



# Cross-Pollinated Seedlings

By Penelope Battey-Pratt

Being something of a scientist by inclination, I thought it might be fun to create some new varieties of plants on my own. We have very early blooming yellow daylilies in our home garden as well as some yellow late bloomers. I wondered if I could create a new yellow daylily that blooms mid-season by crossing the early and the late season varieties together. So, I saved pollen from the late bloomers over the winter and used it on the early ones the following year. I also saved pollen from the early ones and then used it on the later variety in the same year.

In order to cross-pollinate, I applied the yellow, powdery pollen from the anthers of one mature flower to the sticky end of the large, long stigma that rises from the middle of the other flower. If storing the pollen, it needs to be collected on a dry day and stored in a container kept in a dry, cool place. When the seeds of the cross-pollinated plants formed, and the pods started to split open, I planted them in pots of soil and waited for them to germinate and then to grow into seedlings.



*Late blooming yellow daylily*

I planted the seeds into a combination of sand, commercial potting soil, and regular garden soil. I've tried many different types of soil, sometimes with vermiculite on the surface to deter rotting. A solution of camomile "tea" can also help to prevent damping off. If the soil is too heavy or clay-like, I add perlite for drainage. Since the small seedlings may be in pots in the house all winter, I think the roots appreciate more nutrients, so they are potted-on into more fertile soil. With time, I've improved my methods.

Some of the seedlings germinated and grew readily, becoming lovely little grass-like spikes of green. A few required more time to appear while many didn't germinate at all. I later found out that daylily seeds need a period of cold treatment for three months, so I now place them inside a cold frame in the greenhouse.

Once large enough (with at least two leaves) I planted the seedlings from the earlier flowering daylilies in the autumn, and the ones from the later flowering variety the following spring. Unfortunately, I lost last-year's batch of fall seedlings to a rabbit that made a nest inside the bracken and leaves with which I had covered the seedlings to protect them, when so young and tender, from the cold winter temperatures. Maybe some insulation that is not so attractive to a rabbit would work better.

Now, approximately three to four years later, the bigger and stronger daylily plants are starting to bloom. At this point, none of the yellow ones have bloomed yet, but other crosses



*New cross - yellow with orange markings*



I have been working with have bloomed successfully. Most are in the orange range with various patterns on the petals. The parent plants have patterns of yellow and orange.

Of the larger, fancier and more colourful types, I've discovered that the reds are most virile and robust, as only the red-crossed seedlings germinated well and grew. I found that these red varieties were not as



*New cross – red with yellow throat*

dependant on the cold treatment. This year, I've planted the seeds straight into the ground under a flat stone to discourage "critters". In the spring, I shall remove the stone and hopefully some of the other crossed seeds will emerge as lovely little swords of green. I anticipate getting some interestingly patterned pink, white, purple, and yellow blooms as well as the usual red to orange flowers. I've started to transplant some of the more interesting results into all the perennial gardens for colour variety.

I have also cross-pollinated and created new seedlings from irises, Oriental lilies and peonies. They require an initial period of warmth for the roots to form, followed by a long cold period and then warmth again for the green sprouts to emerge. So far, they are still small seedlings with only one or two leaves. It can take a long time for peonies to produce their first bloom when grown from seed. We live in hope and eager anticipation. Peony seeds may be obtained through the Canadian Peony Society. I encourage you to view their website.