

Germinating Seeds

Carolina™ CareSheet

Care and handling

Never allow germinating seeds to dry out: adequate moisture must be available at all times to ensure proper germination. Inspect all containers daily.

Most seeds will germinate at 24 to 26° C (72 to 78° F), which is about room temperature. Thermostatically controlled growth chambers, heating cables, or propagation mats can be used to ensure a constant temperature.

Most seeds will germinate in total darkness, although some plant species require light. Instructions for seeds requiring special treatment are usually provided on the package.

If you have experienced molding of planted seeds, surface sterilization of the seeds is recommended. Use 1 of these methods:

- Soak seeds in a 1:1 (volume) solution of 3% hydrogen peroxide and water or absolute ethanol and water for 10 min.
- Soak seeds in a 1:8 (volume) solution of 5.25% sodium hypochlorite (household bleach) and water for 10 to 15 min.
- Soak seeds in a 1% potassium permanganate solution for 20 min.

Follow the surface sterilization with at least 2 water rinses.

You can speed germination of large seeds such as corn, beans, and peas by soaking the seeds in water for 8 to 12 hr before planting them. Do not expose imbibed seeds excessively to air because drying may injure the now-active embryo.

Most seeds in sealed packets should remain viable and free of insect damage for a year or longer if properly stored. Soybeans are exceptions. Their high oil content makes them susceptible to spoilage, so plant them as soon after receipt as practical. Always store seeds in a cool, dark location protected from moisture. Recommended storage temperature is 20° C (68° F). Temperatures below 12° C (54° F) may reduce viability of some seeds. Seed packets may be placed in a sealed glass or plastic container and stored in a refrigerator.

Planting

Sow very small seeds (such as coleus and tobacco) on the surface of moist planting medium and leave them uncovered or press lightly into the surface with a flat object such as a wooden block to ensure proper contact with the medium. Cover larger seeds (such as radish and tomato) with a thin layer of planting medium. To facilitate proper spacing of the seedlings, sow the seeds in shallow rows (drills) made by lightly pushing the long edge of a ruler or other sharp-edged stick into the soil surface. Cover very large seeds to a depth equal to the diameter of the seeds. Use a blunt stick (such as a pencil) to drill holes to the required depth. Drop seeds into the planting holes and cover them with soil.

After planting the seeds, lightly mist or sprinkle the surface of the medium with water and then cover the container with clear plastic or glass to retain moisture during the germination process. Place the container in a location where the temperature can be maintained at 22 to 26° C (72 to 78° F). Light is usually not required during the germination process. However, some seeds such as tobacco and coleus will not germinate without light; with these seeds special instructions are given on the packet label.

FAQs

Why haven't my seeds germinated?

Are the seeds fresh? Have they been properly stored? If you can answer yes to both questions, you may not have waited long enough or the potting soil may lack moisture or be too moist. When pinched between thumb and index finger, the potting soil should be moist enough to clump but should not drip water. Also, small seeds are sometimes washed too deeply into the mix when top watering. Read any planting instructions on the seed packet as some seeds have special needs for germination.

My seeds germinated and the seedlings grew for a few days before falling over and dying. What went wrong?

The seedlings were killed by a fungal problem known as "dampening off." This condition is promoted by potting soil that is too moist, which allows fungal spores to grow.

My seeds have germinated but the seedlings are spindly and falling over. What do I do?

Seedlings respond to environmental stress by growing elongated, weak stems. The most common cause of stress is too little light. Increase the intensity of light or its duration or both. Other common causes of stress to seedlings are too much soil moisture and too much heat.

Problems?

We hope not, but if so, contact us. We want you to have a good experience.

Orders and replacements: Call 800.334.5551, then select Customer Service.

Technical support and questions: E-mail caresheets@carolina.com.



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