COLD FRAMES AND HOT BEDS FOR AN EARLY START

A coldframe is a protected plant bed. It has no artificial heat added. The temperature difference between the inside and outside of the frame is generally not more than 5 to 10 degrees. A mat or blanket may be placed over the frame on cold nights to conserve heat, but this increases temperature by only a few degrees. There are times, however, when a few degrees can be very important. A coldframe is used to provide shelter for tender perennials, to "harden off" seedling plants or to start cold-tolerant plants such as pansies, cabbage or lettuce earlier than they can be started in open soil. It may also be used to overwinter summer-rooted cuttings of woody plants.

A hotbed basically is a heated coldframe. In many ways it is a miniature greenhouse, providing the same benefits with limited space at minimal expense. It is a means for extending the growing season. It is most often used to give an early start to warm-season vegetables such as tomato, pepper or melon. It may also be used to root cuttings of some woody plants.

Hotbeds and coldframes should have a southern exposure to receive the maximum amount of sunlight. To reduce the cost of heating, use a north or northwest windbreak. This may be provided by a building, bales of hay or straw, tight board fence or evergreen hedge. Bundles or bales of straw could be used on the north for temporary windbreak. The site should have good natural drainage so there will not be excess moisture beneath the bed. If the hotbed is below ground level, excellent drainage is essential to keep water from entering or accumulating during heavy rains. If natural drainage is not good, use drainage tile or a thick layer of coarse gravel. If this is not practical, beds may also be built above ground level for proper drainage. However, there will be greater heat loss. Locate beds near the house where they can be given frequent attention. A convenient water supply should be available. If the structure is to be heated electrically, have outlets close by.

Source: http://extension.missouri.edu/p/g6965
SPRING FORWARD GARDENING WORKSHOP APRIL 5 IN MOBERLY

The Spring Forward Gardening workshop will be held this year at Moberly High School on April 5 from 9:30-3:30. Registration check-in will be from 9-9:30 with an opportunity to visit display tables with information on rain gardens/rain barrels, lasagna gardening, herbs, beekeeping, square foot gardening and hummingbirds and butterflies. The first session will begin at 9:30.

There will be four classes per session to choose from. Class topics throughout the day include: Utilizing Smartphones and Tablets for Gardening, Growing Fruit Trees In The Backyard, Growing Small Fruits, Gain With No Pain, Spotted Wing Drosophila Update, Gardening to Attract Birds and Butterflies, Growing Heirloom Plants, Food Gardening For Your Health and Pocketbook, Season Extenders, Landscaping Tips and Garden Panel.

Cost for the workshop is $20 and includes a boxed lunch (lunchmeat or vegetarian sandwich, chips, fruit, cookie and bottle of water). Registration is required by March 31. For a registration form contact the Adair County Extension Center at 660-665-9866 or download it at http://extension.missouri.edu/adair.

YOUR HELP IS NEEDED

Last year I wrote articles and presented programs on growing and eating microgreens. I would like to know how many of you grew or ate microgreens since reading an article or attending a program either by myself or my colleague Jennifer Mayfield. If you have grown and/or eaten microgreens, I would like you to email or call me and let me know your experiences with them. Which ones did you try? Did you like them? What was your favorite. Do you plan to grow them this year?

Also, if you learned something new or tried something you’ve read about in the Garden Talk newsletter in the past year, I would like to hear about that also. Email me, schutterjl@missouri.edu or call my office (660-665-9866) and leave your information. I would appreciate responses by March 31. Thanks.

TOMATO GRAFTING

We’ve all heard about grafted fruit trees, but have you heard about grafted tomatoes? Grafted tomato transplants are able to combine the high-quality fruit of heirloom cultivars with the disease resistance, stress tolerance, and vigor of modern rootstock cultivars. Researchers around the world have demonstrated that grafting can be effective against a variety of soilborne fungal, bacterial, viral, and nematode diseases. It has been used to eliminate verticillium and fusarium wilt in tomato and cucurbit production systems in Japan, Korea, and Greece. Grafting has been highly effective at producing plants that can overcome abiotic stressors, the environmental stressors that can lead to decreased yields. Grafted plants also have shown effective tolerance to soil temperature extremes, and grafting with certain rootstocks can allow the growing season to be extended in either direction.

The use of grafted vegetables is associated with increased resistance to diseases, abiotic stressors, or both. But grafting can also increase yields without the presence of these stressors. For example, yields increased by as much as 106 percent with the use of certain rootstocks for watermelon production in Australia. Some rootstock varieties have been bred specifically to be used as rootstocks, such as the Maxifort rootstock used in greenhouse tomato production systems. Use of vigorous rootstock varieties can increase water and nutrient uptake in grafted plants. Many growers worldwide are utilizing these rootstocks to increase fruit yields, even where little disease pressure is evident.

Although grafting is a simple process, it requires careful attention to rootstock selection, seeding dates, healing, and planting in the field. Any cultivar that provides the desired fruit characteristics can be used to produce scions for grafting. For heirloom tomato growers, popular scion choices include German Johnson, Cherokee Purple, and Kellogg’s Breakfast.

Source: http://www4.ncsu.edu/~clrivard/TubeGraftingTechnique.pdf
MISSOURI CENTURY FARM PROGRAM SEEKS APPLICANTS

Owners of Missouri farms that have been owned by the same family since Dec. 31, 1914, can apply for recognition by the Missouri Century Farm program. To qualify, farms must meet the following guidelines:

- The same family must have owned the farm for 100 consecutive years.
- The line of ownership from the original settler or buyer may be through children, grandchildren, siblings, and nephews or nieces, including through marriage or adoption.
- The farm must be at least 40 acres of the original land acquisition and make a financial contribution to the overall farm income.

For more information and an application contact your county Extension center or visit the program website at [http://extension.missouri.edu/centuryfarm](http://extension.missouri.edu/centuryfarm).
EMERALD ASH BORER, SHOULD YOU BE CONCERNED?

Emerald Ash Borer (EAB) is an exotic, invasive, wood-boring insect that infests and kills native North American ash trees, both in forests and landscape plantings. Just like chestnut blight and Dutch elm disease before it, EAB is capable of eliminating an entire tree species from forests and cities. This makes it one of the most serious environmental threats now facing North American forests.

This beetle is native to eastern Russia and northeastern Asia, where it feeds on several species of ash. It was probably imported into Michigan via infested ash crating or pallets at least 15 to 20 years ago. EAB was unknown in North America until June 2002, when it was discovered killing ash trees in southeast Michigan and neighboring Windsor, Ontario. It has since spread to 20 states and the Province of Quebec and has killed tens of millions of ash trees.

In July 2008, a small EAB infestation was discovered at a Wappapello Lake campground in Missouri. Since then it has been found in the Kansas City area. It has also been found in Fairfield, Iowa. No one knows for certain how or when the emerald ash borer came into Missouri, though it’s believed the insect hitch-hiked its way into the state in a load of firewood carried by a traveler from a state to the east. Larvae and pupae can hide beneath the bark of cut wood and then escape as adult beetles after being transported many miles. Many of the places where it has been found are parks and campgrounds. People unknowingly carried EAB with them when they brought firewood on a picnic or camping trip. Invasive forest insects and diseases threaten Missouri forests and could kill millions of trees.

Your report can be very important in helping us track the occurrence of these pests, preventing or slowing additional spread to other trees. If you believe your tree has EAB, please report it:

- Fill out an online report at http://extension.missouri.edu/emeraldashborer/
- Call the Missouri Department of Conservation toll-free at 1-866-716-9974.
- Send photos if possible. Take photographs of the entire tree, a close-up of leaves, and any other symptoms. You can email digital photos and contact information to forest.health@mdc.mo.gov

If you have ash trees, learn more before you act. The potential threat of EAB is real. However, acting without understanding the specific threat to your trees, regulations and quarantines, and your options could cause the unnecessary loss of treasured shade trees. Until EAB has been confirmed in your county, or at least 15 miles from your home, then no action is necessary.

For more information see http://extension.missouri.edu/emeraldashborer/ or http://mdc.mo.gov/ and type emerald ash borer in the search box, or call me and I will mail you information

Source: University of Missouri Extension and Missouri Department of Conservation.
2014 ALL-AMERICA SELECTION VEGETABLE WINNERS

All-America Selections (AAS) judges have again finished a rigorous year of trialng and now the AAS Board of Directors is pleased to announce the newest AAS Winners. Winners must represent either a totally new variety, or one improved in some way over an existing one. There are five winning vegetables for 2014, including a bean, pepper, and two tomatoes.

‘Mascotte’ bean is a good example of recent breeding of vegetables for patio containers and smaller-space gardens, as well as improved disease resistance. It is a bush type under two feet tall, with many long, slender pods held above the leaves for easy picking. Fruit are produced about 50 days from sowing.

‘Mama Mia Giallo’ is a sweet Italian type pepper with judges declaring this a “great yellow pepper” because of the huge yield, uniform shape and smooth skin of the long tapered fruits and the beautiful yellow/gold color when mature. ‘Mama Mia Giallo’ has a nice sweet flavor that is excellent either fresh or roasted. For gardeners eager for their harvest, this pepper offers ripe fruits 85 days after transplanting. An added bonus is the somewhat compact 24" plant that takes up less space and offers disease tolerance to Tobacco mosaic virus.

‘Chef’s Choice Orange’ is a hybrid derived from the popular heirloom ‘Amana Orange’ which matures late in the season. It has the wonderful flavor of an orange heirloom tomato in only 75 days from transplant. Its disease resistance is an added bonus. ‘Chef’s Choice Orange’ has a wonderful bright, almost neon, internal color and superior flesh taste and texture for an early maturing orange tomato. Excellent for soups and sauces because the intense color does not fade or discolor when cooked. Fruit average about three-quarters of a pound, but can be larger in a good season.

‘Fantastico’ F1 is a grape tomato and a must for any market grower or home gardener looking for an early-maturing, high-yielding grape tomato with built-in Late Blight tolerance. Bred for small gardens, determinate ‘Fantastico’ will work great in hanging baskets, container gardens as well as in small gardens. Long clusters of sweet tasty fruits are held toward the outside of the plant, making them very easy to harvest but if you let them go a few days past peak, these little beauties resist cracking better than the comparisons used in the AAS trials. 50 days to harvest from transplanting, or 90 days from sowing seeds.

Regional winners were also selected. ‘Pick a Bushel’ cucumber was a Midwest winner. This cucumber is compact and spreads to only about two feet and would be a good choice where space is limited, or in large containers. Fruit can be harvested early for pickles, or when mature at about 6-inches long for slicing.

Source: More All-America Selections, both flowers and vegetables, can be found on their website at www.all-americaselections.org.

LEWIS COUNTY LADY LANDOWNER WORKSHOP TO BE HELD MARCH 26

The Lewis County Lady Landowner workshop will be held March 26 from 10-3:30 at the First United Methodist Church in Monticello. Topics to be covered include cover crops and soil health, Farm Service agency programs; money habits (this program assists participants in discovering how their habits and attitudes about money influence their daily money decisions, support or sabotage their financial goals, relationships and their life); forestry, fish and wildlife management; leases, cash rental rates and land trends; flower garden favorites (annual and perennial flowers will be discussed and why they are favorites in the garden); and the spotted wing drosophila (SWD) fly (SWD is an invasive, destructive pest of soft-fleshed fruits and cracked tomatoes, learn how it will affect your crops).

The workshop is open to all interested persons. There is no cost to attend and lunch will be provided. Please call the Lewis County Extension Center at 573-767-5273 to register. Pre-registration is required by March 21.
GARDENING TIPS FOR MARCH

VEGETABLES ALL MONTH:
• Fertilize the garden as the soil is being prepared for planting. Unless directed otherwise by a soil test, 1-2 pounds of 12-12-12 or an equivalent fertilizer per 100 square feet is usually sufficient.
• Cultivate weeds and remove old, dead stalks of last year's growth from the asparagus bed before new spears emerge.
• Delay planting if the garden soil is too wet.
• Asparagus and rhubarb roots should be planted as soon as the ground can be worked.
• Plant peas, lettuce, radishes, mustard greens, turnips, Irish potatoes, spinach, and onions (seeds and sets), beets, carrots, parsley, and parsnip seeds outdoors. Set out broccoli, cabbage, Brussels sprouts, Chinese cabbage, and cauliflower transplants into the garden.
• Start seeds of tomatoes, peppers, and eggplants indoors.

ORNAMENTALS:
• To control Iris borer, clean up and destroy old foliage before new growth begins.
• Fertilize bulbs with a “bulb booster” formulation broadcast over the planting beds.
• Loosen winter mulches from perennials cautiously.
• Dormant mail order plants should be unwrapped immediately. Keep roots from drying out.
• Trees, shrubs, and perennials may be planted as soon as they become available at local nurseries.
• Seeds of hardy annuals such as larkspur, bachelor’s buttons, Shirley and California poppies should be direct sown in the garden now.
• Heavy pruning of trees should be complete before growth occurs. Trees should not be pruned while the new leaves are growing.
• Summer and fall blooming perennials should be divided in spring.
• Seeds of hardy annuals such as larkspur, bachelor's buttons, Shirley and California poppies should be direct sown in the garden now.
• Start seeds of tomatoes, peppers, and eggplants indoors.

FRUITS:
• Gradually remove mulch from strawberries as the weather warms.
• Continue pruning grapes. Bleeding causes no injury to the vines.
• Continue pruning apple trees. Burn or destroy all prunings to minimize insect or disease occurrence.
• Cleft and splice grafting can be done now. This must be completed before the rootstocks break dormancy.
• Apply dormant oil sprays now. Choose a dry day when freezing temperatures are not expected.
• Spray peach trees with a fungicide for the control of peach leaf curl disease.
• Aphids begin to hatch on fruit trees as the buds begin to open.
• Peaches and nectarines should be pruned just before they bloom.
• Mulch all bramble fruits for weed control.

Source: Missouri Botanical Garden

UPCOMING EVENTS

March 21: Garden workshop in Brookfield, see article for details.
March 26: Lewis County Lady Landowner workshop, Monticello, MO. See article for details.
March 28: Garden workshop in Memphis. See article for details.
May 22: Adair County Lady Landowner workshop. Details in upcoming issues.