

March 2009—Oklahoma Gardening Shows

March 21 & 22
March 14 & 15
March 7 & 8

Oklahoma Gardening Information Sheet (#3539)

OETA air date: March 28 and 29, 2009

OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

Plant Highlight: Evergreen Trees – Evergreen trees provide the backbone of the landscape. They are often used as a backdrop to gardens, they provide year-round structure in a planting bed, and when all else in the garden has succumbed to winter, they continue to shine. In this segment, Kim looks at several noteworthy evergreen trees in the OSU Botanical Garden's arboretum.

Arborvitae are very common evergreen trees in the landscape. One arborvitae of particular interest is the cultivar called 'Green Giant'. 'Green Giant' came out of the National Arboretum's plant breeding program and is noteworthy not only for its size, but also for its adaptability. 'Green Giant' is tolerant of a wide variety of soils and is hardy in USDA Hardiness Zones 5 – 7.

It is virtually maintenance free, as well as pest and disease-resistant, and the tree also does not have problems with deer grazing. 'Green Giant' grows rapidly, adding 1 – 2 feet per growing season; you can expect it to grow to about 30 feet in 30 years. It is used as an evergreen screen, hedge or as a single specimen.

Spruce trees are very challenging plants to grow in Oklahoma, but one that has proven to be very successful is the columnar spruce cultivar 'Cupressina'. The species name of this spruce is *Picea abies*, it is a form of Norway spruce. It has been selected for its tight, narrow growth habit, which allows us to plant it in spaces that would be too narrow for pyramidal evergreens. Of course, the tree can still reach a rather large size of up to 30 feet, with a 6 to 10 foot spread. This is a selection for the more northern parts of the state, as it is hardy from zone 7 down to zone 2, but will be heat stressed farther south.

The Arizona Cypress (*Cupressus arizonica*) is another pyramidal evergreen, this is one with a stouter appearance. The trees have a large diameter, reaching up to 30 feet when mature. Arizona Cypress is heat and drought tolerant, making it a good choice for Oklahoma landscapes. The plants are native to North America and are hardy to zone 7. Most of the cultivars available have a bluish hue to them, making them very attractive. When placing the Arizona Cypress in the landscape, be aware of the mature size and give it plenty of room to spread out.

China Fir (*Cunninghamia lanceolata*) has spiky needle-like leaves. The leaves are arranged in a very interesting spiral around the stems with an upward arch. On young trees, the brown bark exfoliates in strips, revealing a reddish-orange inner bark, which is quite attractive. The tree itself has the typical, pyramidal shape of many evergreens, but the branches of older trees droop somewhat. The trees tend to be multi-stemmed and sucker up from around the base. You can remove the suckers periodically to maintain a cleaner look.

Despite its name, China Fir is actually related to Bald Cypress, and not fir trees. China Fir is

something of a novelty plant for Oklahoma; we certainly do not often see these in the landscape. I find it to have a very exotic appearance that is quite appealing. China Firs are hardy to zone 7, and so their use should be restricted to the southern half of the state. If you plant the tree too far north you risk it dying back to the ground from a hard freeze. It is a good idea to plant the trees in a location that is sheltered from the wind. It requires part shade to full sun conditions and well-drained slightly acidic soils. The tree is fast growing and fairly drought tolerant.

Iron Chlorosis – David Hillock, Consumer Horticulturist, tells us how to treat iron chlorosis. Iron chlorosis symptoms show up as the yellowing of the leaf between the veins, veins remain green, on broadleaf trees like pin oak. Leaves can also turn white and edges may become scorched and turn brown. This usually occurs in high pH soils, above 7.0. It may affect one leaf, a branch, half the crown or the whole tree.

Other factors may cause yellowing such as insect or disease, herbicide damage, or overwatering. Some cultivars are yellow. Rule out other possibilities first. Test soil pH. Manganese deficiency can also look the same. Treatment for suspected iron chlorosis can rule out other suspects.

The best approach is prevention, planting species that are not susceptible to iron deficiencies in high pH soils. Culture is also important, avoid saturated soils and aerate compacted soils.

There are several treatment methods –

1. soil application of elemental sulfur combined with iron sulfate
2. soil application of iron chelates
3. foliar sprays with iron sulfate or chelated iron
4. trunk injections

A soil application is probably the preferred method. Instead of just treating the symptoms you are treating the problem by altering the soil pH. Soil applications can last several years, are relatively inexpensive, simple, and do not injure the plant. It is slower to respond than the other methods and can be labor-intensive. In bare soils the elemental sulfur-iron sulfate mix can be applied to the soil surface and watered in. In turf-covered areas drill holes 1 to 2 inches in diameter, 12 to 18 inches deep and 18 to 24 inches apart from about 3 feet from the trunk to a few feet beyond the drip-line of the tree and apply mixture to holes.

Foliar sprays are a simple procedure and provide a quick response but are only temporary, lasting only one season, can be spotty if complete coverage is not achieved, may cause temporary leaf burn, and can be expensive.

Trunk injections last several years and can be moderately expensive. It does result in an injury to the trunk which is generally best to avoid if possible. This procedure is somewhat complicated and results can sometimes be variable.

Oklahoma Botanical Garden and Arboretum Affiliate Garden Showcase: Cann Memorial Garden – In this segment Kim continues to feature the OBGA affiliate gardens with a visit to Cann Memorial Garden in Ponca City. Jim Eck, long-time park superintendent, shows us around this magnificent garden. Cann Memorial Garden is a 10 acre estate located in the heart of Ponca

City at the Junction of Highway 77 and Grand Avenue. The estate was given to the City of Ponca City by Elsie Cann Brown, daughter of L. A. and Mary Cann in August 1975, in memory of her parents. Lester Cann was an early pillar of the community serving over 25 years as a commissioner and City Manager. The estate was donated with the stipulation that it would be maintained as a memorial garden for use of the people of Ponca City and as a meeting place for the numerous Garden Clubs. A two story farm house built in 1908 has been refurbished with a beautiful shaded patio area with over 2,500 feet of brick walkways. There is also a formal garden containing several hundred varieties of annuals and perennials planted in unique color displays. The garden is a favorite wedding site. There are over 70 species of trees that have been planted since 1980 and more to be added in the future. The Master Gardeners have developed a map to help visitors identify trees. Maps are available in a mail box on the side of the shed by the pond and also at the entrance by the parking lot. Gardens open daily, home tours by appointment. Free Admission. Be sure to visit the gardens during the Ponca City Herb Festival scheduled for June 6 from 8:00 a.m. to 4:00 p.m. For more information on Cann Memorial Gardens, call 580-767-0444 or visit http://www.poncacity.com/cann_garden.htm.

Plants featured at Cann Memorial Gardens:

Jatropha, *Jatropha integerrima*
Hardy Tapioca, *Manihot grahamii*
Persian shield, *Spilanthes dyerianus*
Duranta, *Duranta erecta* 'Gold Edge'
Tassel flower, *Emilia javanica* 'Scarlet Magic'
Water hyacinth, *Eichornia* species
Banana, *Musa ornata*
Profusion zinnia, *Zinnia angustifolia*
Purple fountain grass, *Pennisetum setaceum* 'Rubrum'
Yellow bells, *Tacoma stans*

Barb Cooks – Barbara Brown, Extension Food Specialist, demonstrates how to prepare vegetables for canning.

Vegetable Garden Chores – This week in the vegetable garden we can continue to plant our sweet corn in the garden and start our squash seeds indoors. Our seedlings are starting to emerge, but the threat of frost has not yet passed. It is important to take steps to protect our seedlings from frost. One method of doing this is to cover plants with a floating row cover. Row covers are made from polyester and are very lightweight. They simply lay over the bed and allow light, water, and air to pass through. They are not air tight, but do offer some buffering against extreme temperatures. Covering seedlings and even larger plants helps to slow the formation of ice crystals in plant tissues. Row covers are also useful in protecting plants against insect pests.

Please contact your local Oklahoma Cooperative Extension Service Office for more educational information on garden-related topics. If you need further information about this week's show, call (405) 744-5404 or visit our website <http://www.oklahomagardening.okstate.edu>. Thank you for your continued support!

Sincerely,
Kim Rebek
Oklahoma Gardening Host

Oklahoma Gardening Information Sheet (#3538)

OETA air date: March 21 and 22, 2009

OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

Planting Tomatoes with Walls-o-Water – In this segment Kim demonstrates how to set up walls-o-water plant protectors to extend the tomato-growing season. Typically we wait until the average date of the last frost before we set out our tomato plants, which in Stillwater is around April 15. The problem with planting them out any earlier is that the plants are sensitive to freezing temperatures and can be killed by even a light frost. But if we take measures to protect the plants from frost, we can set them out before the threat of frost has passed.

One way to protect plants is to use Walls-o-Water, which can be purchased at many garden centers or ordered on-line. Walls-o-Water are plastic plant protectors that moderate the temperature around the plant and prevent freezing. Each one has a series of vertical cells that are hollow. We will fill these cells with water that will absorb heat during the day and release it during the night, keeping our plants warm, even when the temperature drops below freezing. You can use these to start tomatoes, peppers, squash, or other plants 4 to 6 weeks earlier.

1. Set Walls-o-Water up where you will plant a full four to six weeks before the last normal frost date for your area. You can use an empty 5 gallon bucket to hold the walls open as you set them in place. Bury the bottom a little bit in the soil to keep it stable.
2. Set up one week before transplanting to warm the soil. This is very important. We all understand that if you transplant into cold soil you may easily stunt the plant's development.
3. Fill the tubes two thirds full and remove the bucket. The tubes will fold together at the top like a teepee. This will trap heat inside the wall-o-water. Our plants will grow inside this teepee, nice and warm both day and night. There is plenty of light penetration through the plastic.
4. Use small, 3-4 inch plants as they will have less trouble with transplant shock.
5. After several weeks the plants will start to push through the opening at the top. That is when we fill the Wall-o-Water completely, which will cause it to stay open.
6. Keep them on until 30 - 45 days after the last normal frost date. You do not need to worry about the plants overheating inside the wall-o-water, because as the temperature rises, they have a cooling effect.

There are many different materials that can be used in a similar manner to walls-o-water.

Individual plant protectors, or cloches, have long been used to protect plants from frost. Traditionally, cloches were glass bell jars placed over the plants, but glass does not stand up to hail, can be expensive, and is easily broken. Instead, just about any plastic container around the house will work. I remember a farmer near my house growing up that had a field of milk jugs every spring. I always thought it looked so funny – but I guarantee he had the first tomatoes around. Two liter soda bottles or juice jugs also work well. When using a bottle with a cap, it is best to cut the bottom off the container, and place it cap-side up over the plant. This leaves us the option of removing the caps during warmer days to provide a little ventilation, and returning the caps at night to trap in heat. Plastic cloches are not going to be quite as insulating as the walls-o-water, but they can still give you a three or four week jump start on your tomatoes.

Whichever method you choose, be sure to set the plants at the appropriate spacing in the field. Our tomatoes will be set at 2 foot centers. Use a dark mulch to conserve soil moisture and also to help increase soil temperatures, we all know that dark colors hold heat. As temperatures rise in the summer, we can cover the dark mulch with straw to reflect light and heat.

Plant Highlight: Flowering Fruit Trees – In this segment Kim showcases a pair of magnificent flowering fruit trees. There are many flowering plums used ornamentally in the landscape, but fruit-bearing plum trees (*Prunus domestica*) also put on a dramatic and aromatic floral display. These trees belong to the rose family, and you can certainly see the resemblance between the flowers. Plums put on quite a show – loading their branches in early to mid-March. One of the challenges of growing plums is that they bloom so early in the season that we risk losing all of our fruit to a frost.

Peaches are another beautiful bloomer. Peaches (*Prunus persica*) produce magnificent pink blooms in early to mid-March. Like the plum, we risk losing these blooms to frost. If you grow peaches or plums, watch the weather carefully in early spring. If frost threatens, take steps to protect the blooms. The peach tree in our studio was too large to cover entirely, so we covered individual branches with sheets to protect them from the coming frost. Cloth drop clothes or frost blankets are also effective. Plastic is not as insulating as cloth sheets. Incandescent light bulbs can also be used to generate a small amount of heat that can be trapped beneath the coverings. Be sure to secure the covers in such a way as to avoid contact with the light source. Place the lights at the ground, as hot air rises.

Oklahoma Botanical Garden and Arboretum – This season *Oklahoma Gardening*TM will showcase affiliate gardens of the Oklahoma Botanical Garden and Arboretum (OBGA), a statewide network of gardens, arboreta and parks. Oklahoma is one of only two states that have a statewide arboretum system. The OBGA was created in 1991 with the goals of expanding public awareness of horticulture and landscape architecture, to develop educational programs for Oklahomans of all ages, to conduct research, teaching, and extension programs, to improve educational opportunities in plant sciences and related areas, and to preserve native and adapted plant material through its network of affiliate gardens.

Myriad Botanical Gardens and Crystal Bridge – The first OBGA affiliate garden we feature is Myriad Botanical Gardens and Crystal Bridge. Garden Manager Allen Storjohann leads us on a tour through the Crystal Bridge Tropical Conservatory, an indoor tropical paradise nestled in

downtown Oklahoma City. With over a 1,000 species in the collection, the Crystal Bridge houses plants from every continent except Antarctica! Two distinct habitat regions, the Tropical Rain Forest Zone and the Dry Tropical Zone showcase unique plants from very diverse locations across the world. The extensive plant collections include outstanding representatives of several fascinating plant groups including palms, bromeliads, orchids, cycads, euphorbias and gingers. Surrounding the conservatory are seventeen acres of brightly colored, diversely landscaped gardens. Myriad Gardens hosts many events throughout the season. Be sure to visit their website at www.myriadgardens.com to find out what is happening.

Plants at Myriad Botanical Garden:

Madagascar Tree Palm, *Pachypodium lamerei*
Bottle Palm, *Hyophorbe lagenicaulis*
Jamaican Poinsettia, *Euphorbia punicea*
Old Man's Palm, *Washingtonia filifera*
Variegated Pineapple, *Ananas comosus* 'Variegatus'
Dwarf red Pineapple, *Ananus lucidus*
Citrus, *Citrus* species
Banana, *Musa speceis*
Coconut, *Cocos nucifera*
Star Fruit, *Averrhoa carambola*
Papaya, *Carica papaya*
Autograph Tree, *Clusia rosea*

Barb Cooks – Barbara Brown, Extension Food Specialist, makes a tomato soup with blue cheese.

Tomato Soup with Blue Cheese

- 1 tablespoon extra virgin olive oil
- 1/2 cup chopped onion
- 1/2 cup chopped celery
- 3 cups (1 28-ounce) can crushed tomatoes, undrained
- 1 can (14.5 ounces) fat free, low sodium chicken broth
- 1/4 cup dry red wine or additional broth
- 1 teaspoon sugar
- 1/4 teaspoon dried thyme
- 1/2 cup half and half
- 2/3 cup crumbled blue cheese, divided
- 1/8 teaspoon ground black pepper



1. Over medium heat brown onion and celery in oil for 10 minutes, stirring often.
2. Add crushed tomatoes, broth, wine, sugar and dried thyme. Bring to a boil, reduce heat and simmer, uncovered, 20 minutes.

3. Stir in half and half and 1/2 cup blue cheese. Keeping heat low, heat soup but do not boil.
4. To serve, divide into bowls and top with remaining cheese and a sprinkle of black pepper.

Serves 6.

Nutrition Facts, with wine		
Servings per recipe: 6		
Calories 171	Calories from fat 81	
	% Daily Value	
Total Fat 9g	14%	
Saturated Fat 5g	23%	
Cholesterol 4mg	16%	
Sodium 545mg	23%	
Carbohydrate 14g	5%	
Dietary Fiber 3g	12%	
Protein 9g	18%	
Vitamin A: 23%	Vitamin C: 23%	Folacin: 8%
Calcium: 16%	Iron: 12%	Potassium: 16%

Barbara Brown, Food Specialist
Oklahoma Cooperative Extension Service

3/09

Vegetable Garden Chores – This week in the vegetable garden we can continue to plant our cole crops and sweet corn. We also want to continue to start our cucumber and squash seeds indoors or in a cold frame.

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Sincerely,
Kim Rebek
Oklahoma Gardening Host

Oklahoma Gardening Information Sheet (#3537)
OETA air date: March 14 and 15, 2009
OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

Transplanting Cole Crops - In this segment Kim sets out broccoli transplants. Cole crops are great cool-season vegetables. These include broccoli, cabbage, cauliflower and bok choy. As cool-season crops, these plants are very cold hardy, but do not tolerate heat well, and so we need to get our plants in early and push a crop through before high temperatures settle in. High air

and soil temperatures cause a harsh flavor to develop. The plants develop best between 60 and 70 degrees Fahrenheit, and the quality declines around 80 degrees. One way to grow a fast crop is to select fast maturing cultivars.

You can plant cole crops from seed or you can transplant seedlings in the garden. To plant from seed, you ideally want to sow seeds in the first two weeks of March. Transplants are best set out during the last two weeks of March. If starting your own seeds, cole crops need about 4 to 6 weeks from seeding until the plants are ready to transplant. Plant spacing is 18 inches. In our intensive bed gardens, plants are set in staggered rows that are spaced 10 ½ inches apart. This still gives each plant an 18 inch circle in which to develop.

We need to take measures to manage cutworms at the time of planting. Cutworms are moth larvae that feed on the plant stems at the soil surface, often chewing through the entire stem and removing the plant tops. Cutworms feed at night and can wipe out an entire row of plants overnight. Young transplants can be protected from cutworms by placing paper 'collars' around the base of the plant stems. The cutworms feed right at ground level. Collars create a barrier between the worms and the plants. Materials that work well for collars include toilet paper or paper towel tubes, paper cups or strips of newspaper.

To make your collar effective, it needs to extend one to two inches above and below the soil surface. Slip the collar over the stem, settle your plant at the proper depth in the planting hole, and hold the collar in place as you fill the holes. Another method gardeners use to deter cutworms is to place a stick or straw that is pencil-width next to the plant stem. The cutworms need to encircle the stem completely to feed and the stick prevents their feeding.

For more information on growing cole crops turn to OSU Fact Sheet [HLA-6017 Growing Broccoli, Cauliflower, and Cabbage](#).

Planting Strawberries - Strawberries are a relatively simple fruit to grow in the home garden. They can be grown successfully throughout the state. Of course, the plants will require weekly irrigation when the rains subside, so be sure the location you choose is accessible to water. Also look for a spot that receives full sun, as shade can reduce fruit set. Strawberries have several diseases in common with other berry plants as well as crops like tomatoes, potatoes and peppers. Be sure the site you select has not been used for any of these crops for several years.

Strawberries are grouped into three general categories. The first are June-bearing strawberries, which produce a single crop from May through mid-June in Oklahoma. They are the best adapted for Oklahoma and are available in early-, mid-, and late-season cultivars. Everbearing strawberries produce berries from May to mid-June, and again in the fall. Overall production may not be as high as that of June-bearing varieties. The final type of strawberry is called day-neutral. These produce fruits all season, but they are sensitive to heat and are not recommended for Oklahoma.

When selecting cultivars and purchasing plants, be sure to buy certified, disease-free plants from a reputable supplier. Planting more than one cultivar with different maturation times is a great way to extend the harvest season.

Strawberries can be planted in a raised bed, in mounded rows or simply in beds in the ground. However, when you raise the soil, you improve drainage. Mix a thick, 3 or 4 inch layer of compost into the soil to add organic matter. As you prepare the bed, limit the width to around 3 or 4 feet so that you can easily reach in to harvest. If you are planting multiple rows of strawberries, leave 4 feet between the rows.

Strawberries are planted in February or March, but you want to watch the weather. Avoid planting just before a cold spell. There are a number of planting systems that can be used for growing strawberries, but in the home garden, the most common method is the matted row system. This system uses wide plant spacing and relies on the strawberry plants ability to send out runners and establish new plants as a means of filling the bed. As strawberries grow, they send out runners along the soil surface. New plants develop along these runners, take root and produce new plants. This is how the plants will spread throughout our beds.

The plants that we set out are rooted runners that have been removed from a mother plant. Strawberry plants are typically sold bare-root, and we need to protect them from drying out as we plant. You can keep them in a bucket of water or wrap them in a damp towel. Before setting out the plants, remove all but the three strongest leaves. Space the plants 1 ½ to 2 feet apart in the row. We will allow the runners to grow in all directions and fill the bed. It seems like a lot of space to fill, but a single plant can produce 30 to 50 runners in a season.

The depth at which we place the strawberry is critical. If it is set too deep, the crown will rot, too shallow and the roots will dry out. Set the plants so that the crown, which is the point where the leaves arise, is level with the ground surface. We also want to spread the roots out as we plant. If the roots are long, you may choose to trim them with a scissors or sharp knife.

One way to set strawberries at the correct depth is to dig wide holes and mound soil piles in the center of the hole. Adjust the height of the mound so that the plant crown is at the surface level. Spread the roots over the mound and refill the hole with soil. Hold the plant at the crown as you work, making sure it remains level with the soil line. Double check the planting depth when you finish. Once you have finished setting out all the plants, water each one in well with at least a pint of water a piece.

Strawberries are shallow-rooted and need one inch of water each week. Mulching around plants will help retain soil moisture and also combat weeds. June-bearing berries will not produce a crop until the summer following planting. If flowers appear, we will need to remove them by hand. We want all of the plant's energy to go into vegetative growth and not fruiting. The everbearing plants should produce a fair crop the first fall.

OSU Fact Sheet [HLA-6214 Growing Strawberries in the Home Garden](#) provides more information on strawberry production.

Plant a Row for the Hungry – In this segment Kim meets with Jeff Lowenfels, member of the Garden Writers Association of America and founder of the *Plant a Row for the Hungry* Program.

The program follows a people-helping-people approach to target hunger and malnutrition. Gardeners are notorious for growing more produce than they can consume. *Plant a Row for the Hungry* encourages gardeners to plant an extra row of produce and donate their surplus to food banks, soup kitchens and other service organizations.

Jeff started *Plant a Row for the Hungry* in his newspaper column in Anchorage, Alaska, asking gardeners to plant a row of vegetables for Bean's Cafe, a local soup kitchen. Since then, *Plant a Row for the Hungry* has grown exponentially, with over 27,000 volunteers collecting well over 1 million pounds of food annually! Jeff joins us to share his story of how *Plant a Row for the Hungry* began.

Several food banks around Oklahoma have joined the cause and started their own *Plant a Row for the Hungry* campaigns. The Lawton Food Bank accepts donations Monday through Friday between 9 a.m. and 4 p.m. or by appointment; you can contact Jeri Mosiman at 580-353-7994 for more information. The Community Food Bank of Eastern Oklahoma is another participant. You can visit their website at www.cfbeo.org or contact Ken Bacon at 918-585-2800 ext. 122 for more information on donating to that organization. Also, the Regional Food Bank of Oklahoma in Oklahoma City is another great resource. Look for information on their website at www.regionalfoodbank.org or call 405-972-1111 to find out how you can contribute.

Everyone can make a difference to a hungry family by simply planting one extra row in their garden. To find out how you can start a campaign in your own community, visit the Garden Writers Association *Plant a Row for the Hungry* website at <http://www.gardenwriters.org/gwa.php?p=par/index.html>. Be sure to let all of us here at *Oklahoma Gardening* know what you are doing to make a difference for the hungry in your community.

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6. soil application of iron chelates
7. foliar sprays with iron sulfate or chelated iron
8. trunk injections

A soil application is probably the preferred method. Instead of just treating the symptoms you are treating the problem by altering the soil pH. Soil applications can last several years, are relatively inexpensive, simple, and do not injure the plant. It is slower to respond than the other methods and can be labor-intensive. In bare soils the elemental sulfur-iron sulfate mix can be applied to the soil surface and watered in. In turf-covered areas drill holes 1 to 2 inches in diameter, 12 to 18 inches deep and 18 to 24 inches apart from about 3 feet from the trunk to a few feet beyond the drip-line of the tree and apply mixture to holes.

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Vegetable Garden Chores – This week in the vegetable garden we will continue planting out our cole crops. We can also start to plant our sweet corn in the warmer areas of the state. If you plan to start your own cucumber and summer squash transplants you will want to get those seeds started indoors as well.

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Sincerely,
Kim Rebek
Oklahoma Gardening Host

Oklahoma Gardening Information Sheet (#3536)
OETA air date: March 7 and 8, 2009
OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

Apartment Gardening – In this segment Kim shares ideas for gardening in small spaces. We have recently been looking at different planting options for growing vegetables in large spaces; however, even if you have only a small porch or patio available for growing plants, you can still produce large amounts of nutritious foods. When ground space is unavailable, you can grow a complete garden in containers. The size of the containers is important and will influence the plants you can grow. A window box is perfect for small vegetables like lettuce, radishes and spinach. A container about 6-10 inches is sufficient for smaller crops like these, as well as parsley, green onions and most herbs. You can add flowers to your plantings for extra color as well.

For larger plants we need to purchase good sized containers. Most vegetables will do well in a five gallon or larger container. You want to be careful and not oversize your container, making it too heavy to handle. Remember, no matter what container you choose, good drainage is important. If the container does not have drainage holes you will want to make some.

It is a good idea to use a soil-less media in your containers as these are not as heavy as field soil. They also have better drainage and water-holding properties than field soil. One of the great advantages of growing vegetables in containers is that you can amend the soil to suit the vegetable you are growing.

Kim demonstrates a method of growing potatoes in containers. Start with a large barrel filled with just about 12 inches of soil-less media. Set the potato seed pieces 5 to 6 inches deep in the soil. In the field, potatoes are hilled by pulling soil from the row up over the developing tubers. In the container, we will hill the potatoes by adding more soil to the container. Over time, we will need to add about 10 more inches of soil to the container, so be sure to size the container properly. A total depth of about 24 inches should be sufficient.

It is important to keep containers well watered. During the summer containers dry out quickly and will typically need watering every day. At planting time we do not need to water as frequently. While our seeds are germinating we want the soil to remain damp, but not too wet. Use your finger to check the soil and only water if it is starting to dry out. Once the seedlings emerge you may have to increase watering.

As you look for seeds and plants to grow in your patio vegetable garden, cultivar selection will become important. Most cultivars that will do well in your landscape will also perform well in a container. Look for plants that are more compact, for example the 'Tom Thumb' pea or the 'Small Fry' tomato.

List of Vegetables for Container Gardening (Source: Texas Agricultural Extension Service)

Tomatoes:	Patio, Pixie, Tiny Tim, Saladette, Toy Boy, Spring Giant, Tumbling Tom, Small Fry
Peppers:	Yolo Wonder, Keystone Resistant Giant, Canape, (Hot) Red Cherry, Jalapeno
Eggplant:	Florida Market, Black Beauty, Long Tom
Squash:	Dixie, Gold Neck, Early Prolific Straightneck, (Green) Zucco, Diplomat, Senator
Leaf Lettuce:	Buttercrunch, Salad Bowl, Romaine, Dark Green Boston, Ruby, Bibb
Green Onions:	Beltsville Bunching, Crysal Wax, Evergreen Bunching
Green Beans:	Topcrop, Greencrop, Contender, (Pole) Blue Lake, Kentucky Wonder
Radishes:	Cherry Belle, Scarlet Globe, (White) Icicle

Parsley: Evergreen, Moss Curled

Cucumbers: Burpless, Liberty, Early Pik, Crispy, Salty

Small Fruit Production – Kim is establishing a number of small fruits in the studio garden. Many of the considerations regarding site selection and site preparation used in the vegetables are also applicable to fruits. For example a site with full sun and good drainage is ideal. Ready access to water for irrigation is also important. As with vegetables, avoid low-lying areas where cold air tends to settle. The soil is prepared in a similar manner, and we will also plant in raised, mounded rows. Raised rows are very important to promote soil drainage, especially for plants that are prone to root rots.

Kim demonstrates how to plant blueberries. The most important consideration when growing blueberries is soil. Blueberries require a low soil pH, and often we need to amend the soil to accommodate these plants. Because it can take a long time to obtain the desired pH, soil should be prepared six months to a year in advance of planting.

Amending Soil – Most fruits and vegetables perform best at a soil pH around 6.5, however, blueberries prefer highly acid soils with pH between 4.8 and 5.2. A soil test indicated the soil pH is 6.5, much too high for blueberries. Sulfur is needed to amend the soil and lower pH. The amount of sulfur needed to adjust pH will vary with soil type. To lower the soil pH by one unit, we need to apply 1 to 1.5 pounds of sulfur per 100 square feet in a sandy soil. In a loamy soil, we will need to increase that amount to 2 to 3 pounds per 100 square feet, and in clay soils, 3 to 4 pounds.

It takes several weeks for the pH to decrease as microorganisms in the soil oxidize the sulfur. It is best to make adjustments to pH six months to a full year before planting. It is also best to add small amounts of sulfur and then check soil pH, adding additional sulfur if necessary until the desired pH is reached. This will help you to avoid adding too much sulfur. Work the sulfur down into the soil. The easiest way to mix the sulfur in is to add it when you till.

Once we reach our target pH of 5.0, we will need to continue to check soil pH periodically, as pH can change over time. In alkaline soils, managing pH will be a constant battle.

Planting Blueberries – There are several types of blueberry available. The three basic types grown in Oklahoma include northern highbush, southern highbush, and rabbiteye. Northern highbush ripen in May and are best suited to the northern and central parts of the state. Southern highbush are a little more tolerant of heat and perform well throughout the state. Rabbiteye blueberries have greater heat tolerance and are suitable for culture in southern Oklahoma. It is important to plant more than one cultivar together for optimal fruit set; be sure the cultivars you choose bloom at the same time.

Like most plants, we want to set our blueberries at the same depth they are planted in the container. It is a good idea to dig your planting hole 2 to 3 times as wide as the container, or about 18 to 24 inches wide. Because blueberries are acid-loving, we place a half-gallon of peat

moss in the bottom of the planting hole. Mix the peat in with the native soil around the plant. It can be difficult to evenly wet peat moss; wet it before you get started. This will help with more even settling once we back fill our hole and prevent air pockets.

If you are using bare-root plants make sure you keep the root system damp during planting. You can wrap them in a wet towel to keep them moist. On a windy day the roots can dry out very quickly. If you are using potted plants you will want to score the root ball to encourage outward root growth. Fill the hole in and tamp slightly to remove air pockets.

Blueberries should be well watered as they establish. It is important to irrigate immediately after planting. Blueberries use a lot of water; they will need about 2 to 3 inches per week. Use acidic mulch such as pine bark to help conserve soil moisture. As the plants establish for the first two years we want all the energy to go into shoot and root development, so for these first two years we will be removing any flowers or fruit that set.

For more information on growing blueberries, check out Fact Sheet [HLA-6248](#) “Blueberry Production for the Home Garden”.

Horticulture Tips – David Hillock, Consumer Horticulturist, gives us gardening tips for March.

Flower and Garden

- Divide and replant overcrowded, summer and fall blooming perennials. Mow or cut back old liriopse and other ornamental grasses before new growth begins.

Tree and Shrubs

- Prune roses just before growth starts and begin a regular disease spray program as the foliage appears. ([HLA-6403](#) & [EPP-7607](#))
- Prune spring flowering plants immediately following their bloom period.
- Anthracnose control on sycamore, maple and oak should begin at bud swell. ([EPP-7634](#))
- Diplodia Pine Tip blight control on pines begins at bud swell. ([EPP-7618](#))
- Chemical and physical control of galls (swellings) on stems of trees should begin now. ([EPP-7168](#) & [EPP-7306](#))
- Dormant oil can still be applied to control mites, galls, overwintering aphids, etc. ([EPP-7306](#))

Turf

- Broadleaf weeds can easily be controlled in cool-season lawns at this time with post-emergent broadleaf herbicides. ([HLA-6421](#))
- Apply preemergent crabgrass control chemicals to cool- and warm-season turfgrasses ([HLA-6421](#)). Heed label cautions when using any weed killers near or in the root zone of desirable plantings.
- March is the second best time of the year to seed cool-season turfgrass; however, fall is the best time to plant. ([HLA-6419](#))
- Cool-season lawns such as bluegrass, fescue and ryegrass may be fertilized now with the first application of the season. Usually, four applications of fertilizer are required per year, in March, May, October and November. ([HLA-6420](#))
- Begin mowing cool-season grasses at 1 ½ to 3 ½ inches high. ([HLA-6420](#))

Barb Cooks – Barbara Brown, Extension Food Specialist, makes split pea soup ([recipe](#)).

Split Pea Soup



- 2 tablespoons olive oil
- 1 small onion, chopped
- 2 medium carrots, chopped
- 2 stalks celery, chopped
- 2 garlic cloves, minced
- 1 pound (2 cups) dried split peas
- 1/2 teaspoon white pepper
- 8 cups fat-free, low sodium chicken broth
- 1 bay leaf
- 1/4 cup plus 2 tablespoons fat-free sour cream, optional
- Smoky paprika, optional

5. Pick through the peas, discarding any broken, discolored or shriveled peas and any foreign matter. Rinse well.
6. In large pot or Dutch oven, heat olive oil. Add onion, carrots, celery and garlic. Sauté until onion is translucent.
7. Add split peas and white pepper, stir 1 minute.
8. Add chicken broth and bay leaf. Bring soup to a boil then reduce heat and simmer 30 to 45 minutes, until peas are cooked through but not falling apart.
9. Remove bay leaf. Mash soup, if desired, using a potato masher, hand blender or regular blender to desired consistency.
10. Serve with a dollop (1 tablespoon) of sour cream and a pinch of smoky paprika if desired.

Serves 6.

Nutrition Facts, without sour cream		
Servings per recipe: 6		
Calories 337	Calories from fat 45	
	% Daily Value	
Total Fat 5g		8%
Saturated Fat 1g		4%
Cholesterol 0mg		0%
Sodium 797mg		33%
Carbohydrate 52g		17%
Dietary Fiber 21g		82%
Protein 23g		46%
Vitamin A: 123%	Vitamin C: 10%	Folacin: 55%
Calcium: 6%	Iron: 23%	Potassium: 26%

Vegetable Garden Chores –

Selecting Appropriate Cultivars. As you purchase seed for the garden, there are a few things to consider in selecting an appropriate cultivar. We all know there are many choices out there, but we want to find one that is right for our specific situation. As you make your selection consider:

- Eating Quality
- Pest and Disease Resistance
- Days to Maturity (quick varieties if using 3 season planting or wish to extend harvest)
- Storage
- Hardiness
- Convenience: self-blanching cauliflower, non-staking peas or tomatoes
- Adaptability – think clay soils!

Please contact your local Oklahoma Cooperative Extension Service Office for more educational information on garden-related topics. If you need further information about this week's show, call (405) 744-5404 or visit our website <http://www.oklahomagardening.okstate.edu>. Thank you for your continued support!

Sincerely,
Kim Rebek
Oklahoma Gardening Host