Feature

Health Benefits of Houseplants
By Shawn Banks

In doing research for this article I found numerous articles that referenced a study done by NASA (the space agency) on the benefits of plants. I was not able to find study to read it myself. Most of the articles mentioned four basic benefits of having houseplants in the house. Those benefits are clean air, happiness, reduced fatigue and colds, increased creativity and productivity. Here is what I found.

Clean air – There are lots of gasses given off by products in the house. Paints, cleaners, glue, trash, and just about everything else in our modern world leak gasses into the air we breath. Many houseplants are very good at removing these gasses from the air. It is reported that in a 24-hour period 87% of the harmful gasses were removed from the air by adding houseplants to the room. This can be accomplished by using one houseplant in a 6 to 8 inch container per 100 square feet of floor space.

The NASA study showed dragon tree, ficus, ivy, philodendrons, spider plants, peace lilies, ferns, chrysanthemums, and palms to be the best at removing toxic gasses from the air. Each plant has one or two of the toxic gasses they are really good at removing. A mixture of plants will produce the best results.

Happiness – Studies have shown that patience in a hospital who have a window facing a garden recover faster than those with a window facing a wall. It has also been shown that having plants in the room helps people relax and reduces blood pressure.

Reduced fatigue and colds – The increased humidity and reduced dust in the air when plants are around seems to work to prevent colds and fatigue according to a study done in Norway.

Increased creativity and productivity – Another study done in an office complex showed increased creativity and productivity when workers had a houseplant near their workstations.

I have always known there was a good reason that people liked to have plants inside, especially during the winter. I always thought it was to enjoy the pretty flowers or to remind them of the friends and family who gave them the plant. Well that may still be true. They also get the added benefit of a healthier, happier life for having the plants surrounding them.
**Featured Plant**

**White Oak**
*Quercus alba*

The white oak is a long-lived tree with some specimens having lived for 600 years or more. In its youth, the tree has a pyramidal growth habit. As it matures, it starts to broaden out to achieve a rounded canopy where the branches reach out as far as the tree is tall. At maturity this tree can reach heights of 60 to 80 feet.

The white oak is native to Eastern North America and grows in a wide range of habitats. It can be found in lowlands and on ridges, in moist soils and in dry soils. It’s not very well adapted to compact soils meaning; it does not do well in construction sites. It has very good fall color in the purple to red range, developing late in the season. After the fall color fades, the leaves of white oaks tend to hang onto the tree throughout the winter.

The white oak is noted for its very strong wood. It is highly sought after for building of ships, wine and whisky barrels, furniture and in some cultures weapons. The wood grain is so tight that it rarely splinters if it is somehow broken.

![White Oak](image)

The acorns of the white oak are not as bitter as those from other oak trees, and were used by Native Americans for making flour. They are also a good food source for many animals including deer, squirrels and some birds.

**Upcoming Events**

**Rain Gardens:** Nov 1, 2010 9am – 5pm, Forsyth County Center, Winston-Salem, NC 27105  
Cost: $20 to cover materials and lunch

**Beekeeping Short Course**  
November 2 - 23, 2010, 6:00 pm - 9:00 pm, at the Johnston County Center cost $20.00. Call 989-5380 for more information.

**Wayne County Master Gardener Holiday Workshop**, November 13th, 2010 at 9:00 am Goldsboro, NC, for more information call 919-731-1525

**Fruit Tree & Nut Tree Sale** now through November 12, 2010 orders can be turned in. Pick up date is Dec 10, 2010. Call 989-5380 for more information and an order from.

**Extension Master Gardener Volunteer training** will begin again January of 2011. If you are interested in becoming an Extension Master Gardener Volunteer call 989-5380 for more information and to get an application.

**Insect Investigator**

**Phorid Flies**
*Pseudacteron spp*

According to Wikipedia, there are approximately 4,000 species of phorid flies ranging in size from 1/64 – ¼ inch in length. Many of these species feed on decaying organic matter. Some species of phorid flies are important in forensic entomology because they feed on corpses.
Other species feed on dung, fungi and decaying plant matter.

A few species in the genera *Pseudacteon* are parasitoids of ants. More specifically they attack the red imported fire ant. The adult fly lays its egg on the thorax of the fire ant. When the egg hatches, the larva makes its way inside the fire ant, eventually reaching the head. The larva feeds on the brain of the ant until it has completely devoured it. The larva releases an enzyme that causes the ants head to fall off, giving these phorid flies the nickname “decapitating fly”. The larva then pupates in the head cavity of the ant, emerging a few weeks later as an adult to start the cycle over again.

North Carolina Department of Agriculture & Consumer Services released the decapitating flies in North Carolina as part of a research study in 2001. The flies are found in Johnston County. The decapitating fly will not eradicate the imported fire ant, but it is a key to keeping the numbers under control.

**What’s in Season?**

**Broccoli**

*Brassoca oleraced*  
*Brassicaceae*

“Green trees” is what I have always called this magical vegetable. The flower heads look so much like little green trees that that is what I have always called them. I always thought if I ate the little green trees, I would grow up to be tall and strong like the big trees. Little did I know all the benefits of eating broccoli.

Did you know there are compounds found in broccoli that reduce the risk of cancer? There are! Research has shown that eating broccoli reduces the risk of stomach cancer and lung cancer. There are chemicals in broccoli thought to reduce the risk of many other types of cancer as well. Some of this cancer fighting power is lost if the broccoli is boiled. However, steaming or stir frying don’t reduce these characteristics of the plant.

Broccoli is a cool season crop, meaning it grows best when it is cool outside. Spring and fall are the times of the year when locally grown broccoli can be found in the supermarket. The seeds or transplants can be planted into the garden at the end of July or first of August so when the temperature cools they will be big enough to produce large flower heads (the part we eat). They can also be planted between the middle and end of March for a spring crop. Broccoli heads will mature in 45 to 60 days from transplant. A good head is one that is still tightly packed. An overly mature head is loose and the flowers may start to open.

Broccoli can be eaten raw or cooked. There are several recipes to choose from including soups, salads, casseroles, and stir-fries. I like mine steamed with a cheese sauce or as a stir-fry. If you haven’t tried broccoli in a while, here is a good recipe to try.

**Recipe**

**Ingredients:**

1 pound beef round stead, cut in strips  
1 tablespoon peanut oil  
1 cup sliced green onions  
1 package frozen broccoli (14 ounces)  
1 cup chopped green pepper  
½ cup Thai peanut sauce  
½ cup fat free beef broth  
2 teaspoons cornstarch  
½ cup chopped cilantro  
¼ cup chopped dry roasted peanuts

**Directions**

- Stir fry beef in oil until browned  
- Add vegetables and cover, cooking until crisp-tender, about 5 minutes  
- Thicken broth with cornstarch; add peanut sauce. Stir sauce into beef mixture. Cover and heat about 5 minutes.  
- Stir in cilantro. Spoon stir-fry to serving dish and garnish with peanuts.
References:
http://urbanext.illinois.edu/diabetesrecipes/recipe.cfm?recipe=Thai%20Broccoli%20Beef%20Stir%20Fry

http://www.ncsu.edu/sustainable/profiles/ppbroccoli.html

http://en.wikipedia.org/wiki/Broccoli

http://www.healingdaily.com/detoxification-diet/broccoli.htm

November Garden Tasks

GENERAL UPKEEP

- **Collect soil samples for FREE testing,** so you'll know how much fertilizer & lime to add. Test your lawn, flower beds & vegetable garden. Testing should be done every 3 years. The kits are available at the Cooperative Extension office.

- **Clean up and throw away any diseased plant material.** Do not throw it in a compost pile. Leaving infected plant material (leaves, fruits, nuts) on the ground or plants provides a source of inoculum for re-infection next year.

LAWN CARE

- **Fertilize fescue lawns** for winter. The November fertilization (near Thanksgiving) is the most important one of the year for cool-season grasses. The soil is still warm enough to permit the growth of strong roots that will enable the grass to withstand next summer's baking heat. Use a slow-release fertilizer formulated for turf, and apply according to soil test results.

TREES, SHRUBS & ORNAMENTALS

- **Fall is for planting!** September through early February is an ideal time to plant deciduous trees/shrubs and perennials. Plant evergreen plants from September - November. The cool weather permits establishment of a root system before next year's hot weather. Find pictures of recommended planting techniques at: http://www.ces.ncsu.edu/depts/hort/hil/hil-601.html

- **It's time to move shrubs** from one place to another. http://www.ces.ncsu.edu/brunswick/mastergardener/mg201113.html

- **Mulch** shrubs/trees, perennials & herbs after the 1st killing frost for winter protection. Apply a layer 3” deep. Mulch comparisons and general info: http://www.ces.ncsu.edu/depts/hort/hil/hil-608.html

- **Plant spring flowering bulbs as the weather turns cold.** For best landscape effect, plant groups of bulbs in between shrubs, or scatter bulbs in wooded areas; avoid planting bulbs in straight lines. Always plant quality bulbs. Daffodils, Spanish Bluebells (Hyacinthoides hispanicus), and Snowflakes (Leucojum aestivum) are bulbs to consider. By contrast, Tulips and Dutch hyacinths decline after their first season, and are best treated as annuals. Tips for
• Use shredded leaves as mulch. Fallen leaves contain lots of nutrients, but they decompose slowly. Help the process along by grinding up your leaves rather than sending them to the landfill. You don't need a shredder; simply rake the leaves into rows and run them over with a lawnmower.

• Compost your yard waste! As you cut back your perennials in preparation for winter, think about returning that bounty to your garden in the form of compost. Compost is nature's favorite fertilizer and soil conditioner. Recycle grass clippings, leaves, and non-diseased garden refuse. For information on how to compost: http://www.ces.ncsu.edu/depts/hort/hil/hil-8100.html

• Here are some tips on how to protect your plants from cold damage: http://www.ces.ncsu.edu/depts/hort/hil/hil-604.html

**LANDSCAPE IDEAS**

• Before you put those plants in the ground, consider this ....

• Landscape with a plan. A well-thought-out landscape plan will produce a more "finished" effect. Analyze your property and draw a simple map, noting which areas are sunny, shady, moist or dry. Consider where you need evergreens for screening, shorter plants to maintain a view, and about creating a landscape that will be appealing throughout all four seasons.

• Put the right plant in the right place. Choose plants well suited to the growing conditions in your yard. We can provide many publications describing plants that are well-adapted to our county. Master Gardener Volunteers, nursery professionals, gardening books geared toward North Carolina are also excellent resources.

• Allow space for plants to grow to their mature size. A common mistake is placing a large or fast-growing plant where there is not enough room for its full height and spread. The error results in continuous pruning in an attempt to keep the plant to a size nature never intended it to be. Builders and beginning landscapers often place shrubs too close together, because the plants look so small when they come from the nursery. Find out how large the plant can be expected to grow, and place them where they can fulfill their potential.

• Put the garden to bed for the winter. Pull out all annuals that have completed their life cycle and cut back perennials.

**VEGETABLES & FRUITS**

• Winterize your herb garden: http://www.ces.ncsu.edu/depts/hort/hil/hil-8112.html

• Rototill the vegetable garden to expose harmful insect larvae and disease organisms to the cold and predators. You'll be set to plant next spring instead of waiting for the soil to dry out enough for tilling.
HOUSEPLANTS

• Info to help your houseplants through the winter:
  http://www.ces.ncsu.edu/depts/hort/hil/hil-8554.html