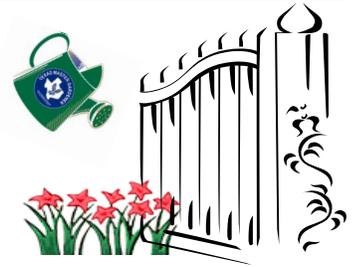




Ellis County Master Gardener's E-Gardening Newsletter



Volume V, Issue 10

Official E-letter of the Ellis County Master Gardeners Association, Waxahachie, Texas

November, 2011

Welcome to the Ellis County Master Gardener's **E-Gardening** Newsletter. The purpose of this newsletter is to give you a month-by-month agenda of what you should be doing with your landscape. We will feature horticultural articles that we hope you will find interesting, and important dates where you can find the Master Gardeners speaking, demonstrating, and passing out information relative to your garden. If you would like to receive this newsletter monthly via your email address, log onto our website www.ECMGA.com, click on subscribe, and it will be sent around the 1st of every month. Best of all; it's FREE! Melinda Kocian, editor/Susan Clark, co-editor

What's Happening in November

Light House for Learning

(With the Ellis County Master Gardeners)

For reservations, Call Melissa Cobb, (972) 923-4631

Monday, November 14, 5:30pm—8pm, Plant Propagation. Students will learn the basics of plant propagation and increasing and multiplying plants for the house, landscape, and garden. After a short presentation in the classroom, students will have hands-on experience in the WISD High School greenhouse. **Instructors:** Walt Friis and Maureen Nitkowski. Cost: \$12.00.



Texas Discover Gardens

3601 Martin Luther King Jr. Blvd., Dallas

TexasDiscoveryGardens.org

Saturday, November 5, 9am—11am, Fall Plant Safari. This pre-sale tour led by the man behind the plants, Director of Horticulture, Randy Johnson, shows you how to incorporate native and adapted plants into your landscape. The lobby opens at 8:45 am for admission sales. Admission: \$15; \$10 members.

Saturday, November 5, 11am—2 pm, Fall Plant Sale. The fall sale gets bigger and better each year! The sale offers many of the wonderful host and nectar plants from our spring sale, as well as hard-to-find native trees and shrubs.

Saturday, November 19, 11 am—12pm, Garden Walk: Seed Hunt. Discover how different seeds can look and why they're important to wildlife as you tour the winter garden. Appropriate for ages 8+. Included with admission (\$8/adults, \$6/seniors 60+, and \$4/children 3-11). Pay at the door.



Saturday, November 5, 7pm—10pm, Local Flavor Dinner. Garden Inspirations gathers food from local farmers and vendors within a 50 mile radius. Our wonderful friend and chef, Jeri McGinty then prepares a meal for our guests. In the gardens of Ted & Bea Rocha of Waxahachie, Texas. Cost: \$55. Visit www.gardeninspirations-tx.com to register.

Friday thru Sunday, November 11-13, 9am—5pm, Lavender Ridge Farms Fall Festival. It's time to celebrate the beginning of Fall with good food, great shopping,

(Continued on page 3)



Listen to KBEC.....

Saturday mornings at 9:00 a.m. on 1390 AM.

The Ellis County Master Gardeners have a 5-minute segment every week, offering you helpful information on what you need to be doing in your landscape, as well as "happenings" around the county. Be sure to listen in!

Melinda Kocian

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Apple Photo by Melinda Kocian

Freezing Fresh Fruit

By Melinda Kocian

6-8 cups fresh fruit

¼ to ½ cups sugar

1 T. Fruit Fresh per 4 cups fruit

Wash, peel and slice, chop or grate fresh fruit (depending on what you are going to make), into a large mixing bowl. Add sugar and Fruit Fresh (keeps fruit from turning brown); mix well. More sugar may be necessary for your specific recipe.

Put fruit in a resealable freezer bag. For easier storing, lay sealed bag flat on a cookie sheet, place in freezer. This works especially well if you are freezing a lot of fruit; several bags will fit on one cookie sheet. Once frozen, the bags will stack well.

Facts About Peaches

Peach trees were first introduced to the colonial settlements along the United States Gulf Coast by the French explorers in 1562. Peaches provide a source of vitamins A and E, niacin, riboflavin, and thiamine. They are also a good source of minerals; including potassium, calcium, iron, and magnesium.

Peach Photo by Melinda Kocian



It's November...What Needs To Be Done?

Planting

- ✿ This is the ideal time to plant trees and shrubs. They will use less water to establish. Consider the size of the plant, especially trees, at maturity. Allow plenty of distance from property lines and structures.
- ✿ Dig a hole two to four times the diameter and one-inch shallower than the root ball. It is not necessary to amend the soil in the planting hole. Back fill with the existing soil only.
- ✿ Plant the spring-flowering bulbs that you ordered soon after they arrive. Wait until December to plant tulips and hyacinths; they need six to eight weeks of chilling time.

Fertilizing and Pruning

- ✿ Feed vegetables that you are growing now.
- ✿ Feed winter annuals growing in the ground with a regular lawn fertilizer. Use a water-soluble plant food for containers each time you water.

Garden Watch

- ✿ Caterpillars like to feast on some cool-season annuals. If they are a problem, pick them off by hand and move them to another location. A spray containing Bt (*Bacillus thuringiensis*) can be used; however, it kills all caterpillars including butterfly caterpillars.
- ✿ Check potted plants growing outside for insects and spray, if needed, before bringing them indoors.
- ✿ Look out for scale on cast iron plants and others. Use a horticultural oil to control.

Odds and Ends

- ✿ Use a mower with an attached bag to collect leaves from the lawn, then empty the bagged leaves into the compost pile.
- ✿ Order seeds you intend to plant later to obtain the varieties you want.
- ✿ Sharpen pruning shears and any other tools as needed.
- ✿ Remove the tops of herbaceous perennials after they have died back.

Featured Texas Wild Flower of the Month

Submitted by Melinda Kocian
Ellis County Master Gardener



Greenthread - Sunflower Family (Asteraceae)

Thelesperma filifolium (Hook.) Gray

Size: 8-30 inches

Blooms: February-December, Perennial

There are at least eight species of *Thelesperma* in Texas. All species have opposite leaves, which are divided once, twice, or sometimes thrice, into segments that are ultimately linear and threadlike. Greenthread has eight yellow, three-lobed, ray flowers around a yellow or brown disk. Occasionally, there may be a diffuse brown or reddish brown

color near the base of the rays, but never in a definite spot. Indians made a tea from this plant, as well as other *Thelesperma* species, hence they are all sometimes called "Navajo tea." Some people prefer this tea to commercial varieties.

Thelesperma is found in dry soils in pastures, prairies, vacant lots, and on roadsides.



Save The Date!
Saturday, March 31, 2012

What's Happening in November (Continued from page 1)

and pumpkins to buy. Vendors will have antiques, art, handcrafted items, and more. Free admission. Free parking. Located at 2391 County Road 178, Gainesville. Rain or shine! Visit <http://www.lavenderridgefarms.com/> or call (940) 665-6938 for more info.

Now through November 23, Autumn at the Arboretum. The Dallas Arboretum grounds are filled with 150,000 blooming fall flowers and foliage plantings plus more than 50,000 pumpkins, squash and gourds. For more info, visit <http://www.dallasarboretum.org/>.

Monday, November 28, 7pm, Indian Trail Master Naturalists Program. This month's program, Plant Marauders, presented by Marilyn Sallee, Texas Master Naturalist, will help us identify invasive plants that can have a dark, aggressive side, escaping from our gardens to run amuck in parks and native areas. She will offer some strategies to combat them. The program is free and follows the 6pm Master Naturalist meeting that is also open to the public. It takes place in the banquet hall of the First United Methodist Church, 505 West Marvin Ave, Waxahachie. For more info, visit <http://txmn.org/indiantrail/>

Saturday, November 19, 8am—2pm, Cedar Ridge Preserve, Conservation in Action Workday. Work in the butterfly garden and on the trails. Water and snacks provided. For info, call Jim Varnum at (214) 543-2055 or email jevarnum@aol.com. Located at 7171 Mountain Creek Parkway, Dallas.

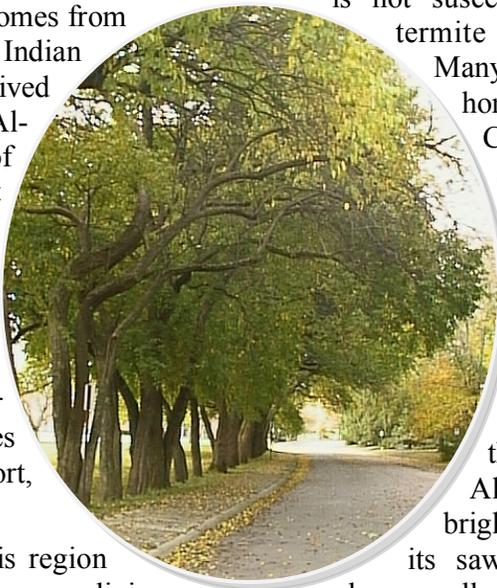
Herb of the Month

By Arlene Hamilton
Ellis County Master Gardener



November Herb of the Month – Osage Orange

Osage Orange (*Maclura pomifera*) also known as Hedge, Hedge Apple, and Bois d'arc is a very beneficial plant, which is the broad definition of an herb. Osage Orange trees are common throughout the Midwest, but were originally found only along the Red River valley of southern Oklahoma and northern Texas. The tree's name comes from the Osage Indian tribe, which lived in the area. Also, the skin of the ripe fruit has a slight orange-peel smell. The trees are easily recognized by their glossy leaves and their short, strong thorns.



Settlers to this region planted the trees as living fences along the boundaries of their homesteads and pastures. Before the invention of barbed wire in the 1880's, many thousands of miles of young hedge trees were planted close together in a line. The trees

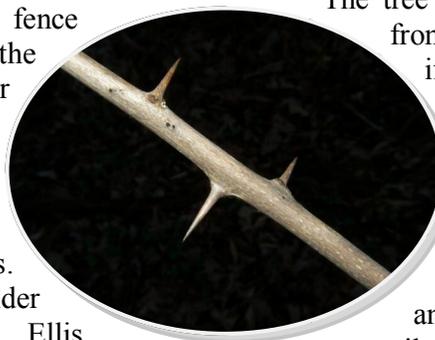
were pruned aggressively to promote bushy growth. "Horse high, bull strong and hog tight" was the criteria for a good hedge made with Osage Orange. After the invention of barbed wire, the hedge fence became obsolete, but the tree was still useful for fence posts. The wood is so strong and dense that it will not rot and is not susceptible to termite attacks.

Many of the older homes in Ellis County (ours included) are supported on piers of century old wood. The French word Bois d'arc, pronounced Bodark, comes from the Native Americans use of the wood to make their bows and arrows. Also, the wood is a bright golden yellow and its sawdust makes a clean lemon yellow dye. Many a prairie woman's dress was dyed with this bright, long lasting color.

The fruit of the Osage Orange is a large, green, wrinkled ball up to six inches in diameter, easily visible in the trees after the leaves have fallen. They have a sticky, white juice in them.

Chop one in half and you will find a pithy core filled with up to 200 seeds. The seeds are edible by people, but must be picked out

of the pulp and removed from a slimy husk. Generally, they are best left to the squirrels, which find them to be a great treat.



The tree is easily grown from the seeds, but if you are considering growing them be mindful that they spread readily, pruning is difficult, and the thorns can easily cause a flat tire, even on the thick tread of a tractor tire.

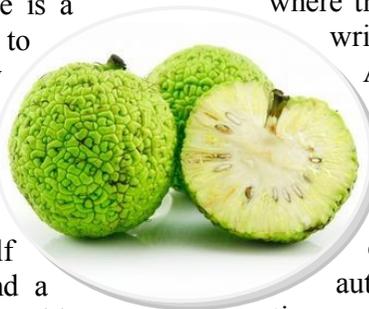
Many people believe the fruit will keep insects out of the house. It was a common practice to place them around the base of the house, or roll them under the floor to discourage crickets and roaches. Research at Iowa State University has shown that there are chemical compounds in the fruit that repel cockroaches.

The trees are common throughout Ellis County. Take a walk along Waxahachie's Hike and Bike Trail and you will find a number of places

where the large, green, wrinkled Hedge Apples have landed. Take a few home, and add the striking green orb to the other autumn decorations greeting visitors to your front porch.



Orange Osage



FALLING LEAVES - Nature's Fertilizer

By: Shirley Campbell, Ellis County Master Gardener and Rainwater Harvesting Specialist



If you're not wanting to have a compost pile in your backyard, then what can you do with all those falling leaves that would end up being dumped in the landfills?

Fallen tree leaves represent a valuable natural resource, providing organic matter and nutrients for your landscape. Fallen leaves contain 50 to 80 percent of the nutrients a plant extracts from the soil and air during the growing season. Your landscape can benefit from these nutrients. In essence, you are throwing away fertilizer when you burn or toss fallen leaves. When leaves fall to the ground, and start decomposing, that is when all the stored nutrition gets released.

Actually the most environmentally sensible thing to do is leave them where they fall. Dead leaves from your native trees and shrubs make excellent mulch. And they're free! Fallen leaves protect fragile roots (which are usually near the surface) from the cold. Don't ever rake your yard until it's leaf-free, leaving bare ground exposed to the elements and any weed seed that flies by.

Leaves left on the ground to decompose also attract insect-eating songbirds like thrashers, warblers, and wrens. The soil is more nutritious, so you'll probably see robins earlier in the spring, as well as, other birds seeking nest-building material.

Here are five options for managing leaves and using them in your landscape and garden.

***Mowing.** A light covering of leaves on the lawn can be mowed and simply left in place. This option is most effective when a mulching mower is used. During times of light leaf drop or if there are only a few small trees in your landscape, this option is probably the most efficient and easiest way to manage fallen leaves. The only drawback to this practice is large leaves or

too many leaves can form a mat and smother plants, cutting them off completely from sunlight, air, or water. This may require running your lawnmower over the fallen leaves several times.

***Mulching.** Mulching is a simple and effective way to recycle leaves and improve your landscape. Mulches carpet the soil and reduce moisture evaporation, inhibit weed growth, moderate soil temperatures, keep soils from eroding, and prevent soil compaction. As in the forest, the leaves serving as a mulch decompose slowly and release their nutrients for use by your landscape plants. Fallen leaves can be used as mulch in vegetable gardens, in flower and shrub beds, underneath hedge rows, in natural areas, and around trees. Using a lawn mower with a bagging attachment provides a fast way to shred and collect the leaves. Fallen leaves that have been mowed or shredded decompose faster and are much more likely to remain in place than unshredded leaves.

***Using the vegetable garden.** In addition to mulching the garden rows, place a thick layer of leaves in the furrows between the rows to function as a mulch, an all-weather walkway, and a compost-in-place location. For the next gardening season, move the row over into the furrow. The decomposed leaves from last year can be tilled into the soil to create the new rows. Repeating this process year after year will produce a fabulous, highly organic garden soil.

***Tilling into the soil.** Fallen leaves can be collected and tilled directly into the soil for shrub plantings, flower beds, and vegetable gardens. This is best done in the fall allowing sufficient time for the leaves to decompose prior to spring planting. Adding small amounts of nitrogen fertilizer or manure to the soil will speed up decomposition. A six to eight inch layer of

leaves turned into a heavy clay soil will improve aeration and drainage. The same amount added to a light, sandy soil will improve water- and nutrient-holding capacity.

***Bag Composting.** Bag composting is one of the easiest composting methods. However, the quality of the compost produced may not be as high as that made by more traditional methods. To produce compost in a bag, simply collect the leaves and place them in heavy-duty, plastic trash bags. Shredded leaves work best. Into each bag full of leaves, put one to two shovelfuls of garden soil and either two shovelfuls of manure or about one-half cup of a high nitrogen fertilizer. Apply enough water to thoroughly moisten the leaves. Punch 10 to 15 holes in the plastic bag to allow for air circulation. Turn the bag once or twice and add water, if needed, to keep the leaves moist. Store in an out-of-sight place. After about two weeks, open the bags to check on the composting process. Under most circumstances, the compost will be ready for use in about six to eight weeks.

What you see on the ground is a very bountiful, nutritious gift to you and your landscape—a gift that shouldn't be thrown away, pushed aside, or sent to the landfill.

"Don't Bag It—Leaf Management Plan" is a publication from A&M available at aggie-horticulture.tamu.edu.



Watch for Armyworms in Pastures and Lawns

From the Texas AgriLife Extension

Scattered outbreaks of fall armyworm have been reported infesting Bermuda grass pastures, wheat, and lawns in north central Texas. The fall armyworm is often most abundant during August through early November in our area. When present in large numbers, caterpillars can consume a pasture, crop, or lawn in a short period of time.

Eggs. Eggs are laid in masses of up to 50 eggs on the grass leaves and are difficult to find. The eggs are covered with the grey scales from the moths body, giving the egg mass a fuzzy appearance. Eggs hatch in two to three days.

Caterpillar. Fall armyworms are green, brown, or black. A distinct white line between the eyes forms an inverted Y pattern on the face. There are four black spots aligned in a square on the top of the eighth segment near the back end of the caterpillar. Armyworms are very small at first, because of little plant damage and as a result infestations often go unnoticed. Larvae feed for two to three weeks and full grown larvae reach about 1 to 1.5 inches long. Armyworms consume 80% of their total food intake during the last few days of development. Given their immense appetite, great numbers, and marching ability, armyworms can damage entire fields or pastures in a few days. Once the armyworm completes feeding, it tunnels into the soil about an inch and enters the pupa stage.

Pupa. The full grown armyworm tunnels into the soil and transforms to the pupae, an inactive, non-feeding stage. In seven to ten days, the moth emerges from the pupa and repeats the life cycle.

Moth. The fall armyworm moth has a

wingspan of about one inch. The front pair of wings is dark gray with an irregular pattern of light and dark areas. Moths are active at night and common around lights at night. A single female can deposit up to 2,000 eggs. Development from egg to adult requires about four weeks during the summer and is longer during cool weather. There are several generations a year. Development ends with cold weather in November.

Management

It is important to detect fall armyworm infestations early before they cause economic damage. Fall armyworm larvae feed primarily during the night and during cloudy weather. During the day, look for armyworms under loose soil and fallen leaves on the ground. The presence of chewed leaves can indicate the presence of armyworms. Small larvae chew the green layer from the leaves and leave a clearing or window pane effect and consume only a small amount of foliage. Consequently, infestations may go unnoticed unless the field is closely inspected. Once larvae are greater than 3/4 inch, the quantity of leaves they eat increases dramatically. During the final two to three days of feeding, armyworms consume 80% of the total foliage consumed during their entire development. For this reason, extensive feeding damage can occur in a few days. The density of armyworms sufficient to justify insecticide treatment will depend on the stage of crop growth and value of the crop. Seedling plants can tolerate fewer armyworms than established plants. Infestations of two to three armyworms per

square foot may justify treatment. Hot, dry weather and natural enemies limit armyworm populations.

Labeled Insecticides for Armyworm Control in Pastures and Hayfields.

Malathion_57% and Malathion ULV. Zero days to harvest or grazing.

Mustang Max (9.6% zeta-cypermethrin). Applications may be made up to zero days for forage and hay, seven days for straw and seed screenings. Labeled for a large number of insect pests, including armyworms and grasshoppers.

Warrior A seven day waiting period should be observed before grazing.

Tracer Do not allow cattle to graze until spray has dried. Do not harvest hay or fodder for three days after treatment. There is no pre-harvest interval for forage. Treat when eggs hatch or when larvae are small. Use higher rates for larger larvae.

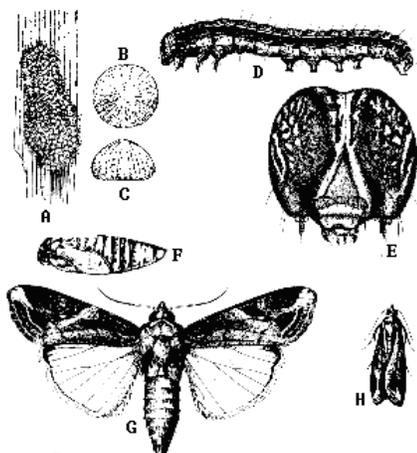
Sevin 4F, Sevin XLR, Sevin 80S, Generic Carbaryl When applied to pastures, there is a 14 day waiting period before grazing/harvest.

Dimilin 2L Wait one day until harvest. Label does not list a restriction on grazing. To be effective, Dimilin must be applied before larvae reach an inch or longer. Will not control larger larvae. Provides residual control for up to two to three weeks, as long as forage is not removed from field. Dimilin acts as an insect growth regulator.

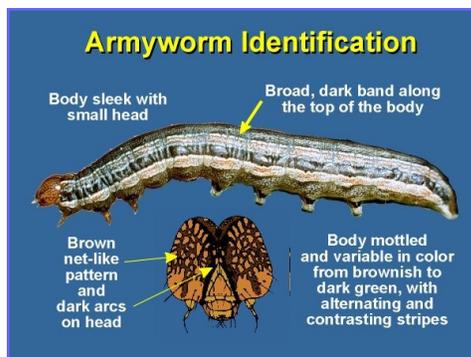
Intrepid 2F Do not harvest hay within seven days of application. There is no pre-harvest interval for forage.

Begin applications when first signs of feeding damage appear. Use higher rates for heavier infestations. Intrepid is an insect growth regulator.

Lannate Bermuda grass only. Do not apply within seven days of feeding forage



Fall armyworm. A, Egg mass. B, Egg (top). C, Egg (side). D, Larva. E, Larval head capsule. F, Pupa. G-H, Adults.





Landscape Gardening

From: Gail Haynes, Ellis County Master Gardener

Ellis County Master Gardeners have a website at www.ecmga.com. Check this website for information on gardening in Ellis County or access other websites including the Texas A&M Horticulture website. Questions for Master Gardeners will be answered with a return email or telephone call if you leave a message at (972) 825-5175.

Salvia 'Summer Jewel Red'—a new variety from All-America Selections trials.

Salvia 'Summer Jewel Red' is a 2011 winner in the All-America Selections trials. It may become an excellent choice for Texas' gardens. This hot-colored annual is a colorful low-maintenance addition to containers, mixed beds, and borders.

Here's what the All-America folks have to say about 'Summer Jewel Red': This *Salvia coccinea* was consistently rated 'superior' or 'above average' by the AAS judges because of its early and generous flower blossoms, continuing from spring to autumn.

Additionally, each dwarf and densely branching plant remains a tidy 20 inches tall, even at full maturity. The bright red flower spikes are covered with half inch blooms making it perfect for the bird lover's garden where the bright red color acts as a magnet for hummingbirds. As an added bonus, goldfinches swarm the plant for seeds. Even the leaves add beauty with their finer-textured, dark-green color.

'Summer Jewel Red', just 50 days from sowing to first flower, is approximately two weeks earlier than comparisons. Expect long season performance and superior holding ability in both wind and rain.



This annual is ideal for full sun containers, mixed beds, and borders where uniformity is desired. Bred by Takii & Co, Ltd.

Garden Checklist for November

☼ Roses often put on some of their best displays in the November-December period of cooler weather. Encourage them at this time with plenty of water during dry spells and good cultivation, finishing with a topping of fresh mulch to save moisture and ameliorate temperature changes. Rose 'Perle d'Or' is a charming rose for Texas gardens.

☼ Take advantage of good weather to prepare garden beds for spring planting. Work in any needed organic matter, and have beds ready to plant.

☼ Prepare beds and individual holes for rose planting in January and February. Use composted manure, pine bark, and similar materials mixed with existing soil.

☼ Remember to give your landscape a steady amount of water, through irrigation or by hand, if there is not adequate rain. This will protect your lawn from excessive winter damage.

☼ Bring in late-blooming plants such as decorative kalanchoes or Christmas cactus so they may finish flowering in the warmth of the house.

☼ As soon as the November weather appears to be settled, it is time to select and

plant such annuals as pansies, violas, and ornamental cabbages and kale.

☼ Plan now for your spring flowering season with a mixture of annuals and perennials.

☼ Reduce the fertilization of indoor plants from late October to mid-March. An exception would be plants in an atrium or a well lighted window.

☼ November through February is a good time to plant trees and shrubs.

☼ Place orders for seeds this month so you will have them available when you are ready to plant. By ordering early, you will be more certain of getting the varieties you want. In addition to ordering seeds that you are already familiar with, try a few new kinds each year to broaden your garden contents.

☼ Don't forget tulip and hyacinth bulbs in the refrigerator. They can be planted any time in December if they have received 60 or more days of chilling.

From Dr. William C. Welch, Professor and Landscape Horticulturist Texas AgriLife Extension Service, College Station, TX



(Continued from page 6)

or allowing livestock to graze. Do not apply within three days of cutting for hay. Lannate is a highly toxic POISON and all label precautions must be carefully followed. A restricted use pesticide.

Labeled Insecticides for Armyworm Control in Wheat and Small Grains include: Baythroid, carbaryl, Lannate, Lorsban, Mustang Max, methyl parathion, Proxix and Tracer. Refer to label for re-

strictions on grazing and harvesting treated crops. Always read and follow pesticide label directions.

Insecticides for Armyworm Control in Lawns: Insecticide labeled in lawns and turf include halofenozide (Mach® 2), bifenthrin (Talstar®), cyfluthrin (Tempo®, Bayer Advanced®), carbaryl (Sevin®) permethrin (multiple brands) and spinosad (Conserve® and others).

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no endorsement by the Texas AgriLIFE Extension Service is implied. Educational programs conducted by the Texas AgriLIFE Extension Service serve all people regardless of socioeconomic level, race, color, sex, religion, disability, or national origin.

Vegetable Gardeners Monthly

With Rick Daniel

Ellis County Master Gardener/Vegetable Gardening Specialist



Now is the time to begin preparations to have a successful spring garden. If you don't plan to grow a winter garden, you can plant cover crops such as clover, hairy vetch, or winter rye to protect the garden soil from erosion. Or, you can use a good cover of mulch to help prevent erosion and to retain those earth worms in your garden through the winter. Keep an eye out for the first freeze date; usually around November 15th, and harvest any tomatoes, squash, peppers, okra, etc. that are still producing before the freeze.

When finished with all gardening power tools for the winter, run them until there is no more gasoline and put them away empty. I like to take my power tools in for maintenance during the winter and avoid the spring rush. You usually get them back in a few days during the winter, where it might be a few weeks if you wait until the spring.

If you have questions this article doesn't address, give us a call at (972) 825-5175 or contact us via the web at www.ecmga.com.

GREENS (Lettuce and Spinach)

LETTUCE



Planting dates: For seeds in spring, plant two to four weeks before last average frost (2/7 to 3/15). For fall, eight to ten weeks before first average frost (8/10 to 9/30).

Planting methods: Seeds need light to germinate, so don't cover with soil. Seeds can't emerge through even the lightest crust. Seeds will germinate in temps ranging from 35-85 degrees. Be sure beds are well pulverized and very moist before planting and you shouldn't have to water again until the seedlings have emerged from the soil. Keep the soil from crusting, which will keep the plants from emerging. Thin to two inches apart when they have two to three leaves and later to eight to ten inches.

Varieties: **Leaf**—Salad Bowl, Black Seeded Simpson, Red Sails **Cos or Romaine**—Paris Island Cos

and Romaine

Culture: Thrives in healthy soil. Use lots of compost and organic fertilizers. Soil moisture is important. Use frequent, light watering. Avoid having lettuce mature in hot weather to avoid bitterness and bolting.

Fertilizer: Medium-heavy feeder. Use starter solution on transplants and side dress with nitrogen about two weeks after planting and again about three to four weeks later.

Harvest: Harvest small thinning plants anytime. Harvest leaves before they mature. Lettuce can be cut and allowed to grow again.

SPINACH

Planting dates: For spring gardens, seed four to six weeks before last average frost (1/10 to 3/15), or as soon as the soil has reached 50 degrees. For fall, plant 9/10 to 10/31. Spinach seeds germinate poorly in warm soils and will go dormant if soil temp exceeds 77 degrees.

Planting method: Broadcast the seed or plant in rows four to six inches apart and 1/8 to 3/4 inches deep. Soaking the seeds in cold water in your refrigerator for 24 to 48 hours is helpful. Tamp the soil lightly after installing the seeds. Thin plants to four to six inches apart about two weeks after emergence and then water lightly.

Varieties: For late winter and early spring use, Bloombdale, Longstanding, or America. For fall planting, use Melody, Coho, Iron Duke, Hybrid 7, and Dixie Market.

Culture: Spinach is a cool season crop and should be planted to allow it to mature during cool or even cold weather. Spinach likes temperatures between 50-60 degrees. Prepare beds with compost. Give spinach room, crowded conditions cause stemming and poor quality plants. Mulch is very important. Be sure beds have adequate moisture before planting and avoid watering again until after seeds have germinated, as this can lead to seedling diseases.

Fertilizer: Fertilize the soil at planting time with organic fertilizer and again after the first major harvest of leaves. About two weeks after thinning, apply a light application of nitrogen fertilizer.

Harvest: Harvest foliage anytime the leaves are large enough to use. Small leaves are more tender. Crinkle leaf types are best for fresh use.





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