Growing Orchids
by Katie Kammler

Orchids are an interesting plant with thousands of naturally occurring species and hybrids all over the world. If you would like to grow orchids in your home, there are several species that are recommended based on their adaptability, ease of growing, availability, and production of beautiful flowers. Purchasing larger plants is advisable because it can take up to five years for a seedling to flower. Also select an orchid based on the growing conditions in your home as each type has different cultural requirements.

Selecting an Orchid
Phalaenopsis orchid species is probably the most common type of orchid available. It is also known as a moth or butterfly orchid. They have long arching sprays of colorful flowers that last for several months. They flower in from winter to early spring so they brighten up the house in the dreary cold months.

Cattleya orchid species are familiar to most people since they are commonly used in corsages. They also have a variety of colors and bloom either in the spring or fall. They require twice the amount of light that phalaenopsis needs to perform well in the home.

Dendrobium orchid species produce long graceful sprays of smaller flowers during the fall and winter. The flowers remain open for three to four weeks.

Cultural Requirements
Orchids require a temperature similar to other house plants and must be protected from cold weather. Minimum night temperatures of 55° and daytime temperatures of 70° to 80° are ideal. Avoid placing plants near windows during cold weather.

Light is the most important factor for flowering and growth. Most orchids require partial shade and a southern exposure is best for providing bright, filtered light. Phalaenopsis do the best under low light conditions with little or no direct sun. Cattleya and dendrobium orchids do best with bright light to some sun but no direct midday sun. Slightly shaded south or west windows work best.

Watering is one of the easiest ways to kill an orchid! They do not like to sit in a waterlogged pot. In general, watering once a week and allowing orchids to dry slightly between
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Watering is the best practice for maintaining a healthy plant. Water soluble orchid fertilizers are readily available and should be applied once a month according to the rates recommended on the label. After flowering, reduce water and fertilizer applications as the plants rest and resume when new leaf production starts. Humidity of 40 to 60 percent is also very important to these types of orchids. Most of our homes do not have this kind of humidity so it must be supplemented by misting.

Orchids are unique because most of them are epiphytes. They have thick, fleshy roots that they use to attach themselves to trees or bark and to absorb water and nutrients. They grow best in soilless mixtures that usually contain bark. They need lots of aeration and drainage. These potting mixes are pretty readily available. Plastic or clay containers can be used so long as they have adequate drainage.

Problems
Orchids are susceptible to a number of insect and disease problems. Common insect problems include scale, mealybugs, spider mites, and thrips. Snails and slugs can also feed on the plants. Physically removing the pests or spraying with a chemical may help control light populations. Diseases include leaf spots, petal bight, bacterial soft rot and many different viruses. Following the good care practices listed above will help keep your orchids from becoming susceptible to problems.

Summer Drought Tips
by Donna Aufdenberg

What drought? Well, every summer, undoubtedly, we will go through a drought, whether it is for a couple of weeks or a couple of months. It is always wise to be prepared and think ahead of Missouri summers.

- Mulch, Mulch, Mulch. Even a thin layer of mulch on landscape soils will conserve some moisture. It is best to have 2-3 inches.
- When planting, choose drought resistant plants.
- Add organic matter to soils. Organic matter helps to retain moisture.
- Put the right plant in the right place. So many gardeners tend to put plants just anywhere in the garden and pay no attention to the light and soil requirements.
- Cultivate sparingly during dry times. Cultivation causes soils to dry out faster. Mow weeds off at the ground or use a herbicide to limit hoeing or tilling.
- Water slowly and deeply.
- Try to avoid using overhead sprinklers to limit runoff and watering foliage. Some garden diseases are promoted by overhead watering.
- Use soaker hoses and drip emitters for more efficient watering practices.
- In general, plants need at least 1 inch a week of rainfall or water.
The Garden Spade

July Gardening Calendar
By Donna Aufdenberg

Vegetables
- Blossom End Rot of tomato and peppers occurs when soil moisture is uneven. Water when soils begin to dry; maintain 2-3 inch layer mulch.
- Dig potatoes when the tops die. Plant fall potatoes by the 15th.
- Harvest onion and garlic when the tops turn brown.
- By the last week, you can start your fall garden by planting collards, kale, sweet corn and summer squash as earlier crops are harvested.
- Continue to use Bacillus thuringiensis for caterpillar pests, such as cabbageworm. Follow the directions on label.
- To prevent okra from becoming slimy while cooking, leave the stem on the pod. The stem is edible, or you can remove it before serving.
- Water stress in sweet potatoes can result in cracked roots. A potassium deficiency causes long, slender roots. Too much nitrogen reduces yield and quality.
- For best flavor, pick ripe tomatoes as needed; flavor peaks within three minutes of picking. Don’t refrigerate them. Fruit texture and some aroma compounds deteriorate in the cold.

Fruits
- Cover grape clusters loosely with paper sacks to provide some protection from birds.
- Prune out and destroy old fruiting canes of raspberries after harvest is complete.
- Apply second spray to trunks of peach trees for peach borers.
- Keep an eye out for fire blight on fruit trees. Prune out and sterilize pruners between cuts.

Lawn
- Water frequently enough to prevent wilting. Early morning irrigation allows turf to dry before nightfall and will reduce the chance of disease.
- Monitor lawns for newly hatched white grubs. If damage is occurring, apply appropriate controls, follow directions on label.
- Observe the lawn area and the shade it receives. Plan to thin major shade trees next spring to increase light reaching patchy turf.

Ornamentals
- Perennials that have finished blooming should be deadheaded.
- Provide water in the garden for the birds, especially in dry weather.
- Watch for black spot on roses. Spray if needed. Remove affected leaves.
- Newly planted trees and shrubs should be watered thoroughly.

Butterfly Nectar Sources
Interested in starting a butterfly garden? Try these plants!
- Black-eyed Susan
- Butterfly Weed
- Butterfly Bush
- Cardinal Flower
- Lanceleaf Coreopsis
- Coneflower
- Daylilies
- Garden Phlox
- Heliotrope
- Hibiscus
- Liatris
- Marigold
- Mexican Sunflower
- New England Aster
- Petunia
- Purple Milkweed
- Rose Verbena
- Shasta Daisies
- Verbena
- Zinnia
Recipe Using Herbs: Pineapple & Mango Chutney
by Don and Carol Koehler

This chutney was served at the Culinary Herbs Class and was a hit. Works well over Chicken or Pork!

Recipe: Pineapple & Mango Chutney

From the Kitchen of: Don and Carol Koehler

- 3 Cups Pineapple, diced in 1/2 inch pieces
- 2 Cups Mango, diced in 1/2 inch pieces
- 1 Cup Onion, finely chopped
- 2 Small Chili Peppers, seeded & minced
- 2 Cup Brown Sugar
- 1 1/2 Cup Herbal Vinegar [apple works]
- 2 Tbls Fresh Ginger
- Juice of 1 Lime and Zest
- 1 tsp Cinnamon
- 1 tsp Salt
- 1/2 tsp Allspice
- 1/2 Cup Dates, chopped

Combine all ingredients and place in medium sized sauce pan. Bring to boil, reduce heat simmer 45 min stirring often.

My Notes:______________________________________________

Hot Topic! Woolly Aphids
by Katie Kammler

We never know what interesting things will come into the office! A few weeks ago, a really interesting picture was sent to me from another office. What looked like a large white, fuzzy, hairy mess turned out to be woolly alder aphids. These aphids are about 2 mm long and are plump gray which is concealed beneath a dense coating of waxy white strands. They are generally found on silver maples. They form colonies on the underside of the leaves and suck out plant juices, looking like a mass of white fuzz….a moving mass of fuzz! The aphids will cause the leaves to cup and they secrete honeydew that will grow a black mold. Control is generally not necessary; they do very little damage and have natural pests such as lacewings and lady beetles. The problem is relatively short lived.
Planning For the Fall Vegetable Garden
by Donna Aufdenberg

Autumn is an excellent time for gardeners to take advantage of cooler temperatures and added moisture for vegetable gardening. Even though we are still in the peak of the hot season, now is the time to start planning for the fall garden.

As most Missouri gardeners know, cool season vegetables become bitter and bolt when days become hot. In Missouri, vegetables such as broccoli and cauliflower are better adapted to fall gardening since they produce best quality and flavor when they can mature during cooler weather.

Many vegetable crops (cool and warm season) are well adapted to planting in late summer for a fall harvest. In most cases, we focus on faster-maturing cultivars for fall to ensure a harvest before a killing frost occurs. It is important to plan early since you may need to raise your own transplants. Not many garden centers or retailers carry vegetable plants for fall gardens.

One challenge when planting in late summer is that plantings often suffer from hot soil and lack of water. Soils can form a hard crust over the seeds which can interfere with seed germination so using a light mulch of vermiculite, compost or potting soil over the seed row can prevent this. Seeds of lettuce, peas and spinach will not germinate well when the soil temperature is above 85° F. Shading the soil and applying a light mulch over the seed row will help keep temperatures down. Apply 1 inch of water in a single application each week to thoroughly moisten the soil. Young seedlings may need to be watered more often during the first week or two of growth.

For most garden vegetables, the first two weeks of August is the best planting period for a great fall garden. Let’s just hope we have plenty of moisture this fall!

Plant of Merit - *Rudbeckia hirta* ‘Prairie Sun’

By Sarah Denkler

As a variety of the native *Rudbeckia hirta*, this flower can tolerate some drought once established. This is considered to be an annual black-eyed Susan but can be found in zone 3-8 surviving as a perennial for a short time. The plant produces a 4-5 inch daisy like flower. The center is pale green instead of the traditional black. The petals radiate from gold near the center to light yellow at the tips. The flowers are held high on 3 foot stems in full sun. Plants usually return each year through self seeding and can bloom in the fall if planted in the spring. Plant about 2 feet apart to allow good air movement and help prevent powdery mildew. By deadheading spent flowers, bloom will be encouraged through the summer. This plant works well when used in cut gardens, meadows, wild flower gardens, masses or cottage gardens.
Compostable materials are a major component of household garbage. Through composting, homeowners can reduce their solid waste by up to two-thirds. However, building and maintaining a compost pile in the back yard may seem too involved and unsightly to some homeowners, but there is an alternative. Vermicomposting, or composting with worms, is a way to reduce household waste without the “hard work” of a compost pile. Previously reserved for apartment dwellers that don’t have back yards, vermicomposting is gaining in popularity with homeowners.

Worms used for vermicomposting are redworms (*Eisenia fetida*), also known as red wigglers. They prefer dark, moist conditions with plenty of air circulation and temperatures between 55 and 77° Fahrenheit. Many commercially-available bins are on the market, though homemade versions can be just as good. Whether they are made out of wood or plastic, there are three key things to consider when assembling yours:

1) **Size:** Collect and weigh compostable kitchen scraps for one week. For each pound of refuse per week, you will need 1 square foot of surface area of bin space. Bins should only be 8-12 inches deep. Materials tend to pack down in taller bins which results in areas with reduced oxygen.

2) **Placement:** Make sure that you have a location where you can store your vermicomposting bin. Convenience is something to consider, so many people choose to place their bin under the kitchen sink. However, anywhere that temperature requirements can be met will work. This could be in the basement, garage, or even in the Earth.

3) **Materials:** Bin materials should have a clean history. Do not use materials that have been used for chemical or pesticide storage. Always clean materials well before using for vermicomposting. Wood bins absorb moisture which dampens temperature fluctuations and helps keep moisture levels inside the bin at optimal levels. Plastic bins do not breathe as readily, so extra attention will be needed to make sure the contents aren’t too wet.

When you have your bin constructed and know where it will be placed, you’re ready to begin filling it. There are two components that you will need to provide for the worms, bedding and food. Common materials used for bedding include shredded newspapers, cardboard, leaves, straw, or other compostable material that can soak up water. Using bedding material from several sources helps to create a favorable environment for the worms. Soak the bedding in water for 24 hours and then squeeze it to remove excess water. Fill the bin approximately 2/3 full with fluffed bedding. Allow the bin to settle for several days before adding the worms. During this time, begin collecting kitchen refuse. When you have gathered enough refuse to spread over the entire bin, add the worms (approximately 500 per cubic foot of bin space) and the refuse to the bedding in the bin. The worms will quickly work their way to the bedding and begin coming up for food as needed. Keep in mind that they like dark environments, so cover your kitchen waste with additional bedding to keep the light out.

For more information on home vermicomposting, including compostable materials, where to get worms, and how to harvest the compost, contact your local University of Missouri Extension office.
Group News - What’s Happening

July 2011

Contact your local Extension Center if you have questions about any event on the calendar or if you have a horticultural event for the calendar.

Upcoming Events....

August

2 - Poplar Bluff MGs 1st Tuesday at 6:30pm, Butler County Ext. Center
11 - Delta Area MGs 2nd Thursday at 7:00pm, Medical Arts Building, Sikeston, MO
18 - Cape Girardeau County MGs 3rd Thursday at Cape County Ext. Center at 7pm.
22 - Perry County MGs 4th Monday at the Perry County Ext. Center at 6:30pm.

Also in August - Alternative Composting Adv. Training, Perryville Extension Center. Fee: TBA

September

5 - Parkland MGs 1st Monday at 6:30pm, Farmington Courthouse Annex (3rd Floor)
6 - Poplar Bluff MGs 1st Tuesday at 6:30pm, Butler County Ext. Center
8 - Delta Area MGs 2nd Thursday at 7:00pm, Medical Arts Building, Sikeston, MO
13 - Rain Garden Basics Adv. Training 1-4pm Poplar Bluff, MO. Fee: $15
15 - Cape Girardeau County MGs 3rd Thursday at Cape County Ext. Center at 7pm.
26 - Perry County MGs 4th Monday at the Perry County Ext. Center at 6:30pm.
Editor's Corner

The Garden Spade is published monthly by University of Missouri Extension staff for individuals and families living in Southeast and East Central Missouri. This newsletter is provided by your local extension council.

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We welcome and encourage Master Gardener groups and individuals to submit items to the newsletter. We encourage the submission of any news such as upcoming volunteer opportunities, community events related to gardening, warm wishes or congratulations to fellow gardeners. We also encourage Master Gardeners sharing experiences and writing articles on timely topics.

All entries into the group news sections must be received by 4:30 on the 15th of each month for the following months news.

Email News to: kammlerk@missouri.edu, denklers@missouri.edu, or aufdenbergd@missouri.edu

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