Frost seeding legumes to improve wooded pastures.

Our 225-acre farm is divided into 70 grazing paddocks. Many of those paddocks were formerly tilled fields. Some were oak savannas that were pastured until about 1980. Other paddocks contain wet meadows and what we once considered waste land.

We now understand that nearly any land type that is not underwater, can benefit from properly managed grazing.

Our primary grazers are cattle and bison. Of secondary importance are horses, sheep and goats.

The paddocks are laid out to include trees whenever possible. Over the past 25 years we have planted trees in many paddocks.

Trees provide shade and wind protection for the grazing animals. Trees can also make pastures more productive in a number of ways.

Our farm is in the Anoka Sand Plain of east central Minnesota. The uplands tend to be droughty. Trees provide shade and reduce wind velocities, thus helping to conserve soil moisture. The Snake River winds through the farm for a mile. The winding river has produced many odd shaped, and irregular parcels. Most of these parcels are wooded.

Any wooded area that gets 20% or more sunlight to the ground will develop a grass cover. If you have a choice, shoot for 50% or more sunlight.

In our upland areas, the first grasses to move in are blue grass and quack grass along with several less aggressive native grasses. Adding legumes to grass pastures is generally a great benefit to forage production. The legumes enhance the habitat for soil microorganisms. Those microorganisms generate nutrients for the plants, most notably nitrogen.

In our shaded areas, Dutch white clover is the easiest to establish. Short Dutch clover is also extremely persistent and once established is as enduring as blue grass. Blue grass and Dutch white clover are also tolerant of close and repeated grazing. Making them a good choice for wintering areas and sacrifice pastures. They can be destroyed by continuous grazing, however.

Red clover frost seeds well but it is not as persistent as some white clovers. Red clover and short lived white clovers can be maintained indefinitely if you allow them to go to seed each year or two.

Frost seeding can be done anytime between late fall and early spring. Spring seeding, immediately after snow melt is normally best. Results vary between poor to excellent depending mostly on weather. It helps to seed onto exposed soil or through a thin plant cover. The easy and common way to prepare the bed is to graze it short, late in the fall.

Frost seeding in wooded areas is best done with a handheld, walking seeder. In the first photo, my helper, Janelle is using such a seeder. These seeders are simple and easy to use. You can cover a surprising amount of ground in a few hours.

Years ago, one of my neighbors, lacking a mechanized seeder, planted a ten-acre alfalfa field in one day. He did own a serviceable packer which he used after seeding. He got a very good stand. Sometimes the best tactic is to “Just do it”.

In the first photo, Janelle is interseeding a high area that contains springs. Those springs create a soggy bed for the birch trees. It is a sacrifice pasture so we will use Dutch white only.

The second photo is a group of pine trees. We trimmed the trees to allow sunlight to reach the ground. This area is grazed two or three times a year. We planted it with taller White and Red Clovers because we can manage it for self-seeding.

The third photo is of a wooded area that has been thinned by Oak Wilt disease. Some of the stumps in the foreground have been chopped to below ground level. Grass is already moving in. Clover seeding will result in a productive savanna.

The fourth photo is a silty ancient floodplain of the Snake River. The soil is fertile but acidic.
We interseeded ladino and alsike clovers along with tall and short Dutch. Ladino and Alsike are especially acid tolerant. This area is very productive is grazed numerous times during the growing season. It will be allowed to reseed once annually.

The fifth photo is a wooded location that gets some machinery traffic. It was interseeded a year ago. The photo was taken early. It has a good grass population but by the photo you can see that clovers and some native forbs are first to green-up.