

## **Frost Seeding Legumes**

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For producers looking to improve their forage yield and quality, frost seeding legumes is a great option for thin pastures or hay land. In Northwest Missouri, adding red clover, white clover or birdsfoot trefoil to your fescue can add nitrogen to the soil and help limit the effects of fescue toxicosis.

Frost seeding is an effective method of broadcasting forage seeds over frozen ground. Mounting a broadcast seeder on a tractor or ATV allows producers to quickly and cheaply spread seeds over a large area without disturbing the established grass species. As the ground freezes and thaws during the transition between winter and spring, or with hoof action from cattle, the seeds will be worked into the soil where they will emerge with the warmer weather. Frost seeding works best with forages that germinate quickly at cool temperatures, with red and white clover being the most common and easily established species.

For successful establishment of a species, good seed-to-soil contact is critical, so areas with bare or exposed soil may work best. Pastures or hayfields that have been overgrazed or mowed closely will have the highest establishment rate after frost seeding, as shorter grass stands will provide less competition to the establishing clover.

Nitrogen applied in the same spring as frost seeded legumes can make establishment of the legumes difficult. The nitrogen promotes growth of the already established grass which chokes out the legume seedlings before they can get an established root system. If trying to establish legumes, consider holding off on the spring nitrogen application, and instead apply nitrogen in August before the fall growth of grass occurs. By this time the legumes should be established and won't be outcompeted by the grass.

Before frost seeding legumes, it's a good idea to make sure that your soil has proper pH and soil fertility levels. As with any species, seedlings of legumes will require adequate levels of phosphorus and potassium for early growth. Conducting a soil test and taking corrective measures before legume establishment can increase frost seeding success.