

Late summer is an ideal time to seed cool-season perennial grasses and many forage legume species. Lower temperatures and generally increased soil moisture allows forage seedlings to become established without as much weed competition compared to spring seeding. There are several management issues to pay attention to in order to help ensure favorable stand establishment. The following soil fertility information is taken from MU Guide 4650 'Establishing Forages': <http://extension.missouri.edu/publications/DisplayPub.aspx?P=G4650>

Adequate lime is necessary for forage establishment and production. It serves to correct soil acidity and supplies calcium and magnesium. Lime also affects the availability of most of the other essential elements needed for forage production. Phosphorus availability, in particular, increases as the pH is increased. If the soil is extremely acid, it is best to apply part of the lime at least six months before seeding. A soil test will help determine the amounts of lime, phosphorus and potassium that should be plowed or disked into the soil before seeding.

Seeds can germinate with or without fertilizer, but young plants will soon use the small amounts of nutrients in the seed. They are then dependent on the level of fertility around them for development. Most research shows that available phosphorus, applied at seeding time and properly placed, is the key element in establishing legumes and grasses. A small amount of banded nitrogen and potassium may also be beneficial at seeding time, but do not include more than 50 to 60 pounds of a combination of nitrogen and potash in a starter fertilizer.

Nitrogen encourages above-ground vegetative growth while phosphorus encourages root development, particularly the lateral and fibrous rootlets. Quick root development is especially important in fall sown forages. A sturdy root growth will counteract winter injury and prepare the plant for rapid spring growth.

A starter fertilizer should consist primarily of phosphorus (40 to 80 pounds) and a small amount of nitrogen (20 to 30 pounds). It may contain some potash, but excessive amounts at seeding damage legume and grass seedlings. Although high potash levels are detrimental to new seedlings, established stands of grass-legumes need a liberal supply. Use soil tests to determine the amount of phosphorus and potassium to use for topdressing. It is best to take a new test every three or four years.

The guide also contains information about other seeding issues, such as seedbed preparation, seeding method and forage selection. More detailed information on specific forages can be obtained from the publication M169 'A Guide to the Common Forages and Weeds of Pastures': <http://extension.missouri.edu/publications/DisplayPub.aspx?P=M169>