USDA United States Department of Agriculture
Natural Resources Conservation Service

Plant Chat
September 2026 | Volume 26, Issue 4
Bismarck Plant Materials Center Newsletter
for NRCS Field Offices in North Dakota, South Dakota and Minnesota

Selecting Grasses for Wet or Seasonally Flooded Sites

Establishing perennial vegetation in wet or seasonally flooded areas presents unique challenges, including limited site access when wet, availability of wetland seed, and suitable germination conditions. To address these efficiently, focus on widely available grass species adapted to such environments.

Many plantings include both wet or seasonally flooded areas and drier upland sections. Because many upland species have limited flood tolerance, creating seed mixes for these sites can add complexity to developing mixes. Each planting should consider producer expectations, purpose, upland-to-wet area ratios, and degrees of wetness or salinity. Matching species characteristics to site conditions and purpose increases the likelihood of successful establishment and functionality. Depending on site conditions and goals, you may use a single versatile seed mix for the whole area or multiple mixes tailored to different sections.

Establishing perennial grasses in a combination of wet and upland areas can be challenging. This article aims to help with species selection and adapting plantings to diverse site conditions.

Slender Wheatgrass, Canada Wildrye, and Virginia Wildrye should be used at low percentages for quick cover and moisture utilization. They tolerate inundation for up to 20 days but are short-lived.

Western Wheatgrass is highly versatile, tolerates up to 60 days of flooding, tolerates saline conditions, spreads via rhizomes, is palatable to livestock, and offers longevity.

Switchgrass provides wildlife cover, withstands up to 30 days of inundation, spreads by rhizomes, and offers good forage value before maturity. Note: Pure stands may be toxic to certain livestock.

Prairie Cordgrass tolerates 45 days of flooding, tolerates saline soils, and spreads aggressively by rhizomes (which are the best way to propagate). Establishment from seed is difficult due to poor viability and vigor. It provides excellent wildlife cover but loses livestock palatability quickly.

Creeping Foxtail is an introduced species, establishes easily, tolerates 45 days of flooding, spreads aggressively, and is highly palatable. However, it may be invasive so check local regulations and consider potential off-site spreading.

Reed Canarygrass is well-adapted to wet areas and suitable for forage, but its aggressiveness can outcompete other species and reduce wetland functionality. Review local laws and potential spread before planting.

Green Wheatgrass and Tall Wheatgrass are great for dual purpose areas that are both wet and saline. Tall wheatgrass loses nutritional quality and palatability as the plant matures, generally in late July.

Big Bluestem and Indiangrass are native warm-season grass options with brief inundation tolerance and great for transition zones between upland and wet areas.

Late-Season Management of Alfalfa and Cool-Season Grasses

Alfalfa Harvest Making the decision whether to harvest late-season alfalfa regrowth can be critical for future stand performance and longevity. For more details, visit NDSU extension article: "Make a plan for late-season alfalfa management."

Cool-Season Grass Fall Grazing Impacts of fall grazing management on cool-season grasses: Heavy grazing use in the fall can delay plant growth and reduce forage production over 50% the following Spring. For more details visit NDSU extension article: "NDSU Extension evaluates impacts of grazing use on grassland growth and production."



Fall grazing western wheatgrass tillers below the black lines will negatively impact spring growth and forage production.

USDA is an equal opportunity provider, employer, and lender.