

# One Method for Growing Rhododendron and Azaleas from Seed, USDA Zone 6a

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Nova Scotia is a peninsula about 500 km (300 miles) long, lying between latitudes 43° and 47° N. Cape Breton is an island on the extreme northern end of the province; the town of New Waterford is located on the eastern shore of Cape Breton.

The climate is strongly influenced by the water masses which locally modify the effects of the general tendency for weather systems to move from the west. Surrounded by water, Cape Breton is bounded by the Gulf of St. Lawrence on the west and the Atlantic Ocean on the east. The Greenland Current—a mass of cool water flowing south—is not far from shore; it's one of the water returns of the Gulf Stream.

The Greenland current is both a curse and blessing. Being colder in the summer than the air temperature, it creates fog on the coast in spring and early summer thereby reducing the hours of sunshine. At the same time, it lessens the length and intensity of frost. The current prevents the sea from freezing in the winter, hence moderates the winter temperature along the coast where the sea is often much warmer than the air at that season. Annual precipitation is 1575 mm (62 inches). The lowest temperature experienced in the garden was -28° C (-18° F) in January 1994. In summer, there are usually two or three days of temperatures at 30° C (86° F).

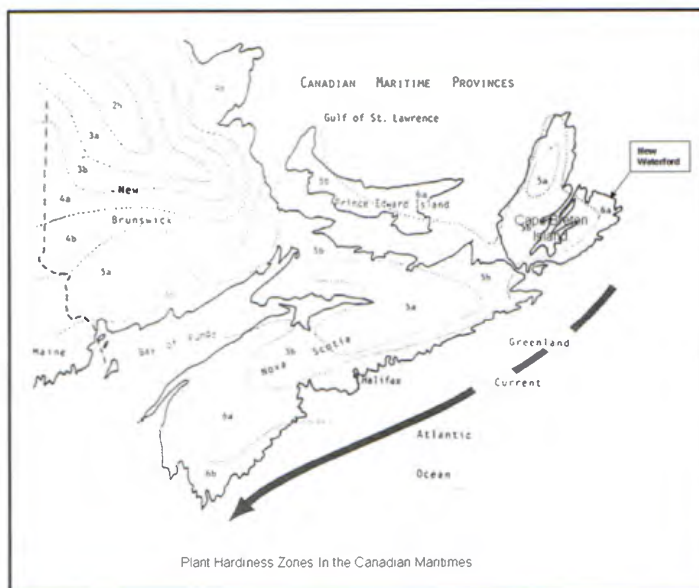
We planted our first azaleas in 1989. Evergreen types are not hardy enough to succeed here except a few of the very hardiest type. The North American deciduous species and hybrids flourish; there are several large beds of Exbury, Knaphill, and Northern Lights series also. In the cool summers, mildew has never been a problem. A favorite pastime during the winter months is propagating new garden accessions from seed. It is an easy and profitable means of obtaining plants that are not commercially available in Nova Scotia (or anywhere else in some cases).

There are many methods of growing rhododendrons from seed. Here is the one I have been following for the last few years.

## First Year—November to November Seed Sources

The seeds I look for are from hardy species, or if a hybrid, have one or both parents of reasonable hardiness. I look for seeds that suggest the mature plants might have fragrant flowers (*Rhododendron aborescens*, *R. prinophyllum*, *R. luteum* or crosses with these). Another objective is to look for a background offering diverse blooming times (early, mid, late).

I purchase seed from the ASA, ARS, and the local ARS chapter seed exchanges but this sometimes arrives too late



in the spring for planting. So I store them in the refrigerator until the next fall. Storage is as simple as putting the paper or glassine packets in an airtight food storage container or glass jar with twist off top with some silica gel crystals on the bottom and a piece of cotton batting over the crystals.

In November, I plant the purchased seeds along with some other seeds from my own crosses which I collected the previous year. Many years ago I read in *Rhododendrons of the World*, written by David G. Leach (1), that he started his rhododendron seed in mid-late November. This works just fine for me, getting the plants to a size where they can overwinter in a cold frame one year later from the time of sowing. On the other hand, the deciduous azaleas tend to grow more rapidly and, if started that early, could become tall and leggy too quickly. I prefer to plant these in mid-January. By the way, did you know that leggy azaleas can be cut back and the juvenile tips rooted very easily?

## Starting Seed

I fill 3-inch plastic pots to within 3/4 inch of the tops with a mix of moistened media (1/3 perlite, 2/3 peat). It's best to add hot water and just enough so that squeezing a ball of the mix in your hand will release only a small amount of surplus water. I prefer to top this with 1/2 inch of live sphagnum moss (2) collected locally and chopped with scissors.

Sphagnum moss and peat moss are not the same product. Sphagnum moss is used in the floral industry to line wire baskets and make wreaths. It is the "living" moss that grows on top of a sphagnum bog. Peat moss is used as a soil conditioner by gardeners. It is the dead material that accu-



▲ Indoor light garden

mulates in the lower levels of a sphagnum bog. Harvesters of the horticultural peat moss remove the top few inches of the live sphagnum moss before harvesting the peat below. If you can't locate sphagnum, don't panic; you will still get fair germination without it.

The seed is sprinkled lightly and left on top of the surface, do not cover with media. I use a small spray bottle with weak liquid fertilizer to settle the seed in. Next, insert a label and put the pots inside a fold-lock sandwich bag and lock underneath. The seed begins to germinate in 10 to 14 days and needs no light until then.

At the first sign of the seed splitting (some white/yellow embryo tissue showing is the signal), I place the seeds under fluorescent lights to promote strong, continuous growth. My light benches are in a section of a basement room which is usually 70° F. If cooler, it will take longer to germinate. The lights are activated and run on a timer from 6 a.m. to 10 p.m. Leave the pots in the plastic bags, lifting each seedling once a week to check on conditions and spritz with a solution of liquid fertilizer. I use Schultz® brand (10-15-10) at seven drops per liter.

Around late February to early March, I thin the seed and move nine robust seedlings into a fresh 3-inch pot with a mix of moistened media (1/4 perlite, 1/4 peat, 1/2 pine bark). No live sphagnum is needed.

By early April most need to be moved again into a single 3-inch pot for each seedling. When I re-pot this time, the plastic sandwich bag is not used. Instead the pots are positioned in a wardian case under the lights. This is simply a square, wooden box made from 7-inch pine with a plywood bottom. All seams are silicone caulked and a Plexiglas removable cover goes on top. Never allow the seedling medium to dry out.

#### Watering/Fertilizing

I water from the top, using three separate applicators for different stages of development. Watering includes the water soluble fertilizer as well. I water until a small pool first accumulates on the surface of the pot:



▲ Seedlings in early March

- The first stage begins when the seed is sown up to the point germination is mostly complete (one month). The 3-inch plastic pot enclosed in a plastic sandwich bag results in little moisture loss. Freshly distributed seed is settled by spritzing the seedling 5 to 10 times weekly using a good quality spray bottle.
- At the end of the first month, bags are removed and pots are lined out in a wardian case. (Some folks use a plastic dome cover.) While this limits moisture loss, it is still necessary to add more volume at each watering. I substitute a laboratory wash bottle for the spray bottle. A wash bottle is a squeeze bottle with a nozzle, usually used to rinse various pieces of laboratory glassware, such as test tubes and round bottom flasks. Most wash bottles are made of polyethylene. When pressure is applied to the bottle, the water inside becomes pressurized and is forced out the nozzle into a narrow, easy to direct stream of liquid. This permits a good volume of water to be applied in a targeted area so the seedlings are not flattened over. As long as the seedlings are in a communal pot, the wash bottle is used.
- At some point, usually 5 months after sowing, each seedling is moved to its own 3-inch pot. Seedlings are now about 1-inch tall and pretty sturdy. It is possible to use a conventional plastic watering can at this stage

#### Moving Out

When all risk of frost is gone (June 15 here), it's time to move the plants outside. About a week or so before, begin the first step in hardening the plants by opening the Plexiglas cover slowly. Gradually open it a bit more each day until finally removing it. Before moving the plants outside, re-pot each seedling in a 6-inch pot using a medium of three parts pine mulch, two parts peat and one part perlite. Add water until a small amount leaks from the drain holes in the bottom.





▲ ▼ Summer shading



▲ ▼ Winter cold frame



The plants cannot be put in direct sun. I have a number of benches and tables on my deck from which I suspend a burlap shade cloth, placing the tender plants from inside into the shaded area. On top of the bench, I place plants that have wintered outside in a cold frame.

It can take three to four weeks before it's safe to expose the seedlings to direct sun. I simply lift the shade cloth for longer and longer periods of time each day until they are receiving eight hours or more of sun. Plants are also fertilized with Miracle Gro® (15-30-15) (1 tbsp/gallon) every other week until late June.

### Preparing for the First Winter Outdoors

In mid-November when the plants are one-year-old they must be prepared with heavy protection for the four months of winter (December to March). The pots are moved to a cold frame and the interstices between pots are packed with peat or sawdust/woodchips. A woven plastic tarpaulin is secured over the top and sides of the frame with staples. This translucent blue tarp does not allow too much heat to build up from winter sun. Never use clear plastic.

### Second Year—November to June

Very little happens, the plants are dormant. No feeding or watering is needed. The cold frames are vented in early April first by sliding the cover over so that 6 to 8 inches of one end is open and by mid-April the covers are removed completely. There is no need to close it at night the plants are already acclimatized to the ambient air temperatures.

### June to November

In June the pots are moved to a central location on benches where they are watered and fertilized (Miracle Grow® liquid) all summer. By September to November the plants are about 12 to 16 inches tall and are ready to be planted in the garden.

I find growing azaleas from seed an interesting and rewarding pastime during the long, cold winter days here in Cape Breton. There is a huge reward in seeing a small plant you've nurtured from a tiny insignificant seed bloom for the first time. This is increased several fold if that plant is from a cross of two plants you've carried out yourself. To view a new color arrangement or smell an intoxicating fragrance are just more reasons for fellow azaleaphiles to try a hand at this gratifying leisure pursuit.

**Bruce Clyburn** recently retired after 35 years in the Cape Breton coal industry. He can be reached by e-mail at [bcllyburn@ns.sympatico.ca](mailto:bcllyburn@ns.sympatico.ca).

### References

- (1) Leach, David G. *Rhododendrons of the World*, Charles Scribner's Sons, NY, 1961.
- (2) Konrad, Mark G. "The Value of Ground Mosses with Seedling Culture," *JARS* Vol. 53 Number 3.
- (3) Johnson, Bryan, "The Live Sphagnum Method for Germinating Rhododendrons," *JARS* Vol. 50 Number 1.