

Frost-Seed Pastures

Late winter's warm daytime temperatures and freezing nights are perfect for frost-seeding legumes in pastures or hay fields, according to Ohio Grazing Program Leader, Ed Vollborn, retired.

The freeze-and-thaw cycle helps broadcast seeds get into the soil. Frost seeding saves time and money. A broadcast seeder can cover twice the ground of a drill. Research also shows frost seeding yields and stands are comparable to those that are conventionally planted. Legume forage yields can rise by up to two tons per acre.

Frost-seeding works best with a management-intensive grazing system. When cattle trample seeds, they improve seed-to-soil contact, especially in late seedings, or when seeds are exposed.

Fall and winter grazing before seeding cuts forage growth and also opens the sod, allowing better soil-to-seed contact. Keeping plant growth down is important because broadcasted seeds can become lodged or stuck in tall forages and never reach the soil.

Grazing the prior year's growth also reduces competition between established plants and new ones that require plenty of sun.

Red clover, which establishes rapidly, is winter-hardy and disease-resistant, is good for frost-seeding. Birdsfoot trefoil and ladino clover are slower to establish, but viable.

Red clover mixed with ladino clover aids quick establishment. Four pounds of red clover and 0.5 to 1 pound of ladino clover per acre works. If planting legumes alone where clovers are absent, plant these species at the following rates per acre: red clover, 6-8 pounds; ladino clover, 2 pounds; birdsfoot trefoil, 6 pounds; lespedeza, 8 pounds.

Producers should avoid grasses. Lightweight grass seeds will not fly as far as legumes do, resulting in an uneven stand. Grass seeds also get stuck in existing plants more than legume seeds.

Soil tests are needed to match legumes with the soils. Soil acidity, drainage, and fertility all affect legume choice. For example, when soil pH is 6 or less, consider clover, birdsfoot trefoil or Marion lespedeza. These legumes also do well in poorly-drained soils.

Rotational grazing can help in managing the newly-seeded stand. Grazing removes top growth, which helps new plants regrow during rest periods. This also opens plants to sunlight.

Frost-seeding can be done every year. Re-seeding is crucial if stand productivity drops in the fall. Knowing the cause of the decline is key. However, before deciding to reseed, producers should find out the cause of the decline, in case it was due to improper seeding, poor establishment, disease or poor legume selection.