

Dormant-season Establishment for Native Grasses

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I am often asked about planting native grasses during the dormant-season. The question is based on the obvious fact that native grasses set seed in the fall, shatter that seed out naturally over winter and thus, are “planted” in the dormant-season. High dormancy of some native grass seed (eastern gamagrass) or varieties (“Cave-in-Rock” switchgrass) also raises this question. So how well does winter planting work?

To answer this question, we conducted two trials evaluating planting date (Dec, Feb, Mar, May, and Jun) and use of winter cover crops (oats, barley, cereal rye, wheat and fallow). We also evaluated seeding rates (increased vs. conventional rates) and the initial dormancy of the seed lot (high vs. low dormancy). All of this was done using switchgrass.

We learned that increased seeding rates were not necessary for successful winter planting. Apparently, there was not enough over-winter seed loss to require additional seed. We also learned that dormancy rate was not an issue for winter seeding (unlike spring or summer seeding). Again, the concern had been that low dormancy seed would not fare well during winter since dormancy is a tool plants use to allow seed to survive the winter.

We also learned that seeding success varied a great deal with amount and timing of rainfall, temperature, and seed placement likely exerting a great deal of influence. Based on that, one conclusion I have reached is that proper seeding practices are more important than seeding date. However, we did see more consistent establishment success associated with March than any of the other planting dates.

We also saw that the choice of winter annual cover crops was not an issue. A number of growers (and I) had thought that the allelopathy of small grains could reduce planting success for native grasses. We saw no evidence of that in our study. In fact, we saw some evidence that planting into a small grain cover crop actually was preferable to planting into a killed sod. This may have been due to improved competition control or simply a more consistent seedbed resulting from the cover crop.

As a result of these studies, we can recommend dormant-season planting in March – and using a small grain cover crop. One very important caution though, whether using the cover crop or not, is that competition control prior to germination is **critical** for this approach to succeed. Since native grass seed starts to germinate quickly as soil temperatures reach 65 degrees, it is important to kill the weeds or cover crop (or both) before soils reach that temperature. This will typically mean spraying in mid-April. Without effective competition control at this time, chances of successful dormant-season planting will drop dramatically.

We are currently wrapping up a third study examining how this strategy works for other native grasses and if seed treatments (fungicide/insecticide combination) can improve planting success. Preliminary indications are that both work.