



## ORGANICALLY GREEN HORTICULTURAL SERVICES

### Fall Newsletter, 2016

#### Amazing Apples!

With the arrival of autumn's beautiful display also comes the harvest, more specifically the apple harvest!

Apples are in the same family as pears, peaches and cherries and are grown throughout the world. Most states in the continental United States grow apples and we grow 48,000 tons of apples which brings in over 2.7 billion dollars annually!

The apple has frequently been mentioned in legends and literature dating back to the Trojan War. Contrary to popular belief the apple is not the forbidden fruit mentioned in the Bible story of Adam & Eve. In fact, only a 'fruit' is mentioned, it is believed to have developed into the apple around the 12<sup>th</sup> century in Europe. It is thought that the apple became synonymous with Adam & Eve due to its Latin name *Malus*, which means "apple" as well as "evil". By the 15<sup>th</sup> and 16<sup>th</sup> centuries the apple was featured in engravings and painting by such artists as Titian.

The ancestor of *Malus domestica* is believed to be *Malus sieversii* which originated in the mountains of Kazakhstan- where it still grows. The apples we enjoy today weren't always so perfect and



sweet; their predecessors were quite sour and bitter. According to Michael Pollan in *The Botany of Desire*, our beneficent Johnny Appleseed who went around planting apple seeds, did in fact do this but it was because people used the apples to make hard cider, a type of alcohol- about the only thing they were good for!

The reason for the bitterness is attributed to the "genetic creativity" of apples or as botanist term it, extreme heterozygosity. When an apple produces seed the extreme heterozygosity ensures that the new seedlings/trees will not be like its parent.

In order to preserve desirable traits in apples, trees are grafted. Desirable traits can include increasing cold hardiness, improvement of branching, and early bearing for trial cultivars.

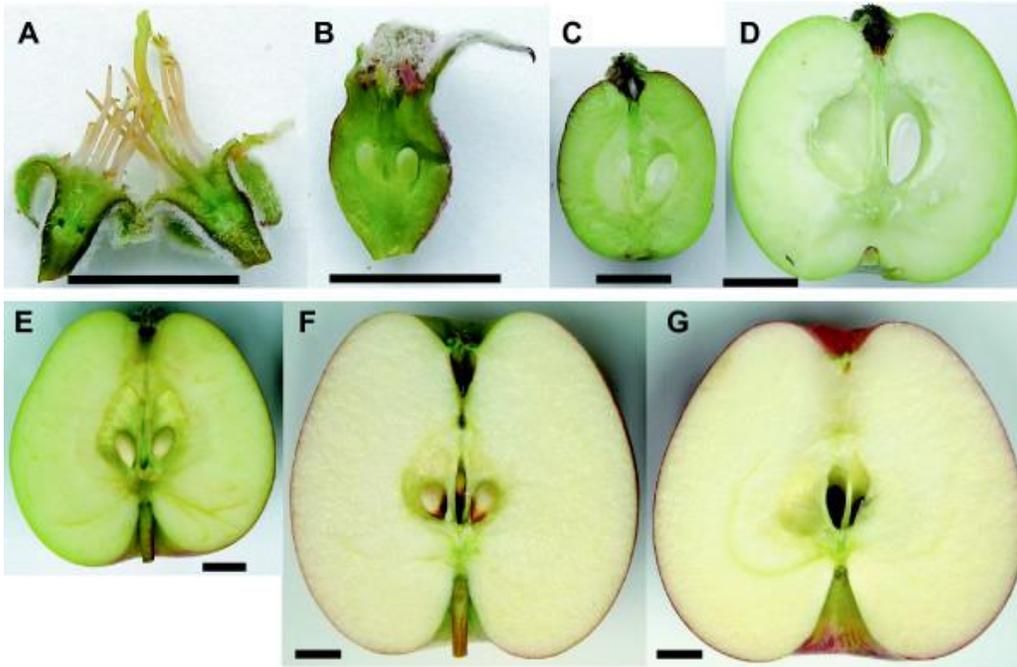


Grafting is when a section of one tree, usually stem or buds (scion) is inserted into another tree, or stock. (See diagram on first page)

The plants will then be left to mature so they will bear fruit. We here at Organically Green love plants and find it the process of a flower transforming into an edible fruit amazing!

This process begins with pollination by insects, this transfers pollen- the male counterpart- to the female parts of the flower leading to the fertilization of the ovary.

The fertilized flower then begins its transformation into that beautiful apple you select off your grocer's shelves. You can see the progress in the picture below.



Apples in addition to being tasty are also being used in a scientific experiment. In 2014, National Geographic featured the following article, “Joe Davis, bio-artist attached to geneticist George Church’s lab at Harvard Medical School, is preparing to create an apple tree that is—literally—a Tree of Knowledge. Davis’s project aims to incorporate Wikipedia into the apple genome. For this purpose, he plans to use the world’s oldest known apple, a 4000-year-old variety of *M. sieversii*.

This isn’t as far-fetched as it sounds. Church and a number of other researchers have proposed that DNA may be the data storage venue of the future. A single droplet of DNA is capable of storing 700 terabytes of data – that’s the equivalent of 14,000 50-gigabyte Blu-Ray discs—and it’s impressively stable. Unlike magnetic tape that needs to be replaced every five years or so, DNA can survive for thousands. The trick is to convert data into binary code based on A, G, C, and T – the four nucleotide bases that make up DNA – and use the result as a blueprint to synthesize a DNA sequence. Davis plans to insert his Wikipedia-coded DNA into a bacterium capable of transferring its genome into an apple cell. This won’t change the taste, smell, or appearance of the apple, but each treated fruit will carry, hidden among its genes, a chunk of extra info—say, the Wikipedia entry on apple trees, snakes, Genesis, or applesauce.

All of Wikipedia can’t fit into one handy apple. Each tiny bacterial carrier can only cope with a few thousand words—which means the whole of Wikipedia, some two and a half billion words long, may require an entire forest of apple trees...And eating such an apple, sadly, won’t make any of us more knowledgeable. Retrieving the info from apple DNA will require a DNA sequencer and some decoding software.”

No matter where apples came from or where they are headed it is sure that they will continue to remain a part of our lives, cuisine and culture for a long time to come!

## Organically Grown



### **MUSHROOM BLACK BEAN VEGETARIAN CHILI**

#### **Ingredients:**

- 2 tablespoons extra virgin olive oil
- 2 medium onions, diced
- 2 sweet red bell peppers (or 1 red and 1 green),  
diced
- 1 tablespoon organic Chili Powder
- 2 teaspoons organic Garlic Powder
- 1/4 teaspoon organic cayenne
- 1 1/2 pounds portobello or crimini mushrooms, cut  
into 1/2 inch pieces
- 1 (28-ounce) can Italian-style diced tomatoes  
(recommended brand: Muir Glen)
- 1 (19-ounce) can black turtle beans, drained and  
rinsed
- Frontier Sea Salt and organic black pepper, to taste
- 1 pound chopped tempeh or ground turkey, optional

#### **Directions**

1. Heat the oil in a large pot over medium heat, and  
cook the onions and peppers until tender. Stir in the  
garlic powder, chili powder and cayenne pepper.  
Sauté until tender, then add the mushrooms and  
continue cooking, stirring frequently, 10 minutes, or  
until the mushrooms are tender.

2. Pour the tomatoes and beans into the pot. Season  
with salt and pepper. Bring to a simmer, then reduce  
heat to low, and simmer 40 minutes, stirring every  
10 minutes or so. If you prefer a runnier chili,  
simmer covered. For thicker chili, leave uncovered.

If you choose to add chopped tempeh or ground  
turkey, use about 1 pound, and brown in the olive  
oil before the onions and peppers. A little extra oil  
may be needed.

For garnish:

Choose from shredded cheese, chopped onion,  
chopped jalapeno, chopped avocado, sour cream  
and cilantro sprigs.

*Note: We recommend using certified organic ingredients,  
when available, in all recipes to maximize flavors and  
nutrition while minimizing your risk of exposure to pesticides,  
chemicals and preservatives.*



**Wishing you an amazing autumn!**

**-The Organically Green Team**



*"By all these lovely tokens September  
days are here, With summer's best of  
weather And autumn's best of cheer."*

*-Helen Hunt Jackson*

## Plants for the Fall!



**Peegee Hydrangea**  
*(Hydrangea paniculata)*



- ❖ Fast growing deciduous large shrub or small tree (10' to 20' tall with an equal spread); branching resembles a fountain, branches come from one central point and cascade over
- ❖ Prefers full sun to partial shade (Best in full sun) and moist, well-drained soil.
- ❖ Blooms mid-July into September with white cone-shaped flowers maturing to a pink
- ❖ Flowers on new wood; prune in winter or early spring

### **Monkshood**

*(Aconitum napellus)*

- ❖ Upright perennial 3' to 5' tall, 1' to 1.5' width
- ❖ Prefers part shade but tolerates full sun.
- ❖ Requires moist, well-drained soil
- ❖ Needs good soil preparation. May be slow to establish.
- ❖ Blue-violet flowers late summer-early fall



- ❖ 'Albus' has pure white flowers on 3' to 4' tall plants.; 'Newry Blue' has very deep blue flowers; 'Blue Sceptre' has blue and white flowers; 'Rubellum' has pink flowers on plants with very finely incised leaves.

### **Sassafras** *(Sassafras albidum)*

- ❖ Deciduous shrub/tree native to eastern United States; 40' - 50' in some cases
- ❖ Prefers full sun and light, acidic sandy soil
- ❖ Outstanding fall color ranges from red to orange and yellow
- ❖ Can be difficult to establish due to sparse root system
- ❖ Remove root suckers if a single trunk is desired



## Services for 2016:

We offer the following services to help increase the enjoyment and beauty of your property:

### Tree / Shrub:

- ❖ Shrub & Tree Spraying / Fertilization Programs
- ❖ Integrated Pest Management
- ❖ Soil Restoration
- ❖ Plant and Soil Stimulation Program
- ❖ Deep Root Feeding
- ❖ Root Growth Enhancement
- ❖ Mature Tree Restoration
- ❖ Air Spading
- ❖ Radial Trenching
- ❖ Vertical Mulching
- ❖ Anti-Desiccant Spraying
- ❖ General Tree and Shrub Maintenance Removal

### Turf:

- ❖ Lawn Renovation
- ❖ Fertilization
- ❖ Overseeding
- ❖ Core Aeration
- ❖ Estate / Property Purification

### Organic Pest Control:

- ❖ Flying Insect
- ❖ Deer / Geese
- ❖ Rodent Repellent
- ❖ Organic Tick & Flea Control

