February 2010—*Oklahoma Gardening* Shows

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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!

Oklahoma Gardening Information Sheet (#3635)
OETA air date: February 27 and 28, 2010
OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

Preparing the Planting Bed for Grapes – The weather has certainly slowed our progress in the small fruits garden, but there is still plenty of time to get our grapes in the ground. Previously, we established a trellis to support our grape vines. Today we will prepare the planting bed and put our grape plants in the ground.

The first consideration in establishing a grape bed is the planting site: grapes require full sun conditions. They can be grown on a wide range of soil types, as long as there is adequate drainage and moisture retention. If your soils do not drain well, establish your grapes on a raised bed. Grapes will require irrigation throughout the growing season, so make sure water is easily accessible at the planting site. When selecting a site you also want to avoid areas where cold air settles, such as at the bottom of a slope. These areas tend to have greater problems with frost damage.

We had not been able to work the soil until this week, because it has been too wet. To preserve soil structure, avoid tilling when soils are wet. You can tell if the soil is dry enough to work by squeezing a handful of soil lightly in your hand. If the soil sticks together in a ball it is too wet, if it crumbles easily it is dry enough to work.

Ideally, soil preparation begins the year before planting. It can take a full season to get perennial grasses like johnsongrass and bermudagrass under control. Last season we worked to remove the turf and reduce the weed pressure in our grape bed. Another job to tackle the season before planting is amending soil. Grapes grow best in soil with a pH range of 5.5 to 6.5. Conduct a soil test several months before planting grapes to determine soil pH and identify potential nutrient deficiencies. A soil sample can be taken to the local OSU County Extension Office. Refer to OSU Extension Fact Sheet PSS-2207 for tips on collecting a good soil sample.

Our soil pH was a little high, so we added sulfur to lower the pH. It can take several months to achieve the desired pH, so try to address soil preparation well in advance of planting. This season we are adding organic matter to our planting bed. Straw, manure or compost can be added by tilling or turning it into the soil several weeks before plant growth is initiated. We are using Boost-It humified compost from SoilSmart Organics donated by Ag Natural out of Bartlesville. Compost is an excellent source of organic matter. Think of organic matter as the magic elixir of soil, it loosens clay soils and increase the water-holding capacity of sandy soils. It also feeds important microorganisms.

Based on your soil test results, you may also need to add fertilizer to the soil to meet nitrogen, phosphorous, and potassium requirements. Base application rates on the recommendations provided with your soil test results. Generally, one-year-old vines require 15 pounds of nitrogen

per acre per year. The rate of application you use will depend on the results of your soil test, the formulation of the fertilizer you choose, and the spacing of your vines. Ask your extension agent for help in calculating how much fertilizer should be applied near each vine.

Planting Grapes and Gooseberries – There are three optimal planting times for grapes. Dormant or inactive grape plants can be set between the first of February and mid-March. Actively growing plants should be planted after the frost-free date for your area, in Stillwater that will be April 15. In the southeastern portion of the state plants can also be set in the fall from October through mid-November. Plants should not be set during dry windy conditions or if extremely cold weather is predicted during the following few days.

There are many grape varieties that perform well in Oklahoma. Factsheet HLA-6246 lists a number of good cultivars and their characteristics. We are planting cultivars from the Arkansas breeding program that have been trialed at OSU's research station in Perkins. We planted the cultivars 'Mars' and 'Sunbelt'. These arrived bare-root, which means they are not potted in soil, but have the roots exposed.

Soak bare-root plants in water for two to three hours before planting. Do not allow plants to become dry during the planting operation. Plant the grapes at the same depth at which they grew in the nursery. This is very important because plants set too deeply may rot, and plants set too shallowly may dry out and die. You can see the soil line on the trunk to guide you in setting them at the correct depth. The planting hole should be 2 to 3 times wider than the root ball. Spread the roots out somewhat in the planting hole. You may wish to build a small mound under the center of the root ball to keep it at the proper depth. Pack the soil firmly enough to hold the vine in the ground if it is tugged on lightly, but not so firmly as to crush the plants. Space plants 8 feet apart in rows. We will come back after bud break to select a single shoot to train as our trunk.

We are also planting gooseberries in our small fruit garden. These are less fun to plant thanks to the spiny trunks. A good pair of leather gloves will help with this problem. Gooseberries are best planted while still dormant, from early February through mid-March. They tolerate heavy soils, but will need good drainage, so we are establishing them in a raised bed. They are planted in much the same way as the grapes, but they do not require as much space. Set the plants 4 feet apart in the row. Before setting plants, cut the tops back to 6 to 10 inches. Plants are also set slightly deeper than the soil line, so that the first branch starts just below the soil surface. This is to encourage a bushy habit.

Good cultivars for Oklahoma include 'Poorman', 'Invicta', and 'Pixwell'. Gooseberries require plenty of moisture and will require regular irrigation. Mulch the plants to help retain soil moisture. This will also help keep soils cooler during the hot days of summer. We will return later this season to establish an irrigation system for our small fruit planting.

Planting Fruit Trees – We had a few gaps to fill in our orchard and after a little debate decided to plant a white peach tree and an apricot tree. Both these fruits can be difficult to produce in Oklahoma, as they tend to break bud early and a late spring frosts can kill the blossoms. Crops are inconsistent, but when you do produce a crop, it sure is worth the wait.

A number of cultivars are suitable for Oklahoma; refer to Extension Fact Sheet **HLA-6222 Home Fruit Planting Guide** for recommended varieties. Fruit trees should be planted when

they are dormant, from early February through mid-March. If you order your plants from a nursery, they will arrive bare-root. It is important that you do not allow the roots to dry out or freeze during the planting process. Prepare your planting hole, digging it wider than the diameter of the spread roots. The fruit tree should be set at the same depth as it grew in the nursery. This is determined by looking at the soil stains on the trunk. Generally, the plant is set so the root flare is just above soil level.

Trim off broken and dried roots and set tree at proper level. You may need to mound up soil under the root ball and spread the roots down and outward over the mound. Make sure the roots are left in a natural outward position. Place topsoil around the roots and firm the soil to exclude air. Always water after planting.

Fruit trees need plenty of room to establish a healthy root system. Space trees 18 to 20 feet apart in rows, with rows set 24 feet apart.

Sometime, we have to delay planting after we receive plants. We had this problem last week as the soil had been too wet to prepare our planting beds. When you have to hold bare-root plants, the best way is to heel them in by forming a mound of loose soil or mulching material. Place the roots into this mound, cover them, and moisten. The trees may be vertical or horizontal as long as the roots are covered. This protects them from drying or freezing until you are ready to plant.

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

Flower and Garden

- Cultivate annual flower and vegetable planting beds to destroy winter weeds.
- Divide and replant overcrowded, summer and fall blooming perennials. Mow or cut back old liriope 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.
- Foliar diseases such as anthracnose on sycamore, maple, and oak and Diplodia Pine Tip blight control on pines should begin at bud swell. (EPP-7634 & EPP-7618).
- Dormant oil can still be applied to control mites, galls, overwintering aphids, etc. (EPP-7603)

Turf

- Broadleaf weeds can easily be controlled in cool-season lawns at this time with postemergent broadleaf herbicides. (HLA-6421)
- 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)

Preemergent Weed Control of Summer Annual Weeds – Now is the time to be thinking about controlling summer annual weeds such as crabgrass with preemergent herbicides. Actually we recommend applying preemergent herbicides as early as mid-February to control crabgrass and other weeds. So if you haven't already applied one, you should do so as soon as possible. The idea is to have the chemical in place a couple weeks prior to conditions that are favorable for weed seed germination; germination can begin when the soil temperatures are in the mid to

upper 50s. Preemergent herbicides must be watered in through irrigation or rainfall to activate the chemicals within 24 to 48 hours after application. This is especially important in turf areas where the herbicide needs to be washed through the canopy of the turfgrass and down to the soil surface where the weed seeds germinate. Failure to do so will result in poor control.

There are several types of preemergent herbicides available; some are registered only for turf areas, some are registered for landscape and garden areas. Be sure to read the product label and select one that is labeled for use in the area you are using it and has the weeds you want to control listed. Heed label cautions when using any weed killers near or in the root zone of desirable plantings.

Cooking with Barbara – Barbara Brown, Extension Food Specialist, talks more about the Slow Food Movement.

Sincerely, Kim Rebek, *Oklahoma Gardening* Host

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Oklahoma Gardening Information Sheet (#3634)
OETA air date: February 20 and 21, 2010
OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

Building a Grape Trellis – This season we are planting grapes in our small fruits garden. To get ready for planting, we need to first prepare our planting site. Our soil needs a bit of preparation, but it is too wet to work, so that will have to wait. In the meantime, we will install our trellis system. A trellis is used to support the weight of the grape vine with a full fruit load.

There are three commonly used trellis systems. Last fall, we looked at examples of each of these with Dr. Eric Stafne at the Cimarron Research Station in Perkins. The style of trellis used depends on the type of grape that will be grown. American grape species and French-American hybrids tend to grow downward, while *Vitus* v*inifera* or European grapes grow upward. The downward growth of American and hybrid grapes is best suited to curtain style trellises. These include the High Cordon system, which supports the vine on a single wire 5 to 5 ½ feet above ground level. The fruiting shoots hang downward from this wire like a curtain. Another system is the Geneva Double Curtain, which adds a second top wire to the high cordon system. The Geneva Double Curtain is for extremely vigorous grape varieties and is not commonly used in the home setting.

Vinifera type grapes, including most wine grapes, are often grown with the Vertical Shoot Positioning or VSP System. This trellis system uses a low cordon wire set about 3 feet above ground level. The plant shoots grow upwards from this cordon wire and are woven through a series of horizontal catch wires as they grow vertically toward the top wire. The VSP system is more expensive to install and requires more continuous training and vine management. It is also not widely used in the home setting.

Most backyard grape growers use the High Cordon System as it is less expensive, simplest, and requires less upkeep with training vines. The trellis is fairly easy to install. It consists of line posts in the rows, end posts for support, and a high-tensile galvanized steel wire.

The first step is to set the end posts. End posts are usually cedar or cured lumber four by four

inch posts. We have already set our end posts, which are 8 feet long, with 2 ½ feet driven into the ground and 5 ½ feet above ground. For larger plantings, the end posts should be reinforced using a post anchor to help bear the weight of the fruit. If you are planting more than one row of grapes, set the rows 10 feet apart.

Grapes are set 8 feet apart in the row, with three plants set between line posts. This gives us a spacing of 24 feet between line posts. Our entire planting is only 24 feet long, so we will adapt the system slightly to our smaller space. Place a line post between each plant. This will help take some of the weight off of our end posts. Line posts are usually steel t-posts but can also be 3 to 4 inch wooden posts. Again, these are 8 foot posts driven 2 ½ feet into the ground.

Now we install the wire. Use a durable galvanized steel wire, we used a number 9 wire, which is recommended. The wires should be secured tightly, but allow a little bit of give. Wires stretch over time and will need to be tightened each spring. The wires can be stapled onto end posts, but this may make it difficult to tighten in the spring. Another option is to use wire vices on the end posts to allow for easy tightening. They also hold the wire securely. Wire vices are inexpensive and well worth the cost for ease of maintenance. The vices are set into drilled holes and screwed into place. Be careful to place them in the correct direction, as the wire can only be pulled through in one direction.

Stretch the wire through the end posts and secure snugly. Use wire ties to secure the wire to t-posts. Our trellis has a second wire three feet above the ground. We will use this wire to train the main trunk up to the top wire. We will be back later this season to plant, but in the meantime, we need to wait for the soil to dry out some so we can prepare our planting bed.

Fruit Elimination on Ornamental Trees – Every summer we get calls from homeowners who are dealing with messy fruits from landscape trees. Unfortunately, when we receive these calls it is usually too late to do much about it that year. Fruit control is possible, but timing is critical and must be done when flowers and fruits are forming in spring/early summer. Of course the best approach is to plant trees that don't produce messy fruits or if you still have an appreciation for the fruiting characteristics, make sure you locate the plant in the landscape where the fruits can fall, but not be a nuisance. You could also consider planting fruitless varieties. These come as sterile forms of the tree species or in some cases as male selections. Some species produce male and female trees; obviously the female trees have the potential for producing those unwanted fruits; the males won't produce fruit. For example, fruitless sweetgum varieties are available like 'Rotundiloba' which is a sterile or near sterile variety of sweetgum; Kentucky coffeetree is an example of a species with male and female plants, the most common male selection being 'Espresso'.

If you are just stuck with existing trees in the landscape that produce those annoying fruits, you have some chemical options. Two types of chemical products are available for fruit control.

Ethephon is a plant growth regulator that when applied to plants reacts by liberating ethylene, which interferes with the plant growth process resulting in reduction or elimination of fruit. The only product registered in Oklahoma that is packaged for the homeowner is Florel® Brand Fruit Eliminator by Monterey Lawn and Garden Products. This product should be applied to the tree when it is in mid-to full-bloom and temperatures should be between 65-95 degrees Fahrenheit. The plants should also not be under stress. Complete coverage is necessary to achieve

satisfactory control. This may be a problem for the homeowner who is trying to control fruits on a large, mature shade tree such as sweetgum or sycamore, but may be an option for a smaller ornamental tree like crabapple. Most homeowners won't have the equipment to reach high into large trees and get complete coverage so they have to hire a pesticide applicator or arborist to do the work. Drift should also be avoided as it may cause temporary modifications to plant growth of nearby plants. Of course, always be sure to read and follow all label directions!

The other product registered for use contains the plant hormone IBA, which promotes premature drop of flowers. However, it can only be applied by an arborist or commercial pesticide applicator. The product is applied as a trunk injection at the beginning of bud break for best results.

No matter which chemical approach you choose, both will need to be repeated yearly. Remember, the best approach is to plant trees that don't produce those annoying fruits.

Cooking with Barbara – Barbara Brown, Extension Food Specialist, makes an Italian tomato sauce.

Herbicide Applications to Dormant Bermudagrass – With the cold temperatures and snow cover we have recently had, turfgrass weed management hasn't exactly been at the front of our minds. But February is a good time to make herbicide applications to dormant bermudagrass for weed management. Products containing glyphosate (such as Round Up) can be used to control winter annual grasses and most winter annual broadleaf weeds. Adding a broadleaf herbicide such as Weed B Gone or Trimec is helpful in controlling a wider assemblage of broadleaves. Timing of applications is driven largely by temperature. Dormant applications work best if temperatures are in the low 60s or high 50s. When temperatures are cooler than this, the treatment is either slow to work or may be considerably less effective. So once those temperatures start to rise, we are ready to make the treatments. It is important that we do not make applications to frozen turf or frozen soil.

As this is a dormant application, the bermudagrass must be completely dormant. That is, it must have a completely tan canopy with preferably no green shoots of bermudagrass sticking above the tan canopy. This does not mean that if you parted the canopy with your hands you would not be able to find green, red or purple stems of bermudagrass below the tan canopy. In fact, one hopes they find green, red or purple stems of bermudagrass above the soil level but below the top tan canopy of leaves or else you have had a substantial winterkill of the aerial shoots at least to soil level. Scout your turf to make certain it is dormant before making the application. We often receive calls in our county extension offices of homeowners asking if the bermudagrass is dormant, but the only way to tell is to look at it. Bermudagrass generally breaks dormancy first on south facing slopes, along concrete and south side of structures where temperatures are warmer.

While we want our bermudagrass to be dormant, the weeds must be green and active for the herbicide application to work. This application does not kill seedling weeds that have germinated but are still located below the tan canopy of bermudagrass as they are protected from being hit by the herbicide. You have to be able to see the weeds. Also, this is not a pre-emergent herbicide application. Pre-emergent herbicides are used to kill weed seedlings and are applied before seeds germinate to manage annual weeds like crabgrass.

Before you treat your turf it is important to read the label carefully. Dormant bermudagrass must be listed on the label in order to use the product for that application. Be aware that many ready to use as well as consumer concentrate materials might not have dormant application on their label.
It is also important to make sure you are treating the proper species. Glyphosate is labeled for dormant bermudagrass treatments, but not dormant zoysiagrass. Be sure you are treating bermudagrass. Do not treat tall fescue, perennial ryegrass, Kentucky bluegrass or any desirable cool-season turf with the dormant glyphosate application. The cool-season grasses will be active and will be damaged by the treatment, if not killed.

Additional points for dormant application:

- Always follow the labeled application rate
- Do not apply to saturated soil
- Do not apply if rainfall is projected in the next 24 hours
- Follow all safety precautions in the label
- Store unused chemicals properly
- Marker dyes are helpful in seeing where you have sprayed

For more information on herbicide applications to dormant bermudagrass can be found in OSU Extension Fact Sheet, **HLA-6421 Controlling Weeds in Home Lawns**.

Cooking with Barbara – Barbara Brown, Extension Food Specialist, introduces us to the Slow Food Movement.

Sincerely, Kim Rebek, *Oklahoma Gardening* Host

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Oklahoma Gardening Information Sheet (#3633)
OETA air date: February 13 and 14, 2010
OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

Safe Removal of Hazard Trees – In this segment Charlie English and his team from English Tree Service of Oklahoma City join us in the studio garden to tackle a large tree removal project. While Charlie and his team demonstrate professionals at work climbing and lowering the hazard tree limb by limb, Charlie joins Kim to discuss the potential hazards dead and damaged trees can pose in the landscape, when a hazard tree should be removed, and when a project is too large to do-it-yourself. Charlie recommends having a certified arborist assess the health of trees in your landscape at least once every two years. Large trees can become extremely dangerous as they die and fail. While homeowners are often hesitant to pay for tree removal, the potential monetary damage a fallen tree can create is well worth the expense.

The large hackberry (*Celtis occidentalis*) being removed from the studio gardens shelters a number of shade-loving trees and shrubs beneath its crown. We are taking steps to protect the plants from possible damage during the removal. Simple shelters built of scrap plywood, metal sheeting, and other materials on hand are used to protect our Japanese Maple (*Acer palmatum*) and Oak-leaf Hydrangea (*Hydrangea quercifolia*). Ladders and overturned garbage cans may be used to protect smaller shrubs. We must also consider long-term protection of the understory

plants, as they will now experience increased exposure to mid-day sun.

Many trees experience severe damage during wind and ice events throughout the winter months. If you have a tree that has been damaged, you can learn more about proper management in OSU Fact Sheet EPP-7323, "Managing Storm Damaged Trees."

Oklahoma Arborist Association – The arborists volunteering their time in the studio are all members of the Oklahoma Arborists Association. This group of tree care specialists is dedicated to continuing education, safety, and professionalism. President Bill Long joins us in the studio to tell about the organization and what it does for the state of Oklahoma.

Certified arborists are knowledgeable about the needs of trees and are trained and equipped to provide proper care. Hiring an arborist is a decision that should not be taken lightly. Proper tree care is an investment that can lead to substantial returns. Well-cared-for trees are attractive and can add considerable value to your property. Poorly maintained trees can be a significant liability. Pruning or removing trees, especially large trees, can be dangerous work. Tree work should be done only by those trained and equipped to work safely in trees. You can locate an International Society of Arboriculture (ISA) Certified Arborist in your area through the ISA website: http://isa-arbor.org/findArborist/findarborist.aspx.

We certainly appreciate the time and energy volunteered by our work crew today. Members of the Oklahoma Arborist Association volunteer their time to work on a service projects at different locations throughout the state each year. This February, you will see their handy work at the Cowboy and Western Hall of Fame and Museum in Oklahoma City.

Three-Cut Pruning with David Hillock – In this segment David shows us the three-cut pruning technique. If it becomes necessary to remove a large limb, do so by using this 3-step method. The first cut is an undercut made about a foot away from the trunk across the bottom of the limb. The second cut is made further out on the limb from the first cut. This cut is made all the way through the limb removing the larger portion of the limb. The third cut removes the remaining stub and is made near the base of the limb just outside the branch collar. If you do not follow these three steps, often even on smaller limbs, the weight of the limb will split the limb at the halfway point and rip or peel the bark, leaving a gaping wound. Pruning wounds should be kept as small as possible. Do not cut flush to the trunk, even in the absence of branch collars. Instead, remove limbs with bulges (branch collar) flush to the bulge, not flush with the trunk. Remove limbs without the swelling almost flush with the trunk. For more information, see Fact Sheet – HLA-6409 Pruning Ornamental Trees, Shrubs, and Vines.

Corrective Pruning for Ice-Damaged Trees – In this segment Kim visits with State Urban Forester Mark Bays in Oklahoma City to discuss pruning needs for trees that are damaged in winter ice storms. While initial pruning efforts removed major damage, trees will continue to require pruning to help direct new growth. Mark shares with us both proper and poor pruning techniques using a Lacebark Elm (*Ulmus parvifolia*) that has served as somewhat of a laboratory tree.

Sincerely, Kim Rebek, *Oklahoma Gardening* Host

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OETA air date: February 6 and 7, 2010
OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.
(Rerun of Show #3607, originally aired on August 15 and 16, 2009)

Lane Agricultural Center – In this episode we visit the Wes Watkins Agricultural Research and Extension Center in Lane to learn more about organic vegetable production. The extension center is housed in conjunction with the South Central Agricultural Research Center of the USDA-ARS, and together they comprise the Lane Agricultural Center. Lane houses a unique certified organic research field, where a team of scientists from both OSU-Extension and the USDA test a variety of practices for improving organic production in Oklahoma.

Dr. Warren Roberts, Associate Horticulture Professor, joins us to provide an overview of organic vegetable production and helps take some of the confusion out of the word "organic". He also discusses ways of building healthier soils, the foundation of organic production. We also take a look at some of the studies he is conducting with tomatoes. These include an experiment with canopy cover to manage foliar diseases, grafting heritage cultivars onto sturdy rootstocks, and testing different pruning practices to maximize yields. Some of his studies are in support of the Farm-to-School program, a program that connects growers to school cafeterias as a way to provide the children of Oklahoma with healthy, fresh food choices. One such study investigates planting dates for sweet corn, to better match harvest times with the return of children to class in fall. In the same plots, Dr. Roberts is also studying combinations of organic fertilizers to identify ideal delivery systems of important plant nutrients.

Dr. Angela Davis, Research Geneticist with the USDA-ARS, shows us a demonstration field that has been established to show growers the benefits and challenges of using different types of mulches in organic herb production. In addition to the benefits of mulches to plant culture, such as reduced soil erosion, better retention of soil moisture, and weed suppression, mulches also help to keep produce clean, a great benefit to market growers. In the demonstration, Dr. Davis compares plastic mulch to straw mulch, and bare soil.

Dr. Jim Shrefler, OSU Area Extension Specialist, shares an organic weed control study with us. Managing weeds organically is a great challenge to organic growers. While plastic mulches and cultivation are effective, they can be time consuming or expensive. Dr. Shrefler and collaborator Dr. Charles Webber of the USDA-ARS, are investigating a variety of substances for use as organic herbicides. While a number of substances are available commercially, few have been rigorously tested. The team is finding some success, but notes that timing is critical. As with any management strategy, control is much better when young weeds are targeted. Likewise, some weeds are much more easily managed with organic herbicides than others.

The work conducted in organic vegetable production supports a growing industry. Recent studies show that organic production is growing by more than 20% annually. OSU Cooperative Extension works to support all of Oklahoma's producers, both traditional and organic growers, through scientifically based research and outreach.

Sincerely,
Kim Rebek, *Oklahoma Gardening* Host