



## Germinating Iris Seeds

by John Coble and Bob Bauer

*Coble and Bauer run Ensata Gardens located in Michigan state and have a long experience with many new varieties of Siberian and Japanese irises. With climatic conditions nearly identical to what we have here in most of Canada, their tips/hints on growing iris seedlings should be very helpful to most of our readers across Canada.*

We have always (since 1982) germinated our Japanese and Siberian iris seed indoors. From some of our first experiments with this technique we had 80-100 % germination. With favorable weather we were planting 8-12" seedlings in May with the first fan increases seen in July and in some crosses 100% bloom the following year. Our most vigorous seedling produced 8 bloomstalks on a one-year plant!

Our main reason for germinating seed indoors is to gain one year on first bloom and thus one year on evaluation. Most important is the elimination of unworthy seedlings and freeing garden space for another crop of seedlings. This does become important with an annual crop planting of 1000-1500 seedlings.

We collect our seedpods when ripe and starting to split, usually early September. The seeds are stored in paper envelopes-but for no more than a month. Be sure to shell your seedpods and search for and kill any worms. As soon as all seeds are collected, the seeds of each cross should be wrapped in pantyhose material (maybe cheesecloth would do). These little tied up bundles are then put in a large bowl and covered with water - a saucer on top to hold the bundles down. The water should be drained and changed every day for at least two weeks. This soaking and rinsing treatment is to remove the seed germination inhibitor present in the seed or seed coat. Outdoors, the fall rains and melting snow in winter do the same thing over a 3 to 4 month period.

After the final rinse the seeds are covered with a 10 % solution of bleach for 1/2 hour. (10% solution created by mixing 1 part bleach with 10 parts water) Pour off the bleach solution and rinse quickly with water a couple of times. Then cover the bowl with plastic wrap and secure with a rubber band (do not seal with an airtight lid) or we transfer the tied bundles to a plastic bag and secure them with a twist tie. The bleach treatment is to reduce the mould population that will want to grow on the wet seeds during the next stage, which is refrigeration (stratification).

The wet rinsed bundles in bowl or bag now need to be refrigerated for 12 to 14 weeks. Fewer than 12 weeks will find fewer seeds germinating. After the 12 weeks refrigeration the bowl or bag can be removed to room temperature (kept closed and moist). Some seeds may have already germinated in the refrigerator but most will start after the third day at room temperature. After the third day, we get more germination if the seeds are warmed to 90-100 degrees F. for 1/2 to 1 hour each day. You can set your covered bowl of bundles in another bowl of hot water and let the seeds gradually warm up and cool back down. We fill the bowl of bundles with warm tap water, let sit until room temperature and then drain off the water until the next heat treatment the following day.

Tall bearded irises and day lily seeds are handled the same way through the soaking and refrigeration stages but *not* the warm water treatment after refrigeration. Bearded irises germinate best at 55 degrees F. Once your seeds start germinating handle them as best fits your needs and situation. This will depend on the number of seeds that you are handling, the size of your house and those you share the house with!

At about the fifth or sixth day at room temperature we open each bundle and remove the germinated seed to plastic cups half filled with wet sand and cover with plastic wrap. (separate cup for each cross) We continue this every other day for about a week. The ungerminated seed can then be returned to the refrigerator for a minimum

of two more weeks and then the room temperature heat treating treatment repeated.

The germinated seed can be potted whenever you want. The other ideal of this system is that only germinated seed are planted. No trays of empty cubes from ungerminated seed. We raise the germinated seed on wet sand in plastic cups near a window. When we have sufficient number of seedlings with green shoots about one inch tall we transplant them with tweezers to seedling trays filled with a soilless seedling potting mix. The trays are set about six inches below fluorescent lights; ideally the bulbs are about 1 to 2 inches above the tips of the plants. We use cool white bulbs and run the light 24 hours a day. We raise the lights until the plants are 8-10 inches tall.

Then we let the seedlings grow to the lights and start mowing off the tips every couple of weeks as they grow into the lights. We fertilize every two weeks with a Miracid solution of one teaspoon per gallon of water.

Hopefully by mid-May the danger of frost is past and the seedlings can be hardened off outside for a week in the shade and gradually moved to full sun. Watch these tender plants, they will probably need watering every other day while outside, every day in the sunshine.

Line out your seedlings in good organic rich soil and keep them watered (and mulched) all summer during their first year. The next spring you will have bloom.

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