

MILL BAY GARDEN CLUB

Growing Plants from Seed

by Elaine Scott

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Decide which seed is worthwhile growing

- Seed is expensive, and growing plants from seed can be time consuming
- Is it rare or unusual, a new cultivar?
- Is it easy to germinate and grow, or will success rate be low?
- How many do you need? Just a few or a lot?
- If common, is it cheaper to buy a six pack at the nursery?

Storing seeds.

- If you are collecting your own seeds, you need to make sure that they are fully dry prior to storing them.
- Store seeds in an airtight container e.g., a film roll container or freezer bag. Make sure that it is labeled with the name of the seed and the date it was collected or bought.
- Store these containers in another airtight container such as a preserving jar.
- Store in the deep freeze. **Note: some seeds cannot be frozen so check your reference if you are not sure.**
- If storing vegetable seeds, put them in separate jars labeled by the month you are going to start them and by whether or not they will be started inside or directly sown outside.
- Check references to determine the length of time the seed can be stored. As an example, parsnip seed is only good for one year. Dried bean seeds are viable for about five years.

You've collected and stored or bought the seed. Now check your references or the seed package and follow the instructions

- Growing instructions will tell you *when* to plant it
- Does it need stratification?
 - May need soaking for certain length of time to soften seed coat (sweet peas)
 - May need to be chilled or frozen for several weeks (Cimicifuga)
 - May need to be nicked with a sharp knife or rubbed with sandpaper (Brugmansia)
- Does it need to be covered /uncovered with soil to germinate?
- Does it need light /dark to germinate?
- Does it need bottom heat to germinate – most do but not all.
- Is it a big seed or small seed?
 - Distance between seed: Big seeds needs more room so plant fewer seeds per chamber
 - Tiny seed is often easier to handle if you mix it with a bit of dry sand

Equipment that helps you achieve the best results when growing indoors

- You are trying to emulate what nature does naturally using artificial conditions: light, dark, hot, cold, wet, dry, gentle wind, soil fertility.
- **Provide sufficient light by using grow lights**
 - Suspend fluorescent light fixture over trays using adjustable chain that will link into hooks, TIP: lights often available at garage sales, you need one warm light tube and one cool light tube or full spectrum grow tubes
 - Hook up to a timer – plants can need up to 14 hours of daylight
 - Distance should be 2 -3” above the seeds so plants are stocky, not leggy
- **Use trays** with no drainage holes if using heat mats, and cell inserts to make it easier when it comes time to pot on seedlings. You can also use 3 1/2 “square pots placed in lasagna trays.
 - **Trays and Cells must be sterile;** use new ones or wash and then rinse in 10% bleach solution
- **Plastic Dome keeps in humidity (sterilize if reusing)**
 - Bigger is better, more air circulation, less dampening off, more room, keeps temperature more even and less chance of overheating
 - Plastic bags also work, suspend with coffee stir sticks or popsicle sticks.
 - Glass covers over the tray area also work well.
 - **Note: I do not use a plastic dome but some people do prefer to.**
- **Sterile germination mix** such as Sunshine #3 germinating mix will last for a long time
- **Bottom heat by using heat mat or heating cables**
 - Seeds usually germinate best with warm feet and cool heads. The warmth encourages active root growth and the cooler air helps to produce robust, stocky plants and probably helps to reduce fungal problems. However, some seeds do not like bottom heat so check your references.
 - Growing in a cooler room helps, such as a mudroom, garage, shed, sunroom, greenhouse, where there is a change in air temperature during day and night
 - Heat mats come in 1 or 2 flat size, handle with care so they last longer (follow the manufacturer’s instructions)
 - Heating cables are now very hard to find, require some preparation for installation but great if you intend to grow more than one or two flats of seeds and generally will last several seasons.
- **Fan** for when seeds have germinated and are actively growing. This reduces fungal infections.

Sowing the seed

- Make up labels for all the seeds you will be planting
- Plant to the right depth, cover or uncovered as directed

- If sowing a seed that takes a long time to germinate, consider covering the surface with some fine chicken grit.
- Place label in cell and place in tray (so you don't end up with unlabeled seeds: if you don't label you WON'T remember what it was!)
- When tray is full, water lightly with warm water so soil is damp, not wet.
- Place dome over tray (if using dome) and place on heating mat

Caring for seed

- Check daily, especially when seeds start to germinate. Water soil **lightly** to keep them moist, remove dome daily if possible to get some air exchange.
- If any sign of dampening off, spray with weak solution of water and baking soda and increase air circulation.
- When seedlings have germinated, remove dome entirely and ensure that the fan is on. Keeps humidity in check and produces stronger stems.
- Once the seeds have germinated, rather than watering the small seedling from the top I put the water in the bottom of the tray. This allows the water to be sucked up by the soil and does not damage the fragile seedlings.

Potting up

- When they have their first set of true leaves is usually the time to pot on into larger containers.
- Use 1/3 sterilized potting mix, 1/3 peat (or coconut fibre) and 1/3 perlite.
- Add a slow release fertilizer to the soil mixture (see recipe).
- Water from bottom up i.e., place plant containers in a solid bottom tray. Easier on the small seedlings.
- Seedlings still need light and air but probably will no longer need bottom heat.
- Most plants do better with extra potting up – 2" container to 3 ½" container then one gallon pots.
- Harden off seedlings gradually before planting outside. Make sure outside soil temperature is appropriate for the type of plant.

Recommended references.

- The Propagator's Handbook / Peter Thompson. David & Charles. Newton Abbot. Devon. 1996. (General propagating information)
- Harvested Seed Germination Requirements 2009. /Royal Horticultural Society. U.K.
- The Gardener's A-Z Guide to Growing Flowers from Seed to Bloom /Eileen Powell. Storey Publishing. North Adams, MA. 2004.
- Seed to Seed. Seed Saving and Growing Techniques for Vegetable Gardeners. /Suzanne Ashworth. Seed Savers Exchange, Inc. Decorah, Iowa. 2002.
- West Coast Seeds Catalogue. Available free from nurseries. Valuable planting guide and seed starting information.
- How to Propagate. Techniques and Tips for over 1000 plants/ John Cushnie. Kyle Cathie Limited. London. U.K. 2006. (General propagating information).
- Saving Seeds As if our Lives Depended on it/ Dan Jason. Salt Spring Seeds. Salt Spring Island. 2008

Murray Mix Fertilizer

A general all purpose slow release fertilizer – note does contain blood and bone meal and canola meal therefore not suitable for those who do not want to use these products.

- 4 parts alfalfa meal
- 4 parts canola meal
- 4 parts blood meal
- 2 parts dolomite lime
- 1 part rock phosphate
- 1 part bone meal
- 1 part kelp meal
- 1 part greensand.

Seed sources.

- West Coast Seeds. Delta B.C. www.westcoastseeds.com. (Vegetables, herbs and flowers.
- Full Circle Seeds. Sooke, BC. Fullcircleseeds.com. (Vegetables)
- Gardens North Seed. Annapolis Royal. Nova Scotia. Gardensnorth.com. Excellent source for hardy plants.
- Plant World. www.plant-world-seeds.com. South Devon, U.K. Good source for flower, shrub etc. seeds but check their hardiness zones. What is hardy in Devon may not be hardy here.
- Chiltern Seeds. Cumbria, England. www.chilternseeds.co.uk. Good source for flower, shrub etc. seeds.
- Alpine Garden Club of British Columbia. Membership in the club enables you to take part in their free seed exchange. www.agc-bc.ca. Wide selection of seeds for perennials and shrubs.
- Barnhaven Primroses. www.barnhaven.com. Good selection of acaulis, polyanthus, primroses, primula and auriculas.
- New Zealand Tree Seeds. www.nzseeds.co.nz. Good selection of unusual seeds.
- Salt Spring Seeds. www.saltspringseeds.com.

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