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Bringing Houseplants Indoors

Since moving to the coast, most of my houseplants have become porch plants. They thrive outdoors for most of the year here, but there does come the time each fall to bring them indoors when the temperatures drop. With our unpredictable, temperature-fluctuating winter seasons, the time to do this will vary year to year. Check up on the cold tolerance of the specific plants you have so you can be ready to move them in when you need to as you keep an eye on dropping temperatures. A safe general guideline for most of our tropical houseplants would be to bring them in before night temperatures drop to 55 degrees. However, depending on the plant, they may need to be brought in before temperatures get that low, or they may even prefer cooler night temperatures.

Moving houseplants gradually into their winter indoor environment can help reduce shock. Leaf drop is usually inevitable when moving houseplants into an indoor area with less light than they received outdoors, but shock can be minimized if the plants are given more time to adjust during their transition. Consider first moving your plants indoors at night and returning them outdoors during the day at the beginning of the transition before keeping them indoors to lessen shock. Another option would be to move plants to a sheltered, shaded area outdoors with less light for several days before making the final transition indoors.

Closely inspect your plants for any pests and treat them before bringing them indoors. Keep a close eye on the plants once indoors to control pests before high populations get out of hand. Keep in mind that houseplants will grow much less vigorously in the winter season, so they won't be needing as much water or fertilizer. Houseplants provide many benefits for the home and can be a beautiful addition to any space. Don't forget to move any you may have put outdoors for the summer back indoors before the temperatures drop too much! If you're just starting out with indoor plants, check out MSU Extension Publication P1012, Care & Selection of Indoor Plants, at extension.msstate.edu.

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Diseases Affecting Citrus Trees

Citrus trees are susceptible to several diseases which can affect the appearance and quality of the fruit. The three most common fungal diseases to affect citrus are Scab, Melanose and Sooty Mold.

Citrus Scab is caused by the fungal pathogen *Elsinoe fawcetti,* and affects the leaves, fruit and stems of plants. Satsuma, grapefruit, and lemons are susceptible to Citrus Scab, but oranges are not usually affected.

Symptoms of Citrus Scab may appear as early as three days after infection and appear as small, pale orange, circular raised spots on leaves. As leaves develop these areas become well defined warts on one side of the leaf with a conical depression on the opposite side. These areas may run together to affect large areas of the leaf. Symptoms on fruit form irregular scabby masses and are cream-colored to pale yellow in young fruit but darken to olive gray with age. When severely affected, fruit may become misshapen with warty projections.

Citrus Scab on fruit

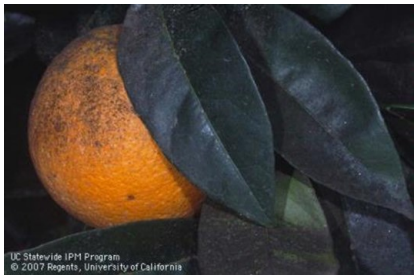
Citrus Scab lesions on leaf

Citrus Scab can be treated by the application of copper fungicides such as Kocide. To achieve effective control, plants must be treated after bloom when fruit are pea-sized. Plant tissues are susceptible to Citrus Scab only when young. Water is very important in determining severity of infection by Scab. Spores affecting young fruit develop in old lesions and numbers of spores can build very quickly with frequent wetting by rain or overhead irrigation. Spores are spread by splashing water. As with other fungal diseases, care should be taken to reduce the time leaves are wetted.

Melanose is caused by the fungus *Diaporthe citri*. This disease affects the appearance of fruit but generally does not cause harm to the pulp. Melanose infections first appear on leaves that are not fully expanded. Lesions on both leaves and fruit appear as darkly colored raised pustules. On leaves, these pustules may have a yellow halo, and lesions on fruit may coalesce producing a cracked appearance. Lesions on fruit may also be spread by flowing water to produce a tear-stained symptom. Treatment for Melanose is similar to that for Citrus Scab.

Melanose on grapefruit

Sooty mold is a common fungal disease affecting a wide range of plants. There are several fungi that are responsible for sooty mold. These fungi do not feed on the plant itself, but rather on "honeydew" excreted by pest insects living on the plant. Insects that can be responsible for sooty mold include aphids, scale, mealybugs, and whiteflies. Sooty mold can be treated by applying insecticides to control these insect pests. After the insects are eliminated, sooty mold will weather away from the plant. Sprays of insecticidal soap or horticultural oil used to control insects may also help loosen and remove sooty mold.



Sooty mold on citrus leaves and fruit

Garden Calendar: November

Plant

- Plant shrubs and trees after soil cools.
- Plant summer blooming perennials: Iris, Daylily, and Daisies. Plant winter and spring annuals: Pansy, Pinks, Flowering Cabbage, and Kale.
- Root Rose cuttings.

Water

- Water all newly planted trees and plants regularly.

Prune

- Remove dead limbs and prune evergreen shrubs.
- Cut off tops of brown perennials, leave roots in the soil.

Do Not Prune

- Do not prune spring flowering shrubs such as Azaleas, Hydrangeas, Mock Orange, Spirea, and Flowering Quince because flower buds are already forming.
- Delay pruning of most trees and shrubs until February since any new growth stimulated by pruning may be killed by a sudden freeze.

Miscellaneous

- Put leaves and spent annuals into compost bin.
- Add mulch to your garden and all ornamental beds for winter protection.
- Repair and sharpen garden tools, store with light coat of oil to prevent rusting.
- Build bird feeders and houses.

In Bloom

- Impatiens, Cannas, Roses, Witch Hazel, Gerbera Daisies, Sweet Olive, Camellias, Sasanquas,

  Japanese Plum, and Poinsettias.

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Compost Improves Soil Structure

The biggest benefit from compost is its value as a soil conditioner.

Compost is partially decomposed plant material mixed with soil. Since compost is rich in organic matter, use it to improve soil structure, tillage, fertility, and water and nutrient-holding capacity. Microorganisms are responsible for the natural decomposition of organic matter when composting. Finished compost is dark and crumbly with a fresh, earthy smell. Typically, the composting process takes 6 months or more to complete. The composting process is dependent on the type of organic waste materials, environmental conditions, and homeowner care of the compost pile.

Compost can be mixed directly into the garden soil or used as a mulching material that is mixed with the soil after the growing season. The biggest benefit from compost is its value as a soil conditioner. Compost increases the water-holding capacity of soil, reducing the frequency you need to water. Adding compost improves sandy and clay soils. Plant growth nutrients in compost include nitrogen, phosphorus, and potassium. They are mostly in an organic form, and they release slowly and are less subject to leaching. Compost is something you normally make rather than purchase, but composted bark and composted manure are frequently sold as soil conditioners. Make compost from vegetable and other plant materials from normal yard chores, leaves, and grass clippings, or hauled-in materials like sawdust, straw, or hay.

Construct a pile of alternating layers of organic waste material and soil. Keep the pile moist and add a mixed fertilizer to speed the composting process. Build your compost pile in some out-of-sight location. It can be built on open ground or in a bin made of cinder block, rough boards, or wire fence. The sides of the bin should not be air or watertight. Spread a layer of organic matter about 6 inches deep and add 1 cup of a mixed fertilizer, 6-8-8, to each 10 square feet of surface. Then add 1 inch of soil and enough water to moisten but not soak the pile. Repeat this process until the pile is 4 to 5 feet high. Make the top of the pile concave to catch rainwater.

Under normal conditions, turn the pile in 2 or 3 weeks and again in 5 weeks. Heat helps decomposition, so if the compost pile is made in the fall, decomposition will be slow until spring and summer. Moist, green plant materials and fresh manure decompose much faster than dry, brown materials and can produce a considerable amount of heat. For more information on composting, please call your local county Extension office or refer to Publication 1782, *Composting for the Mississippi Gardener* at extension.msstate.edu.

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Nematodes in the Home Garden

Nematode attacking plant root (x1800)

Nematodes are a group of slender worms, too small to be seen without magnification. Most plants have some nematodes associated with them either within the plant or feeding by puncturing plant roots with their spear-like mouthparts. Nematodes may cause damage to plants, including malformation of flowers, leaves, stems, and roots, while others affect the ability of the plant to transport nutrients. Nematode feeding can also allow for entry of other pathogens, increasing the damage done to the plant. Nematode damage is more severe when plants are under other forms of stress.

Plants affected by nematodes show symptoms like those caused by inadequate water, poor nutrition, or root rots. Plants may be stunted or show yellowing of foliage. Plants may also wilt under warm conditions even when soil moisture is sufficient. These symptoms are usually more evident on young plants than on established ones.

Tomato roots affected by root knot nematode

Nematodes enter the garden either by infested soil or transplants. Infested soil is easily moved from one garden to another on equipment, such as hand tools or shovels. Before moving any tools from a garden area you believe may be infested with harmful nematodes, wash away any traces of soil and disinfect tools with a 10 percent bleach solution.

If a garden area has been infested with plant pathogenic nematodes, choosing another site for your garden is a good way to avoid damage to plants. Due to limited space this is often not possible for many gardeners. Growing plants resistant to nematodes can also decrease damage. Using resistant plants is both easy and inexpensive; however, resistant varieties are not available for all crops, and in some cases, resistance is not complete. Increasing soil organic matter can also reduce problems with nematodes. Organic matter helps the soil retain moisture and adds nutrients that assist the plant in resisting nematode damage. Increased soil microbes, resulting from addition of organic matter, may also reduce nematode populations by building up microorganisms that feed on them. Finally, keeping part of the garden fallow can reduce nematode numbers by providing them no host to feed on. The area must be kept free of weeds for this to be effective.

Many types of nematodes are free-living and do not damage plants. Some nematodes are important beneficials, reducing populations of harmful nematodes and some insects. Identification of nematodes present in the soil is important to determine if the species present can cause damage to plants. The kinds and amounts of nematodes present in your soil may be determined by sending soil samples to the Mississippi State University Extension Plant Pathology Laboratory. Contact your county extension office for more information about nematode testing.

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Fall Lawn Care

Applying late-season fertilizer applications to warm-season turfgrasses in Mississippi (winterizing) is a controversial management practice that stems from the concerns for potential winterkill, disease promotion, and the effect on total nonstructural carbohydrates.

Some research has indicated that late-fall nitrogen fertilization increases vulnerability to winterkill and promotion of diseases. Other studies, including those conducted by Mississippi State University, have shown no direct correlation to winterkill, but instead shows prolonged fall color and earlier recovery in the spring.

Late fall applications of potassium are standard recommendations and practices as potassium promotes winter hardiness and disease resistance in turf. A strong healthy lawn probably can do just fine without fall fertilization, but a weak stressed lawn can still benefit from a boost in nutrients.

The first official day of fall was September 22, but we still have several weeks of growing conditions left for most of the state. Therefore, a fall application of a winterizing fertilizer formulated to contain lower ratios of nitrogen to potassium, particularly with nitrogen sources that are released slowly, may be just what your lawn needs. Time the winterizing fertilizer application when temperatures begin to moderate and days begin to shorten but before the turf goes dormant.

Regardless of the time of year, lush turf growth stimulated by excessive nitrogen may be more susceptible to certain diseases and insects. Be prepared to treat accordingly with appropriate fungicides and/or insecticides. Your lawn fertilization program should be based on soil test analysis, turf use requirements, and grower expectations.

Online Private Applicator Certification Program

A *private applicator* is a certified applicator who uses or supervises the use of restricted-use pesticides to produce an agricultural commodity on his or her own land, leased land, or rented land or on the lands of his or her employer. Private applicators must be at least 18 years old.

In response to limited face-to-face training during the COVID-19 situation, the Mississippi Department of Agriculture–Bureau of Plant Industry has approved an online private applicator certification program developed by the MSU Extension Service. Persons needing to obtain or renew their private applicator certification can complete the online training (two video training modules and a competency exam) by using the following link: http://extension.msstate.edu/content/online-private-applicator-certification-program. The fee for training and testing is $20, payable online by credit card, debit card, or eCheck.

ROASTED BRUSSELS SPROUTS

Makes 6 servings of 1/2-cup each

INGREDIENTS

1 pound Brussels sprouts
1 Tablespoon oil
1/8 teaspoon salt
1/8 teaspoon black pepper
¼ teaspoon cayenne pepper, optional
1 teaspoon lemon juice

DIRECTIONS

1. Preheat the oven to 400°F.
2. Wash your hands well with soap and hot water.
3. Line a large baking sheet with aluminum foil.
4. Wash the Brussels sprouts. Pull off any dirty outer leaves. Cut off the end of the stems.
5. Cut large sprouts in half the long way. Leave small ones whole.
6. Put the sprouts into a large plastic bag.
7. Pour the oil over the sprouts. Sprinkle with salt, pepper, and cayenne pepper (optional).
8. Shake the Brussels sprouts with the oil and seasoning in the plastic bag to coat.
9. Spread the sprouts in a single layer on the baking sheet.
10. Put the sprouts in the oven. Bake for 10 to 15 minutes.
11. Stir the sprouts. Bake for 10 to 15 more minutes.
12. The sprouts are done with they are tender and brown.
13. Remove the pan from the oven. Drizzle the lemon juice over the sprouts.
14. Refrigerate leftovers within 2 hours.