

## Growing magnolias from seed

In general magnolia seeds respond readily to a variety of rearing techniques, and experienced growers often evolve their own particular methods for getting good results. For those interested, the following advice from **STEFAN COVER**\* will provide some idea of what works well:

- 1) Ideally, seeds should be collected just before or just as the seed cones begin to open. Do not wait until the seed cones are fully open and the seeds are drying out—such seeds may exhibit reduced germination rates because of drying and seed predation. Let the seed cones sit in a *dry, well-ventilated* location. Over a few days they will open fully to reveal the bright orange or red seeds.
- 2) Promptly remove the seeds from the seed cones and place them in bowls of cool water for several days to soften the orange or red outer seed coat. Once softened, remove the outer seed coats and wash the seeds in mild soapy water (dishwashing liquid works well) to clean off the oily residue. A large

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tea strainer or a colander is very useful for washing and rinsing seeds. Note: when you are washing the seeds, *discard any that float*. In water, good seeds sink to the bottom of the container and stay there. "Floaters" are generally not viable, although once in a blue moon one will germinate.

- 3) Let the seeds dry overnight at room temperature on a paper towel, and then place them *in a labelled, sealable plastic bag with moist peat moss* (preferably) or moist paper towels. Do not store the seeds dry, as they rapidly lose viability under those conditions. Likewise do not store them sopping wet. This can deprive them of needed oxygen and encourages the growth of fungi. Place them in the refrigerator (not the freezer!) for at least 60 days. As a rule I leave them there until I am ready to plant in the spring, a period of almost six months. The cold temperatures prepare the seeds for germination—this is called stratification.
- 4) When you are ready to plant them in the spring, take the seed bags out of the refrigerator and leave them at room temperature, preferably above 21°C (70°F). If mold is present, transfer the seeds to fresh moist peat moss in a clean plastic bag. Germination generally starts within five to 14 days if the seeds are kept at 21 to 24°C (70-75°F). They are slower at lower temperatures. Once out of the refrigerator, check them every other day or so. Be sure the peat moss remains moist, but does not become too wet. At the first signs of germination, *transfer the germinating seeds to pots promptly!* This reduces the chance of fungal or bacterial infection. Pots should be at least 15cm deep (6in.) to allow for proper root development. I use standard 1-litre size perennial pots. Be sure to label your pots accurately right from the very beginning, it will save you trouble and aggravation later on.
- 5) For best results, use a well-drained potting mix in your pots. *Magnolia* seedlings must be kept moist, but need good drainage. In pots ordinary garden soil does not drain well, *so don't use it*. I recommend starting magnolia seeds outdoors, as results are generally better. Wherever you start them, give the seedlings as much light as possible. Indoors, a very sunny windowsill, or well-lit plant stand is good. If outdoors, wait until the danger of frost is minimal to sow the seeds. Partial sun or light shade is ideal as the seedlings emerge, but once the first leaves expand fully and they have developed two pairs of leaves, give them more sun if possible. At the same time, be attentive to watering *and protect the sides of the pots from direct sunlight!* This is important: parched soil and/or high soil temperatures will damage or kill the roots of your plants. Keep the seedlings well fed. A general-purpose fertilizer is fine as long as it does not contain lime. Osmocote, a slow-release fertilizer, works well, but only use the three to four month formula. Fertilizers with longer release periods may

not allow your seedlings to harden off properly in preparation for winter. **Note:** watch out for slugs and rodents! Mice and voles eat *Magnolia* seeds, and slugs destroy young seedlings with deplorable enthusiasm. Preventing these problems is generally more effective than trying to stop them once they develop.

- 6) Once the seedlings are 7 to 12cm tall (3-4in.), they appreciate being transferred to larger pots. If done carefully, this rarely causes damage and produces better growth. Again, shield your pots from direct sun so they don't 'cook'. In addition, placing an inch (2.5cm) of bark mulch on the soil surface will help keep your pots from drying out, and reduces weed growth as well. However you fertilize your seedlings, don't feed them after about midway through the growing season [say, mid July in colder climates, perhaps a little later in warmer areas]. This will assist them in hardening off and getting ready for the winter.
- 7) Over-wintering first year plants can be a bit of an art. *Magnolia* roots die progressively as temperatures decrease below freezing, so pots of first year seedlings must be protected against freezing during their first winter. The best way to do this is in an insulated cold frame or a cool greenhouse, but any cool place (where the plants can be watched over and watered if needed) will serve. The best temperature for winter dormancy is just a couple of degrees above freezing if you can manage it. Warmer temperatures will encourage an earlier resumption of spring growth. Indeed, if it is too warm, your plants may not vernalize properly and will have trouble resuming normal metabolic activity when spring arrives.
- 8) As woody plants go, magnolias are among the most enjoyable to cultivate. Seeds are large and easy to collect. Seed dormancy is simple, not complex. Seedlings are robust and their requirements straightforward. Lastly, if you are willing to put in the time, the rewards can be extraordinary. There is nothing like the sight of a magnolia you have raised from seed coming into bloom for the very first time!

