

**News Release
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IT'S TIME FOR "FROST-SEEDING"

This time of the year is a great time for "Frost-Seeding" legumes. With temperatures constantly rising above and dropping below freezing, the ground is also constantly freezing and thawing. Moisture in the soil expands when it freezes lifting soil particles up and when it thaws the soil comes back down either in the same spot or a little bit lower on the slope. This action of the soil when the ground freezes and thaws allows for the incorporation of the seed. The incorporation of the seed allows for proper soil contact, which benefits in better germination rates. Typically red clover is the main legume that is planted this time of year, but ladino clover, aslike clover, alfalfa, lespedeza and birds-foot trefoil also do well.

There are numerous benefits to frost-seeding legumes with the main benefit being the cost. With frost-seeding there is less equipment needed, which in effect leads to lower fuel costs. Another cost savings is the amount of money saved by not having to buy a nitrogen fertilizer. If at least a 30% stand can be established in a pasture or hay field then the legumes will usually fix enough nitrogen for the rest of the grasses in the field. This could also benefit fields with very high phosphorus levels that receive organic sources of nitrogen every year. The legumes produce the nitrogen for the other grasses while the grasses and the legumes take the excess phosphorus out of the soil. Legumes are also a cheap source of crude protein in forages.

Here are some typical legume seed rates used for Frost-Seeding:

Single Seed Mixtures		Variety Seed Mixtures	
		Names	Rate (lbs./acre)
Name	Rate (lbs./acre)	Names	Rate (lbs./acre)
Alfalfa	6-10	Alfalfa & Red Clover	5-8
Red Clover	4-10	Red Clover & Aslike Clover	3-5
Aslike Clover	1-4	Red Clover & Ladino Clover or Aslike Clover	3-6
Ladino Clover	1-3	Ladino Clover or Aslike Clover	2
Birds-foot Trefoil	3-8	Birds-foot Trefoil & Red Clover or Ladino Clover	3-6
Lespedeza	8-15	Red Clover or Ladino Clover	3-5 (RC) or 2 (LC)

The following six practices should be considered in order to get a better establishment out of the seeding. The **first practice** is to consider the site that will be seeded. Fields with a thin stand of grass will establish better than a more vigorous stand of grass due to seeds not reaching the ground when they are sown. If the site has poor drainage, do not plant alfalfa.

The **second practice** is weed control. Weeds should be controlled before establishing legumes due to the fact that most weeds are broadleaf plants and almost all broadleaf herbicides will kill legumes as well.

The **third practice** is testing the soil in the field. Knowing the levels of phosphorus and potassium in the field is crucial. Legumes need higher amounts of these two nutrients than other forages. Also, the soil sample that is collected will reveal the pH of the soil. Most legumes need a soil pH of 6.5 or slightly higher for the plants to get optimum nutrient availability. Lime might need to be added to the field to help the establishment and plant vigor of the legumes. If liming is not an option then consider planting birds-foot trefoil or lespedeza. These legumes can stand lower soil pH's.

The **fourth practice** is grazing the fields to lower heights before seeding to allow for less

competition for sunlight and to allow for the seeds to have proper soil contact.

The **fifth practice** is timing. Frost seeding should occur between late February and late March. This time frame is when most of the freezing and thawing action is occurring. Seeding can be done later, but incorporation would be considerably lower. To help a late seeding succeed, cattle can be allowed to access fields. This practice allows cattle to tromp the seed down into softer soils (this is often referred to as “walk-ins”).

The **sixth practice** is to prohibit over-grazing after establishment. Legumes can be grazed more often, but they need more vegetation left in between grazing. If they are grazed too low to the ground, they can't compete with other grasses or weeds and they have to retrieve more nutrients from their root reserves, which causes plant vigor to dwindle.

Following these practices should greatly help in establishing and maintaining legumes in your forages.