

# Improving Grass Pastures and Hayfields by Overseeding Legumes

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Late winter's warm daytime temperatures and freezing nights are perfect for overseeding legumes into grass pastures or hay fields.

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

Overseeding works best with a management-intensive grazing system. When livestock trample seeds, they improve soil-to-seed 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. Short plant growth is important because broadcasted seeds can get caught 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 sunlight.

Medium red clover, which establishes rapidly and is winter hardy, is good for overseeding. Birdsfoot trefoil is slower to establish, but it does not have any bloat potential. White clover is a good pasture option, but it should not be the major component as it does have bloat-causing concern.

Red clover mixed with white clover is a reliable combination to consider for improving grass pastures. A rate of four pounds of red clover and 0.5 to 1 pound of white clover per acre works. Alfalfa is another excellent option, provided the soil pH is greater than 6.6 and remaining residue is less than four inches. If planting legumes alone where they are absent, plant these species at the following rates of pure live seed per acre: red clover, 6-8 pounds; white clover, 1-1.5 pounds; birdsfoot trefoil 5 pounds; and alfalfa 8-10 pounds.

Producers should avoid overseeding grasses with legumes. Lightweight grass seeds do not broadcast as far as legumes do, resulting in an uneven stand. Grass seeds also get caught in existing residue more easily 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 .60-6.5, and the soil is poorly drained, consider red clover, white clover or birdsfoot trefoil before alfalfa.

Rotational grazing can help in managing the newly seeded stand. Grazing removes top growth, which opens the soil surface to receive more sunlight and helps new plants better establish during rest periods.

If necessary, overseeding can be done every year. Reseeding is crucial if stand productivity drops in the fall. Knowing the cause of the decline is key. 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 choice.

