Tips for Vegetable Transplant Success

Jon Traunfeld, Extension Specialist, Fruits and Vegetables, and State Master Gardener Coordinator

New Year’s Day is the first day of the 2013 growing season! It will soon be time to begin searching seed catalogs for those favorite vegetable, herb, and flower cultivars. Many gardeners are also busy wiping the dust off their light stand, and collecting trays and containers in preparation for growing transplants indoors. The questions and answers below contain tips that I hope will guide new gardeners and serve as reminders for the experienced hands.

Can I grow tomato plants on a windowsill?
The natural light from a window is seldom enough for good, strong seedling growth. Plant stems usually stretch and lean towards the light and will not produce sturdy plants. Acceptable plant growth usually only occurs in south-facing bay windows or solariums. Light is measured by its intensity (closeness and brightness), duration (length of time the light is available), and quality (includes blue and red wavelengths). Fluorescent light fixtures and tubes are the best choice for growing transplants indoors.

I inherited my dad’s old shop lights. Should I switch to the new, thinner fluorescent tubes?
Up until recently, most fluorescent fixtures accepted T-12 tubes. The number after the “T” refers to the diameter of the lamp in eighths of an inch. Therefore, a T-12 lamp is 12/8 or 1.5 inches in diameter. T-8 and T-5 are two newer types of fluorescent tubes that are increasing in popularity for indoor gardening. T-8 is 1-in. diameter, and T-5 is 5/8-in. diameter. Compared to T-12 tubes, the T-8 tubes are 20-25% more efficient, have a longer life, and are slightly more expensive. But if you already have and use T-12 fixtures, and are happy with the results, there is no reason to switch. Focus on the rated lumens. There is not that much difference between T-12 and T-8. T-5 fixtures and tubes are pricey and use more energy (54 watt) but produce more lumens per watt than T-12 or T-8 fixtures.

Do I need to buy special grow light bulbs?
Chlorophyll absorbs most of its energy from the Violet-Blue and Orange-Red wavelengths. Cool, white tubes (40 watts) produce light in the blue and yellow-green segments of the light spectrum. They are the least expensive and the mostly blue light can produce healthy, stocky salad greens and vegetable transplants. More expensive full-spectrum fluorescent tubes (“grow
lights”) are available that produce a balance of warm (red) and cool (blue) light. “Grow lights” enhance foliar growth and produce thicker stems than cool white tubes, and are needed for producing flowers on indoor plants. Some gardeners insert one warm and one cool tube into a fixture to gain the same effect.

Why do my transplants sometimes topple over and die?
I water them every day and fertilize weekly.
You may be killing them with kindness. Wait until the top of your growing media is nearly dry before watering. The idea is to keep the root system supplied with water and oxygen. If your containers are saturated with water the roots will stop growing and pathogenic fungi that like wet soil will infect and kill your babies. And slow down on the fertilizing. Most potting mixes contain enough fertilizer to grow a seedling for 5-6 weeks.

Do I need special potting soil or can I use soil from my garden?
Never use garden soil- it’s too dense (about 75 lbs. /cubic foot) to grow healthy transplants and probably contains weed seeds and plant pathogens. Soilless growing media is the stuff to look for (contains no mineral soil). It’s light (10 lbs. /cubic foot), porous, and drains well. Typical ingredients are peat moss, vermiculite, perlite, a little lime and fertilizer. Read product labels for ingredients and reject products that feel heavy (these are usually labeled as “planting soil”). Also, don’t be tempted to buy a separate bag of “germination” media for starting vegetable seeds. This is only useful for sowing extremely small seeds.

If you grow lots of transplants and also do container gardening you might want to invest in a large bag or compressed bale of commercial soilless growing media. It’s cheaper than buying the same amount in small quantities.

I’ve heard that peat moss harvesting harms the environment? What are the alternatives?
Peat is an organic substance formed from plants (principally sphagnum moss) that decompose very slowly in waterlogged soils (bogs). Peat is valuable in horticulture because its fibrous structure helps it retain a lot of water and air. There is concern over the ecological effects of excavating peat moss. Rising fuel prices have increased the cost and caused professional growers to look for alternative ingredients for growing media.

<table>
<thead>
<tr>
<th>Type</th>
<th>Diameter of tubes</th>
<th>Cost of 4 ft.-long fixture (2 tubes)</th>
<th>Cost per 4-ft. tube</th>
<th>Light output (initial lumens* per tube)</th>
<th>Tube life (hrs.)**</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-12 (40w)</td>
<td>1 1/2 inches</td>
<td>$15</td>
<td>$2 - 4</td>
<td>1500 - 3200</td>
<td>10,000 - 20,000</td>
<td>Until recently, the industry standard</td>
</tr>
<tr>
<td>T-8*** (32w)</td>
<td>1 inch</td>
<td>$20</td>
<td>$3 - 5</td>
<td>2800</td>
<td>30,000 - 40,000</td>
<td>20-25% more efficient than T-12</td>
</tr>
<tr>
<td>T-5 (54w)</td>
<td>5/8 inch</td>
<td>$100</td>
<td>$13 - 15</td>
<td>5000</td>
<td>30,000</td>
<td>9% more efficient than T-8</td>
</tr>
<tr>
<td>Sylvania Gro-Lux Wide Spectrum (T-12)</td>
<td>1 1/2 inches</td>
<td>$15</td>
<td>$16</td>
<td>1700</td>
<td>20,000</td>
<td>Type of “Gro-Light” - adds red and far-red to blue; mimics cool-white with incandescent</td>
</tr>
</tbody>
</table>

* Lumens measures light intensity over the visual spectrum- the brightness that we see.

** Over time the bulbs begin to lose their intensity. T-8 bulbs have a slower period of decrease, losing about 10% of initial brightness after 7,000 hours. T-12 bulbs can lose 20% after the same number of hours.
Ground up coconut husk fibers (coir) are a popular alternative, though the sustainability of harvesting and shipping this material from the tropics is widely debated. Some gardeners and small farmers have learned to blend finished, screened compost with commercial growing media. Compost is heavier than soilless media (about 25 lbs./cubic foot) but is less expensive (especially if homemade!) and supplies nutrients and other compounds that promote plant growth and health. Try mixing compost 1:2 with soilless media.

**My transplants are very slow to germinate and grow. What am I doing wrong?**
Grow transplants at 70-75 degrees F. during the day and slightly cooler at night. You can offset cool basement temperatures by covering your plant stand with clear plastic. This will trap some heat from the light ballast and raise the humidity level. Cover newly seeded flats or pots with clear plastic to hasten germination. Remove the covering when plants pop up. Keep fluorescent light tubes 1-2 inches above the plants at all times. This will increase light intensity and keep plants stocky and strong. Lights should be run on a timer for 14-16 hours each day (vegetable plants need 6 hours of rest in the dark).

**How much does container size matter?**
There has been much research done in this area. Tomato, eggplant, and pepper transplants establish more quickly in the garden and produce earlier and higher yields when grown in large containers (> 9 square inches). Most other vegetable transplants will grow fine in 3-5 square inches.

**Does it pay to grow bean and lettuce seedlings indoors?**
Some vegetable farmers grow bean transplants to catch the early market. This rarely makes sense for backyard gardeners. Pre-germinating corn and bean seed, on paper towels or in growing media, does make sense if you are planting early in cool soil (less than 55 degrees F.) If you hate to thin crops like radish, beet, arugula, lettuce, spinach, and broccoli raab, then by all means start them indoors. You’ll be able to grow and harvest more per square foot with transplants.

**My tomato plants usually get too tall and hit the lights or flop over. It’s hard to plant them in the garden.**
I can empathize with you here. Try sowing tomato seed 6-7 weeks before you expect to plant. You’ll end up with stocky 8-10 in. tall plants. If they do get too tall you can lay them down in a trench when planting and turn the growing tip up so only the top 2-3 sets of leaves is above the soil.

Visit our Grow It Eat It website for more transplant growing information. Follow these instructions to build your own simple, inexpensive PVC Light Stand.
Many Maryland gardeners saw a downy mildew disease for the first time on their impatiens this summer. Since then many have submitted questions to the Home and Garden Information Center about this and other downy mildew diseases. Here are some interesting observations about these diseases and their current status.

**Pathogen:** The downy mildews are quite different from the powdery mildews. The downy mildew pathogens belong to a group called the Oomycetes and include some famous examples of devastating diseases such as late blight of potato and sudden oak death. They are also often referred to as water molds, because they prefer humid moist conditions. Modern taxonomy suggests that they are related to other photosynthetic organisms such as brown algae and diatoms.

There are more than 17 genera of downy mildew organisms. Some of the more common genera include *Bremia, Peronospora, Plasmopara* and *Pseudoperonospora*. Ornamental plants commonly identified with downy mildew diseases include: aster, alyssum, basil, coleus, coreopsis, delphinium, dianthus, geum, impatiens, mint, pansy, rose, rosemary, rudbeckia, salvia, snapdragon, sunflower, and veronica.

Downy mildews are typically diagnosed based on foliar symptoms and the presence of spore structures, called sporangia usually found on the lower leaf surfaces. These sporangia tend to be grayish white to white in color and may be sparse or an abundant “downy growth” depending on the disease. In general, optimal conditions for infection and sporulation are high relative humidity and temperatures ranging from 50 to 70° F. The spores then infect through stomates on the lower leaf surfaces of the host plant. It can take anywhere from 6-12 days for the plant to show foliar symptoms after initial infection. Some downy mildews, such as *Peronospora sparsa* on rose or *Plasmopara halstedii* on sunflower, can also cause systemic infections. Some are seed borne such as *P. balbahrii* in basil. Sporangia on leaves are easily wind-dispersed and that is the main way the pathogen spreads within the crop and to new plantings.

**Management:** It is very important to scout highly susceptible plants, during cool damp cloudy weather, especially in the spring, to detect the first disease symptoms. Also, scout susceptible incoming plant material carefully for downy mildew especially the lower leaf surfaces. Quickly remove and destroy infected plants and do not compost the plant debris. Space plants to ensure good air circulation so that when overhead irrigated or exposed to rainfall, the leaf surfaces can dry more quickly. Avoid overhead irrigation if possible during cool cloudy weather.

**Specific Downy Mildews**

**Basil downy mildew:**
caused by *Peronospora belbahrii*, is confined between the leaf veins and causes characteristic angular yellowing on the upper leaf surfaces. Symptoms of downy mildew on basil can easily be mistaken for a nutritional deficiency. Lower leaf surfaces are covered by the gray to nearly black sporangia of the downy mildew pathogen. This disease is seed borne in basil and seed lots are tested for the presence or absence of the pathogen.

The most commonly used culinary sweet basils, *Ocimum basilicum*, are the most susceptible to downy mildew. The least susceptible basils included the lemon and spice types such as ‘Lemon Std’, ‘Lemon’, ‘Lime’, ‘Spice’, ‘Blue Spice’ and ‘Blue Spice Fil’.

**Mint downy mildew:** caused by *Peronospora lamii*, causes angular purple lesions on the upper leaf surfaces and a bluish-gray of sporangia on the lower leaf surfaces.

**Coleus downy mildew:** caused by *Peronospora sp.*, causes brown, irregular dark lesions on leaves, leaf drop, and stunting of seedlings. Because the lesions are irregular, infection can cause the leaves to twist and distort before dropping. In cool, wet, humid conditions sporangia may be visible to the naked eye as a downy gray to purplish growth on leaf undersides.
were not completely removed. We recommend that garden impatiens not be planted in the same beds next year, and to keep a close eye on any garden impatiens you plant to catch the disease early.

**Black-eyed Susan (Rudbeckia) downy mildew:** caused by *Plasmopara halstedii*, causes yellowing and angular necrosis on the upper leaf surfaces that often mimics nitrogen or nutrient deficiency symptoms. The lower leaf surfaces are covered with a fuzzy grayish white growth of sporangia. Symptoms may occur during cool spring or fall weather. This disease is possibly seed borne in rudbeckia.

The most susceptible plant in the landscape to this disease is, *Rudbeckia fulgida* var. sullivantii 'Goldsturm'. Other rudbeckia species and cultivars such as *R. fulgida* 'Pot of Gold' and *R. hirta* seem to be more resistant to downy mildew. Sunflower and other members of the daisy family are also susceptible to this downy mildew.

**Rose downy mildew:** caused by *Plasmopora sparsa*, causes reddish brown angular lesions on the upper surfaces of leaves and is rarely visible on the lower leaf surfaces since it produces few sporangia. Since the sporangia are hard to see on the lower leaf surfaces the damage or symptoms are sometimes mistakenly diagnosed as pesticide injury. All rose cultivars are susceptible but vary in their symptom severity. Oospores do form in diseased roses, and probably serve as infection sources for the next growing season. This pathogen can also overwinter within rose tissues in a vegetative state.

Coleus cultivars vary considerably in their resistance to this disease. The cultivars ‘Freckles’, ‘Beauty’, ‘Russet’, ‘Fairway Salmon Rose’ and ‘Fairway Rose’ all held up well in testing with only mild downy mildew symptoms. Other cultivars, such as ‘Dragon Black’ and ‘Volcano’, showed more severe symptoms which included severe leaf drop.

**Impatiens downy mildew:** caused by *Plasmopara obduscens*, causes infected plants to appear off color with slight downward leaf curling. As the infection continues, the leaves may fall off leaving only bare stems. The lower leaf surfaces of yellow leaves and sometimes green leaves can be covered with a thick white growth of sporangia. Eventually infected stems will turn brown and break down. Healthy plants can become infected by short-lived aerial spores that are easily dispersed by wind currents and splashing water, or by oospores that may survive the winter in the soil.

All varieties and intraspecific hybrids of the common garden impatiens, *Impatiens walleriana* are susceptible to impatiens downy mildew, including both vegetative and seed produced plants. New Guinea impatiens, *Impatiens hawkerii*, is highly tolerant to this downy mildew. There is the potential for this disease to overwinter in landscape beds if diseased plants
Eastern hemlock is a wonderful landscape tree found in the wild stretching from the shores of the Chesapeake to the Blue Ridge Mountains.

In neighborhoods it graces landscapes as an evergreen specimen or screen along property lines. More than five decades ago, the hemlock woolly adelgid appeared near Richmond Virginia. It likely entered this country on infested nursery stock from Japan. For many years this pest made its presence known mostly in home landscapes and parks where it often disfigured and sometimes killed hemlocks. As it spread to the Appalachian Mountains, it devastated magnificent stands of eastern hemlock leaving thousands of dead trees in its wake.

From Maine to Georgia it now threatens eastern hemlock in the north and its rarer cousin, the Carolina hemlock, in the south. This tiny insect spends most of the summer and early autumn hunkered down as an inconspicuous, immature stage called a nymph on the bark of the hemlock near the base of the needles. When the cold winds of winter blow in late October and November, the nymphs resume development and mature in mid-winter. During this time, they produce large amounts of white, woolly wax which gives the adelgid its name. This waxy cover provides protection for the adelgid and for the eggs she will lay within it in late winter. Between March and June, a second generation of adelgids will hatch out and mature, and then the cycle begins again with females producing the next batch of nymphs on hemlock twigs that summer. All the while, the developing nymphs and egg-laying females feed by inserting hypodermic-like mouthparts through the bark of the twigs. The long, sucking mouthparts search along the tree’s vascular system and eventually find specialized tissues called parenchyma cells of the xylem rays. The mouthparts are inserted into these cells and the adelgid robs the tree of its stored nutrients.

Heavily infested trees decline in vigor, turn a sickly grayish/green color, lose their needles, and may die in five to ten years, if the adelgids are not controlled. To reduce the risk of death or damage to your hemlocks, try to keep them as healthy as possible. Be sure they are planted in loose, organic soils with room for the roots to grow. In times of drought, irrigation may be helpful. Inspect your hemlocks carefully at least twice a year, once in December and again in May to catch an adelgid infestation early. Sometimes a small, isolated infestation can be nipped in the bud by simply pruning out an infested branch or two and destroying them. Almost ten years ago I spotted adelgids infesting hemlocks that separated my insect preserve from my neighbor’s backyard. I treated the trees...
with an insecticide and this chemical fix held the adelgid at bay for many years. Some of these insecticides can be purchased over the counter and applied through the soil. Heavily infested or very large trees may require the care of a licensed and certified arborist. They have the tools and knowledge to deal with adelgids. The United States Forest Service is spearheading several projects to help defeat the adelgid throughout the range of our hemlocks. Projects include methods to rapidly detect forest trees infested with adelgids, evaluations to identify species and varieties of hemlocks that resist adelgid attack, and searches to discover biological control agents that kill and eat adelgids. Several species of lady beetles attack the adelgid in its home range in Asia. Lady beetles imported from Asia and released in our area have shown promise in reducing adelgid numbers. So, with approach of the holiday season, take a moment to don your parka, go outdoors, and commune with your hemlock. Give it a check-up and detect those dastardly adelgids before any damage is done.

For more information about hemlock woolly adelgid and its management, please visit the following web sites:

- http://www.plantprotection.umd.edu/content/documents/HWABulletin_000.pdf
- http://na.fs.fed.us/fhp/hwa/

This article originally appeared in the December 12, 2011 edition of Bug of the Week. To learn more about a variety of insects, visit Mike Raupp’s Bug of the Week website.

Master Gardeners Gardeners in Talbot County Help to Protect the Bay

Talbot County Master Gardeners recently designed and installed a buffer garden at the Phillips Wharf Environmental Center (PWEC) on Tilghman Island.

Buffer gardens filter and slow down storm water run-off, an important practice that also captures pollutants before they reach the water and helps to protect the Bay and habitat for wildlife. This one will buffer the water running off of the parking lot into Knapps Narrows.

Master Gardeners oversaw the excavation and remediation of the site along with the removal of high tide bushes and Phragmites. In addition to planting the garden, which will now serve as a demonstration area to inspire others, the Master Gardeners will help implement an ongoing education program integrated with PWECs existing environmental initiatives.

The Master Gardener (MG) program is part of the University of Maryland Extension and seeks to educate residents about safe, effective and sustainable horticultural practices that build healthy gardens, landscapes, and communities.

For more information on this project contact the Talbot Co. MG Coordinator, Mikaela Boley 410-822-1244, mboley@umd.edu.
Picture Yourself as a Master Gardener

Do you...

- Get excited about your garden?
- See yourself as a life-long learner?
- Enjoy giving back to the community?
- Like meeting and working with people from diverse backgrounds?

If the answers are YES you should consider joining the ranks of the University of Maryland Extension Master gardener Program. We welcome ALL gardeners (over the age of 18) who like working with plants and people and desire a rewarding volunteer experience. Extensive gardening knowledge and experience NOT required. We provide the training. Learn more about the MG program in your area. Classes are now forming!
Red and Green - Tailed Jay, *Graphium agamemnon*, and Cotton Stainer *Dysdercus suturellus*

Mike Raupp, Professor & University of Maryland Extension Specialist, Ornamental Horticulture, IPM

Red and green are colors of the holiday season. The deep green leaves and scarlet bracts of poinsettia have decorated churches and homes in Mexico for centuries while in Europe emerald leaves and bright red berries of holly have symbolized the winter season from the times of the ancient Romans and Celts.

The green of leaves is created by the photosynthetic pigment chlorophyll and reds of leaves and berries are produced by another family of pigments called anthocyanins. This is all fine for plants, but how do insects produce the magnificent colors found on their wings and bodies? For many insects, such as the beautiful tailed jay butterfly, the iridescent colors on the wings are produced as light is reflected from thousands of shingle-like scales that cover their bodies. Within the scales are several very tiny surfaces aligned to alter light and create specific colors. The spacing of these surfaces causes certain wavelengths of light such as green to be reinforced and reflected while other wavelengths such as reds are absorbed and not seen. Butterflies such as the magnificent Morpho use this mechanism called interference to produce their iridescent colors.

Other insects such as the bright red cotton stainer have a different way to generate striking colors. Like plants, many insects rely on pigments for color. Pigments are organic molecules. The chemical bonds of pigments absorb some wavelengths of light allowing others to be reflected. In the case of the scarlet cotton stainer, pigments in the exoskeleton of the bug absorb blues and yellows and reflect reds, hence the brilliant vermillion color. Some pigments found in insects contain nitrogen and are synthesized by the insect itself. However, many of the red and yellow pigments known as carotenoids and flavones cannot by synthesized directly by insects. Instead, these pigments originate in plants. As insects eat, they ingest the compounds necessary for the production of color. Their food serves as a source of protective coloration as well as sustenance for the hungry bug.

“The Insects: Structure and Function” by R.F. Chapman was used a resource for this Bug of the Week.

*This article originally appeared in the January 12, 2009 edition of Bug of the Week. To learn more about a variety of insects, visit Mike Raupp’s Bug of the Week website.*
Did you know that every month the consultants at the Home and Garden Information Center share some of their favorite plants in the Baltimore Sun newspaper and also on Home and Garden’s website? Below is a sample of some past winter selections. Be sure to visit our website each month for an updated selection of plants.

**PAPERWHITE NARCISSUS** *Narcissus tazetta*

Now that flower gardens are brown, create joy inside by forcing bulbs. Many bulbs can be tricked into blooming out of season, but the easiest are from climates without a cold period so artificial chilling is unnecessary for bloom. Paperwhite narcissus bloom happily in almost any non-draining container. Fill the container with pebbles, coarse sand, or light potting mix to 1-2” from the top. Set bulbs close together. To anchor, cover with pebbles to a quarter of bulb height. Water to bulb bases. Keep cool in low light until they root and shoots begin. Then they can take direct sunlight until flowering starts. If they grow too tall, support with a thin stake and ribbon. Once blooming, move into lower light or wherever best enjoyed. (Plant of the Week, December 11, 2011: Text: Christine McComas; Photo: Vicki Jedlicka, University of Nebraska-Lincoln Extension in Lancaster County)

**‘WINTER KING’ GREEN HAWTHORN** *Crataegus viridis ‘Winter King’*

Colorful berries that persist all winter are prized by gardeners. Most berries fade or quickly disappear down bird gullets. The berries of this Maryland native hit the trifecta: large for a hawthorn, brilliant red all winter, and not palatable to wildlife until the end of winter. As a bonus, it has good resistance to rust disease, which can disfigure hawthorn leaves and fruit. A small tree, ‘Winter King’ averages 20-35 feet with a spreading canopy covered in spring with corymbs (small bouquets) of white flowers. Thorns are fairly sparse. Plant this outstanding tree in spring in full sun and just about any soil as long as it’s well-drained. (Plant of the Week January 21, 2010; Text and photo by Ellen Nibali)

**WINTER JASMINE** *Jasminum nudiflorum*

Much good can be said for a shrub that bursts forth with tiny yellow flowers during the bleakest part of the year. *Jasminum nudiflorum* or Winter jasmine is known to be one of the earliest blooming plants in the landscape. Flowers open between January and March, usually peaking in February. This 3-4 ft. x 4-7 ft. shrub has trailing branches that form a mounded mass. The trailing branches root where they contact bare soil, so give this shrub room to sprawl and fill in areas if you like. The deep green leaves are attractive in the summer. It can be trained up a wall or trellis, grown as a groundcover, or planted to allow the stems to tumble down a wall or slope. Plant in full sun for best flowering. It adapts to many soil types as long as it is well-drained. It is not known to be prone to insect or disease problems and deer leave it alone. (Plant of the Week, February 15, 2011; Text: Debbie Ricigliano; Photo: OSU Department of Horticulture)
In 2012, The Year of Leafy Greens, we challenged the public and Master Gardeners to grow leafy greens in new and creative ways and share their ideas. Here are some of their innovative methods:

- **Repurposed gutters**
  - Queen Anne’s Co. MG

- **Growing Wall for senior homes**
  - Can YA Love

- **Framed raised bed**
  - Harford Co. MGs

- **Table top containers**
  - Howard Co. MGs

- **Raised beds from children’s wading pools**, Baltimore Co. MGs

- **Unframed raised bed with water spinach**
  - Lake Elkhorn community garden

- **Broccoli raab in wine box**
  - E. Cone, Harford Co. MG

- **Sweet potato in paper lined laundry basket**
  - G. Kladitis, Charles Co. MG

- **The Growing Pillar**
  - Can YA Love
The Grow It Eat It Blog authors have posted 17 articles on Leafy Greens since February! Topics ranged from starting seeds in very early spring all the way to protecting tender new greens under low tunnels this winter and everything in between! Many of the blog articles included recipes with step by step photo enhanced instructions.

**Check out these recipes!**

- Kale with Black Beans and Tomatoes
- Kale with Garlic
- Rubies and Greens
- Oprah’s Outtasight Salad
- Swiss Chard Pancakes
- White House Sweet Potatoes and Greens
- Cabbage Stir-Fry with Caraway Seeds
- White House Summer Chopped Salad
- White House No Cream Creamed Spinach
- White House Couscous with Chard, Fresh Sardines, and Tomatoes
- Swiss Chard Spanakopita

Want to see your name on the Grow It Eat It website? Send us your favorite recipes, pictures optional, and we’ll post them on our site.

**Remember…2013 will be the Year of Root Crops!**
**Question:** Recently I purchased a cyclamen at the grocery store to brighten up my kitchen. It is a very beautiful plant with the most colorful and unusual flowers. I have never had one before and I hope you can tell me how to care for it. I really would like to know how to keep it blooming.

**Answer:** Cyclamen are popular houseplants this time of year and can cheer up a dark corner of a room. The flowers come in shades of pink, mauve, purple and white. The key to keeping them happy indoors is to place them in bright sun but not direct sunlight in the coolest spot in your home. Never place them near a heating vent. Daytime temperatures no higher than 65° F and nighttime temperatures in the 50° F range are ideal. Warmer temperatures reduce flowering time and signal the plant to go dormant. In their native habitat they go dormant during the hot, dry part of the summer until the weather cools. It is better to irrigate from below by placing water in the saucer and then emptying it out after about 5-10 minutes. Allow the soil media to dry out about halfway down between watering. Fertilize every two weeks with a water soluble houseplant fertilizer. Snip off spent blooms and yellow foliage.

Getting them to bloom again can be a tricky and long process. Most often they are discarded after they have finished blooming. Cyclamen grow from a tuber and need a rest period before they flower again. When the leaves begin to yellow, discontinue watering and fertilizing and allow them to completely die back. Then store in a cool, dark spot for 2-3 months. If it needs to be repotted this would be the time to do so. You may begin to see some new growth and at that point move it to a sunnier location and begin to water and fertilize again. Your cyclamen will then begin a period of active growth.

**Question:** For the past several months, patches of my backyard grass have been peeled back as if something is looking for grubs or other insects. It has happened in the past but usually in the spring and then it stops. This time it began in the fall and is continuing to happen. My yard is a mess. Who is doing this? I never see anything back there.

**Answer:** This sounds like skunk behavior. You are correct; they are peeling back your turf looking for grubs to feed on. Skunks are nocturnal so it makes sense that you would not see them. They are very well adapted to living in suburban areas and often live under porches, low decks and sheds. Their natural habitat is around clearings, pastures and along the edge of forests. If the area is small, scatter rags soaked in ammonia to help repel them, but be careful not to injure your grass. You can also try temporarily laying chicken wire or hardware cloth over the area to make digging more difficult for them. If the problem persists contact the Maryland Department of Natural Resources Nuisance Wildlife Information Line at 877-463-6497 for a list of wildlife damage control cooperators for hire who can assist you with this problem or go to their website, http://www.dnr.state.md.us/wildlife/Plants_Wildlife/nw.asp


### The Perfect Gardening Gift

Not sure what to get your garden lover this holiday season? Give the gift of practical, up-to-date, expert information...in the form of the Maryland Master Gardener Handbook.

For gardeners who wish they knew more, this is a treasure trove of academically researched and experientially tested information on sustainable horticulture.

Produced by faculty at the University of Maryland College of Agriculture and Natural Resources, this indispensable gardening tool makes a wonderful addition to the reference library of both beginning and seasoned gardeners. It features a “Bay-Wise” approach to gardening that will help readers improve soil quality, nurture plants, and manage most pests without pesticides. It also explains many of the “hows” and “whys” of horticulture, with special emphasis on diagnosing and solving plant problems.

The 669-page Maryland Master Gardener Handbook is divided into 28 chapters, with stated learning objectives for each chapter. There are:

- 5 chapters on the basics (ecology, botany, soils, entomology, and plant diseases);
- 8 chapters on plant groups (turfgrass, herbaceous plants, woody plants, vegetables, small fruits, tree fruits, herbs and houseplants);
- 9 chapters on such subjects as landscape design, invasive species, alternatives to turf, weeds, and water quality and conservation; and
- Chapters on other important topics, including composting, aquatic gardening, wetlands and wildlife.

This durable spiral-bound publication also contains 430 color photos, a 114-page integrated pest management section that includes diagnostic keys for all major plant groups and special keys for cultural and environmental problems and structural and nuisance pests.

Order your copy online or by mail, by going to [http://mastergardenerumd.edu/Handbook.cfm](http://mastergardenerumd.edu/Handbook.cfm). Click on either the “Online” or the “Order Form” link. You have your choice of electronic purchasing or printing out an order form and mailing it with your check for $69 (made out to the University of MD) to: MG Handbook, University of Maryland Extension, 12005 Homewood Road, Ellicott City, MD 21042

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- **Lawns**
- **Woody Ornamental Plants**
- **Herbaceous Ornamental Plants and Aquatic Gardening**
- **Fruit**
- **Vegetable and Herb Gardening**
- **Soil, Fertilizer, Mulch and Compost**
- **Seasonal and Indoor Plants**
- **Indoor and Outdoor Pests**
- **Wildlife**

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