

Seed Substitution Process

MnDOT places certain requirements on the species, varieties, germplasm, and certification of components that make up state seed mixes. These requirements are detailed on the "Seed Mixture Component Requirements" table (hereafter referred to as the substitution list), which is accessible through both the MnDOT and Minnesota Crop Improvement Association (MCIA) website.

What is the process?

Each year several of these required components become sold out and a substitute needs to be found. The following process is used to select and approve appropriate substitutes:



Figure 1: Butterfly milkweed and sideoats grama seedlings

1. A vendor who is about to run out of a particular component (species, variety, origin, or certification) sends MnDOT an email requesting permission to substitute an alternative. This request should identify the component that is in short supply and propose an alternative.
2. MnDOT examines the request and decides on the suitability of the proposed substitute
3. MnDOT sends out a notice to all vendors as well as MCIA and other stakeholders. This notice:
 - a. requests verification that no other vendors have a supply of the original component
 - b. Provides an opportunity to weigh in on the suitability of the proposed substitute
4. If no objections are received within 48 hours (two business days) of the notice, MnDOT will send out an email verifying that the proposed substitute is allowed. MCIA will update the substitution list and post it online.
5. If a seed mix lot is ever questioned or audited, the seed label will be compared to the version of the substitution list that was in effect at the time of blending to determine compliance.

How does MnDOT decide what substitutes to allow?

Several considerations are involved in determining whether or not to allow an alternate species or alternate germplasm, including:

- **Supply:** Do other vendors still have the original source? Is the proposed substitute in good supply?

- **Function:** Does the proposed substitute perform a similar ecological function and require similar growing conditions as the original species? Does the proposed variety have similar performance characteristics as the variety that was originally specified?
- **Native range:** For native species, is the proposed substitute native to all or most of the range in which it is likely to be used?
- **Price:** Is the proposed substitute comparable in price to the original species?
- **Sources for native species:**
 - For native species, substitutions for different germplasm of the same species will follow the priority order listed below.*
 1. MClA certified in the Source Identified class with a genetic origin in the region defined in 3876.2.G, “Acceptable Varieties and Origins,”
 2. Source Identified seed certified by a seed certifying agency other than MClA and with a genetic origin in the region defined in 3876.2.G, “Acceptable Varieties and Origins,”
 3. Certified seed of varieties/germplasm listed in the State Seed Mix Acceptable Seed Mixture Component Requirements Substitution Table (Certified, Selected, or Tested class as applicable)
 4. Wild Type with a genetic origin in the region defined in 3876.2.G, “Acceptable Varieties and Origins.” The Department defines “wild type seed” as seed from a local or regional ecotype originating from remnant native stands and not modified by any intentional selection process, and
 5. Wild type from adjacent states (ND, SD, IA, WI)

*MnDOT may propose an alternate species of a higher priority category before allowing lower priority categories of the original species. This is done in situations where the two species have similar characteristics but the benefits of certification and/or increased diversity outweigh the benefits of using the original species.

Why not use more of the remaining components of a mix rather than finding a substitute?

One of the design objectives of roadside vegetation is diversity. Plant diversity improves the functionality of roadside vegetation. An approach that does not allow substitutes would result in less diverse seed mixes and would not meet this objective.

For how long is an approved substitute effective?

Once a species or a particular germplasm is approved as a substitute, it can continue to be used (even if the original component becomes available later on) until the substitute list is re-set, which will occur on March 1 of each year.

How is the substitution list re-set?

The substitution list undergoes edits throughout the year as each substitution request is processed and granted. The supply of most species is replenished each winter as producers clean and test the seed

that was harvested in the fall. To account for this, the list is re-set on March 1st of each year. One month prior to this date, MnDOT asks all approved vendors to review the proposed list to see if any species, varieties or germplasm will require a substitution right away. Vendors must send any requests by February 15th. MnDOT will send out the list with the proposed substitutes for review during the last week of February. If there are no objections then the resulting list goes into effect on March 1st as the first substitution list for that year.

What if a vendor needs a short-term substitute?

On occasion, a vendor will need a substitute for a species, variety or germplasm that was expected to be available at the time of the substitution list reset but its use is prevented due to delays in conditioning or testing. If this happens, the vendor should send a request to MnDOT explaining the situation and the proposed substitute. MnDOT will consider the request and may grant permission to use the substitute for a short length of time and on (a) specific project(s). The vendor must retain documentation of permission for this short term substitution.

Range-limited seed mixes

Sometimes a project will call for a standard native seed mix but will require that most of the components have genetic origins from within a certain distance of the project. This is done to protect the genetic integrity of remnant native plant communities adjacent to the planting. When a range-limited seed mix is required, it will be listed in the plan as a “seed mix special” and will include a note below the Statement of Estimated Quantities table that reads: “Range-limited 75: At least 85 percent of native components must have a genetic origin from within 75 miles of the project.” The actual distance may vary and will be stated in that note. MnDOT is aware that these mixes can be a difficult mix to source and provide, depending on the location and the timing. If substitutions are needed for these project-specific mixes, call both the project manager and the phone number listed below.

For More Information

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