998. <https://www.uky.edu/Ag/Forage/id113.pdf>.
- Westerfield, R.; C. Westerfield. *Using Cover Crops in the Home Garden*. University of Georgia Cooperative Extension Publication 1057. 2014. [http://extension.uga.edu/publications/files/pdf/C%201057\\_1.PDF](http://extension.uga.edu/publications/files/pdf/C%201057_1.PDF).

### Exciting Plants: *Cercidiphyllum japonicum*

*Cercidiphyllum japonicum* (Figure 4), better known by the common name katsura tree, is a plant in the family *Cercidiphyllaceae*; it is the only member of the family. The katsura tree is native to China and Japan and is cold hardy in USDA plant zones four to eight. Katsura tree grows best in a

sunny location with supplemental irrigation (usually two to three growing seasons) until fully established; it is considered drought tolerant after establishment. This tree has year-round appeal starting with the emergence of the leaves which are a reddish purple, gradually turning bluish green during the summer. Autumn is when the real glory of this tree is put on display. The color can range from yellow to apricot and peak color is usually seen around mid-October. The smell of the fallen leaves is described as being a spicy cinnamon/brown sugar or cotton candy. The leaf shape closely resembles the native Eastern red bud tree but are arranged opposite of each other instead alternately along the stem. Katsura tree is a medium to fast grower and usually reaches an ultimate height of 40 to 60 feet with an equal spread. This a tree that has year-round appeal and worth trying if you have the room in your landscape.



Figure 4. *Cercidiphyllum japonicum* – One-year-old tree. Photo by Shawn Appling

For more information, please view the following articles or contact your local extension office:

- Dirr, Michael. “*Cercidiphyllum japonicum*”. Manual of Woody Landscape Plants. Champaign, Illinois: Stipes Publishing, 1998. 207-208. Print
- Niemiera, A. *Katsuratree*. VCE Publication HORT-15. 2012. [https://pubs.ext.vt.edu/HORT/HORT-15/HORT-15\\_pdf.pdf](https://pubs.ext.vt.edu/HORT/HORT-15/HORT-15_pdf.pdf).
- Relf, D.; B. Appleton; D. Close. *Selecting Landscape Plants: Rare and Unusual Trees*. VCE Publication 426-604. 2015. [https://pubs.ext.vt.edu/426/426-604/426-604\\_pdf.pdf](https://pubs.ext.vt.edu/426/426-604/426-604_pdf.pdf).

## Events of Interest

- **Culpeper Harvest Days Farm Tour on October 1<sup>st</sup> and 2<sup>nd</sup>:** Please visit [www.culpeperfarmtour.com](http://www.culpeperfarmtour.com) for more information
- **2016 Urban Agriculture Symposium on October 1<sup>st</sup> (9 am to 3:30 pm):** Fairlington Community Center 3308 South Stafford St., Arlington, VA 22206. For more information, visit [www.mgnv.org](http://www.mgnv.org) or call 703-228-6414 or email [mgarlalex@gmail.com](mailto:mgarlalex@gmail.com)
- **Beekeeping Class on November 14<sup>th</sup>, 16<sup>th</sup>, 18<sup>th</sup> (4 pm to 6 pm):** Greene County Extension Office, 10013 Spotswood Trail Stanardsville, VA 22973. For more information, please contact VCE Greene (434) 985-5236 or [seweaver@vt.edu](mailto:seweaver@vt.edu)
- **2017 Extension Master Gardener Training for Culpeper, Greene, Madison, and Orange Counties, starting January 11<sup>th</sup>:** For more information, please contact VCE - Culpeper (540) 727-3435 Ext. 355, [ashawn6@vt.edu](mailto:ashawn6@vt.edu); or VCE - Greene (434) 985-5236, [seweaver@vt.edu](mailto:seweaver@vt.edu)

**Please Plan to Attend One of the Following Orientations if you are Interested:**

Wednesday Nov 30th VCE - Culpeper

Thursday Dec 1st VCE - Madison

Tuesday Dec 13th VCE - Greene

Wednesday Dec 14th VCE – Orange

*All orientations begin at 11 am*

## Five Reasons To Eat An Apple Every Day

1. **Your Diet** - Apples are the perfect, portable snack: great tasting, energy-boosting, and free of fat, cholesterol and sodium.
2. **Your Heart** - Research confirms it! The antioxidant phytonutrients found in apples help fight the damaging effects of LDL ("bad") cholesterol.
3. **Your Digestion** - Just one apple provides as much dietary fiber as a serving of bran cereal. (That's about one-fifth of the recommended daily intake of fiber.)
4. **Your Lungs** - An apple a day strengthens lung function and can lower the incidence of lung cancer, as well.
5. **Your Bones** - Apples contain the essential trace element, boron, which has been shown to strengthen bones - a good defense against osteoporosis.



## Storage and Handling Tips

- Select firm apples free from bruises.
- To keep apples crisp, keep them cold. Apples ripen 8 to 10 times faster at room temperature.
- Store apples in a ventilated plastic bag or hydrator drawer to prevent them from absorbing other food flavors.
- Dip apples in lemon juice after slicing to prevent browning.
- Be sure to handle carefully, bruised apples do not store well.
- Striped apples and apples with patches of green are often of excellent quality, depending on the variety.
- Apples, like many other fruits, produce ethylene gas which promotes ripening. Realize that fruits such as peaches, pears and bananas produce ethylene gas and are sensitive to the ethylene produced by apples. Storing these fruits in close proximity to each other may hasten the ripening process. Oranges, pineapples, and tangerines make good storage companions for apples because they do not produce ethylene gas and are not sensitive to it.

## Baked Apples

### Ingredients:

- 2 medium apples
- 2 tablespoons brown sugar
- 1 teaspoon cinnamon

### Equipment:

- Knife
- Cutting board
- Microwave safe dish
- Small bowl

Number of Servings: 2  
 Prep Time: 10 minutes  
 Total time: 10 minutes

### Directions

1. Cut apples down the center and in half again, down the center.
2. Cut out the core in the center of the apple and the seeds. Chop into small pieces, and place in microwave safe dish.
3. In a small bowl, mix brown sugar and cinnamon together. Sprinkle on top of apples.
4. Microwave for 30 seconds until apples are soft.
5. Let cool for 1 minute.

For more recipes, please visit:  
[www.fcs.ext.vt.edu/recipes](http://www.fcs.ext.vt.edu/recipes)



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### Nutrition Facts

Serving Size: 3/4 cup	
Servings: 2	
Amount Per Serving	
Calories 118	Calories from Fat 9
%Daily Value*	
Total Fat 1g	1%
Saturated Fat trace g	0%
Cholesterol 0mg	0%
Sodium 4mg	0%
Total Carbohydrate 31g	10%
Dietary Fiber 4g	17%
Protein trace g	1%
Vitamin A 2%	Vitamin C 14%
Iron 5%	Calcium 3%

\*Percent Daily Values are based on a diet of 2,000 calories.

Brenda Watkevich  
 Family Nutrition Program Assistant  
 Culpeper Extension Office  
 (540) 727-3435 x348

The U.S. Department of Agriculture (USDA) is an equal opportunity provider and employer. This material is partially funded by USDA's Supplemental Nutrition Assistance Program – SNAP. The Supplemental Nutrition Assistance Program (SNAP) provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. To find out more, contact your county or city Department of Social Services or to locate your county office call toll-free 1-800-552-3431 (M-F 8:15-5:00, except holidays). By calling your local DSS office, you can get other useful information about services. This

2013



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