

Propagation of Southern Perennials

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INTRODUCTION

At Southern Perennials and Herbs in southwest Mississippi, we propagate all of our perennials. Herbaceous perennials maybe propagated year-round in the Deep South. Cuttings may be propagated during the growing season. Divisions and root cuttings are usually made during the dormant season. Seeds may be germinated all year.

STEM CUTTING PROPAGATION

Cuttings of perennials are propagated during the growing season on plants that cannot or should not be grown from seed. Cutting propagation rather than division is generally preferred during the hot summer months. Candidates for cutting propagation are, naturally, those that form above-ground stems with nodes, but not rosette-forming perennials such as *Hemerocallis*.

We prefer to take cuttings only during cloudy periods of the day in summer or in early morning or late evening. It is very important to keep cuttings from wilting before they are placed under mist. A beneficial practice, particularly for difficult-to-root perennials, is to place stock plants in shade for a couple of weeks before cuttings are taken. If cuttings must be taken during sunny periods, exercise great care to avoid wilting.

We take cuttings from soft, new growth. We use mostly tip cuttings but sections of stem that are still relatively soft may be used. For most perennials, cuttings should be 3 to 4 in. long. Usually, we take single- or double-node cuttings from upper stem sections, or 3-in. tip cuttings.

We don't strip cuttings unless they physically can not be inserted into the rooting medium without being stripped. Cuttings are stuck just far enough into the medium so that they remain upright.

Before being stuck, all cuttings are dipped in Dip 'N Grow rooting hormone at a concentration of 10 : 1 (water : DNG). We dip all cuttings, even the easy-to-root cultivars. Though this is not necessary for root initiation on many cultivars, it is done to insure uniformity of rooting. We've tried various concentrations of rooting hormone, but 10 : 1 Dip 'N Grow works best for us for general use. Dip 'N Grow is 1% IBA plus 0.5% NAA. Treated cuttings are stuck in 72-cell, deep plug trays and placed under intermittent mist under a bench in the greenhouse.

Cuttings must be checked regularly for root initiation, which may take as little as four days. They are promptly removed from mist as rooting begins. Rooted cuttings remain in shade for several days, then are placed outside in the general nursery area. Cultivars that root rapidly may be potted into 1-qt or 4-in. pots in as little as 3 weeks from the time the cuttings are stuck, especially in late spring or early summer when growth is most rapid.

DIVISION

Division of perennials is primarily a cool-season activity, but there are notable

exceptions. Warm-season grasses such as *Miscanthus* and *Pennisetum* must be divided during warm weather. *Elymus*, along with other cool-season grasses, on the other hand, must never be divided in warm weather. Other perennials that we usually divide during the summer are hemerocallis, Louisiana hybrid iris, hosta and, when the need arises, certain other easily grown perennials. Summer division usually requires extra attention to moisture requirements of sensitive perennials.

Cool-season division is straightforward for rosette-forming perennials; simply divide so that new plants have active roots and at least one rosette. The foliage on leafy types is trimmed by half or more, if not already trimmed by frost. For stoloniferous perennials, stolons or rhizomes are placed just beneath the surface of the container medium. Three to five or more pieces are used for slender-rooted cultivars. Some perennials with particularly tough root systems are simply chopped into vertical sections, pieces small enough to fit in a plug-sized container.

Our root-cutting propagation is very limited, so we don't feel adequately experienced to comment on procedures.

SEED PROPAGATION

Seed propagation goes on all year. Most perennial seed is sown into 72-cell, deep plug trays. We never cover any seed. The trays are placed under mist, under a greenhouse bench, and treated the same as cuttings. Seed trays are removed from mist a day or two after they germinate. They are then placed on the greenhouse floor, under shade in summer, where they are kept for a week or more until the seedlings are large enough to be placed outside with the general nursery stock under overhead irrigation. Trays are kept here for several weeks until they are rooted enough to plant into one-quart pots. There is no attempt to regulate temperature during germination. The ambient temperature of the greenhouse is generally adequate for good germination of most cultivars. We have learned, though, that certain ones are best sown during specific seasons, presumably due to the prevailing temperature. For instance, *Rudbeckia fulgida* 'Goldsturm' needs a warm temperature to germinate well, and attempts to germinate this cultivar during winter invariably meet with failure.

Our refusal to cover seed with soil contradicts the recommendations from seed company catalogs and seed propagation texts, as do the temperatures and times required for germination. Nevertheless, we almost always get good results and often get faster germination than is cited in these references. This is probably due to a combination of surface sowing and maintaining temperatures much higher than recommended. Since the trays are shielded from direct sunlight, the darkness requirements of certain seeds are adequately met. The requirement of certain other types for light during germination is met by preventing the seed trays from being in total darkness. We realize this is rather unscientific, but it works for us.

We collect seed of a number of perennials from stock plants kept in our display gardens. Some seed is collected from container plants, though this is not the preferred method, since seed is often ruined by irrigation. Seed collected from our plants is usually sown soon after collection, though some is stored for extended periods. We collect seed of *Lilium philippinense*, and this seed must be sown immediately. *Lobelia cardinalis*, however, can be kept viable for at least two years. Our seed-storage area is simply cardboard boxes in an air-conditioned office, kept at about 80 to 85°F during the summer and at about 65 to 70°F during the winter.

CONCLUSION

Our propagation methods have been developed over a period of several years. Since many of our procedures contradict conventional wisdom, we can only conclude that propagation, while a scientific endeavor in many of its aspects, requires the intuitive dedication of a plant's person to achieve its fullest potential.