



SEED-STARTING SUPPLIES: THE OLD, THE NEW, THE CHEAP

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From *The Curious Gardener*, Winter 2007

Soon we gardeners will start fantasizing about the rebirth of a warmer sun illuminating a March morning. We are ready to give birth again also—to life in the garden.

So what do you need to start seeds indoors? Basically, all it takes is a container, planting medium, seeds, water, oxygen, light, and warmth. However, the type of supplies necessary to provide these elements may change with the seed type and most definitely does change with time & technology. Seed starting supplies available today can be more convenient, easier, efficient, and expensive.

Traditional Supplies

Containers: There are a variety of containers available and it is good to closely align the specific needs of the seeds you are planting to the container—i.e., some plants are more vulnerable to transplant shock and therefore single cell packs are better. Traditional containers include:

1. Plastic trays which are at least 2" deep and up to 20" long.
2. Molded plastic foam trays (usually 3" high) with plant holding cells that taper to a narrow open point that encourages a dense root ball.
3. Peat pots or pellets which go directly into the ground; proponents explain that the pots disintegrate and the peat enriches the ground. Soak them before using and breakup a bit before planting outdoors. Here the growing medium itself becomes the container unit.
4. Ordinary clay flower pots can do the job also.
5. Traditionally, the basic seedstarting container is the wood flat.

There are two types of planting medium: germination medium and growth medium, the latter being able to do both. So why have a special medium for germination only? By eliminating any type of soil in the mixture, the germination medium removes any chance of sudden seedling death from the dreaded damping off fungus.

Germination Media: Many materials can be used to start seeds from straight vermiculite to mixtures of soil-less media which must be loose & aerated, well drained, low in nutrient salt contents, and free of disease organisms, pest eggs and weed seeds. Equal amounts of sphagnum moss, horticultural perlite/vermiculite and sterilized builder's sand are satisfactory, but there are many other good recipes. You can purchase an assortment of these germination mixtures at garden centers also. No matter what medium is used, be sure it is sterilized and damp before seeds are added.

Moisture: Watering cans and spray bottles have been used traditionally. Glass & plastic covers are long-time favorites for moisture retention (greenhouse effect). Seeds require continuous water and oxygen to germinate. (Note: too much water eliminates the oxygen available to the germinating seed.)

Light: A room with a south facing, sunny window is still a great spot for seed starting, especially for the warmth. Germination does not require light (with exceptions such as lettuce), but seedling growth does. Fluorescent tube lighting has been the historical alternative.

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Warmth: Maintaining the proper temperature for a particular seed type is vital to its germination. Know the range of temperatures acceptable for your seeds. 65-75 degrees is the normal range; exceptions should be listed on seed packets. Incandescent bulbs, radiators, heating cables/mats - as well as the sun - can provide warmth.

Seeds: Always read the instructions that come with specific seed types. Some need to be chilled, scarified, and/or presoaked. Sow seeds with a saltshaker or pinch them out with your fingers. Keep most unused seed in a cool, dry location inside an airtight container with a packet of silica gel desiccant. Refrigerators are excellent storage spaces and may be frozen if you are 100% sure they are dry (can't squash in one piece because they are too brittle). And buy seeds that are packaged for the upcoming growing season only. You should be able to germinate 80% or more of them.

Labels: Don't forget to label. Use anything that works; adhesive backed paper labels are readily available in stationary stores.

“State of the Art” Supplies

I opened a catalog yesterday and read, "Grow a Healthy Gourmet Garden Year Round". This electric "machine" sent adjusted light, water and nutrients to specific plants in all "bio-grow" pods. Everything is included, even the seeds. This may be an extreme, but entrepreneurs have devised many new ways to sell you convenience, ease, and "healthier" seedlings.

Containers: The trend today is to sell containers in convenience kits that try to do it all for you. You pay for the convenience, but price around—it may be worth it. A few examples:

- All-in-One Greenhouse Kit: Jiffy medium, peat pellets (which can go directly into the garden later), starting trays, and a clear plastic vented, humidity dome. Add seeds and moisture.
- Quick Start Grow Kit: peat based, nutrient-enhanced grow mat for both germination and growth. Holes are preformed—just add seeds and water and cover with vented, greenhouse dome. Check kit to make sure you have more than 2" for root growth.
- Mini electric greenhouse: automatically stays at 75 degrees. Add container, mixture, seeds, and set in the sun.

Media: A popular new soil-less growing medium uses coir, made from coconut fibers. It retains moisture and nutrients better than moss. And today worm castings are a common and safe nutritional addition. Unfortunately, many of the new germinating mixes contain too much fertilizer and compost which are not only unnecessary at germination but university studies show can decrease seed survival rates.

Light: Compact, fluorescent grow- light systems are now available in full spectrum natural light . These CFL's (Compact Fluorescent Lights) provide more concentrated light than the old tubes and are about 1/4 the size.

Moisture: Vented humidity domes create mini-greenhouses. You can also purchase a low pressure misting system, distributing, 4 seconds of mist every 6 minutes.

Warmth: A seedling heat mat placed in the bottom of a tray/flat automatically warms plant roots 10- 20 degrees above room temperature. This speeds germination and increases the germination percentages.

Seeds: New devices are available for controlled sowing. A trowel-like seed distribution tool has interchangeable baffles to dispense a wide range of seed sizes. You can buy a seed syringe-type dispenser, dropping the seeds with a push of a plunger; little thinning is necessary and waste is minimized. And seed tapes are available that have precisely spaced seeds enclosed in an organic, water soluble material. Simply place them in the container.

“On the Cheap” Supplies

The least expensive way to germinate seeds is outdoors when the ground is warm again and fear of frost is minimal. If your soil is already light with the ability to hold moisture but drain well, all you need are the seeds. However, your germination rate will be much lower due to uncontrollable environmental factors such as disease and temperature extremes.

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Containers: Egg cartons (not much room for growth), trimmed milk cartons, cottage cheese cartons, aluminum disposable loaf pans (reusable), and household discards - enamel broiler pans, cake tins, dishpans, etc. If the container fits on a sunny windowsill, more cost savings are possible.

Media: You can save money by sterilizing your material (moss, sand, compost, vermiculite, perlite, screened loam, etc.) yourself. Place in the oven at 180 degrees for 30 minutes and be prepared to use room freshener.

Light: The sun is free, but installing a south-facing window is not. Let's hope you already have one.

Moisture: Large plastic bags can create a mini greenhouse; it doesn't have to be a "humidity dome". And you can hand water your seeds/seedlings but doing so is very risky. If you do, use a fine spray; puddling and dry areas are forbidden!

Seeds: You can use your fingers to pinch out seeds without any purchased tools or mechanisms..

Labels: You can use Popsicle sticks, cut pieces of Venetian blinds, strips cut from plastic bottles, and scrap paper glued to the side of containers. Only your imagination limits your choices.

Whatever your choice—traditional, "state of the art" or the "on the cheap" supplies—enjoy an early spring indoors this winter.

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