

FORAGER

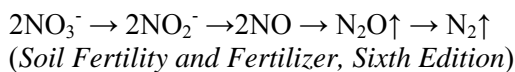


Agronomics with livestock in mind!



In the Field – WET FIELDS MAYBE SHORT ON NITROGEN

Almost continuous rain in many areas has left soils waterlogged. In waterlogged soils, inorganic nitrogen is often converted to gas and lost to the atmosphere and oxygen is excluded from the soil. Anaerobic organisms in the soil obtain the O₂ they need from NO₂⁻ and NO₃⁻ along with the release of N₂ and N₂O gases through the following reaction:



Large populations of denitrifying bacteria are present in the plant root zone. These bacteria can make quick use of the inorganic nitrogen, leaving little available for the growing crop. The waterlogged areas of fields are often discolored

(yellow), and stunted for the rest of the season, due to this nutrient deficiency.



Fig 1. Wet areas of a field showing N deficiency.

Poorly drained corn fields, that are waterlogged, benefit tremendously from sidedressing nitrogen. Applying nitrogen when corn is 10 to 16 inches tall will enable the corn crop to access nitrogen when it most needs it, while reducing the chance of nitrogen losses. To determine how much nitrogen is needed, sample soil and run a pre-sidedress nitrogen test (see the April 2003 issue of The Forager for more information on side dressing).

Seeding Forage Stands

Challenging weather and heavy field traffic have reeked havoc on forage stands. With the wet spring many growers have not been able to get new stands established. Fall seeding maybe a good option for many growers. Seeding in late summer or early fall, depending on your geography, offers a lot of benefits, which include:

- Weed competition is usually not as intense, resulting in cleaner stands and lower weed control costs.
- Stand establishment is completed early, allowing for increased yields the following spring.
- Diseases that attack alfalfa seedlings are usually not as prevalent in the fall.
- A more favorable time window is available for seeding.
- Wet fields are usually dry and ready to work.
- Alfalfa and other grasses can be no-tilled directly into corn or small grain stubble.

Some of the nicest and most productive forage stands are fall seeded. It is an excellent time to establish a crop, but does require some management considerations:

- Seedlings of alfalfa and reed canarygrass need at least 8 weeks of growth prior to the first killing frost to ensure winter survival.
- Seeds should be planted 1/4 to 3/8 inch deep (depending on the crop) with good seed to soil contact, making optimal use of available moisture.
- Use companion crops with caution, since they may use up the moisture needed by the seedlings.
- Avoid cutting summer seeded alfalfa until next spring, as it could result in stand loss.
- Generally, summer seeding rates should be increased by about 15% over typical spring seeding rates.
- Including cool season grass seed with the alfalfa can improve stand yield and forage quality.

In most areas of the Northeast and Midwest, alfalfa can be seeded in late July to mid August. Most cool season grasses can be seeded into September in many areas. Growers who take advantage of fall seeding will be less dependent on good spring weather next year, and should enjoy a more productive first year stand.