



Join us for 2018 Spade & Wade Garden Tour Saturday, July 21 - Six Gardens Open

It is 2018 and the year for another of Tillamook County Master Gardeners Association's (TCMGA) Spade and Wade Garden Tours.

From the foothills east of Tillamook to the shores of the Pacific, visitors have the opportunity to visit six spectacular and varied gardens in Tillamook County on Saturday July 21st from 10 am to 4 pm.

Visit a garden that includes a serene woodland alongside a vegetable garden worked the way a garden should be, with annual charts to insure crop rotation and pest control.

A master of bonsai will show off her collection as well as give demonstrations on how to create these gems.

A garden is created for birds and bees – and humans – with a wide variety of ornamental shrubs and perennials as well as vegetable crops.

Take a river walk along a property with areas creating several different gardens: natural areas along the river, berry and vegetable gardens, areas for ornamentals, and a greenhouse to get the plants started.

Travel to the Coast. Set high on a hill overlooking the Pacific is a 'his' front area planted to survive the ubiquitous deer and elk in the area as well as withstand the salt air from the ocean. And in the back is 'her' garden with unusual plants for the area: hardy begonias, a prostrate coast redwood, winter hardy palms, a mature Mexican Palm.

Nearby this garden, one can take a walk in a woodland through an old growth forest planted with a variety of ferns and with examples of nurse logs. This is only a short description of all you can see on TCMGA's educational and unique tour.



Tillamook County has lots to offer with the Cape Meares Lighthouse, Tillamook Creamery, Kilchis River Reserve, the Pioneer Museum, TCMGA's Learning Garden, Munson Falls, great fishing, and so much more. Come and make a weekend of your visit or even stay a week.

Tickets: \$10.00 each. Children 16 and under are free; purchase at the OSU Extension Office, Tillamook County Pioneer Museum, Hidden Acres Greenhouse & Café, and local Farmers Markets. Check the TCMGA Facebook page for more information: <https://www.facebook.com/tillamookmastergardeners/>

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PRESIDENT'S CORNER



Busy, Busy, Busy - Tillamook County Master Gardeners Assoc. Members Tend to Many Activities

With summer upon us, it doesn't seem possible that the Tillamook Master Gardener Association's Annual Plant Sale, Growing Gardener (Mini College) and June Dairy Parade are successfully behind us. As the sun warms the soil, our gardens answer with splendid floral colors and our fruit bushes and trees as well as the vegetable gardens are producing delicious ripe produce. Several years ago, I learned not to over plant zucchini. My excess enthusiasm resulted not only in sharing with my neighbors and friends, but also numerous recipes such as zucchini bread, chocolate zucchini cake, zucchini smashed potatoes, zucchini pancakes, zucchini toss, provincial zucchini swiss chard tart, zucchini pasta salad with lemon vinaigrette, and my favorite zucchini fritters with tomato salsa. Mind you, these too I shared with friends and neighbors - There was a lot to spare!

TCMGA has been a busy group of dedicated volunteers who sprung forth to work in the Learning Garden and at the Oregon Youth Authority. We volunteered to prune and tidy the shrubs and plantings at the Pioneer Museum; managed the Native Plant Garden at the Extension Office; made Stepping Stones under the guidance of Phyllis Holmes for our Garden Owners; participated in the Farmers Market Plant Clinics in Manzanita, Pacific City and Tillamook and marched in the June Dairy Parade to advertise the Spade and Wade Garden Tour which takes place on Saturday, July 21st from 10-4PM.

It is my great pleasure to announce that the Tillamook Master Gardeners Association has been awarded the Marje Luce Search for Excellence Award for our Pruning Day and the Karl Carlson Memorial Fund Award for signs in the Learning Garden from the Oregon Master Gardeners.

I trust your spring was as rewarding and wish you a beautiful and bountiful summer on the glorious North Oregon Coast.

Karen Sarnaker

TCMGA President 2018

Canning Fish, Meat, Poultry and Vegetables Class Topic

Is there a fisherman, hunter or gardener in your family? Do you prefer home-canned tuna and vegetables to commercially canned products? Do you want to learn to preserve that deer or elk you're planning to get this year? Do you like knowing the origin of the foods you eat and are you thinking about canning vegetables for use this winter when fresh produce is not as readily available?

If you answered yes to these questions, then register now for the class "Home Canning Fish, Meat, Poultry and Vegetables" sponsored by the OSU Extension Service in Tillamook on Saturday, July 28, 10 am-2 pm. Cost is \$15 for supplies and handouts if pre-registered by the Thursday, July 26 or \$20 after July 26. Classes with low pre-registrations may be cancelled. **Register online at <http://bit.ly/TillamookFoodPreservation>**. Stop by the OSU Extension Service office, 4506 Third Street in Tillamook to pick up the latest home canning publications.

You're Invited Be Sure to Visit the Learning Garden at Tillamook County Fair - August 8-11



This is a formal invitation to visit the Tillamook County Master Gardener's Learning Garden during the fair we'd love to show you around our special garden. It is amazing (and sad) that only about 10% of all of the attendees at the Tillamook County Fair stop by and stroll through the garden. Located across from the fair office and in view of the rides it is a great place to sit and rest for a few minutes before returning to the festivities.

We have lots to share about our experiments in gardening in DSDA zone 8a. This year we revamped



our four "trug" beds (raised beds that the gardener can stand and harvest from). We are also learning about which varieties of raspberries that have done well here and others not so well.



This year we have added milkweed plants *Asclepias speciosa* 'Davis' (left) in hopes of helping to establish Monarch butterfly breeding. I fell in love with the fuzzy leaves and the strange nubby buds and darling pink star flowers.

Our dogwood tree *Kornus Kousa* is in full glory and is adjacent to the deer resistant bed, notice I said resistant not deer-proof. That is because deer are browsers and like to check things out and may leave some plants alone for years then all of a sudden the buffet is on. You may get some ideas for your own garden. Check out the shade plants and the native beds for more choices. Then take a walk through the hoop house to see the vegetables being grown to share the bounty with our local food bank.



There will be Master Gardener volunteers hosting the garden during the Fair, on Wednesday August 8th through Saturday August 11th from 10 a.m. to 6 p.m. So stop by and let us show off this great garden and answer your gardening questions.

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A. VanDerZanden, J. McNeilan, and B. Edmunds

It Pays to Water Wisely

People waste water; plants don't. Water is wasted when it is applied too rapidly and runs off rather than soaking in or is applied to bare soil surfaces and evaporates.

Make the most of your water

Choose the best irrigation system

Trees, shrubs, flowerbeds, and vegetable gardens are best irrigated with **drip or trickle systems**. Large trees and shrubs may need a **hose trickling water** for several hours. **Microspray emitters** or a pop-up-type irrigation system are good for plants in sandy soils.



Drip system



Garden hose

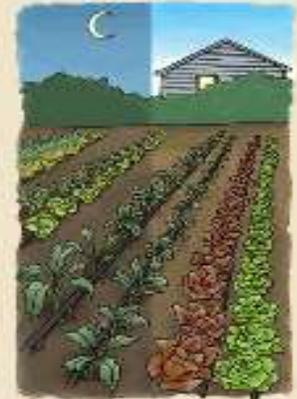


Microspray emitter



Water infrequently and deeply

Irrigate plants to a depth of 8 to 10 inches to encourage deep roots.



Water at night or in early morning

Less water evaporates when it's cool, humid and calm.

Watering priorities

High: New plants require at least 1 inch of water per week from June through September and during other dry periods.

High: New lawns need 1 to 1.5 inches per week when it's dry.

High: Mature trees need to be watered deeply every 2 weeks. *(High priority because of the trees' value)*

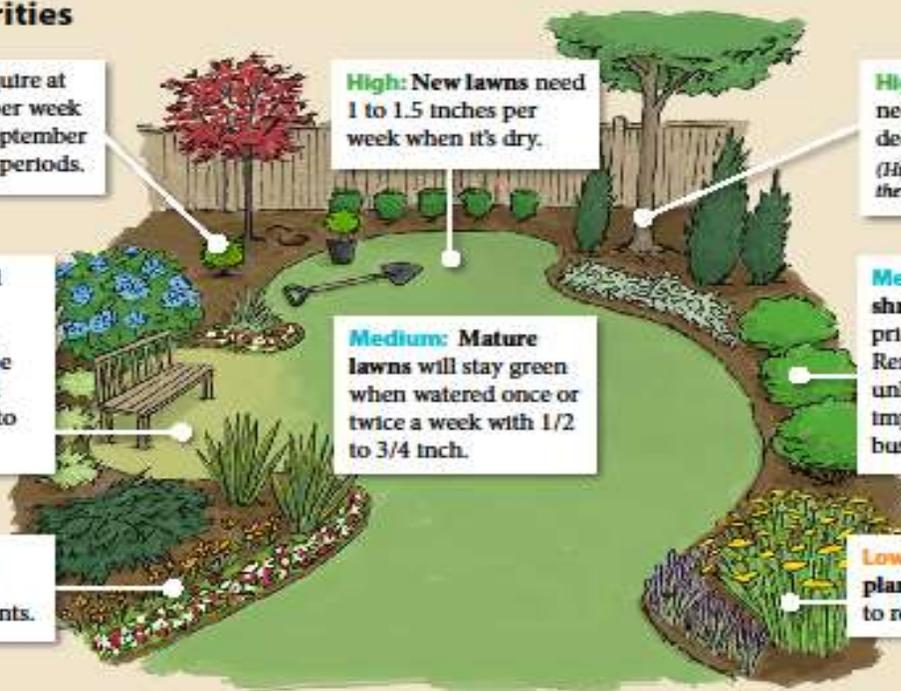
Medium: Established landscapes can be strategically watered; important areas can be watered regularly and less-prominent areas to be left dormant.

Medium: Mature lawns will stay green when watered once or twice a week with 1/2 to 3/4 inch.

Medium: Healthy shrubs are a lower priority than trees. Remove overgrown, unhealthy, or improperly placed bushes.

Low: Forego annual bedding plants with high water requirements.

Low: Perennial plants. Mulch the bed to reduce evaporation.



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Hydrangeas Happily Flourish in Coastal Gardens

Location, Planting and Transplanting - Hydrangeas like mostly shady spots but some varieties can take more sun. The more sun your hydrangea gets, the more frequent watering that may be necessary to maintain the blooms and leaves. It's wait to plant in the spring after spring frosts but before the hottest summer months have set in. The active growth period for hydrangeas is March through September. You may transplant established hydrangeas but it's best to move the large specimens in the spring or the fall.

Soil - Soil should be well draining and rich with organic matter, bark and peat moss. Try to avoid animal manure as they tend to be too high in nitrogen. Well-aged manure is acceptable. Test your drainage before planting as it may require some amendments to improve drainage. If your soil is holding too much water, add sand or bark. If your soil is draining too quickly, add garden mulch or peat moss.

Water - Hydrangeas do like lots of water but it is possible to over water, especially will poor draining soil (see above). Hydrangeas don't like to have their roots sitting in water. Signs of too much water are brown leaf edges and leaf drop. Signs of not enough water are droopy leaves that perk up within a half hour of watering. Drip irrigation is usually successful.

Common Pests and Disease - Slugs and snails like certain hydrangeas and can be stopped dead in their tracks with slug & snail bait. Powdery mildew and black spot occur in shady locations when the hydrangea gets poor air circulation. Keep overgrown plants a good distance away from the base on the plants and discard any leaves with traces of mildew or fungus. Rust spots occur with too much direct sunlight after overhead watering. It's best to water in early morning or late afternoon at the base of the plant

Fertilizer - We recommend a balanced time-released fertilizer be used a few times a year – spring and early fall. It is not always necessary to fertilize as most hydrangeas bloom better if a little starved. When hydrangeas form buds and begin to bloom, yellowing leaves in the center of the plant is a sign that they need some fast acting fertilizer. If you're wanting blue and purple blooms, be sure that you use a fertilizer that is low in phosphate. Phosphate limits the plants ability to absorb the aluminum.

Color - hydrangeas (except white ones) are at least a little bit pH sensitive. In acidic soil conditions (less than 6 on the pH scale) with available aluminum, you will tend to have blue and purple blooms. It's the aluminum in the soil that will change the pigments in the blooms to blue and purple. The soil conditions need to be acidic for the plant to absorb the aluminum. To increase the acidity, amend your soil with aluminum sulfate (established plants only), coffee grounds, rusty nails and coins, or conifer needles. In neutral soils (6 to 7.5), hydrangeas tend to have red and pink blooms. To increase the alkalinity in soil, add garden lime or super phosphate.



Blooms – dried

Hydrangeas don't dry well when freshly flowering. It's best to wait about six to eight weeks after blooming until the head has a papery. Cut in the morning and be sure to remove all leaves from the stem. You may hang the cut bloom upside down or in a vase with just a few inches of water. Keep the blooms out of the sun in a well circulated area. Once dried, the hydrangea can be sprayed with floral spray paint for deeper colors.

Blooms – cut

Hydrangeas don't cut well when freshly flowering either. Wait at least a few weeks after the bloom is completely open. Remember, the older the bloom, the longer it will last. According to experts, the trick is getting that oxygen bubble out of the stem. Leaves take moisture away from the stem so remove all leaves from the stem. If possible, cut just little stems. You may soak the entire cut in cold water, use florist alum gel to seal the end of the stem (and drain the oxygen bubble) or put the stem in boiling water.

Pruning

When to prune is mostly a matter of convenience. We have pruned both in the fall and early spring and had good results either way. It does seem that the later and the more harshly you prune that fewer flower blooms can be expected the next season. This is because most hydrangeas bloom on "old" wood. With young plants, be sure to prune enough growth to form them into a good "shape" and no more. The *Paniculata* and *Arborescens* varieties bloom on new wood so you may cut them for size in the spring or fall.

You may prune in the fall after blooming or in the spring after the hard frosts are over. Remember, the later you prune and the more drastically you prune, the fewer blooms you'll have. Prune to the first leaf node of this year's growth.

Cut 1/2" to 1" above a budding node at a 45 degree angle. These buds will be the new leaves and blooms of your hydrangea. If you live in an area that is prone to spring frost, protect these buds with bed sheets or frost cloth (a light felt) on nights that frost is expected.

Established hydrangeas tend to have branches that die back every year. These are completely woody branches inside the hydrangea. Cut up to a dozen of these branches down to the ground to spur new growth at the base.

Perennials: Dig and Divide!

Perennials are one of the many treasures in the garden but after time they may have outgrown their spot or just aren't as vigorous as when they were first planted. These plants actually perform best when they are planted younger and have room to grow. Even the oldest of perennials can be rejuvenated back to a full, happy life full of blooms! Here are our top 10 tips on how to divide and when!

1. If a plant is looking good, it's time to divide!

If you have had a perennial in the ground several years and it is still looking top notch it is best to divide it at the end of the season before it starts going downhill in the coming seasons. Perennials are harder to divide once they have gotten to large, also if they have become so lack luster it is hard to rejuvenate them back to life. Watch for early signs of trouble such as weak blooming stalks in the center, fewer than normal flowers, or smaller leaves. If your plant is starting to show these symptoms it's time to divide!

2. Dig around the root zone, not in it!

To ensure as minimal root damage as possible it is best to dig lift the perennial out of the ground by digging around the outermost drip line. It's best to create a trench around the clump and then with a shovel go in and under the clump at several points until you can lift the perennial out of the dug hole. To avoid damage to any new or current growth it's best to divide early in the spring before growth really takes off or fall once you can cut the stems back.

3. Cool weather is better

You can divide nearly all perennials at any time of the year however the best time is when the soil temperature is staying warmer than the air temperature. This allows for a lot of root growth in the ground to get the division good and established before they set on a lot of top growth. Also, fall tends to be a preferred time to dig and divide because the new plants have more time to grow a new root system before the heat of summer.

4. Hold 'em cool and hold 'em moist!

If you can't get your divisions back into the ground right away, or into a container it is best to hold the plants in an area where they stay cool and moist. They can be placed in a bucket or box in a cool, shady place and covered with newspaper to help prevent excess loss of moisture. If the roots happen to dry out before you get to replant them we recommend to soak them in a bucket with Ferti-Lome Root stimulator for about an hour to replenish their moisture before you transplant them back in the ground.

5. Put in what you take out!

Rule of thumb- if you take out a bucket full of soil, replace the bucket full of soil! It's always best to help maintain soil structure, fertility, and nutrients if you can replace the soil and perennial mass you moved by adding compost and organic matter back to the soil. This will ensure that any transplants or new plants are off to a healthy start!

6. The best transplants are the most vigorous!

Once you have dug your clump and are ready to divide, it is best to divide your clump into about 4-6 sections depending on size. Perennials multiply quite fast-one stem can likely grow three or four times that size each season. By dividing into healthy, smaller divisions, you will get a more vigorous plant that will tend to have stronger growth and bloom the coming season.

7. If in bloom, be extra gentle!

Some would say that you shouldn't divide a perennial when it is in bloom, however it can successfully be done. Some plants such as early spring bloomers or fall bloomers will fare just fine if given the extra bit of attention keeping the roots healthy and hydrated.

8. Healthy pieces are the way to go!

If you are dividing a perennial plant that is on the decline you want to make sure you only transplant divisions that are healthy. If you transplant divisions that are weak and declining you are most likely going to end up with a plant that is more susceptible to pests and disease. If a plant has become crowded and weak before you got around to dividing it chances are the center section is what has been hit the hardest and the outer edges are the healthiest. Try and take divisions from the outer part but be sure to watch for discolored stems and/or roots.

9. Give 'em room to grow!

When you go to replant your divisions you want to make sure your transplant goes into a hole that is at least as wide as its roots are when the roots are spread out. With many divisions it is easiest to make a mound in the hole in which to spread the roots over. This ensures that the tips are growing down as they would naturally and that your plant gets off to a running start!

10. Know your roots!

Perennials can be grouped in to five basic root types. Determine what root type you have (clumps/offsets, surface roots, underground running roots, taproots, or woody)
 Root Types—Clumps/Offsets - small plants that grow at the base of a larger plant) should be divided by snapping the connection between any of the sections. Make sure you get plenty of nice roots and at least three or more growing points. Echinacea, Asters, Hosta, and Coreopsis.
 Surface Roots - tend to run on or just below the soil surface. These plants can be divided by simply cutting between and of the stems leaving you two separate plants with roots and shoots. Sedums, Rudbeckia, and Monarda.
 Underground Running Roots—also be referred to as a sucker, cut away from the mother plant to be transplanted, or you can dig up the mother plant to separate into pieces with suckers already forming. Geraniums and Anemones.
 Taproots—Think of them like a potato- you just want to make sure you get a good eye or two with some viable looking roots. Euphorbia and Papaver.
 Woody Roots - divided by cutting between the newly rooted plant and the mother plant. Candytuft, Lithodora, Phlox, and Lavender.

All About The Apple – *Malus domestica*

Taxonomy

The cultivated apple, *Malus domestica*, belongs to the Rosaceae (Rose) Family, and the subfamily of Pomoideae; along with pear, quince, loquat and medlar.

Throughout its history of cultivation, at least 10,000 apple cultivars were developed, many of which are now lost. This was due in part to the older practice of seed propagation. Commercially there are about 100 cultivars currently being grown commercially, but only 10 of the most popular make up over 90% of US production.

History

It is generally believed that the edible apple originated somewhere in Central Asia. There are many other wild species of *Malus*, and it is generally assumed that *M. domestica* evolved from chance hybridization among these wild species. The seeds of these early fruits would likely have been spread by animal and birds. The many native herbivores may have gorged themselves on the apple fruits, selecting those trees producing larger, sweeter, and juicier fruit. They therefore selectively spread seeds from better tasting fruit, aiding the evolution of these features. Selected in this way, the apple gradually changed from a bird's food with edible seeds to a larger mammal's food with poisonous (cyanide-containing) seeds.

Apples were probably improved through selection over a period of thousands of years by early farmers. Historians have documented the presence of edible apples as early as 6,500 B.C. when the remains of apples were found among excavations at Jericho in the Jordan Valley and dated to this time period. Many other accounts have been recorded, but in 323 B.C. Theophrastus described six varieties of apples and discussed why budding, grafting, and general tree care are required for optimum production, and stated that seeds almost always produces trees of inferior quality fruit. The excellent keeping qualities of apples were discovered by at least 100 B.C., as the Roman Varro provided written accounts of "fruit houses" for storing apples for winter. Apples were brought to North America with the colonists in the 1600's, and the first apple orchard on this continent was said to be near Boston in 1625. From these New England origins, apples moved west with the pioneers. In 1790, Thomas Andrew Knight of England begins first controlled apple hybridization program for apple improvement. It was 1904 when J.T. Stinson in an address to the St. Louis Exposition, proclaimed, "An apple a day keeps the doctor away". Perdue and the University of Illinois jointly initiated an apple breeding program in 1945 to produce high quality disease resistant apples. One of the best ways to cope with diseases and pests is to select or breed for genetic resistance.

On the darker side, the seeds of apple and pear contain a mild hydrocyanic acid that will inhibit respiration in humans, resulting in spasms, coma, difficult breathing, and ultimate death. It is said that a man who ate a cup of apple seeds died.

Early Americans prized the apple for cider. The standard recipe for cider: One apple type for TARTNESS, one for FLAVOR, and one for AROMA. You have all heard of John Chapman (Johnny Appleseed) who developed small apple orchards from his birthplace in Massachusetts to Indiana, where he died in 1845. He was a preacher with a love of God and Apples (presumably in that order). Then there was Sir Issac Newton who contemplated his thoughts about gravity as he set out in his orchard and watched an apple fall. Recently, live tissue from that same orchard has been rescued and grafted onto healthy rootstock in Tennessee.

The first apple seeds in the Oregon Territory were planted at Vancouver in 1825. And today you can purchase a grafted tree from this "Vancouver Apple," the oldest in Oregon. Lewelling and Meek brought apple seedlings over the Oregon Trail and established the first Oregon Fruit Nursery at Milwaukee in 1848.

Folklore

There are many myths and legends associated with the apple. Apples were frequently used in Greek, Russian, Norse, and other mythologies as symbols of immortality or reincarnation. One of the most popular stories pertaining to apples is that of Adam and Eve, who ate the "forbidden fruit" of the tree of good and evil in the center of the garden of Eden. Actually the account given in Genesis 2 and 3 never mentions what kind of fruit this tree produced, but numerous works of art commonly depict it as an apple. The Latin noun *Malus* has the dual meaning of either apple or evil, which probably stems from this bible story. Apples are also symbolic of temptation.

In Greek mythology, Gaia, or Mother Earth, presented a tree with golden apples to Zeus and his bride Hera on their wedding day. These golden apples became involved with many tales of love, bribery and temptation, ranging from the abduction of Helen of Troy to the defeat and marriage of Atlanta. The sexual and romantic connotations of the apple were powerful reasons why apples came as a desert at the end of the meal. They not only tasted heavenly and were good for digestion, but were regarded as a cunning transitional aphrodisiac for the pleasures that followed. Is it any wonder that apples became the most sought after fruit on earth?

The Roman Horace, in 100 B.C., noted that Italy had become one big fruit orchard and the perfect meal began with eggs and ended with apples. The Romans even created a deity of the fruit trees: the goddess Pomona. Many cultures since, have responded to the basic human longing for a time and place where men and women could be free from the battle with nature for food and shelter. This place was symbolized by a garden of paradise and pleasure, complete with fruit-laden apple trees.

An Apple A Day — More About Apples

Botanical Description—Plant

The small to medium sized tree develops a spreading canopy, to 30 feet in the wild, generally 6-15 feet in cultivation. Tree size and shape is dependent on rootstock and training system used and consistent pruning. Leaves are elliptical with serrate margins, dark green with light pubescence on underside.

Flowers—Petals are white when open, but have red-pink undersides when opening, hence the “pink” bloom stage.

Pollination — Most cultivars are self-unfruitful. Cross-incompatibility is rare, so most cultivars that bloom at the same time will serve as pollinizers, including crab apples. A few cultivars are pollen-sterile. Honey bees and Mason bees are the most effective pollinators.

Fruit — A special fruit type is given to the apple and related fruits – the pome. The apple contains 5 seed cavities with generally 2 seeds each with complete pollination. Seeds are relatively small and black, and mildly poisonous. Fruiting usually starts 3-5 years after grafting.

Most apples reach maturity about 120-150 days after bloom, with a few cultivars maturing in as short as 70 days, and as long as 180.

General Cultural —Soils and Climate

Deep, well-drained, loamy soils with pH 6-7 are best, but apples are grown on a wide variety of soils worldwide.

Apples are adaptable to various climates, but best adapted to the cool temperate zone from about 35-50 degrees latitude.

They have a more northern range than many other tree fruits due to relative late blooming and extreme cold hardiness.

Generally, fruit quality is best in temperate climates with high light intensity, with warm (not hot) days and cool nights. This accounts for the success of apple culture in eastern Washington State and Oregon’s Hood River Valley, which have a cool, desert-like climate.

The wood and buds of dormant trees are hardy to -40F, but open flowers and young fruitlets are killed by brief exposure at 28F or less. Apples are among the latest blooming tree fruits, and are therefore less frost prone than other species at any given location.

Early Development and Variety Selection — Of the more than 2400 species of fruit and nuts, about 80 have been domesticated. Fruit breeding by controlled cross-pollination of selected parents was not done to any degree until the 19th century. Even though a great many breeding programs were carried out during the 20th century, the new varieties of some fruits, such as apple and pear, have not replaced many of the grand oldies like – Golden Delicious, Delicious, Cox, Granny Smith, Rome Beauty, Jonathan, Yellow Transparent, Gravenstein, McIntosh, and others – all chance seedlings, selected more than 100 years ago.

Scientific fruit culture has largely developed since the mid-19th century, and at an accelerated pace in the past 70 years.

Propagation—Today all apple trees are propagated by grafting because they do not grow true to seed and it is difficult or impossible to either layer or root from cuttings. In order to maintain a high-quality line of fruit trees, cuttings (scions) must be made from a successful tree and grafted on established and healthy roots.

Harvest—Maturity

Several methods are available for determining optimal harvest time. Days from full bloom is relatively consistent from year-to-year for different cultivars, and provides a rough estimate of picking date. The back-yard grower may start consumption as soon as the seeds turn dark, the background color (if present) turns yellow, and the apple tastes good.

Harvest Method—Apples must be picked by hand to avoid bruising, which reduces quality grade and increases storage losses. Fruit also must be picked carefully to avoid damaging the fruiting spur, where next season’s fruit will be borne. Do not reach and pull, but rather hold the fruit gently in the hand and rotate it upwards, as if you are trying to un-hook it from the spur or attachment point. Apples are to be un-hooked – not snatched. If the apple does not release when raised slightly above horizontal, it is likely not ripe.

Storage—The apple is one of the few fruits that can tolerate long-term storage without significant loss of quality. At home, apple storage can be extended by packing firm unblemished fruit in tight boxes or plastic bags, refrigerated cold as possible with out freezing. At 40 degrees they will ripen and soften 5-times faster -- at room temperature – 10-times faster. Winter storage on the floor in a cool unheated garage can work well, but will require additional protection when temperatures fall below freezing.

Medicinal Properties

As recently discovered in many fruit crops, flavonoids may play an important role in preventing many kinds of cancer, and may also reduce the risk of heart disease and stroke.

Eating 2 apples or drinking 12 ounces of apple juice daily was shown to reduce build-up of arterial plaque.

The old adage, “An apple a day keeps the doctor away” now has some science backing. Primary nutritional benefit is in the pectin and fiber. The average apple contains about 5 grams of fiber -- as much as a bowl of oatmeal or other cereal. High potassium, low sodium, and zero fat also promote health.

Studies show that regular eating of apples helps control headaches and nervous tension; with fewer colds and upper respiratory ailments. The mild nature and low acid content of apples are more readily accepted and digested by infants, and causes less colic and rashes. Some advocates will even claim that a fresh apple is nature’s own tooth brush. The fibrous texture won’t stick to the teeth, and their mouth-watering appeal accelerates salivary action – nature’s aid for cleaning teeth.

Contribution to Diet — Apples have a broad spectrum of food uses: pies and cakes, jams, sauces and juices, apple butter, dried apples, and much more. Apple juice has surpassed orange juice consumption in the USA. A medium sized apple contains about 80 calories, and is unusually high in fiber; generally about 5 grams per fruit (mostly from pectin). In 2001, United States consumers ate an average of 45.2 pounds of apples and processed apple products. About 60% of these are eaten fresh. More apples are consumed world-wide than all the other tree fruits combined.

Expert Tips for Growing Kiwifruit

If you have a good strong trellis, are a bit of a gambler and have a love of kiwifruit, there's no reason not to grow your own crop. As vigorous as they are, though, don't expect to plop these vines into the ground and stand back.

Kiwifruit need some attention to yield the large amount of fruit they're capable of producing. Proper siting, fertilizing, watering and, most importantly, protecting from cold weather, are necessary to keep your plant in good shape, said Bernadine Strik, berry specialist for Oregon State University Extension Service.

There are three types of kiwifruit, Strik explained, the most common being the fuzzy kiwifruit (*Actinidia deliciosa*) available at the grocery store, usually the cultivar called 'Hayward.' Joining the lineup are hardy kiwifruit (*A. arguta*); and kolomikta kiwifruit (*A. kolomikta*), which is not often grown for fruit. Instead, gardeners become enamored of the variegated pink leaves and use it as an ornamental vine.

Hardy kiwifruit, also called kiwiberries because of the grape-sized fruit, are most suited for home gardens because they are best adapted to Oregon's westside climate, she said. The highly aromatic fruit has smooth, green skin – sometimes with a red blush – that's edible, making them great for snacking. Fuzzy kiwifruit don't ripen on the vine and are harvested in fall when they are "green ripe." They can be stored in a cold area for months, which is why they you'll find fuzzy kiwifruit in grocery stores year-round.

Fuzzy kiwifruit are best grown in warmer regions like California, because vines can get winter cold injury in most areas of Oregon. Hardy kiwifruit are better adapted to our region because they are very winter cold hardy and fruit will vine ripen from mid-September into mid-October. You'll sometimes find them at farmers markets and some grocery stores.

Of the hardy kiwifruit, the easiest to find are 'Ananasnaya,' (sometimes called 'Anna') with jade-colored skin, bright green flesh, black seeds and a pineapple-type flavor (the name means "pineapple" in Russian) and 'Ken's Red,' a New Zealand cultivar with olive green skin and darker green flesh with deep red streaks.

"The young shoots and fruit of all kiwifruit species are sensitive to frost injury," Strik said. "Temperatures of 30 degrees or less for only 30 minutes can severely damage newly emerging shoots in the late winter through spring."

To reduce the chance of damage, grow kiwi plants in warmer areas of the garden that are protected from frost, avoiding low areas or cool sites. When temperatures are forecast to drop to 32 or lower, drape the vine with row covers before sunset and remove them when temperatures rise above freezing.



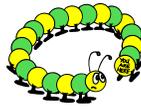
Strik, who is the author of Extension's publication [Growing Kiwifruit](#), offers additional tips:

- Kiwifruit vines are either female, which produce the fruit; or male, which are vital for pollination and fruit production. Be sure to plant both unless a neighbor has a male.
- Build a substantial arbor or T-bar trellis (a diagram is included in the above publication) that's tall enough to stand under for harvest; the stronger the better since the vines can grow 15 feet wide and produce up to 100 pounds of fruit.
- Plant 10 to 15 inches apart in spring in deep, well-drained soil in a sunny, protected area of the garden. Don't skimp on this advice since kiwi vines are susceptible to root rot.
- Water a couple of inches of water a week during the growing season. A drip system works best.
- Fertilize with about ½ pound of nitrogen per mature vine, dividing this into thirds (mid-March, mid-April and mid-June) using a well-balanced fertilizer such as 16-16-16 (3 pounds per season) or soybean meal (about 7 pounds per season).
- Prune females heavily in December. If it gets later in the season, the vines will excrete large amounts of sap, which dismays gardeners. "I often get people saying, 'My vine is bleeding to death,'" Strik said. "So, it's best to prune early. If you are pruning late, don't worry too much about the sap loss." Prune males after bloom in late June. When pruning a mature vine, remove about 70 percent of the wood that grew last season. Most of the wood removed is older wood that already has fruited. See the publication for pruning diagrams.
- In warmer regions of Oregon harvest fuzzy kiwifruit in late October to early November when they are still hard, but the seeds are black. They can be stored in a cold (32 to 40 degrees) area for several months. To ripen small amounts, put in a slightly vented plastic bag with apples or bananas. Harvest hardy kiwifruit, which do not all ripen at the same time, when they are soft to the touch. They should be eaten right away; or in order to store in the refrigerator for a few weeks, harvest fruit when they are still firm, but seeds are black (early September). When they are too ripe, the fruit will tear at the stem end. You can enjoy them throughout the winter by freezing them and partially thaw before eating.

What's "Bugging" My Garden?



by Evelyn
VonFeldt
OSU Master
Gardener



I'd like to make you aware of one of the basic tenants of sustainable gardening- biological controls and how it has played an important role in Tillamook County in the control of Tansy Ragwort *Senecio jacobaea L.*

First what is Tansy Ragwort? It is noxious weed in Oregon Washington and Idaho. After the seeds germinate they grow into a rosette made of deeply lobed leaves that don't mature until at least June of the second year. Stems can be 2 to 4 feet tall. Tansy is a member of the Asteraceae family of plants and the blooms can be recognized by the row of yellow petals surrounding the disk-like yellow center- which is where the individual flowers (think of a sunflower- same family). These flowers are clustered



on the stems and a healthy plant can produce more than 150,000 seeds, though most seeds only travel about 10 feet from the mother plant they can also lay dormant for as long as 15 years in the soil. Back in "the good old days" tansy took over entire fields, that may sound lovely to look at but they are toxic to animals, especially horses and cattle, but also deer, pigs and goats. Pyrrolizidine alkaloids in all parts of the plant cause irreversible and cumulative liver damage in adults and can also kill nursing young or can abort fetuses. Even dried plant parts are still toxic.

So enter insect biological controls: namely the **Cinnabar moth** *Tyria jacobaeae*, the adult is a black and red moth, while the larvae are about 1" long with black and yellow or orange bands, like all caterpillars they are made for one thing - EATING. They feed on the leaves, buds and flowers often defoliating the plant. The adult female lays her eggs in May and June in clusters of about 40 eggs



on the underside of the leaves. She will deposit a total of 100 to 300 yellow eggs that take 1 to 3 weeks to hatch. The larvae need 4 to 6 weeks to develop. After they finish feeding they will pupate in the soil until next year when the adults emerge in May and June to start the cycle all over again.



This all is wonderful but biological controls take time to make a dent in the weed population and when the number of weed disappear the insects that feed on them do to. Not every weed and those long dormant seeds gradually build in numbers so it will then take a while for the biological controls to grow sufficient numbers to again control those weeds. This is where we are heading now.

But never fear there is another insect in the armory a small golden-yellow ragwort flea beetle *Longitarsus jacobaeae* this little guy 1/8" long takes over where the Cinnabar moth leaves off. During the summer after feeding on the upper part of the weed the beetle larvae mine into the roots of the rosette stage of the Tansy in the fall and overwinter in the roots killing the plant.



So what should you do if you see the Cinnabar larvae? If you find them dining on one of its alternate host plants like Common tansy *Tanacetum vulgare L.*, Common groundsel *Senecio vulgaris L.*, Woodland groundsel *Senecio sylvaticus L.*, or Dusty Miller *Senecio cineraria* you can "relocate" the caterpillars to real Tansy ragwort and help them do their job. Or if you have tansy on your property keep it pulled or use an herbicide. (Always use herbicides safely and follow all written instruction on the label).

Sources: PNW 175 (out of print- available at OSU Extension Office), Chinook Observer.com, Bing Images.

Garden hints from your OSU Extension Agent

JULY

Maintenance and Clean Up

- Mound soil around base of potatoes. Gather and eat a few "new" potatoes, when plants begin to flower.
- Early morning best time to water to reduce evaporation. Water the soil, rather than leaves to reduce disease. Water deeply, infrequently to encourage root growth.
- Hanging baskets need watering and feeding during hot weather.
- Weed and fertilize rhubarb and asparagus beds. A mulch of compost or rotted cow manure works well as fertilizer. Water deeply to develop crowns for next year.
- Mulch to conserve soil moisture with paper, plastic, sawdust, etc.
- Stake tomatoes, as necessary.

Planting/Propagation

- Midsummer plantings of beets, bush beans, carrots, cauliflower, broccoli, lettuce, kale, peas for fall/winter crops.
- Dig spring bulbs when tops have died down; divide and store or replant.
- **Oregon Coast:** First planting of Chinese cabbage, kohlrabi, and rutabagas

Pest Monitoring and Management

- Watch for cutworm damage in garden. Use barriers, remove by hand, use beneficial nematodes when soil temperature is above 55 degrees Fahrenheit, or spray with *Bt* according to label directions.

Late July: Begin to monitor for early and late blight on tomatoes.

Place traps to catch adult apple maggot flies. You can use pheromone traps to monitor presence of pests.

July 17-23: Third spray for codling moth in apple and pear trees, as necessary.

- Cover blueberry bushes with netting.
- Watch for early and late blight on tomatoes. Correct by pruning for air circulation, picking off affected leaves, and/or treat with approved fungicide.
- Monitor rhododendrons for adult root weevils. Look for notching.
- Continue monitoring raspberry, blackberry, blueberry, cherry and other plants that produce soft fruits and berries for Spotted Wing Drosophila (SWD). If SWD are present, use an integrated and least toxic approach to manage the pests. Learn [how to monitor for SWD flies and larval](#) infestations in fruit. ☺

AUGUST

Maintenance and Clean Up

Plant winter kale, Brussels sprouts, turnips, parsnips, parsley, and Chinese cabbage. Mid-summer planting of peas-(use enation-virus-resistant varieties); plant fall cabbage, cauliflower, and broccoli. Plant spinach.

Planning

- Dampwood termites begin flying late August. Make sure your home is free of wet wood or places where wood and soil are in contact.
- Best time to establish a new lawn.

Maintenance and Clean Up

- Fertilize cucumbers, summer squash and broccoli to maintain production.
- Clean and fertilize strawberry beds.
- Use mulch to protect plants from hot weather damage. Provide temporary shade, especially for recent plantings.
- Camellias need deep watering to develop flower buds for next spring.
- Prune caneberries after harvest.

Check raspberries for crown borers,-- holes near the soil line, at base of plant. Remove infested wood before adults emerge (mid-August).

Pest Monitoring and Management

- Monitor soft fruits and berries for Spotted Wing Drosophila.
- Control yellow jackets and wasps with traps and lures as necessary.
- Check for root weevils in ornamentals; codling moth and spider mite in apple trees; scale insects in camellias, holly, maples. Treat as necessary.
- Check leafy vegetables for caterpillars. Pick off caterpillars as they appear. Use *Bt-k*, if necessary.
- For mite control on ornamentals and most vegetables, hose off foliage, Treat with approved miticide if necessary.
- Remove cankered limbs from fruit and nut trees for control of diseases such as apple anthracnose and bacterial canker of stone fruit. Sterilize tools before each new cut. ☺

SEPTEMBER

Maintenance and Clean Up

- Harvest winter squash when the "ground spot" changes from white to a cream or gold color.
- Pick/store winter squash; mulch carrot, parsnip, and beets for winter harvesting.
- Protect tomatoes; pick green tomatoes and ripen indoors if frost threatens.
- Dig, clean, and store tuberous begonias if frost threatens.
- Harvest potatoes when the tops die down. Store them in a dark location.
- Optimal time for establishing a new lawn is August through mid-September.
- Aerate lawns.

Planting/Propagation

- Divide peonies and iris.
- Plant or transplant woody ornamentals and mature herbaceous perennials. Fall planting of trees, shrubs and perennials can encourage healthy root growth over the winter.
- Plant daffodils, tulips, and crocus for spring bloom. Work calcium and phosphorus into the soil below the bulbs at planting time.

Western Oregon: Plant winter cover of annual rye or winter peas in vegetable garden.

Pest Monitoring and Management

- Control slugs as necessary. Least toxic management options for slugs include barriers and traps. Baits are also available for slug control; use caution around pets. Read and follow all label directions prior to using baits, or any other chemical control.
- Monitor trailing berries for leaf and cane spot. Treat if necessary.

• Continue monitoring for Spotted Wing Drosophila (SWD). If SWD are present, use an integrated and least toxic approach to manage the pests. Learn [how to monitor for SWD flies and larval](#) infestations in fruit.

Coastal and Western Valleys: Spray susceptible varieties of potatoes and tomatoes for early and late blight.

Houseplants and Indoor Gardening

Clean houseplants, check for insects, repot, fertilize ; then bring them indoors.

Oregon State University Extension Service encourages sustainable gardening practices.

Always identify and monitor problems before acting. First consider cultural controls; then physical, biological, and chemical controls (which include insecticidal soaps, horticultural oils, botanical insecticides, organic and synthetic pesticides). Always consider

Coming Events



July 21st - Spade & Wade Garden Tour

This self-guided tour of 6 area gardens. Gardens are open from 10am to 4pm. Passports are \$10 each with children 16 and under Free. They are on sale now at the following locations and can be purchased via mail - as well as in person - at the OSU Extension Office, Tillamook County.

- OSU Extension Office -Tillamook County- 4506 Third St., Tillamook
- Hidden Acres Greenhouse & Café
- Tillamook County Pioneer Museum



August 8 - 10 Tillamook County Fair -

Join Master Gardeners in the Learning Garden located near the entrance to the Fair - see the established trees, learn about the plants that grow well in our coastal environments. A great place to enjoy the "Magic in the Air" at the Tillamook County Fair. Master Gardeners will be on hand to answer questions and provide informative tours of the Learning Garden from 10 am to 6 pm.

***Oregon State University
Publications are available at:***

***[http://extension.oregonstate.edu/
catalog/](http://extension.oregonstate.edu/catalog/)***

***If you do not have internet, you
may request a copy of most of
the publications cited in this
newsletter from:***

***OSU Extension Service
4506 Third Street
Tillamook, OR 97141***

Phone: 503-842-3433

Master Gardener OFFICE HOURS

***OSU Master Gardeners ARE IN
@ OSU Tillamook County
Extension Service
4506 3rd Street
Tillamook, OR 97141***

The Tillamook County Master Gardeners volunteer service in our community and give hundreds of hours in service to the community by answering home horticulture questions.

Please stop by the Master Gardener Office with your questions.

**Office Hours
JULY, AUGUST, SEPTEMBER**

***~ Monday, Wednesday & Thursday ~
12:30 to 4:30 PM***