GEORGESON BOTANICAL GARDEN

UNIVERSITY OF ALASKA FAIRBANKS

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Transplanted Versus Direct-Seeded Wildflower Seed Mixes - the Story Continues!

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In 1994, we started an experiment to determine if wildflower seed mixes could be sown in flats several weeks before transplanting rather than direct-seeded into the garden. The purpose was to promote earlier flowering. The transplants were 2 1/2 or 4 1/2 weeks old. In that first study, we learned that 2 1/2-week transplants are too young. The roots are not developed well enough and they fell apart upon transplanting. The 4 1/2-week transplants worked very well and promoted flowering at least one month earlier for some species than direct-seeded plots.

In 1995, we repeated the experiment with three- and six-week-old transplants. The purpose was to determine the optimum timing of greenhouse sowing and recommend the shortest time necessary to get good transplants and early flowering.

Beginning in April, 1995 we placed nine, 3x3-inch containers into greenhouse flats and filled them with a sterile soil mix. The annual flower seed mix developed by the Georgesn Botanical Garden (formerly known as Mix 8) was sown by mixing the seeds with moist sand to a corn meal consistency, and broadcasting the sand/seed mix over the flats. Flats were moistened, then covered with an opaque plastic sheet until germination commenced. We sowed flats on two different dates, April 21 (6 weeks prior to transplanting) and May 12 (3 weeks prior to transplanting). On May 26, flats were moved from the greenhouse to cold frames to harden off. On June 2, the containers of seedlings were transplanted into garden plots at 12-inch spacing, with two, 3x3-inch containers per space. These transplants were compared with plots that were direct-seeded on the same date.

Like the 2 1/2-week transplants in 1994, the three-week-old transplants were a bit too young. Roots did not develop well, and transplanting was difficult. The six-week-old transplants had much greater root development and were easier to transplant. Flowering was earlier for both the three-week and six-week transplants, but the effect seemed to be much more pronounced for the six-week transplants. Some plants in the six-week treatment were blooming in the containers or very shortly after planting. They included baby's breath, bachelor's buttons, California bluebell and catchfly (Table 1). The three-week transplants, on the other hand, bloomed first during the week of June 22 (Baby's breath, California bluebell and Dwarf poppy). As in previous years, the direct-seeded mixes bloomed beautifully, but flowering did not start until mid-July. Most wildflowers continued blooming until season's end with the exception of California bluebell, catchfly, dwarf poppy and tidy tips. These wildflowers began blooming earlier and finished blooming up to three weeks before the growing season ended.

The early-season blooms on the transplants really make a difference in the public perception of these wildflower mixes. Prior to blooming, the direct-seeded mixes appear like a jumbled mat of weeds. Only when the baby's breath and California bluebell appear do visitors think the beds are full of flowers. Although the most dramatic display for this mix is from mid July through August, the early appearance of seedlings as transplants really makes a difference in the garden. Based upon our three year study of the wildflower mixes, we recommend starting the mixes indoors at least five weeks before transplanting (5-6 weeks is good) for the longest-season color. Direct sowing is possible, but the bloom season can be delayed by as much as one month for some flowers.

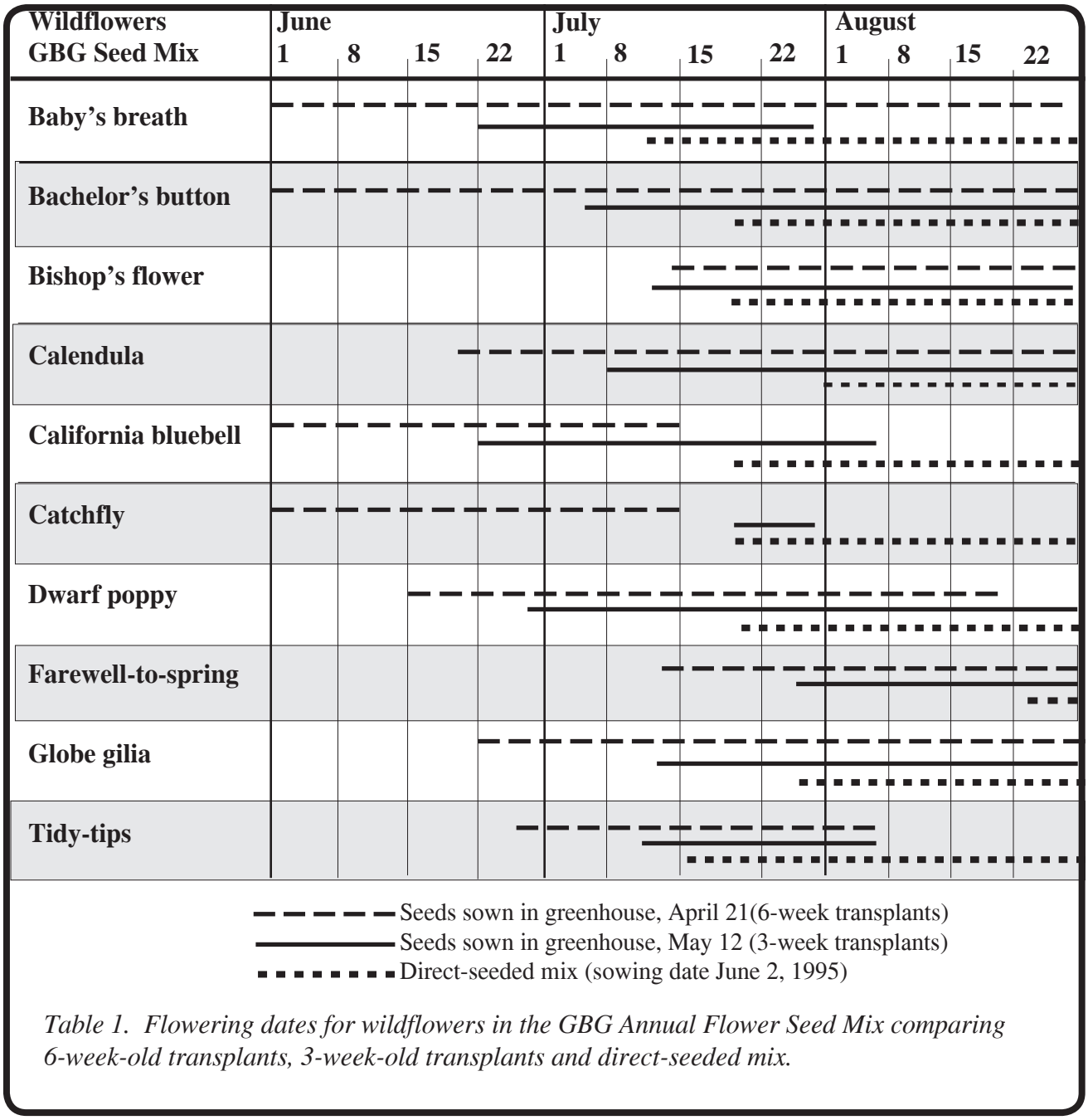

Table 1. Flowering dates for wildflowers in the GBG Annual Flower Seed Mix comparing 6-week-old transplants, 3-week-old transplants and direct-seeded mix.

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