Seeding Methods for Small-Seeded Forages

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With low per acre seeding rates and shallow-depth planting requirements, seeding small-seeded forages such as clover and bermudagrass can be a challenge. The key to success is using planting equipment that meters out the seed at the desired seeding rate while providing good seed/soil contact without placing the seed too deep into the ground.

The most desirable method to plant is to use either a cultipacker seeder (on plowed and prepared seedbeds) or a no-till or conventional drill equipped with a small-seed box attachment. This provides the most accurate seeding rate control. However, the use of a no-till or conventional drill can result in small-seeded forages being planted too deep (i.e., deeper than 1/8 to ¼ inch). Some drills cannot be adequately adjusted to maintain a consistent shallow planting depth. Furthermore, planting depth is harder to control when planting into wet soil, a soft seedbed or on rough ground.

Seed drills equipped with a small seed box attachment can be used to accurately meter small seed at low seeding rates. Care should be taken not to plant seed too deep.

If such equipment or condition limitations exist, successful seed placement can occur if the seed are broadcast directly behind the drill's shoes and in front of the press wheels. To do this, disconnect the tubes from the small seed box where it enters the drill's shoes and secure the tubes behind the shoes or in front of the press wheels with wire or cable ties. This allows the seed to be metered out on the soil surface and pressed down into the soil by the press wheels. This practice will ensure that the seed are not planted too deep.

Conventional-till seedbeds should be firmed with a cultipacker **before** seed are broadcast. Footprints left by an average person on a properly prepared seedbed should not be more than ¼-inch deep. Broadcast seeding on a prepared seedbed should be followed with adequate firming of the seedbed with a cultipacker.

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A spinner-spreader can also be used to broadcast small seed. However, accurately broadcasting small-seeded forages with low seeding rates (less than 8 to 10 lbs/acre) is difficult with large spinner-spreaders. If the available equipment cannot be adjusted to accurately apply low seeding rates, the seed can be mixed with coarse sand or some other inert material that is similar in size and weight. Smaller seeds should **not** be mixed with larger seeds in the hopper or seed boxes since the small seeds will settle to the bottom. Legume seeds should **not** be mixed with fertilizer since the fertilizer can damage or kill the bacteria in the inoculant.

Broadcasting seed over existing, killed or chemically suppressed sod may result in insufficient seed-soil contact. When planting into living or dormant sod, the existing grass should be cut or grazed close prior to planting. For chemically killed sod, old crop debris should be at a minimum. To improve seed-soil contact, broadcasted seed should be "scratched" into the soil using a chain drag or spike-toothed harrow.

While not required, using a roller or cultipacker after seed are "scratched in" will enhance seed/soil contact and improve seed germination. Some producers have successfully used a pasture aerator to disturb the soil and prepare the ground for seed to germinate. However, the aggressive use of an aerator (or drag, harrow and other such equipment) can damage existing sod, expose areas to soil erosion and weed encroachment thus resulting in a poor stand of grass/legume.

On plowed or prepared seedbeds, the preferred method of planting small-seeded forages is with a cultipacker seeder.

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