

Successful Establishment of Prairie Through the Use of Prairie Seed Drills

Successful prairie establishment through the use of a prairie seed drill requires awareness of several important factors, including site preparation, correct drill calibration and careful attention to planting depth.

Prairie seed drills are generally no-till implements, meaning they don't require disturbing the existing grade prior to installation. However, it is vital that any existing vegetation has been killed via herbicide applications prior to sowing. It is particularly critical that rhizomatous perennial weeds such as Canada thistle, Canada goldenrod, and smooth brome be eliminated, or they will continue to dominate, preventing establishment of the prairie plants. While the no-till drill can cut through sod, excessive thatch can prevent adequate seed to soil contact, requiring further steps such as burning or mechanical incorporation with a disc or other farm implements.

It is imperative to follow the drill manufacturer's instructions for calibration of the drill. Typically these drills have three seed boxes, a fluffy seed box for the prairie grasses and other large light seeds, a small seed box utilized for most forbs, sedges and small seeded grasses such as switchgrass, and a grain box used for the cover crop of oats. Each box must be calibrated independently with the seed that is to be utilized in that box. Suppliers like Spence Restoration Nursery package seed mixes in different bags for each of these seed boxes. Every mix has a slightly different density, so these boxes must be recalibrated each time the mix is changed.

Sowing depth is the most critical variable in the success of prairie drill sowing. Prairie seed must not be sown too deep. While the prairie grass seed will germinate when sown as deep as one half inch, most forbs will not tolerate sowing depths exceeding $\frac{1}{4}$ inch. As a result, installers should always strive to sow prairie seed at a depth of $\frac{1}{4}$ inch or less. Easily the number one cause of drill installation failure is sowing the seeds too deep. If sowing on bare ground, the installer may remove the tubes leading from the small seed box, particularly if sowing dormant in late fall or early winter. This procedure allows the forb seed to drop directly onto the surface as if it were broadcast sown. The freezing and thawing over the winter will ensure adequate seed to soil contact. The most abundant and diverse forb recruitment I have seen has resulted from dormant sowing utilizing this technique.

PLANT FEATURE: BLUE-STEMMED GOLDENROD (*SOLIDAGO CAESIA*)



An attractive species of well-drained woodlands, *Solidago caesia* features axillary flower clusters along curved glaucous stems. The arching stems adorned with these small clusters of flowers resemble a section of a wreath resulting in the other common name, wreath goldenrod. Growing only about 18 inches tall, the lanceolate leaves and bluish stems make it attractive throughout the growing season. Like all goldenrods, it is a valuable source of late season nectar.

Solidago caesia makes a delightful addition to a woodland garden where it grows best in dappled shade. Other natives that thrive in this habitat include Short's Aster (*Aster shortii*), Beak Grass (*Diarrhena americana*), Wild Stonecrop (*Sedum ternatum*), and Short-headed Bracted Sedge (*Carex cephalophora*). In a restoration, it is most appropriate on sloping woods with associates from our [Upland Woodland Mix](#).