

Almost all ferns can be propagated from spores, but it's no simple task. It's a challenge to grow a full-sized plant from a dust-sized spore; you need exacting temperatures and sterile conditions to be successful. There is no greater feeling of accomplishment, however, when all your tiny ferns finally do emerge.

Ferns, unlike most members of the plant kingdom, don't flower or reproduce themselves by seeds. Ferns are ancient plants, still clinging to their primitive method of reproduction. Their pale green spores appear periodically on the undersides of the fronds. As the spores mature, they turn brown or black. If you see a plant that has symmetrical or evenly spaced rows of brown dots (or brown fuzz along the edges of the fronds), the dots are merely ripe spores.

You can use several methods to grow ferns from spores. One option is to "plant" the spores in a covered jar or pan; or you can use a clay pot, as described for growing seeds. Make up a soil mix of equal parts garden soil, peat moss or leaf mold, and sharp sand. Sterilize parts that weren't sterile when purchased by baking in a 200-degree Fahrenheit oven for at least 45 minutes.

If you opt to use a jar or pan, boil the container to sterilize it also. Let it dry, then add a layer of soil several inches deep. If you use a clay pot, condition by immersing the pot in boiling water. Then fill it three-fourths full of soil. Save the boiled water to use later to moisten the soil.

When spores are mature, remove a frond from the plant and let it dry for several days between papers or in a bag. Then shake the spores off onto a sheet of paper, and make a funnel so you can evenly tap them onto the growing medium. Or sprinkle them on the surface with your fingers. Mist spores in pans or jars using the cooled, boiled water. If you're using the clay pot method, set pots in a pan of water (boiled, then cooled; or distilled) until they take up enough moisture to dampen the surface. Cover with plastic wrap or place in a closed plastic bag. Put in indirect light or under fluorescent lights for 14 to 16 hours per day. The temperature must remain a constant 65 to 75 degrees Fahrenheit.

Mist with sterile water whenever the soil starts to dry out. In several days (or weeks, depending on species), a green slime will appear. Several months later tiny fronds will push up from the soil. Transplant them from the pot or jar into a plastic shoe box or other flat, covered container. Or simply rearrange them so they aren't crowded. Maintain high humidity to keep the fragile leaves from drying out. When plants are one or two inches tall, transplant into separate pots, and in a year or two you'll have full-grown ferns. Then follow fern care advice for your specific kind.