



Plant Chat

Fall 2014 Volume 14, Issue 4
A Newsletter Published Quarterly by the Bismarck Plant Materials Center
for NRCS Field Offices in North Dakota, South Dakota, and Minnesota

Wanted: Field Planting Sites

Sites in South Dakota, North Dakota, and Minnesota are needed for planting “on farm” field plantings. These trials provide a means to evaluate promising conservation plants in a variety of growing conditions. Are there producers out there willing to incorporate any of the following species into their 2015 seeding or planting plans?

Name	Species	Type	Material	Maximum Amount/planting
Virginia wildrye	<i>Elymus virginicus</i>	Grass	Seed	25 PLS pounds
Foxtail dalea	<i>Dalea leporina</i>	Forb	Seed	25 PLS pounds
Lodgepole pine	<i>Pinus contorta</i>	Tree	16-in ³ plugs	25
Douglas fir	<i>Pseudotsuga menziesii</i>	Tree	7-in ³ plugs	25
Sweetgrass*	<i>Hierochloe odorata</i>	Grass	Plants	10

* sweetgrass is offered as special planting material and requires NO evaluation

Responsibility: The Plant Materials Center will provide seed/plants, evaluation forms (annually), and assistance with evaluation (when possible). The producer is responsible for planting or seeding, and the NRCS/Conservation District and/or producer is responsible for filling out evaluations (3-5 years for trees and Virginia wildrye; 1 year for foxtail dalea).

To Request: Complete the [NRCS-ECS-9 form](#). For tribal sweetgrass requests, use the tribal request form on page 6.

Send completed [NRCS-ECS-9 forms](#) to the contact in your corresponding state:

Minnesota (before November 21, 2014)	North Dakota (before November 21, 2014)	South Dakota (before December 19, 2014)
Mark Oja	Wayne Markegard	Tim Nordquist
USDA, NRCS	USDA, NRCS, PMC	USDA, NRCS Field Support Service Center
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Requests will be reviewed for approval at each state’s annual Plant Materials Technical Committee meeting. While the PMC will try to meet all needs, some may be denied due to limited seed and plant quantities. Each office will be notified concerning the status of their request.

Information related to species description, seeding rates, and desired sites can be found on pages 2-5.

Special Plantings

Limited amounts of seed or plants are available for demonstrations, education and research.

Foundation Seed

Foundation seed is available to anyone interested in producing conservation grass and forb seed.

For more information on special plantings, foundation seed, or any questions about field plantings, contact Wayne Markegard, Plant Materials Specialist at: wayne.markegard@usda.nrcs.gov or the Plant Materials Center at 701-250-4330.

Plant Materials Available for North Dakota, South Dakota, and Minnesota – 2015

I. Field Plantings

Purpose:

- To assess the conservation potential of plant materials and plant technologies under a variety of soil, climatic, and land uses. Field plantings are located on a producer’s land.
- To provide technical information for tech guides, publications, etc.

Field Office Responsibilities:

- Assist with seed/plants establishment.
- Annual evaluation and data collection for 3-5 years (depending on species); evaluation forms will be provided annually.

Requests for Plant Materials:

- Field offices submit a completed [NRCS-ECS-9](#) form “Plan for Field Plantings” to their PM contact.
- Requests will be presented to the State Plant Materials Committee for approval.
- Plants/seed will be distributed to cooperating field offices prior to spring planting.

Virginia Wildrye (*Elymus virginicus*) 9094359

Description: Virginia wildrye is a perennial, cool-season bunch grass that is native to much of the United States, including the Dakotas and Minnesota. It prefers moist sites and will grow in partial shade to full sun. The height averages 2-3 feet. Virginia wildrye grows on a variety of soil types but has a low salt tolerance. The forage is palatable to livestock while green in early spring and fall. Seedlings are vigorous and establish quickly. It can naturally reseed where bare or open ground occurs. Plants are generally short lived, living about 5 years. The seed heads are spikes with stiff straight awns. There are approximately 96,000 seeds per pound. As its growth habit is similar, it can be a substitute for Canada wildrye in most plantings.

Suggested plantings (Mix or Solid Seeding)

- pasture and hayland, wildlife habitat, prairie restoration, riparian zones
- cover between tree rows - new planting or established trees

Seeding Season

Early spring, late summer, dormant (follow recommended dates in your state for cool-season grasses)

Seeding Rate

State	PLS pounds/acre Full Rate	Seeds/ft ² Full Rate	Recommended % in Mix
Minnesota	15.0	33 seeds/ft ²	1-10%
South Dakota	13.5	30 seeds/ft ²	1-10%
North Dakota	10.0	20 seeds/ft ²	1-10%

Foxtail Dalea (*Dalea leporina*) 9094445 ‘Sundance’

Description: Foxtail dalea is an annual legume native to the Western hemisphere from Canada to Argentina. It is found in sandy prairies and disturbed sites throughout the eastern Great Plains. Plants generally grow 1-3 feet tall and are erect in stature. Its forage is high in protein and digestibility but is bitter flavored to livestock early in the growing season. Bitterness declines as plants age. It flowers from July to September. Performance in research trials has been better on sandy, acid or neutral soils than on heavy, more fertile soils. In areas where seed reaches maturity, the species can readily reseed. There are an estimated 150,000 seeds per pound.

Suggested plantings (Mix or Solid Seeding)

- cover crop – component in a mix
- green manure crop or summer fallow cover
- companion in grain or row crops
- companion in grass/forb mix; pollinator mixes
- other (your choice)

Seeding Season

Early spring, dormant (follow recommended dates in your state for forb plantings)

Seeding Rate

State	PLS pounds/acre Full Rate	Seeds/ft ² Full Rate	Recommended % in Mix
Minnesota	10.0	35	*
South Dakota	10.0	35	*
North Dakota	10.0	35	*

*Dependent on other species in mix

Lodgepole Pine 9094433

Purpose: Windbreak, Multi-row (WBMR); Wildlife (WLDF)

Sites Needed: 5 sites per state (MN, ND, SD)

Plants/Site: 25 plants

MLRA preferred: statewide (ND, SD, MN)

Description: 9094433 (*Pinus contorta* var. *latifolia*) is a tall straight-trunked, narrow-crowned pine, native to the Rocky Mountain and Cascade-Sierra ranges. It prefers reasonably moist, well drained fertile soils, but has proven to be drought tolerant once it is established. It grows well in soil pH 5.0 to 7.5. Windbreak Suitability Group - 1, 3, 4, 5. Whether it is tolerant to higher pH soils (up to pH 8.2) needs to be investigated. Lodgepole pine is used as a food source by a variety of birds, squirrels, and porcupine. This is a composite of five seed sources that scored well in tests at the Agricultural Research Station in Mandan for the past 30 years and at two North Dakota field locations for the past 7 years. In PMC trials, it exhibited darker green foliage than Ponderosa pine or Scotch pine. Early growth rates and foliage density were similar to Ponderosa pine.

Douglas Fir 9094434

Purpose: Windbreak, Multi-row (WBMR); Wildlife (WLDF)

Sites Needed: 5 sites per state (MN, ND, SD)

Plants/Site: 25 plants

MLRA preferred: statewide (ND, SD, MN)

Description: 9094434 (*Pseudotsuga menziesii*) is a large, coniferous tree native to the Rocky Mountains of the US and Canada. This particular strain comes from the central or eastern side of the mountain range. At maturity, this tree should exceed 75 feet tall on better soils. Needles are single, flat and less than 1 inch long. Since this is an entirely different genus and species from our commonly used pine and spruce, the addition to the technical guide would increase the resiliency of our conservation plantings to disease, insects and changing weather. Field plantings will determine the soils for which this plant is best suited. Note: This particular seed source comes from 60-foot tall, 80-year-old trees growing on a sandy loam soil at USDA-ARS, Mandan, North Dakota.

Sweetgrass 9063128

Purpose: Culturally Significant (CUSI)

Maximum Plants/Site: 10 plants

MLRA preferred: statewide (ND, SD, MN)

Description: Sweetgrass (*Hierochloa odorata*) is an early cool-season grass that is characteristic of wet, sandy soil near riverbanks and lakeshores. Uses of sweetgrass are numerous. The source of the sweetgrass aroma, which smells like vanilla, is called coumarin. This plant compound has been used for hundreds of years as a plant extract for both fragrance and medicinal use. Native American cultures burn braided sweetgrass twists in traditional ceremonies, using the sweet scented smoke as purifying incense. This accession of sweetgrass was originally collected along the Missouri River near Bismarck, North Dakota. Plants should be spaced 1 to 3 feet apart on a prepared garden-like site, and hand watered until established. Sweetgrass spreads rapidly by underground rhizomes. After establishment, plants increase rapidly if weeds are controlled. It is not unusual for 10 plants to increase to hundreds of plants the second year, and thousands of plants the third year. Successful plantings may be used as propagation beds after establishment. Plants will be shipped in small pots approximately 2 ½ inches square and 3 inches deep.

III. Foundation Seed for Certified Seed Production

VARIETY	COMMON NAME
Native - Grasses	
Badlands ecotype	little bluestem
Itasca germplasm	little bluestem
Bad River ecotype	blue grama
Bison	big bluestem
Bonilla	big bluestem
Bounty germplasm	big bluestem
Dacotah	switchgrass
Forestburg	switchgrass
Mandan	Canada wildrye
Pierre	sideoats grama
Red River germplasm	prairie cordgrass
Rodan	western wheatgrass
Tomahawk	Indiangrass
Lodorm	green needlegrass
Native - Forbs/Legumes	
Bismarck germplasm	purple prairieclover
Bismarck germplasm	stiff sunflower
Medicine Creek germplasm	Maximilian sunflower
Bismarck germplasm	narrow-leaved purple coneflower
Introduced - Grasses	
Mankota	Russian wildrye
Manifest	intermediate wheatgrass
Manska	pubescent/intermediate wheatgrass
Reliant	pubescent/intermediate wheatgrass
Nordan	crested wheatgrass



United States Department of Agriculture
Natural Resources Conservation Service

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**Plant Materials
Program**

Request for Tribal Plant Materials

Tribe: _____
Address: _____

Date: _____

Contact Person: _____
Phone Number: _____
Cell Number: _____
E-Mail Address: _____
Fax Number: _____

Transportation of Material (check one)

Pick-up Delivery

Desired Delivery Date: _____

Shipping Address (if different from above)

Species Currently Available	Material Type (Seed/ Plugs/ Transplants)	Quantity Needed

List Additional Species Desired (if more space is needed please attach an additional page)	Quantity Needed

Please indicate other types of guidance or assistance that would be beneficial
(e.g plant identification, site planning or establishment)

Tribal Rep. Signature: _____ **Date:** _____

PMS Signature: _____ **Date:** _____

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