Grower 101:
Scheduling Perennials

With hundreds of new herbaceous perennials introduced each year and thousands on the market, figuring out how to schedule them can be overwhelming.

By Leonard Perry

With plants coming from diverse native habitats, each with their own requirements from propagation through flowering, there is no one method to use for all. The first question to ask yourself is whether you are growing, or wish to grow, perennials exclusively. If so, you have many more options. If not, as part of an overall production mix, how much production space, resources and time do you have or wish to devote to perennials? This will determine whether you want to start from seed/stock plant or buy in unrooted cuttings or pre-finished. Often, growers use a combination, depending on their resources and plants chosen.

Unless you are equipped to strictly grow from seedlings or liners, the plants to grow or purchase from seed/vegetative and which method to use depends on several factors. Seeds yield many plants, are easy to adapt to bedding plant seeding programs and are economical. On the other hand, they often have complex or unknown germination requirements, may require a cold dormancy period, and germinate poorly and un-uniformly. Perennials from seeds often take longer to bloom than those from vegetative means, and seed propagation often requires warmer temperatures than vegetative methods. These are some of the reasons small- and medium-size growers often buy in plugs from specialty propagators, letting them deal with these germination issues.

STOCK VS. BUYING IN

Maintaining your own stock plants will, of course, be determined by available space and labor for propagation. Growers recommend keeping such plants between one and three years at most, then selling them as large finished plants. Young plants generally yield more cuttings that root easier. Just make sure plants are not patented, in which case you will need a license to propagate them, or you will need to buy young plants from licensed propagators.

Figure 1. Perennial production scheduling guide. These dates are approximate, varying with location, plant and cultural factors.

Date	Action (to cell size)
June 1-15	sow slow growers (288)
June 15-30	sow moderate growers (288)
July 1-15	sow fast growers (288)
August 1-15	transplant (50) or sow direct (72)
August 15-30	transplant (50) purchased plugs
September 15-30	begin temperature drop, purchase any liners
November 1-15	reach 35-40° F
February 1-15	begin potting held-over or purchased vernalized liners
February 15-28	begin temperature ramping up April 1-15 reach 65° F

Figure 2. Spring finishing guide for perennials. Potting dates for May sales. These dates are approximate, varying with location, plant and cultural factors. Adjust dates depending on desired sale date.

Starting size	Finish size		
	4-inch	quart	gallon*
128	March 14-21	March 7-14	February 1-15
72	March 21-28	March 14-21	February 15-28
50+	April 1-7	March 21-28	March 1-21

**Three plants per pot for 128, subtract 1-2 weeks if using additional plant of 72 or 50.*

If you wish to do your own vegetative propagation, keep in mind this is easiest when the plant itself wants to be vegetative and not flowering. This is often in spring for divisions and various times of summer for cuttings. Fall can be used for plants such as geranium, sedum, dianthus, salvia, sempervivum, tiarella and heuchera. Winter can be used for root cuttings (such as eryngium, gaillardia and Phlox paniculata), grasses and division of indoor potted stock.

If you are buying in cuttings, unrooted are less expensive than rooted at purchase but may cost more to produce. With either type, depending on the plant, they may need to be vernalized (receive cold, often 12 weeks of 35-40° F) in order to bloom. For this reason, or if greenhouse space is not available or economical to heat, growers may purchase rooted and vernalized liners in spring to pot and finish. On the other hand, if spring is too busy with bedding or other crops, starting or buying in liners in the fall, potting, then vernalizing over winter, may make growing perennials possible.

Similar considerations apply to growing from seeds or plugs. If space, facilities and labor are available, growing appropriate perennials from seed may be more cost effective than buying in plugs later in the season. There are many plug tray sizes and even more possible production combinations; a common one is to sow in a 288 with transplanting into a 50. Sowing is done late May to mid-July, depending on the plant. Slow plants such as aquilegia and campanula may need to be sown late May, with 8-10 weeks before transplanting. Moderate growers such as lupine, geum, gaillardia, delphinium and dianthus may be sown in mid June, with 6-8 weeks before transplanting. Fast growers such as achillea, leucanthemum, coreopsis and rudbeckia may be sown in mid July, with 4-6 weeks before transplanting.

Depending on plant and time begun, transplant to larger cell sizes from mid July to late August. This also applies to plugs purchased then, later transplanting for the larger plug sizes. Between September 15 and 30 and November 1 and 15, drop temperatures gradually from 65 to 35-40° F, perhaps by 5° F per week over a six-week period. This would apply to rooted cuttings or transplanted seedlings. Then hold at this temperature until February, March in colder climates, before ramping temperatures back up similarly. If you don't transplant, you can sow directly in a 72- to 125-cell size in August, about six weeks before lowering temperatures as above.

Whether starting from your own plants, or from purchased and vernalized ones, begin potting in February for smaller plants and larger pots. Potting schedules will of course vary with location, plant and cultural factors and desired finished size. For a 4-inch pot, generally figure on about 5-6 weeks to finish from a 128 cell, 4-5 weeks from a 72 cell and 3-4 weeks from a 50 cell. To a quart, from a 50 cell, figure on 4-7 weeks. To a gallon pot, from a 128 cell use three plants per pot and figure on 10-12 weeks, 8-10 weeks from a 72 cell, and 5-8 weeks from a 50 cell or larger. If you add another 50 or 72 cell plant to the gallon pot, subtract a week or two. □

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