



# NUTRONOMY

~ SOLUTIONS FOR SUCCESS ~

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## Frost Seeding



Frost seeding legumes and grasses is increasingly used by growers as a cost effective means to improve hay and pasture fields, as well as to establish a hay stand under wheat. Frost seeding offers several advantages, including the ability to establish forages without tillage; reduced labor, energy and machinery cost; and speed of seeding. This enables work to be done before the spring rush and is a method to maintain productive stands without a complete re-establishment. The key to a successful frost seeding involves several factors including good seed-to-soil contact, reducing competition, species selection, seeding rates, timing, and seeding methods.

### Tips for Success

#### ❑ Improve Seed-to-Soil Contact

Closely graze or cut the existing stand in the fall.  
Light hoof action by grazing animals may help “plant” the seed.

#### ❑ Reduce Competition

Early cutting or grazing of the stand is recommended to slow down the growth of established species and allow the new seedlings more sunlight to grow.

#### ❑ Species Selection

*Best Species:* red clover (Tempus), birdsfoot trefoil (Exact), perennial ryegrass (Aubisque, Fetione, Elgon), Italian/annual ryegrass (Abundant, Aurelia, Monarque), and Orchard grass (Pizza, Sparta).

*Species with varying success:* alfalfa (WL327, Radiant, HayGrazer), alsike clover, ladino clover (Jumbo), and timothy (Mariposa).

*Not recommended:* smooth brome, reed canary grass, forage turnips or tall fescue.

❑ **Seeding Rates:** Frost seeding will result in a lower rate of established plants compared to conventional seeding methods. However, the optimum seeding rate needs to be determined by the condition of the existing sod, the species being seeded, the number of new seedlings desired, and last but not least, trial and error. The table below is a guide for recommended frost seeding rates.

Species	Seeded Alone (#/Acre)	Seeded as part of a mix (#/Acre)
Alfalfa	6 – 10	4 – 6
Clover, Alsike	3 – 5	2 – 3
Clover, Ladino	2 – 3	1 – 2
Clover, Red	5 – 8	3 – 4
Orchard grass	6 – 8	2 – 4
Ryegrass, Italian or Annual	20 – 40	10 – 25
Ryegrass, Perennial	10 – 35	3 – 20
Timothy	4 – 6	2 - 4
Trefoil	4 - 6	2 – 3

❑ **Seeding Method & Timing:** The basic principle of frost seeding is that alternating freezing and thawing, along with spring rains will incorporate the seed into the soil surface where it will be able to germinate and grow.

- Seeding should occur when the snow is gone and nights are still cold enough to freeze the soil surface.
- Seeding on top of snow is generally not recommended because of the danger of run-off before the seed can get to the soil.
- It is necessary to determine the spreading width of your broadcaster for each seed type, since it will vary between species.
- It's not recommended to mix legume seeds with grass seeds, as their distance of “throw” is quite different.

### Summary

Frost seeding can be an effective, low-cost method of establishing new forage species into an existing stand. Good seed-to-soil contact is the key to success. While legumes like red clover and trefoil are the easiest to establish, grasses such as ryegrass and orchard grass can be very successful and increase forage production immediately without having to completely reseed. Don't forget to inoculate legumes before seeding.

*To place your frost seeding order, contact Jamie or Wayne at the office: 1-800-346-3649.*