

Nuggets of Knowledge[®]

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***Romneya coulteri* (matilija poppy/fried egg plant).** At Cornflower Farms in Elk Grove, California, we specialize in California native plants and the one I'm going to briefly talk about is *R. coulteri*, also called the matilija poppy or the fried egg plant, because of the huge white blossom with a yellow ball of stamens, resembling a fried egg. It's a very popular plant because of its showy flowers.

Romneya coulteri's native habitat is coastal southern California, around Ventura. It does best in very dry soil. It's been tricky to propagate in the nursery industry, but once established in an area it grows like wildfire. We've had some luck at Cornflower Farms growing it from seeds.

We have several mother plants growing on the nursery where we collect seed in the late summer/fall (August-September). Cleaning the seed is easy, crushing the seed pods and filtering out the chaff. We get lots of powder, but don't worry about that too much. Seed is stored at 38–42 °F until we sow it in March.

Sowing. We sow the seed in 17-inch × 17-inch seed flats. Our soil is a mixture of perlite and peat moss. After sowing the seeds we put a 4-inch layer of pine needles and then light them on fire. We use a barbecue lighter in case the fire goes out we can relight the leaves easily. We let the leaves burn down and cool. After all has cooled, we water the seed flats and put it on the seedling bench. We generally see fairly even germination after about 2–3 weeks.

Transplanting. We transplant sooner than later to minimize root disturbance. We've seen that the longer we wait for transplanting, the more we lose. The rose pots are pre-filled with potting soil, watered very well and then the seedlings are dibbled in. After a flat is planted, they are watered in very gently. After the initial watering, they are kept fairly dry. After getting over the transplant shock, they grow rapidly and are ready for transplanting into 1-gal containers. For transplanting into 1-gal containers, we water the flats very well and pre-fill the 1-gal containers. The seedlings are then loosened from the rose pots and planted by hand.

Problems. For the most part, there are no disease problems, but if a plant is transplanted too deeply, it takes just days to die. Also, we have to be very careful during the transplanting stages, not planting the tiny seedling too deep and making sure the seedling is not bent after watering in. In the liner stage, the tops break off very easily from the roots and won't grow back at that point.

Germination Chamber Notes

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As our seed-propagated perennial program continued to expand, it became apparent that we needed a better germination environment. A germination chamber with

adjustable environmental controls would help our seedling crops come up faster and with more uniform germination than the more temporary enclosures we had been using previously. A chamber would also permit larger production windows and scheduling opportunities.

Instead of building a permanent structure we decided to purchase an insulated shipping container and modify it to suit our needs. We found a company close to the Port of Portland that refurbishes used containers and sells them at reasonable prices. The company delivered a 24-inch insulated container that was missing its refrigeration unit. After calculating the minimal light requirements of some of our seed crops we had a local electrical company install water-resistant fluorescent light fixtures. Our own technical services department built a new insulated wall and door where the old refrigeration unit used to be. Next, they installed a combination heating/air conditioning window unit with a small fan and circulation tube that ran along the floor of the container. Finally, we installed the wire-rack shelves and were ready to start sowing.

Seed Leaching Notes

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Some seed contain chemical germination inhibitors that require leaching before germination can proceed. One of the groups that we have found benefit from a leaching treatment before sowing are the *Mahonia* taxa. In the past, we had simply placed the seed in a mesh bag and slowly run water from a hose through the seed. Success was somewhat inconsistent using this method. To more uniformly leach all of the seed, we created a new leaching system using material we had around the nursery.

We store many of our seed in clear, 128-oz, plastic containers with screw lids. These would serve as our new leaching environments. We cut out the top of each lid and replaced it with a fine mesh, stainless steel screen. A small hole was made at one of the top corners of each of the containers, just large enough to permit the insertion of 1/4-inch spaghetti tubing. The spaghetti tubing was attached to a pipe manifold with ball valves to control the water flow rate through each tube. The manifold has five ball valves on it, allowing us to leach up to five different seed lots at the same time. When the water is turned on, it travels through the tubing down to the bottom of the containers, mixing the seed as it leaches them, ensuring a more even treatment.

Dividing Tool

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At the Dayton, Oregon location of Monrovia Growers we make over 300,000 divisions of grasses, astilbes, and irises each year. One tool that we've found invaluable for this task is the Dexter Limelight Knife that has a 6-inch stainless steel blade. It is ergonomically designed and the bright colored handle makes it hard to lose. Our knives