

# **Overwintering Tender Plants Indoors**

#### BY BRITTNAY HAAG

Looking to save a little money on plants? Have a plant that is special to you? Finally found the perfect shade of pink annual plant and want to keep it for next year? Bring your plants indoors before the cold weather returns by following a few easy tips!

Tender perennials, which are usually plants that gardeners in the colder regions consider annuals, are easily overwintered indoors, caring for them as you would any houseplant. Examples of these tender perennial plants are: geranium, coleus, lantana, begonia, Persian shield, and Joseph's coat.

Plants can either be overwintered by digging up the entire plant or propagating the original plant. Whichever method, it must be done before the threat of the first frost.

If the plant is small enough, or you have ample room, the entire plant can be dug up and planted in a container of fresh potting soil. Make sure to get as much of the root system as possible to cause less stress to the plant. Cut back the plant so a half of the original plant is remaining.

Some plants can be easily propagated to start multiple new plants. Tips cuttings are taken by selecting a healthy, 3 to 5-inch shoot with four to six leaf nodes, and cutting below a leaf node. Remove any flowers or buds, and the bottom two to four leaves. Insert the lower portion of the cutting into a container of moist potting soil and water well. Cover the entire container with a clear plastic bag to keep the moisture level high around the plant. Place the container in bright, indirect light. Roots should form in three to four weeks, when you can remove the plastic cover.

#### **Steps for overwintering plants indoors:**

- **1.** Look over each plant carefully for signs of pests and diseases. Rinse off leaves with water to be sure no tiny bugs are hiding. Only bring healthy plants inside.
- **2.** Either dig up the entire plant or take cuttings as described above.
- **3.** Place plants in a sunny location. Supplemental lights can be used if there is not adequate natural light.
- 4. Water the plants when the top inch of soil becomes dry. Water each container until it flows out of the bottom drainage holes.
- **5.** To increase the humidity around the plants, place a shallow pan of gravel and water under the pots.
- **6.** Plants will not need to be fertilized during the winter because they are not actively growing.
- 7. Gradually acclimate plants to outside weather again (harden off), by setting them outside during the day once day temperatures are over 60°F. Plants can be placed outside full time once the threat of frost has passed.

Tropical plants such as cordyline, gardenia, and croton, as well as some herbs, like sage, rosemary, and bay can also be overwintered by bringing them indoors before the first frost.

As with all gardening, the process of overwintering tender perennials is trial and error. You may find that some plants are easier than others to overwinter in your home. Keep your thumb green all winter by caring for your garden plants and possibly saving a few bucks in the spring.



Lantana cutting.



Lantana cutting stripped.



Coleus cutting with new roots. Photo credit: Charlotte Talkington

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# **Fall Browning of Evergreen Foliage**

BY MARTHA A. SMITH

Every fall, questions arise concerning the foliage on evergreens changing color dramatically. Callers are convinced that their plants must have some type of virus or fungus and want to know what can be done. "There is really nothing to be concerned about," explains Martha Smith, Horticulture Educator, University of Illinois Extension.

"What is happening is commonly called inner needle drop or third-year needle drop."

All trees and shrubs renew their foliage annually, producing new leaves in the spring of the year and shedding old leaves in the fall. The leaves of deciduous plants such as maples and oaks live for one growing season and then fall off usually in a blaze of color. But evergreen foliage lives from one to several years, depending on the species. As new growth emerges in the spring, last year's growth becomes shaded. Its role as primary photosynthesizer is over. During late September and October, this inner or older foliage dies and falls away.

In some species like white pine and arborvitae, this fall browning takes place rather suddenly. The older needles turn a bright gold-yellow and remain attached for about 7 to 10 days depending on weather. If we have strong autumn winds and heavy rains, these needles fall quickly. Sometimes, this natural occurrence is hardly noticed. But every few years it is very noticeable, and people become concerned.

This natural foliage drop may be distinguished from cases of severe foliage damage due to disease by its uniform appearance over the whole tree and its common occurrence on neighboring trees of the same kind. It is also confined to the innermost or oldest needles. Nearly all pines bear needles in bundles of two to five, and the needles remain together when they drop.

No harm is done to the tree by the loss of this foliage. The amount dropped depends somewhat on the condition of the tree and the preceding growing seasons. Less vigorous individuals will lose a greater proportion of their total leaf area. If the new, terminal, or current year's growth is fresh and vigorous, the health of the tree is not in jeopardy.

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# UNIVERSITY OF ILLINOIS EXTENSION **GARDENER'S** CORNER

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Fall inner needle drop on Pinus aristata, bristlecone nine



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### **Fall Seeding of Lawns** BY RICHARD HENTSCHEL

and situations that require the homeowner to repair or option statewide is turf-type tall fescue, which has the reestablish areas of the lawn. Sometimes it is lawn insects growth habit, color, and texture of the bluegrasses with the like the grub or a disease outbreak that made a mess of heat and drought tolerance of the traditional tall fescue. the lawn. But conditions like extended drought or the loss of a shade tree turning the backyard from a shady oasis After the seed is down and lightly raked in, watering is to hot desert-like conditions can also mean reestablishing another step that can mean the difference between a part of or the entire lawn.

is preferred, as it gives the grass seed a longer time and leaves puddles. In hotter and dry locations, the use of a more favored weather conditions for establishment. An light mulch of a clean straw is very helpful keeping the soil added free bonus is that most (but not all) weed seeds more evenly moist. favor spring germination. A fall seeding will already have grass plants that can out-compete spring-germinating Mow the new areas as soon as they need it as this helps weeds.

in Northern Illinois than Southern Illinois. Best timetable illinois.edu/lawntalk/index.cfm) that covers selecting grass, for N. Illinois is mid-august through the first week in planting and maintenance, weeds, and many other lawn September. S. Illinois has a much longer window available, care issues in greater detail. extending through the whole month of September. Central Illinois starts mid-August but goes longer into September.

Regardless of why repair or reestablishment is needed, similar steps are used to get the lawn looking good again. If it was a disease, rake out the damaged and dead turf. The next part is critical to being sure the disease is less likely to return. Sunken or low spots in the yard invite disease. Be sure to add soil to level or even slightly raise those areas before re-seeding. Larger areas needing reestablishment will need some soil added and worked in as you prepare the seedbed using the same rule – level or slightly raised as the dirt is going to settle.

Grass seed choice depend on conditions. Full sun in N. Illinois typically means a blend of hybrid Kentucky bluegrasses. A mixture of sun and shade can mean a mix of that blend of Kentucky bluegrasses with perennial rye or if deeper shade fine fescues. S. Illinois will find additional choices, including some warm-season grasses that are

Every year somewhere in the state, there are conditions available locally for the hotter, drier summers. Another

mediocre germination and a great one. All grass seed requires a moist, uniform seedbed for best conditions. Lawns in Illinois can be re-seeded in spring and fall. Fall Frequent light watering is much better than a soak that

the lawn grass increase in density.

Just like our Illinois growing season, the window is shorter Extension has a web site, "LawnTalk," (http://extension.









## **Ornamental Kale**

BY JENNIFER FISHBURN

This is the time of year when flower gardens start too warm, plants can become leggy and leaf colors There are many color combinations of ornamental garden. Chrysanthemums, asters, pansies, and frost, plants are relatively pest-free. ornamental kale are some popular fall selections.

fall and early winter. This is one of the few plants as good as culinary kale and is best used as a the average first frost. It's too late to plant seed for that offer color with foliage rather than flowers. landscape plant. It is from the same genus and this year, but you can make plans for next year. Leaves are produced in a tight rosette and can be species as broccoli, cabbage, cauliflower, and curly, ruffled, or feather-like. The outer leaves are Brussels sprouts, but has much fancier and more Ornamental kale is a great plant to replace fading typically blue-green while the centers are brightly colorful foliage. Ornamental kale plants were annual flowers. Be sure to place them in a full sun colored red, pink, purple, green, yellow-green, or developed by selecting kale plants with unique location where you can enjoy the colorful centers. creamy white.

below 55 degrees Fahrenheit. The colors really botanically a biennial. This means that it produces kale also looks great in container plantings. begin to show with frost and cold temperatures. foliage the first year and flowers the second year. It generally takes a few weeks of cool temperatures Most valued for its foliage, ornamental kale is before leaves reach their best color. The leaves of grown as an annual. ornamental kale will remain colorful until temperatures drop to 20 degrees Fahrenheit Most garden centers offer selections of ornamental (surviving to temperatures as low as 5 degrees). kale. To maximize their life span look for plants

temperatures are still warm. If temperatures are size even when planted into the garden.

to look tired; however, there are a few plants that can fade. In addition, early plantings are more kale. Glamour Red F1, an All-America Selections love the cooler temperatures and brighten the fall prone to pests such as cabbage loopers. After a winner, has fringed hot pink leaves in the center of

Ornamental kale adds a splash of color during the kale. However, while it is edible, it doesn't taste late July to early August, about six to ten weeks before foliage color.

that aren't root-bound or overgrowing their Avoid planting ornamental kale while night container. Root-bound plants will not enlarge in

ten to twelve inch heads. If you can't find the selection of ornamental kale that you are looking Ornamental kale is genetically the same as edible for, it is possible to start it from seed. Sow seeds in

They look best placed in the front of a garden and blend nicely with ornamental grasses, sedums, Leaf colors intensify when night temperatures drop While considered an annual, ornamental kale is and other fall blooming perennials. Ornamental



# **Top Perennials for a Fall Cutting Garden**

BY CANDICE HART

states a University of Illinois Extension Horticulture educator. "The colors and life of the flowers will be at least a week in most cases. textures of the fall garden just simply can't be beat," Candice Hart says.

"The most important thing to consider when choosing a perennial plant for into water with a floral preservative as soon as possible," notes Hart. Floral a cut flower garden is the vase life of the flower," Hart says. Some perennial preservative packets can be found at your local florist. Remove any foliage flowers simply do not last long once cut from the plant. Daylilies, for example, from the stems that will be under water and place your vase in a cool location, have a very accurate name. The flower only lasts for a day, making it a poor away from direct sunlight or drafts. Change your water every few days, adding choice for a cut flower garden.

#### Late Summer and Fall Blooming Perennials

Aconitum- Monkshood: The blue blooms of monkshood contrast well against all the other fall flowers. Agastache- Anise Hyssop: Beautiful in the summer and fall when it's covered with spikes of lavender-blue

licorice-scented flowers.

Anemone- Japanese Anemone: Large poppy-shaped pink or white flowers on tall stems at the end of the season.

**Aster- Asters:** Covered with loads of vibrant flowers in the fall.

Clematis- Sweet Autumn Clematis: Beautifully fragrant, sweet autumn clematis is covered with white flowers at season's end.

Dendranthema- Chrysanthemums: A staple in the fall garden, mums are excellent cut flower performers. Helenium: Helen's Flower: Boasts cheery yellow, orange, or red blooms at the end of the season. Pennisetum- Fountain Grass: Add movement to an arrangement with the flowing foliage or seed heads of various grasses in the garden. **Perovskia- Russian Sage:** A super-tough perennial plant that is equally as tough as a cut flower. **Rudbeckia- Black-eyed Susan:** These bright and cheery yellow flowers hold up beautifully as a cut flower. Sedum- Stonecrop: These tough plants laugh off all summer's heat and drought to look great in your garden at the end of the season Solidago- Goldenrod: A tough perennial plant with bright yellow flowers that are excellent filler in an arrangement.

# **At-Home Tissue Culture**

#### BY BRUCE J. BLACK

Last fall in the first part of this article on at-home tissue culture, we discussed what tissue culture is and how to make the medium for our plants to grow. In this follow-up article, we will continue with how to take a cutting and steps needed when growing plants in-vitro.

After your media has been completed and sets, you want to begin your prep work for transfer of plant material into your now sterile media. The first step is to sterilize all of your tools and plant material in order to prevent bacterial growth. Make tool packets by wrapping tools with aluminum foil; this allows for easy removal and will keep the tools sterile while cooling. Sterilize your tool packets in boiling water or in the pressure cooker to remove pathogen. Allow them to cool while you sterilize your plant material.

Before sterilizing your plant material, first select what plant you would like to grow. African violet (Saintpaulia ionantha) is one of the easier plants for

beginners. Then you can progress to more expensive or more time-consuming plants such as various orchid species. After deciding on your plant, select healthy leaves, stems, or roots to propagate. Depending on the plant, one or multiple vegetative structures may be used to grow plants vegetatively. For African violet, leaves are most commonly used for at-home production.

Prepare a ten percent bleach solution in a container with a lid (450 ml of sterile water & 50 ml of bleach), adding three to five drops of dish soap. This dish soap will prevent any debris from sticking to the plant surface. Add in plant pieces and swirl the container for 15 minutes. Then dump out the water and refill with the sterile water, swirling to rinse. Repeat this process four times. At this point, try not to breathe on the plant material or touch it with unsterile hands.

Sterilize your work area and hands with rubbing alcohol. After the plant

material is clean, trim off the bleach-burnt edges and cut the plant material into smaller segments (Fig.1). Discard the edge pieces. Place the plant segments on the medium surface, pushing in slightly for leaf pieces and pushing half in for stem pieces. This will create more surface area in contact with the media to begin uptaking nutrients.



Figure 1. African Violet leaf diagram showing how to make your cuts. 1) Remove edges cutting leaf into a square. 2) Divide into 2 pieces for small leaves and 4 pieces for large leaves.

Throughout the summer, many gardeners bring flowers in from their garden Listed below is a selection of great perennial choices for a long-lived cut to enjoy in a vase, but the fall perennial garden boasts just as much beauty, flower garden in Illinois. These perennials will be easy to grow and the vase

> "When cutting flowers from a cut flower garden, be sure to get your stems new floral preservative each time, and this will ensure a long vase life for your beautiful arrangement.



Black-eyed Susan

- Heliopsis- 0x-eye Daisy: While most gardeners are familiar with the big-blooming annual sunflowers, the perennial selections are just as great.

Cap the jars with the lid, label with the date, and place in a 75°F room under light for sixteen hours a day. If the room is cooler, cells will take longer to grow causing the plants to take longer to get bigger. If fungus forms in the jars and attacks the plant material, discard the contents of the jar. Once the new plants are too large for the container, transfer them into a new container and begin acclimating them to their new environment ex-vitro.



Various tissue culture plants in glass jars nd covered with luminum foil. Photo source: Atlanta Botanical Garden, Daderot, Wikimedia Commons.

# **Five Valuable Tips for Fall Lawn Care**

#### BY CHRIS ENROTH

Lawn care does not stop when summer ends. To the contrary, when it comes to routine turf maintenance the late summer to early fall months are a critical time for cool-season lawns.

Cool-season lawns are a group of turf species comprised mainly of Kentucky bluegrass, tall fescue, perennial ryegrass, and fine fescue. If you are a homeowner in Illinois with a lawn, more than likely it is a cool-season type. Cool-season lawns green up quickly in the spring and fall, but may go dormant during the hottest part of summer.

Coming out of a hot, dry summer, cool season lawns will be stressed and could use some tender loving care. Following are five tips to pick up your lawn as the summer fades to fall.

**1. Aerate** - A great way to relieve soil compaction and reduce thatch. The machine for the job is a hollow-tine aerator (a.k.a. core aerator). Aerating will also help to increase air and water infiltration, improving turf stand health, which allows grass to combat common lawn disease. Operate the core aerator a few days after a rain when the soil is still slightly damp. Core aerators cannot cut into hard, dry soil. Leave the soil cores to break down over the next few weeks.

**2. Overseed** – Broadcast seed into an established lawn with a seeder or by hand. Slit seeders are a great tool for overseeding into established lawns. Select a high-quality seed and set seeder at the correct rate.

Bonus Tip: To patch bare spots, rake up the soil surface for good seed-to-soil contact. Mix bagged topsoil with bagged compost 50/50. Combine grass seed with the soil/compost mix at a 3:1 ratio. Three scoops of soil mix with one scoop of seed. Apply the 3:1 mix to the bare spot, firm up the patch with your hands. Keep the area moist until germination and follow up with watering while the young grass plants develop.

3. Fertilize - Apply 1 pound of nitrogen fertilizer per 1,000 square feet. If you only do one lawn feeding a year, this should be it!

**Optional:** Apply a late-season fertilizer called a winterizer one week after the final mowing of the season.

4. Mulch your clippings and leaves – By bagging clippings and leaves you are taking nutrients away from the soil. Ditch the bag and return those nutrients and organic matter back to the lawn. Mulching mowers work best. Lawns, where clippings are not bagged, can go longer between fertilizer applications. Research at Michigan State University shows that shredding your fall leaves into the turf can improve lawn health.

Perennial weed control - This is also a great time to kill broadleaf weeds such as dandelion or creeping Charlie. At this time of year, perennial weeds are preparing for winter so they are sending carbohydrates to their roots. Applying a systemic herbicide at this time will be more successful at killing the entire plant, above- and below-ground. Once the weeds are dead, cool temperatures are conducive for cool-season turf to fill in the bare spots.



1. When aerating a lawn, use a hollow-tine aerator, These remove physical cores of soil. Other devices such as solid-tine aerators or spikes are not effective.



2. A healthy cool-season lawn can be achieved though proper fall lawn care.



3. A hollow-tine aerator deposits the soil cores on the lawn surface. There is no need to remove these as they will break down in a few weeks' time.

