



Growing Indoor Ferns

Ferns are non-flowering houseplants that are grown for foliage which can take many forms: from the delicate Boston fern to the tough and leathery fronds of the Bear paw fern. As members of the Polypodiopsoda class, ferns are vascular plants that reproduce by means of spores. They have complex leaves that uncoil from fiddleheads into fronds. Although they are native to tropical and sub-tropical rainforests ferns are easy to grow and maintain. Ferns require indirect sunlight, moist soil, and a humid atmosphere.

Growing Medium

Ferns prefer potting soil with good drainage and high organic content. A potting mix should have peat moss or sphagnum for moisture retention, sand or gravel for drainage, and sterilized bagged garden loam or potting soil. Add 1/2 ounce of dolomitic limestone to each gallon of soil mix and 1 tablespoon of bone meal or 20% superphosphate. See [Potting Media](#) for additional info.

Container Selection

Choose a container with a size proportionate to the plant keeping in mind that most ferns have a shallow root system. A plant is too small for its pot may drown in the excess water held in the soil. There should be roughly one inch of space between the root system and the sides of the container. Ferns may need to be repotted often but wait until it seems overcrowded. Any pot used should have a drainage hole at the base of the container to remove excess water. Do not put stones or broken crockery into the bottom of a container as a method of drainage. This will actually create an environment where the plants roots will sit in water-logged planting medium. A coffee basket filter placed in the bottom before the soil mix will work well to keep soil from running out of drainage holes. Another option is double potting. Place the fern and potting mix in a permeable container such as a clay pot and then place that container into a larger pot that has a layer of sphagnum moss that will surround the smaller pot. Keep the sphagnum moist.

Light Requirements

Ferns prefer indirect lighting from a north or east-facing window. The intense sunlight from a southern or western exposure may dry out or even scald the foliage. A sheer curtain can reduce light penetration or move the fern far enough from the window to avoid direct sunlight.

Temperature Requirements

Daytime temperatures should average 65-75°F. Nighttime temperatures should be about 10° lower, preferably below 60°F. Higher temperatures may require more frequent watering (see Humidity/Watering).

Humidity/Watering

When temperatures are below 60°F add water only when the soil is dry to the touch. If plants receive too much or too little water, shedding of leaflets will occur. Browning on the tips of the fronds and the yellowing and dropping of interior leaves are all signs of a low humidity. Certain practices, in addition to the double potting mentioned above, can be taken to increase humidity surrounding the plant. See [Houseplant Watering Techniques](#) for additional information.

- Lined Tray: Place a pebble-lined tray or saucer underneath the pot. Add water to the pebbles maintaining at least ¼" of water at all times. The bottom of the pot should not touch the water in the tray. Sitting directly in water will encourage fungal diseases and root rot. For best results, replace the gravel periodically or wash it thoroughly at three-month intervals to halt the development of algae in the water or on the pebbles.
- Misting: Use room temperature water. This is helpful during the winter when heating systems may dry out air.
- Room humidifier: Use it to obtain 30 to 50% humidity within a room or place the plant in a bathroom.

Fertilizer Requirements

Ferns require little fertilizer unless actively growing in winter months. Liquid houseplant fertilizer should be applied at half the recommended amount. Too much fertilizer will scorch the foliage. Do not fertilize newly divided or repotted plants for 6 months. See [Fertilizing Houseplants](#) for additional information.

Repotting

Ferns require repotting every few years. Divide overcrowded plants by removing from the pot then use a knife to cut into the root mass into 2 or 3 sections. Repot, keep the soil evenly moist, and supply humidity for the first few weeks.

Insect Problems

Scale, mealybugs, and [spider mites](#) are the most common insect problems. Either hand picking or a hard spray with warm water will dislodge most insects. A cotton ball dipped in rubbing alcohol can be used to carefully wipe foliage. Avoid pesticide use that may damage the sensitive plant. See [Insecticides: Low Toxicity Options](#) for additional info.

Popular Houseplant Fern Varieties

- Bear's Paw fern (*Aglaomorpha meyeniana*)- This large plant offers thick, leathery, dark green fronds that may grow up to 4'. It is epiphytic and grows with its roots exposed to air.
- Boston fern (*Nephrolepis exaltatis*)-This plant is also known as the ladder or sword fern. It has long, delicate fronds and light green foliage; grows from 10" to 3', depending on cultivar. It is ideal for hanging baskets. Requires frequent misting or high humidity as it will drop leaflets if it gets too dry. Dwarf compact cultivars are an excellent choice for a houseplant. These were especially popular in Victorian times.
- Brake fern (*Pteris cretica*)-This plant has several varieties, some with variegated foliage. It works as table fern or a hanging basket. Diffused light and nighttime temperatures of 50 to 55° F, 68 to 72°F during the day.
- Button fern (*Pellaea rotundiflora*)-This is a good plant for small spaces as it only grows 12 to 18" tall. It is often dark green and has round, slightly leathery "button-like" leaves attached to slender stems.
- Maidenhair fern (*Adiantum*)-This is a fast-growing fern is part of the Pteridaceae family with varieties that range from the large-leaved *A. peruvianum* to the smaller *A. capillus-veneris*. It needs high humidity and consistent moisture to survive. Its foliage is lacy with small, fan-shaped leaves. It does best in a north window. If it dries out, the foliage may die as the plant shrivels and will not recover when watered.
- Japanese Holly fern (*Cyrtomium falcatum*) - This prolific plant, also known as the fishtail fern, has bright, glossy, leathery leaves. It prefers cool to moderate temperatures and indirect sunlight, requires less humidity than most other ferns, and is ideal for lower light conditions.
- Rabbit's Foot or Ball fern (*Davallia fejeensis*)-This plant is an excellent fern for hanging baskets as the furry, creeping rhizomes that hang over the edge of the container resemble a rabbit's foot. It is epiphytic and needs to be planted with the rhizome above soil level instead of buried. It is very sensitive to salt and needs to be watered with soft water. It grows up to 12" high with runners to 3' long.
- Staghorn fern (*Platycerium* spp.)-The Staghorn fern's leaves are wide, flat, down-covered, and resemble an elk's antlers. It is slow-growing but can reach 3 to 4' in height. It should be grown in sphagnum moss with the shield (the brown part from which the green "antlers" emerge) wired to a piece of wood or cork bark. It does best in very humid climates as it needs lots of humidity. Water it by immersing the entire the wood slab or cork bark into a pan or lukewarm tub of water. Allow to drain before re-hanging.
- An extensive listing of ferns may be found at [UConn's Biodiversity Education & Research Greenhouses](#).

Despite good cultural practices, pests and diseases at times may appear. Chemical control should be used only after all other methods have failed. For pesticide information please call UConn Home and Garden Education Center weekdays, in Connecticut call toll free 877-486-6271. Out of state call 860-486-6271. UConn Home and Garden Education Center, 2017