Simple Pasture Improvement – Frost Seeding

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Pasture improvement doesn’t have to be difficult or expensive. Mid February to mid March is the time to take advantage of Mother Nature’s pasture improvement ability. Frost seeding describes the practice of surface broadcasting pastures with legume or grass seed during the late winter and early spring to take advantage of late freeze-thaw cycles and early spring rains to improve seed-to-soil contact.

Management of existing forage is important in successful frost seeding. Seeding must be completed prior to spring green-up to minimize competition by existing forages. Application of nitrogen fertilizer will reduce frost-seeding success due to increased grass competition with legume seedlings. Dense forage residue and growth will reduce frost seeding success rates so producers planning on frost seeding pastures should graze pastures short in the fall and winter to improve seed-to-soil contact by removing excess residue. Spring pasture residue can be partially overcome by harrowing pastures or allowing animals to trample in seed, provided moisture is not excessive.

While not always successful, frost-seeding legumes offers several advantages to livestock producers. Legumes have the capability to fix atmospheric nitrogen into ammonia and ultimately into nutritionally valuable plant protein. Clovers can add in excess of 100 pounds of nitrogen per acre to the soil. In addition, legumes added to toxic endophyte-infected tall fescue pastures dilute the negative endophyte effects. Legumes contain increased protein and calcium levels compared to grasses resulting in improved pasture nutrient composition.

Red and Ladino clover are two legumes well adapted to frost seeding due to ease of establishment and early seedling vigor. Seeding rates for red clover alone are 4-8 pounds per acre while ladino seeding rates are 2-3 pounds per acre. Use 4 lb/acre red and 1 ½ lb/acre Ladino when seeding a mixture.

Moderate grazing early in the growing season will help control grass and weed competition; however, avoid close grazing to ensure stand establishment. Maintain soil fertility and prevent overgrazing to extend stand life.

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