
Frost Seeding Forages FAQ

Posted on [March 26, 2025](#) by [Christine O'Reilly, OMAFRA Forage & Grazing Specialist](#)

Frost seeding is a popular way to renovate an existing forage stand and is most effective in fields where patches of bare soil at least the size of a loonie are visible. With spring around the corner, many producers have questions about how to best use this technique to improve their hay fields and pastures.

When can I frost seed forages?

The optimum time to frost seed is when the snow has melted, but the ground is still frozen. Waiting until there is bare soil prevents the seed from being washed away with melt water. Frozen ground can support the weight of equipment and prevent ruts and compaction. Often the ideal window for frost seeding is very short, and sometimes the perfect conditions only occur in the wee hours of the morning, before dawn thaws the soil again.

Which species are suitable for frost seeding?

Most small seeded legumes – such as clovers and trefoil – are excellent candidates for frost seeding.

Alfalfa is not recommended for frost seeding. When seedlings reach the second trifoliate stage, they become sensitive to frost damage. This heightened frost sensitivity lasts until the crown is fully developed. By waiting until the ground is fit in the spring for a “normal” seeding time, producers reduce the risk of a late frost hitting their

new seeding at its most vulnerable stage. Autotoxicity also limits where alfalfa could be frost seeded, as it will not germinate in fields with mature alfalfa plants.

Grasses are more difficult to frost seed due to their larger seed size. Broadcasting grass onto frozen ground is an unreliable method of establishment. Some grain farmers have had success frost seeding spring cereals with a no-till drill, and it is likely this approach would work for cool-season perennial grasses.

How do I frost seed?

Seeding rates vary depending on the species being seeded, as some are more competitive to establish. In a mixture, lower rates of each species can be used. Fields that have more bare ground visible should be seeded with higher rates. See table 1 for examples of frost seeding rates for different species.

Species	Seeding Rate (lbs/acre)
Red clover	3-7
White clover	2-3
Birdsfoot trefoil	3-6
Orchardgrass	3-4
Italian ryegrass	4-8
Bromegrass	6-12
Source: G. Quesnel	

Legumes can be broadcast using a spinner spreader mounted on the back of an ATV or tractor. As the ground freezes and thaws during early spring, the water in the soil expands and contracts, which draws the small seeds into closer contact with the soil.

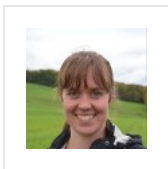
Grasses can be no-till drilled into the stand. Ideally the field was grazed or mowed close in the fall to remove heavy covers. The seed trench does not need to close behind the drill, as the freeze/thaw cycles will close it. While this can be done when air temperatures are warmer than -8°C, best results are achieved at -4°C to -3°C. As soon as the ground begins to thaw, seeding must stop as the drill can plug with soil very quickly.

For more information on frost seeding forages:

[Frost Seeding Forages: Planning for Success](#)

[Frost Seeding – A Cheaper Alternative](#)

[Frost Seeding Works](#)



About Christine O'Reilly, OMAFRA Forage & Grazing Specialist

Areas of Focus: - Production and storage strategies to improve the productivity and profitability of forages - Benefits of forages and grazing within cropping systems - Forage production and grazing systems in northern Ontario

[View all posts by Christine O'Reilly, OMAFRA Forage & Grazing Specialist →](#)

This entry was posted in [Crops](#), [Livestock](#) and tagged [establishment](#). Bookmark the [permalink](#).

Blog at WordPress.com.