

Planting Dates

Spring seeding is generally favored for native grass establishment, while fall seeding is often favored for planting forb, sedge, and rush seed to allow winter conditions to naturally break seed coats. Fall dormant seeding should be conducted after October 15th in the northern half of the state and after November 1st in the southern half of the state, and before the soil freezes. Dormant seeding or frost seeding (seeding into a few inches of snow) can also aid the establishment of forbs and sedges in uplands where grasses can become more dominant with spring plantings. Dormant seeding is also beneficial for pollinator projects with a high percentage of forbs and if hydrology will be restored in the fall, as it may be difficult to access the site after spring snowmelt. It is common to conduct dormant seeding shortly before snowmelt to ensure that seed is not lost from wind, birds or rodents.



If a wetland project will be constructed in the spring/early summer, or will have flowing or fluctuating water levels it may be better to seed later in the spring after water levels stabilize. Spring seeding of wetland and upland areas should be conducted before June 30th, as summer temperatures can lead to the loss of seedlings.

Containerized plants, vegetated mats, and bare root plants are most often planted in the spring when there is adequate rainfall and soil moisture, but fall plantings can also be successful. Containerized trees and shrubs can also be planted in late fall, before the ground freezes, but frost heave is sometimes a problem in high moisture areas. The installation of woody plant cuttings is typically conducted from early spring until leaves start to develop.

The table below summarizes preferred seeding and planting dates for different types of seed and plants.

Planting Date Guidance for Restoration & BMP Projects

Seeding - Recommended Dates/Vegetation Type

Seed Type	Spring/Early Summer	Mid-Summer	Early Fall	Mid-Fall	Late Fall (Dormant Seeding)	Frost Seeding
	(see date below)	Jun 30 - Aug 1	Aug 1 - Sep 10	Sep 10 - Oct 15	Nov 1 - Frozen Soil (see note about soil temp.)	Feb 15 - April 7
Cool-season Prairie Grasses	Apr 1 - Jun 15	**		*		
Warm-season Prairie Grasses	May 15 - Jun 30		*	*		
Prairie Sedges and Forbs	May 15 - Jun 30		*	*		
Wetland Grasses	Apr 1 - Jun 30	**		*		
Wetland Sedges and Forbs	Apr 1 - Jun 30	**		*		
State Native Construction Mix	Apr 1 - Jun 15		*	*		
Oats Temp. Cover	Apr 1 - Jun 15			*	*	*
Winter Wheat Temp. Cover	**	*			*	*

Plant Installation - Recommended Dates/Vegetation Type

Plant Type	Early Spring	Late Spring	Mid-Summer	Early Fall	Mid-Fall	Late Fall (Dormant Planting)
	Green-up-May 15	May 15 - June 30	Jun 30 - Aug 1	Aug 1 - Sep 10	Sep 10 - Oct 15	Nov 1 - Frozen Soil (see note about soil temp.)
Bare-root Herbaceous			*	**	**	
Bare Root Woody			*	**	**	
Containerized Prairie				*	*	*
Containerized Wet Meadow				*	*	*
Containerized Marsh				*	*	*
Containerized Woody					*	
Submergent Plant Fragments				*	*	**
Vegetated Mats				*	**	**
Woody Cuttings			**	**	*	

Expected Success Rates:

High Success
Medium Success
Not Recommended Without Watering or Favorable Weather Conditions
*Low Success
** Not Recommended

Note: Late fall dormant planting can be conducted earlier if National Weather Service soil temperature data is showing a consistent soil temperature below 40 degrees F for cool-season grasses and legumes or below 50 degrees F for Native warm season grasses, forbs and legumes.

Seeding Considerations

Spring/Summer Seeding: Spring and summer tends to be the best season for grass establishment and forbs such as pasque flower, prairie smoke, phlox, shooting star, golden alexanders, gentian, meadow rue, and many violets that do not require stratification. Forbs and sedges that require a winter for stratification tend to do better with fall planting but when planted in the spring they can sit dormant for a season until they are ready to germinate.

Fall Dormant Seeding: It is common to wait until around November 1st when dormant seeding. It is important that conditions will be cold enough to prevent germination right before winter. It is also common to wait until shortly before snowfall to prevent the loss of seed from wind, birds and rodents. Fall dormant seeding is commonly done when forbs, cool-season grasses and sedges are a primary goal for a project. Fall dormant seeding and winter seeding typically should not be conducted in areas where there will be flowing or standing water in the spring as seed may be lost.

Snow Seeding: Snow seeding is conducted during early or late winter when there is less than a foot of snow, and on sunny days when seed can move to the soil surface. This technique has been successful for a wide variety of species types. Refer to the Minnesota Wetland Restoration Guide for more information about snow seeding.

Cover/Companion Crop Use: Cover crop species are included in state seed mixes. Oats (*Avena sativa*) should be used in spring or summer, and winter wheat (*Triticum aestivum*) in fall. If a project is focused on stabilization and slopes are between 5-10%, cover species should be increased by 35 pounds per acre. If slopes are more than 10% cover species should be increased to 56 pounds per acre.