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Growing Ferns Indoors

BY GEMINI BHALSOD, EXTENSION EDUCATOR, HORTICULTURE

Many of the tropical ferns that people buy as houseplants grow in moist, humid forests with dappled sunlight. When attempting to grow ferns indoors, it is important to think about their native conditions and do your best to recreate them at home. Ferns can be tricky indoor plants, but with the right attention and care, they can thrive for years and bring new and interesting texture indoors.

Ferns that are grown at home include Boston fern (*Nephrolepis exaltata* 'Bostoniensis'), Rabbit's foot fern (*Davallia fejeensis*) and Bird's-nest fern (*Asplenium nidus*). The latter two may not be as familiar as ferns like, staghorn and maidenhair, but these two ferns pose a challenge due to their need for extreme humidity.

First, where should you keep your fern? Since ferns don't do well in bright direct light, situating near an east or north facing window will usually be enough. Ferns can handle some morning or evening direct sunlight, but all day is not ideal for these plants. In Illinois climates, a north facing window might not be enough during the winter months, so try moving it closer to an east or west facing window as the days get shorter.

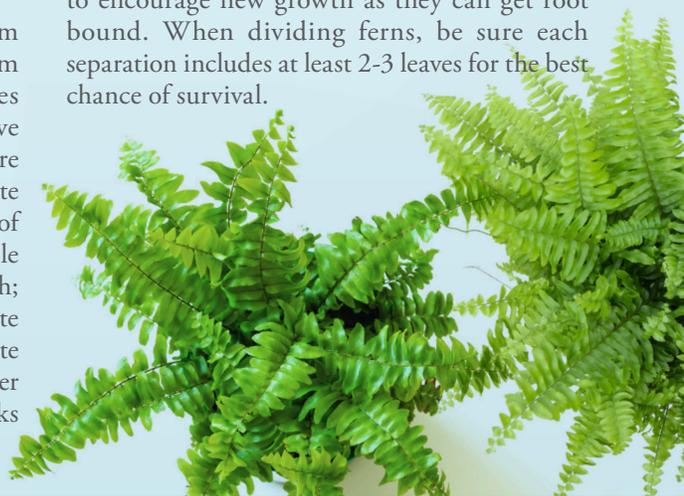
Maintaining even soil moisture and cool room temperatures is critical for fern care. Room temperatures should not exceed 72 degrees Fahrenheit. A properly watered fern can thrive when humid conditions are not ideal. They are adapted to moist environments and do not tolerate completely drying out. Depending on the size of your fern, you might need to water it multiple times a week! Don't keep it waterlogged, though; good drainage is key because they don't tolerate standing water. A soil mix with added vermiculite and peat moss can help with drainage and water retention. A plastic pot with drainage holes works

better than a terracotta or unglazed clay pot, as they can wick moisture from the soil. Good practice is watering your fern when the soil surface begins to look dry.

Humidity is essential to caring for ferns. Dry, cold, Illinois winter air doesn't need to be the end of your fern because once you know how to manage a humid environment, your fern can thrive. First, a humidifier where you can set the percent humidity is ideal, as ferns usually need 40-50% humidity. Even one without a percent setting will benefit your fern (and your dry skin) in the winter.

You could also situate the pot on a dish with stones and shallow water or set your plastic pot within a larger pot that is lined with moss. Keeping the moss as moist as a wrung-out sponge can help increase the humidity around your fern.

As ferns age, you will need to trim off brown, dry, leaves, but if your plant is growing new leaves, this is a normal part of its life cycle. Fertilize with a general purpose fertilizer only when the plants are actively putting on new growth or the foliage looks pale. When repotting, be sure to score roots to encourage new growth as they can get root bound. When dividing ferns, be sure each separation includes at least 2-3 leaves for the best chance of survival.



Ice Storms and Tree Damage

BY RYAN PANKAU, EXTENSION EDUCATOR, HORTICULTURE

Damaging ice storms occur throughout the state of Illinois with the frequency of these events varying slightly depending on the region. Based on more than 50 years of weather data from the Illinois State Water Survey, Illinois averages three to four days of freezing rain each year.

Ice storms, by the meteorological definition, occur when ice accumulation is 0.25 in. or greater. Larger ice accumulations (greater than 0.5 inches), can produce heavy damage in trees, especially when combined with wind.

So, what can you do to protect your property from ice storm damage?

Your best protection tool is prevention. Evaluate each large tree in your yard as a potential target, asking these simple questions for each tree:

- Are there power lines under a large tree canopy?
- Do significant limbs extend out over your home's roof or the roof of other structures?
- Beyond rooflines, what other targets exist in your yard, such as fences, sheds, outdoor furniture, grills, and landscaping elements such as shrubs and hardscaping?

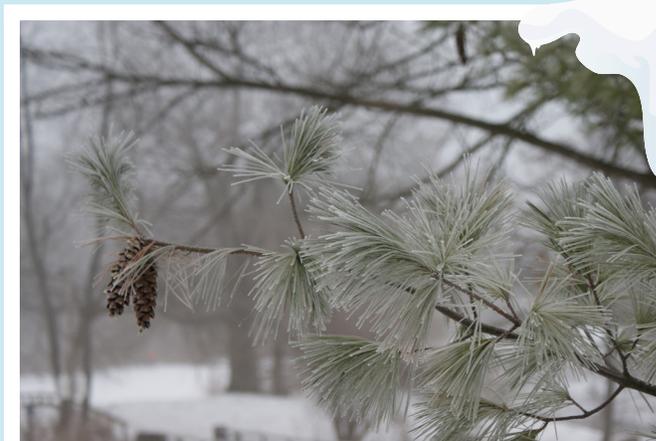
What interventions can I take to keep my trees healthy and strong?

Professional arborists are trained to assess the structural integrity of trees. These tree experts use the many outward signs a tree provides to identify areas of internal defect and instability. Arborists can often identify limbs with internal cracks and other weaknesses from patterns of bark, limb growth, or other signs. Pruning can remove significant weight from suspect limbs to reduce the load upon weak or defective areas in the tree canopy. In combination with pruning, limbs can be cabled or braced to provide additional support for a suspect branch union.

Regular pruning is important in maintaining healthy plants. But it's especially important, for large, high-value shade trees around your property. Pruning keeps trees healthier, and provides the best available preventative care for storm damage, including ice storms.

Wood fiber characteristics vary greatly among shade trees. Certain tree species, such as Siberian elm, silver maple, willows and many species of evergreen, are prone to damage from ice storms due to their wood fiber and structure. Evergreens are especially susceptible to ice storm damage since they hold leaves over the winter months, making them more prone to damage caused by ice accumulations than deciduous trees. For these reasons, it is especially important to assess evergreen trees with significant targets beneath them since many of these species have more brittle wood fiber, which is inclined to break as opposed to bend.

Though relatively rare in Illinois, severe ice storms can cause substantial tree damage. Most areas of the Midwest typically experience a large ice storm once a decade, so preventative actions such as pruning, mulching, and other plant health care practices can protect your trees against damage from the next major ice storm.



Pantry Pests

BY KEN JOHNSON, EXTENSION EDUCATOR, HORTICULTURE

We don't see many insects during the winter, a fairly common one that we see is pantry pests. These insects live, eat, and grow inside stored products like dry pet food and dry food products like oatmeal, rice, pasta, flour, and chocolate. They're also pretty fond of other dried plant materials, such as dried flower arrangements, ornamental corn, and birdseed. There are a variety of insects that are considered pantry pests, some of the most common include cigarette, drugstore, and flour beetles, as well as Indian meal moths.

Cigarette, drugstore, and flour beetles are small (1/8") beetles, reddish brown in color with a rounded, oval shape. Indian meal moths are about 1/2 inch long and have distinctive wing coloring, the part of the wing closest to the body is whitish-gray while the rest of the wing is coppery colored with black stripes. The caterpillars of Indian meal moth will leave a silken thread behind them as they feed, often forming webs across the surface of foods they are infesting.

There are a variety of effective methods for preventing pantry pest infestations.

1. Buy dried foods in quantities small enough to be used up in a short period of time. Use oldest products before newer ones and opened packages before unopened ones.
2. Inspect packages or bulk products before buying. Packages should be sealed and unbroken.
3. Store foods in tightly closed glass, metal, or heavy plastic containers. This prevents pantry pests from getting into food, and traps them inside infested foods, protecting the rest of your pantry.
4. Practice good food sanitation habits. Keep food storage areas clean by not allowing crumbs or spilled food to accumulate. Remove and discard old, unused products and inspect the remainder. Thoroughly clean cracks and corners.

If you have pantry pests, consider some of these control strategies for eliminating them.

1. Inspect all potential food sources. Many are attracted by lights and may be found away from the infested food product.
2. Heavily infested items should be thrown away outdoors in a tightly sealed bag.
3. If food products are not badly infested they can be thrown away, or they may be salvaged:
 - A. By freezing at 27°F or colder (colder the better) for at least 3-7 days (the longer the better).
 - B. Food can be heated at 140°F in an oven for an hour.
4. Empty and thoroughly vacuum any areas holding infested items. Pay particular attention to cracks, crevices, and corners.
5. Empty the vacuum cleaner or discard the vacuum cleaner bag after use to prevent re-infestation.
6. The use of insecticides is not recommended. Control will only be temporary unless the infestation is eliminated and they have no effect on pests inside of food packages.





Maintaining Garden Tools

BY NANCY KREITH, EXTENSION EDUCATOR, HORTICULTURE

Did you know maintaining gardening tools can play a significant role in gardening? Clean, sharp tools are more effective and save gardeners time and energy. Keeping tools clean helps limit the spread of plant disease, as well.

To clean tools that come in contact with soil, such as spades, rakes, hoes and trowels, practice cleaning them after each use. Use a wire brush to remove stubborn clay or soil. Use a cotton rag to do a final cleaning and store them indoors in a garage or garden shed.

When it comes to cleaning cutting tools such as pruners, shears, scissors, axes and knives, wipe them down with a rough cotton rag. Be sure to remove any sap or grime with a cloth dampened with a commercial lubricant if needed and dry with a clean cotton rag.

If tools have rust, it will need to be removed. Use a stiff wire brush or steel wool. A general rust removal product can be used, too, but be sure to follow the label directions. Wipe with mineral oil or spray lubricant for easier rust removal. Finish by wiping the tool with a cotton rag to remove excess oil.

In general, when sharpening your tools, a file or stone can be used. Always move the file in one direction rather than back-and-forth. Hand files work well for tools like shovels, axes, hoes and trowels. Honing stones are better for pruning shears and knives. Start by slowly pushing the file or stone away from you and the sharp edge

of the tool. Be sure to sharpen the bevel at the same angle created by the manufacturer (typically 20 degrees for cutting tools). You may notice burrs, or raised edges, form. Those can be removed by running a file along the backside of the blade. After sharpening, lubricate the edge to prevent corrosion.

Specifically, for hand filing shovels, axes, hoes and trowels, use a bastard cut mill file with handle for ease of holding. Start by securing the tool. Next, use the file to sharpen the blade at a 45 degree angle. Typically, it takes 5 to 10 passes. Monitor your progress as you should notice the blade getting sharper and shinier.

When sharpening shears, pruners and knives, it is best to remove the hinge (when possible) for better access to the blades. Be sure to note how to put the tool back to together, taking a photo may help. Use a two-sided, well-oiled honing stone. If blades are nicked or very dull, start with the coarser side of the honing stone and finish with the smoother side. Work the stone until you recover the 20 degree angle, typically in 10 to 15 passes.

For scissors and snips, cutting multiple times through fine sandpaper will sharpen them somewhat. For a sharper edge, a honing stone or diamond sharpening rod could be used. Be sure to sharpen at the same angle as the manufacturer intended.

Winter is a great time for building tool care into your garden maintenance plan. This task will pay off in the long run by keeping you safe, your plants healthy and extending the life of your tools.

Make a Statement with Succulent Cacti

BY KELLY ALLSUP, EXTENSION EDUCATOR, HORTICULTURE

Succulent Cacti are the new trend! They are just as interesting and easy to care for as the itty-bitty succulents we've come to know and love, but make a much larger impact on your plant-scaping efforts.

Architecturally, these plants are usually naked branches without leaves, and some are known for their breathtaking, but short-lasting blooms. Their superpower is that they grow big and may even need to be potted up every two or three years.

A pencil cactus (*Euphorbia tirucalli*) has engulfed the window of my office with bright green stems, with few and very small leaves on the branch tips. This plant bathes in the bright but diffused light from a southwest facing window. It is in a 12-inch pot of high quality, soilless media and is watered once every two to three weeks, waiting for the soil to completely dry between waterings. During winter, watering is drastically reduced to every month or two. The cactus in my office is trying to take over a 4 x 4 table meant for meetings, and sometimes tickles the noses of those who sit there. It is the statement of the room and has intentions of touching the ceiling one day, especially if I pot it up.



Instead, I will need to take cuttings. To do this, dip the cut end into a warm cup of water to stop the flow of latex sap that is endemic to euphorbias. 'Sticks of Fire' is a cultivar commonly seen in the industry as it turns pink, orange, and yellow when grown in bright sun. This plant could easily go outside during the summer as it is native to South Africa and India. Flowers are fleeting and not very noticeable.

I have a night blooming cereus cactus (*Epiphyllum oxypetalum*) in bright morning sun on my front porch. It is known to bloom one night a year with the most exquisite and delicate downward-facing blossoms that fill the night air with fragrance. Mine bloomed in the middle of August, and the blossoms opened up more than three nights in a row. The plant was covered with the promising pink buds that closed during the day. The best display was at 4 a.m.. With huge fleshy leaves, the cereus quickly filled out a 14-inch planter. It is watered once a week and allowed to dry down between waterings. During the winter months, I bring the plant into my home and give it an entire corner of my dining room.



Like with my pencil cacti, I reduce watering. This plant is native to the southwestern United States and is pollinated by hummingbird moths.

Dancing bone cactus (*Hatiora* spp.) is a plant that grows upright at first, but then drapes over the side of the pot like bony little fingers with joints. It isn't a typical cactus, but a jungle cactus—a succulent that grows in the crotch angle of trees. Its blooms are small and yellow but they completely cover the plant. It grows in an 8-inch azalea pot on the shady part of my porch. Since it is a cactus from the jungle, I usually water it at least once a week.

When you're looking to green your space with little investment, forget the itty-bitsy Echeveria, sedums, and aloes that are slow-growing, and go for succulent cacti that will transform the room.



How to Manage Winter Houseplant Insects

BY RICHARD HENTSCHEL, EXTENSION EDUCATOR, HORTICULTURE

Chilly Midwest days are here, prompting us to rehome many plants to the indoors. Plants enjoy a great chance of surviving the elements when moved inside, but it's important to consider that some outdoor pests may hitchhike inside and become a threat to the plant's health. Outdoors, natural predators and weather events both naturally keep insect populations in check. Once inside the house, these forms natural protections no longer exist, allowing the offending insect population to multiply quickly. Two of the more common houseplant insects during the winter months are spider mites and scale insects.

Spider mites come in several colors, yet all damage plants the same way. Spider mites do not have chewing mouthparts, they scratch the plant tissue to feed on the plant's sap. Mites can also spread digestive juices in the feeding area, destroying more tissue for consumption. Mite damage can sneak up on you as insects start feeding on the underside of the leaves in low numbers, leaving very tiny white spots and stippling. As the population grows, they begin to appear near the vegetative growing points and flower buds by the thousands among very fine webbing, indicating a major infestation that requires immediate attention or disposal. You can rinse off the nymphs and adults with forceful streams of water, using the sink attachment or give them a shower in the bathtub if the plant is too big for the sink.

Respray after a few days as the eggs will hatch and start the process all over. The goal is to break the life cycle and not let an adult lay any more eggs.

Another common houseplant invader is scale insects. Scale insects live and feed on houseplants and as time allows, will increase in numbers. The best indicator of a scales infestation is a clear sticky material on the leaves called honey dew, or a sticky mess on the floor below the plant. Scale insects insert their feeding tube into plant tissue and begin to remove the plant sap to feed on. As they feed on the plant sap, the excess is expelled and drips downward creating a sticky surface. The adult scale firmly attaches to the plant stems. The offspring is a very small, fleshy insect resembling an aphid and can be dislodged with forceful streams of water much like spider mites. Adults take a lot more effort as their waxy scale protects them. For this reason, managing a scale insect infestation is more difficult than spider mites. In many cases finding an insecticide labeled safe for use on houseplants is the best option. Just like spider mites, heavily damaged plants should be tossed out.

Don't let the threat of pests keep you from bringing your houseplants in for the winter, but use caution and keep a close eye out for signs of infestation to help keep your plant safe and healthy.

