



Bloom 'N' News

All the seeds that are fit to sow.



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"When weeding, the best way to make sure you are removing a weed and not a valuable plant is to pull on it. If it comes out of the ground easily, it is a valuable plant." - Author Unknown



Photo: Plantation Products

Tips For Cut Flowers

Mary H. Meyer, Extension Horticulturist, Department of Horticultural Science, U of Minnesota

Whether cut flowers are grown in a home garden or in a greenhouse by commercial experts, their care is a science.

To keep cut flowers beautiful longer; remember that they have been removed from their source of water, the root system, and will wilt quickly if not placed in water. Cut stems should be placed in water immediately, as air will rapidly move into the water-conducting tissues and plug the cells. This is why the cut flower that has been out of water more than a few minutes should have a small portion of the lower stem cut off so that water will move up freely when it is returned to water. Cuts can be made under-water to assure no air enters the stem.

A cut flower also has been removed from a major source of food—the leaves on the plant to which it was attached. Although the leaves on the flowering stem make food, once indoors they are in a reduced light situation and this limits available carbohydrates.

Use a Preservative

Commercial preservatives will increase the life of cut flowers and should always be used. (Adding aspirin, wine, or pennies to cut flowers **WILL NOT** help to keep them fresh longer.) A floral preservative is a complex mixture of sucrose (sugar); acidifier, an inhibitor of microorganisms; and a respiratory inhibitor. Sucrose serves as a source of energy to make up for the loss of the functioning leaves and insures continued development and longevity of the flower.

An acidifier makes the pH of the water more near the acid pH of the cell sap. Most water supplies are alkaline and can reduce the life of cut flowers. The acidifier also stabilizes the pigment and the color of the flower. This is why red roses turn "blue" when placed in water without a preservative or acidifier.

A microorganism growth inhibitor is perhaps the most important part of a floral preservative. Bacteria and fungi are everywhere and are ready to enter the cut surface of the stem and multiply. Prior to actual decay symptoms, cells of the water-transporting tissues can become blocked with microorganisms, inhibiting water uptake.

To aid the floral preservative in slowing down microorganisms, always clean the vase or container. Also remove all leaves below the water surface, as they soon deteriorate. Water and water uptake are major factors in keeping cut flowers fresh.

A process called "hardening" ensures maximum water uptake. It simply means placing the freshly cut stem in 110° F (43.5° C) water (plus preservative). Place in a cool location for an hour or two. Maximum water uptake is attained because water molecules move rapidly at 110° F (kinetic energy) and quickly move up the stems. Flowers at cool temperatures lose less water. In this one brief period while the water is cooling, freshly harvested stems, leaves, and flowers take up almost as much water as in the balance of their life.

Other Tips for Long-Lasting Cut Flowers

Check the water level of the container or vase daily and add water plus preservative when needed.

Keep flowers away from hot or cold air drafts and hot spots (radiators, direct heat, or television sets).

While both drafts and hot spots increase water loss, hot spots reduce a flower's life by speeding transpiration (water loss) and respiration (use of stored food such as sugars) and increasing development (rate of petal unfolding).

When away from home, move the flowers into the refrigerator or the coldest (above 35° F/1.5° C) spot in the house. Again, this will slow down water loss, respiration, and development.

Never store fruit and flowers together. Apples produce ethylene gas, a hormone that causes senescence, or aging, in flowers.

In summary, to keep cut flowers longer:

- * Recut the stems and remove excess foliage.
- * Harden the flowers by setting them in warm water in a cool place.
- * Use a floral preservative.
- * Keep them cool and avoid drafts, hot spots, and television sets.
- * Use a clean vase or container and check the water level daily.

"The garden is the poor man's apothecary." German Proverb

Drying and Preserving Flowers and Plant Materials for Decorative Use

Mary Beth Musgrove, Extension Associate. Horticulture, Auburn University

Drying and preserving flowers and plant materials is a form of artistic expression that was very popular during the Victorian age and has once again gained popularity. There are many reasons for preserving plant materials, whether your interest is in drying flowers from an arrangement that has special meaning or preserving beautiful cut flowers, foliage, ornamental grasses, and plant materials from the landscape or garden. Dried flowers are used in arrangements, wreaths, swags, pressed art, and other decorations.

To improve your success with drying plant materials, and to enhance their longevity, refer to the following methods for drying plant materials.

Collecting Plant Materials

Plant materials should be collected at the most suitable time of the year for drying and preserving that specific plant part. In general, all plant materials should be collected when they are in peak condition. Plant parts can be harvested at different stages of development for variation in color, form, and texture. Flowers, for example, can be cut at the bud stage and at any later stages until just before full flower. Do not use flowers that have begun to fade.

Almost all plant materials can be dried--everything from flowers, foliage, and branches to seed pods, grains, cones, nuts, berries, and other fruits. One person's weed is another's treasure! Some plant materials, however, are more "everlasting" than others, particularly if the best drying method is used to preserve the plant.

Other tips for collecting plant materials are as follows:

- * Avoid collecting plants when they are wet or moist from dew.

- * Use a sharp knife or pruning shears to cut flowers and plant materials.
- * Select plant materials that are without insect or disease problems.
- * Place stems in water while harvesting to prevent wilting. Some flowers may hold color better if allowed to stand in water for a few hours. Start the drying process as soon as possible after cutting.
- * Collect more plant materials than needed to allow for some loss.
- * Be mindful of where you collect plant materials; never remove unlawful or endangered plants.

Methods of Drying Plant Materials

Some plant materials are naturally dry and require little work to preserve them. Most plants, however, must be either air-dried, pressed, or buried in a plant-drying mixture.

Naturally Dry Materials

Naturally dry materials include dry grasses, reeds, pine and other cones, and most seed pods. Dry materials should be harvested when they are still in good condition, usually in the fall at the end of their growing season but before they become weathered in appearance. Cattails, however, should be picked when they first turn brown, while flowers are still visible at the top of the spike. Usually, a little grooming is all that is necessary for naturally dry materials. However, cones and pods may need to be washed in water and a mild detergent. Fragile seed heads, such as those of pampas grass, as well as mature cattails, can be sprayed with hair spray or other aerosol lacquers or plastics to hold the heads in place and to prevent shattering as the plants age. Lacquers or shellac can be sprayed or painted on fruits and cones to give them a more shiny, decorative look as well as to help preserve them. Remove seeds from pine cones to prevent shedding that may occur at a later time.



Air-Drying

Air-drying is the easiest method of preserving flowers and plant materials. Many garden flowers and wild plants can be collected, tied together at the stem ends in loose bundles with rubber bands or pipe cleaners, and hung upside down in a warm, dry area. With good air circulation, flowers take 1 to 3 weeks to dry completely. Large flower heads should be hung individually. Most flowers can be dried on their own stems; however, some flowers, such as the strawflower, have a weak stem and require that a wire be inserted before drying to support the flower.

Table 1. Flowers Recommended for Air-Drying

Astilbe	Dusty-miller	Hydrangea	Santolina
Baptisia	False-dragonhead	Larkspur	Smoketree
Baby's Breath	Fennel	Lilac	Statice
Blackberry-lily	Gaillardia	Marigold	Strawflower
Calendula	Globe thistle	Milkweed	Sumac
Cattails	Goldenrod	Okra	Tansy
Chinese lantern	Gomphrena	Paulownia	Teasel
Chives	(Globe Amaranth)	Polygonum	Thistle
Crimson Clover	Grains	Poppy (seed pods)	Yarrow
Cockscomb	Grasses (ornamental)	Rose	Xeranthemum
Dock	Honesty (Money Plant)	Salvia, Sages	

Use the following tips to successfully air-dry plant materials:

- * Dry flowers in a warm, dry, dark area that has good air circulation for best results.
- * Remove all leaves from stems and branches.
- * Tie flowers in small bundles so that flower heads do not touch.
- * Hang flowers upside down, or lay them on drying racks or screens raised off the ground.
- * Wait for flowers to completely dry, and then sort the plants by flower types and sizes, and store them in an airtight container until ready to use. Dried plant materials can be stored in cardboard boxes such as shoe boxes; however, plants are better protected from insects and rodents if stored in airtight containers.

Pressing

Pressing is a method of preserving plants to use on pictures, stationery, place cards, etc. Most foliage and simple flowers with few petals press very well. Pansies are an excellent flower for pressing at all stages of flower development. Ferns make excellent pressed plants. Leaves and branches with foliage can be pressed to form plant materials with natural curve.

Pressing is done by placing plant materials between layers of an absorbent paper material and applying weight or pressure for at least 5 to 10 days or until the plants are dried. Newspapers, telephone directories, blotter paper, or tissues are good papers to use. Plant presses are also available. After the first week, check the paper for excess moisture, and replace the paper if necessary. Reposition the flowers if needed.

Table 2. Flowers Recommended for Pressing

Ageratum	Columbine	Heath	Pansy
Alyssum	Cornflower, Bachelor's button	Heather	Phlox
Anemone	Cosmos	Hydrangea	Primula
Azalea	Crocus	Johnny Jump-Up, Viola	Queen Anne's lace
Bleeding heart	Daffodil	Larkspur	Rose
Butterfly weed	Daisy	Lily-of-the-valley	Salvia, Sages
Candytuft	Delphinium	Marigold	Statice
Celosia, Cockscomb	Ferns	Nasturtium	Sweet pea
Chrysanthemum	Geranium	Nemesia	Verbena
			Zinnia

Burying Flowers in Plant-Drying Mixtures

Flowers can also be dried by burying them in a plant-drying mixture. The drying agent in the mixture helps support the flower while removing moisture, preserving the flower's shape and form. The most common mixtures used are borax mixtures and silica gel.

Borax Mixtures

Borax detergent combined with cornmeal or sand is an inexpensive material for drying flowers. Although sand will work, cornmeal is a lighter material and is less likely to flatten flowers. Ratios of borax to cornmeal vary, depending on who you ask, from 1 part borax to between 1 and 10 parts cornmeal. Using 1 or 2 tablespoons of salt per quart of mixture may help speed up the drying process.

Borax mixtures can be reused. To preserve the mixture for reuse, spread the mixture evenly in a shallow baking pan, and heat it at 250 degrees F for about 1 hour or until it is dry to the touch. Store the borax mixture in an airtight container until ready to use it again.

Silica Gel

Silica gel is a fairly expensive moisture-absorbing chemical desiccant. It is an excellent product for drying flowers. It is lightweight, dries flowers faster than borax mixtures do, and can be used over and over again if dried properly.

Silica gel is sold under many different trade names and is available at most craft stores, garden supply stores, and florists. It must be kept in an airtight container at all times. As silica gel absorbs moisture, the crystals in the gel change color. To dry silica gel for reuse, spread it in a shallow baking pan, and heat it at 250 degrees F for 1 hour.

Methods of Burying Flowers

After choosing a drying agent (desiccant), select a container that will fit the flower types and desiccant to be used. Flowers dried in borax mixtures should be left uncovered during the drying process to allow for good air circulation and faster drying. A shallow box can be lined with newspaper to strengthen the box. The box should be deep enough to allow the flowers to be covered completely. If drying flowers face down, it is not necessary to cover the stems, just the flower. Silica gel must be used in an airtight container. Plastic containers or tins with airtight lids are excellent choices.

Flowers can be dried in one of three positions: faceup, facedown, or horizontally. Flat-faced flowers, such as daisies and coneflowers, dry well when placed facedown in the drying mixture. Elongated, spike-type flowers should be dried horizontally. All other flower types can be dried faceup.

Table 3. Flowers Recommended for Burying/Desiccant Drying

Ageratum	Daffodil	Lantana	Queen Anne's lace
Anemone	Dahlia	Larkspur	Rose
Bells of Ireland	Daisy	Lilac	Salvia
Black-eyed Susan	Delphinium	Lily-of-the-valley	Snapdragon
Butterfly weed	Dogwood	Magnolia	Stock
Carnation	False-dragonhead	Marigold	Verbena
Chrysanthemum	Feverfew	Nierembergia	Waterlily
Coleus	Forsythia	Pansy	Yarrow
Coneflower	Gladiolus	Passionflower	Zinnia
Coralbells	Hollyhock	Peony	

Some flowers should be wired before drying. Remove the natural stem, and use one of the following stem-wiring techniques. Flowers that have a small, soft center should be hook-wired. Using a 20- to 24-gauge florist wire, push the wire up through the center of the flower. Bend a small hook in the end of the wire, and pull it back into the flower head so that it cannot be seen. Flowers with hard centers, such as roses, should be cross-wired. Push a piece of florist wire through the base of the flower head at a right angle to the stem. Bend both ends of the wire down around the flower base to form a stem. Wire stems can be bent out to the side as you bury the flowers in the drying mixture.

To bury the flower, place at least 1/2 to 1 inch of the drying mixture in the bottom of the container. Make small mounds of the mixture where flowers will be placed. Sift the drying mixture between and around the petals until the flowers are completely covered. It is generally easier to work with flowers when they are placed in one single layer per container. Place the flowers so that they do not touch.

Drying times vary depending on the flower thickness and the drying agent used. Silica gel requires 2 days for thin-textured flowers and 5 to 7 days for heavier-textured flowers. Borax mixtures generally require from 5 days to 3 weeks, depending on the flower texture. Do not keep the flowers in the drying agent for too long. Petals will become brittle, and some flower color may be lost if the flowers dry too long.

When flowers are thoroughly dry, remove them by gently sliding your fingers under the flowers and lifting. As you lift the flowers, gently shake off the loose mixture, and brush excess material from the petals, using a soft-bristled paint brush.

Flowers that easily shatter or drop their petals are unsuitable for drying. For some ray-type flowers, applying a drop of clear glue may help prevent shattering after they are dried.

“The greatest gift of the garden is the restoration of the five senses.” - Hanna Rion

Geraniums, Geraniums, Geraniums!

Mary Ann Clayton, Montgomery County Master Gardener Volunteer

The Learning Garden's ‘Theme Garden’, a 50 foot by 5 foot garden located in front of the oval driveway at the extension office, varies each year. This year's theme is ‘Geraniums, Geraniums, Geraniums!’. Three different types of plants commonly called geraniums are featured.



Twenty two varieties of **scented ‘geraniums’**, which are members of the genus *Pelargonium*, have been planted in this bed. These plants range in names from Baja Giant to Wildwood, but most importantly range in fragrance from rose, mint, fruit, spice and other pungent fragrances. The scent is released by brushing against the plants or gently rubbing the undersides of the leaves with your fingers. In addition to the wonderful aromas released by the leaves,

these *Pelargoniums* also produce small flowers, usually in some shade of pink. The flowers feature the five petals of the *Pelargonium* genus, but instead of being evenly spaced, as are bedding-plant geraniums, they are arranged with two upper petals and three lower. Scented geranium species range in size from 18 inches to 4 feet. Scented geraniums were brought to Holland and England from South Africa in the early 1600's, and brought here by colonists. Thomas Jefferson even took some with him to the White House! Scented geraniums have culinary uses and can be used in potpourri.

Four different color varieties of the **common bedding 'geranium'**, *Pelargonium x hortorum*, are included in this bed to show the difference in these two *Pelargonium* species. These plants are grown for their wonderful flowers, and little attention is paid to the scent of their leaves.

The planting and care of the scented geraniums and common bedding geraniums is similar. Plant in well drained soil in full sun, water when the soil becomes dry. These plants can grow in containers as well as in the ground. In our area, *Pelargoniums* are grown as annuals. They can be taken inside and grown as houseplants in the winter, or cuttings from the plants can be taken in the fall. In the cold dark days of winter, rubbing a scented geranium leaf transports you temporarily back to summer!

If you would like to take some cuttings and grow these plants during the winter, join me in the theme garden on a Saturday morning in the fall. Contact the Penn State Extension Office (610-489-4315) in early fall for the date and time.

Four **true geranium plants** are in this bed, with many more located in the oval bed in the driveway. These are perennials that can be easily divided or self seed. There are many different varieties, with several different flower colors, leaf shape and texture. They are often referred to as **'hardy geraniums'** to differentiate them from the above 'annual geraniums' or 'cranesbill geraniums' because the name *Geranium* comes from the Greek word for crane, which refers to the inner, "beaked" part of the flower. *Geranium maculatum* is a geranium native to the eastern U.S. These plants can grow in a wide range of conditions, moist to dry soils and in shade to full sun. Flowers bloom from early spring to practically throughout the summer and the foliage can turn from green to red in the fall. These plants are not grown for fragrance.

I hope that when you can make it out to our gardens this blooming season that you stop by the theme garden and take time to smell the leaves. Many different varieties of *Pelargoniums* and *Geraniums* will be available at our **Annual Master Garden Plant Sale, May 17, 2008.**

"On every stem, on every leaf, ... and at the root of everything that grew, was a professional specialist in the shape of grub, caterpillar, aphid, or other expert, whose business it was to devour that particular part." - Oliver Wendell Holmes

Water, Lawns and Ornamentals in the Dry Summer

Dr. Bob Nuss, Professor Emeritus, Horticulture, PSU and Dr. Pete Landschoot, Turfgrass, PSU

Your lawn crunches like potato chips when you walk on it. Even your older trees are showing stress. Although you might be tempted to coddle your plants, you can kill them with too much kindness. Grasses go into a semi-dormant state and become vulnerable when it's dry. Now that the water's been turned off, you should limit activities and traffic on lawns as much as possible. Come September -- if we get rain and cooler weather -- you can fertilize and overseed to get some recovery. If we don't get enough rain in September, wait until next spring to overseed.

Focus your watering efforts on plants you can do something about, like ornamentals. With lawns, it's just a waiting game until the rain and cool weather return. Watering is key for woody plants. When the top 1-1 1/2 inches of soil are dry, water down to 8-10 inches -- to the root zone. You can accomplish this by direct, slow watering. Trickle water on very slowly so it soaks into the soil, with no runoff. Also, when you water at night, you lose less to evaporation.

But watering has its dangers. If you overwater in areas with heavy soil or slow drainage, you can saturate the root zone and force out the air. This can suffocate the roots and kill them. When roots die, you'll see top wilting in the plant. Most people interpret this as a lack of water, add even more and aggravate the problem. After watering, most plants should recover overnight. But if the plant remains wilted, you may have root damage from overwatering.

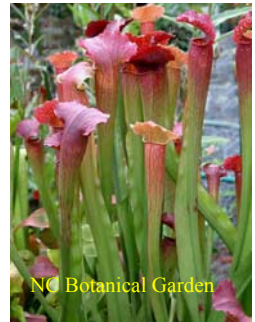
For new plantings, keep the initial root ball moist. Water beyond the planting hole, not just at the base of the plant. That way, you don't drown the roots, and new roots have moist soil to move into.

Mulching is the next best solution to watering. But be sure to water under mulch, not on top of it. It takes at least an inch of rain to get through organic mulch."

Create Your Own Sarracenia Garden

Mary Concklin, Extension Educator–Horticulture, Penn State Cooperative Extension–Montgomery County

Sarracenia ssp., commonly known as Pitcher plants, are carnivorous plants native to the eastern US. They prefer moist soil so are ideal for bog gardens of all sizes. They also require no fertilizer. Nourishment comes from the insects that are lured by the nectar in the pitcher and then digested by enzymes. Pretty neat when you think about it.



Creating a *Sarracenia* garden (or bog garden) requires a container that drains very slowly and an acidic soil mixture of 1 part moist sphagnum moss, 1 part moist peat moss, ½ part coarse pool filter sand and ½ part washed charcoal. Fill the container, add the *Sarracenia*, and top with live wet sphagnum moss. It will help to prevent drying of the soil media.

Rain water is best followed by dehumidifier and well water. Avoid water that runs through a water softener because the salt content will damage the plants and chlorinated water.

Sarracenia gardens do best in a location with at least 6 hours of full sun. For the winter in our area, simply bring the garden inside or move it to a protected site and mulch. Leaves, pine needles, bags of shredded paper, and straw work well. In the spring, remove the mulch and trim the old growth. Repot when needed.

These low maintenance plants and other bog garden plants will be available at the 2008 Master Gardener Plant Sale on May 17.

Vegetable Smorgasbord

Rebecca Boylan, Montgomery County Master Gardener Volunteer and Extension Horticulture Program Assistant

Summer crops are taking advantage of the long, hot days to put on abundant growth in a short amount of time. All that tender growth is a virtual smorgasbord to a host of insect pests that can wreak havoc on your crops in no time. The following are some key crops and the pests to watch out for.



- ❖ **Beans:** Mexican bean beetles are a common pest of beans and can defoliate the plants quickly. The adults are similar to a lady beetle but are coppery-brown in color and have sixteen black spots on their back. Larvae are buttery yellow and fuzzy and are about the size of a grain of rice. Both larvae and adults feed on the underside of the leaves and can defoliate them rather quickly. Squish the copper-colored eggs when seen, or handpick the adults and larvae. Control larger infestations with a registered insecticide.
- ❖ **Cucumbers:** The number one pest of cucumbers is the striped cucumber beetle. This pest does its damage by feeding on emerging seedlings, leaves, stems, and fruit. It's also a vector for cucumber mosaic virus which causes the plants to wilt and die. Striped cucumber beetles are oblong, yellowish-green in color, ¼ inch long, and marked by three black stripes. Plants can be covered with a floating row cover when young before they bloom to protect them against the beetles, but the cover must be removed to let the pollinators in. Look for cucumber varieties in the future that have cucumber mosaic virus (CMV) resistance. There are some pesticides that can be used to combat the beetle, but be careful spraying pesticides when plants are being pollinated.
- ❖ **Eggplant:** Eggplants, peppers, potatoes, and tomatoes are all in the same family, so they share the same pests. One common potato pest that makes itself at home on eggplant leaves is the Colorado potato beetle. You'll find this ⅜ inch long beetle with black and yellowish-white stripes feeding on the leaves along with its reddish-tan, hump-backed larvae. They can make quick work of the leaves, so control is either handpicking or treating with a registered insecticide.

- ❖ **Squash:** Squash vine borers can strike out of the blue, and an entire vine can collapse overnight. The larvae attack squash, zucchini, pumpkins, and gourds by boring into the stem which prevents water and nutrients from circulating into the plants. The larva is a fat grub-like caterpillar about an inch long, and the adult is a wasp-like moth. If the stems are attacked, you can try to “fish out” the larva and bury the stem; new roots may form on the buried stem. Handpick any eggs that are found. Apply registered insecticides if the problem recurs.
- ❖ **Tomatoes:** Tomatoes aren’t pest-free, but people have more disease problems with tomatoes than insect problems. One insect problem that is sometimes weather-related is aphids. Aphids are more of a problem on tomatoes when the weather is dry as rain washes the aphids off. Aphids are 1/8 inch long wingless soft-bodied insects that can be pink, dark green or mottled pink and green. They feed by sucking the fluids out of the plants. New growth can become distorted and blossoms can drop. Control can be as simple as a spray from a hose, or with a registered insecticide if the infestation is severe.

Not all insects need to be treated with a bottle of insecticide. It’s important that you identify the insect, decide if it’s a pest (it may be a beneficial insect), then decide on a course of action. Sometimes, handpicking is the easiest thing to do, other times, a quick spray from a hose will dislodge the offending insect. There are occasions when the pest population has reached a threshold where a pesticide may be appropriate. More information about vegetable insect pest control can be obtained from the Montgomery County Cooperative Extension Office, or from <http://pubs.cas.psu.edu/Publications.asp> where you’ll find fact sheets about growing a variety of vegetables.



All issues of the Bloom ‘N News and an index of topics are available on-line at: http://montgomery.extension.psu.edu/Horticulture/BloomNews_Archive.html



4-H Fair, Classes



August 9-11, Montgomery County 4-H Fair

Open classes in flowers, vegetables, crafts, fruit and more are available to anyone, young and mature alike. For information on the fair and classes, visit our website at <http://montgomery.extension.psu.edu/>. Click on 4-H and Youth, scroll down to the 4-H Fair – ‘open class fair entry and requirements’.

The fair has something to offer everyone – come on out and join us!

July 17, Dealing with Bugs and Bunnies with Marc Radell, 7-8 pm, Behmerwald Nursery, 4904 Garges Rd. Schwenksville, Pa. 19473, 610-287-0480. Free, open to public, nursery will stay open until 9 pm for shopping.



Consumer Horticulture Hotline

For all your horticulture questions, free and for-sale publications, and soil test kits, visit or call our Horticulture Center. Horticultural assistants are available to answer questions by phone from 9:00 a.m. – 1:00 p.m. at 610-489-4315. If you are unable to stop by during office hours, you may drop off samples in the “after-hours drop off mailbox” located outside the Horticulture office at the Cooperative Extension office, at 1015 Bridge Rd. (Rt. 113) in Creamery (located between Skippack and Collegeville).

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