

# 2025 Report of Activities

## Bismarck Plant Materials Center

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### Bismarck Plant Materials Center



*Bismarck Plant Materials Center Office and Training Center*

BISMARCK STAFF	POSITION
Lucas Schmiesing	PMC Manager
Nancy Jensen	Agronomist
Michael Bellon	Biological Science Technician
Steven Allard	Soil Conservationist
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Plants are an important tool for conservation. The Bismarck Plant Materials Center (PMC), which is part of the USDA Natural Resources Conservation Service, is one in a network of 25 PMC's nationwide dedicated to providing vegetative solutions to conservation challenges. It has provided conservation plant materials and technology for more than 80 years to land users in Minnesota, North Dakota, and South Dakota. It works closely with other federal and state agencies, universities, and nonprofit organizations on various tasks. These include:

- ❖ Development/selection of adapted grass, forb, legume, tree, and shrub cultivars and releases for conservation plantings.
- ❖ Breeder and Foundation seed production of releases. Seed is distributed to commercial growers and nurseries.
- ❖ Technology development related to grass, forb, tree and shrub establishment, management, and use.
- ❖ Disseminate conservation plant information through publications, training, and other outreach activities.

## Training/Tours

### Herbaceous Establishment Workshop

Article by Emily Rohrer, South Dakota NRCS State Rangeland Management Specialist and Plant Materials Program Liaison

NRCS hosted a Herbaceous Plant Establishment workshop in July to provide information on establishing perennial plants in cropland situations. The Bismarck PMC provided a webinar to over 100 NRCS employees and partners covering information on the plant materials center, seeding information, and other various tips and tricks. Afterward, three field sessions were held across the state to look at seeding equipment, observe recently seeded stands of grasses and forbs, and discuss maintenance and management options. There were 60-70 NRCS employees and various partners who attended the field sessions.



Components of a drill and drill calibration were explained during part of the field training.

## Tribal Outreach

### Plants Distributed

Sweetgrass (*Hierochloe odorata*) is a ceremonial plant used by many Native American Tribes. Sweetgrass was collected along the Missouri River in Burleigh County, North Dakota in 1991 and a propagation bed was started at the Bismarck PMC as part of an outreach and technical assistance program. Each year plants are propagated and distributed from this collection to tribes or anyone seeking to establish sweetgrass. In 2025, approximately 290 sweetgrass plants were propagated at the PMC from rhizome cuttings and distributed to 25 entities or individuals for starting propagation beds of their own.

### Propagation Protocols

Propagation protocol development continues at the Bismarck PMC for plant species culturally significant to Native American tribes. The protocols are basic instructions for growing and multiplying various plants. A fact sheet outlining [sweetgrass propagation](#) was published in 2021. In 2025, propagation protocols for [white sage](#) (*Artemisia ludoviciana*) and [prairie turnip](#) (*Pedimelum esculentum*) were completed.



A Lakota Tribal producer received sweetgrass plants from the PMC in 2024. A bed established from these plants was vegetatively increased (right) utilizing propagation protocols. A braid (left) was crafted from leaves harvested in 2025.

## Foundation Seed Production

Foundation seed of Bismarck PMC cultivars continues to be grown at the Bismarck PMC. In 2025, 17 foundation/breeder fields were harvested. Two fields of Bad River Ecotype blue grama (*Bouteloua gracilis*) produced exceptional yields, allowing for large quantities to be distributed to commercial growers. A new field of Tober Germplasm Virginia wildrye (*Elymus virginicus*) was seeded in late August in preparation for increased demand.

Prescribed burns on warm-season grass production fields were completed on May 6, 2025 with the help of ND NRCS state and field office staff. Burns are completed to reduce residue, increase plant vigor and seed yield. Weather conditions throughout the growing season were favorable for both warm and cool-season grass seed production resulting in above average yields for most PMC cultivars.

In addition to grass and forb harvest, the PMC also hand-harvested seed from several popular PMC tree cultivars. The collected seed is cleaned and distributed to local nurseries in the region to assemble their own breeder blocks for future seed collection efforts. Seed is then grown in nursery beds and conservation grade trees are distributed to the public for conservation plantings.

Seed harvested at the PMC is cleaned in the seed cleaning facility on-site during the winter months. Grass and forb Breeder and Foundation seed is distributed through the North Dakota Foundation Seedstocks Program to seed growers. The seed produced from growers is then sold to commercial vendors or directly to the public for conservation plantings.

## Studies/Plantings

### Winter Survival and Quality of Orchardgrass Varieties

The original intent of this study was to evaluate survival and longevity of selected tall fescue (*Schedonorus arundinaceus*) and orchardgrass (*Dactylis glomerata*) cultivars for use in North Dakota. Currently, ND NRCS does not recommend planting orchardgrass or tall fescue. Due to potential invasiveness, tall fescue was removed prior to study completion. Fifteen varieties (cultivars) of orchardgrass were seeded as monocultures in small, replicated plots on May 14, 2020 and terminated August 11, 2025. Commercial cultivars were selected based on winter hardiness claims. Throughout the study, cultivars were similar in appearance and performance. Plants were not vigorous in any year of the study but did not show winterkill until the spring/summer of 2025. The sheltered planting



*Winterkilled plants of orchardgrass in 2025.*

location and lack of use may have resulted in winterkill later than would be found in a field setting. Results from this study support current NRCS recommendations; planting orchardgrass in North Dakota is not advised.

### Commodity Crops Seeded with Pollinator Mixes

The objective of this study is to evaluate the establishment of pollinator habitat by mixing and seeding an annual, flowering commodity crop with a native forb/grass pollinator mix. The commodity crop can potentially suppress weeds



*Titan Kelsch, seasonal technician, harvesting 'Lodorm' green needlegrass.*

and provide pollen and nectar to pollinators during the seeding year. It also has potential to provide economic return from harvested grain.

The commodity crops in the study are flax (*Linum usitatissimum*), canola (*Brassica napus*), and sunflowers (*Helianthus annuus*). The pollinator mix is composed of 10 forbs and 6 grasses and seeded at a ratio of 50% grass/ 50% forbs based on seeding rates. The forbs represent three bloom periods and the grasses are both warm and cool-season species. The commodity crops were measured for full seeding rates and mixed with a full seeding rate of the grass/forb mix. Individual replicated plots of each commodity crop/pollinator mix along with the pollinator mix (alone) were seeded on May 20, 2024.

Stand counts in Spring 2025 found abundant cool-season grasses and 6 forb species in all plot types except sunflower, which had abundant cool-season grass but only 3 forb species present. Warm-season grasses were not counted.

Forb and grass counts are planned for all plots in 2026.

### Observational plantings of PMC germplasm for expanding range of use

This study is underway simultaneously at PMCs in North Dakota, Montana, Idaho, Nevada, and Washington. The objective of the study is to determine the potential area of adaptation for conservation plant releases developed at various PMCs. At the Bismarck PMC, performance will be compared to releases with known adaptability in North Dakota, South Dakota, and Minnesota. Twenty-six releases representing 11 species were propagated in the greenhouse and seedlings were planted in nonreplicated rows 20 ft long at the Bismarck PMC on June 24, 2025. The releases will be evaluated from 2025-2028 for vigor, cold tolerance, drought tolerance, insect damage, disease damage, seed production, survival, and size.

Evaluations began in Fall 2025. Most of the cultivars had good growth by the end of the season and plant size and life cycle differences (i.e. flowering dates) were noted. High performing releases will be considered for advance testing, which could result in additional cultivar recommendations.



Few forb plants established in sunflower companion crop plots, but cool-season grasses were abundant.



Plots of 26 grass releases under evaluation at the Bismarck PMC.

Common Name	Species	Cultivar	Cultivar	Cultivar	Cultivar
western wheatgrass	<i>Pascopyrum smithii</i>	'Arriba'	'Rosana'	'Rodan'	
switchgrass	<i>Panicum virgatum</i>	'Alamo'	'Dacotah'		
Virginia wildrye	<i>Elymus virginicus</i>	Tober Germplasm			
blue wildrye	<i>Elymus glaucus</i>	Union Flat Germplasm			
James galleta	<i>Pleuraphis jamesii</i>	'Viva'			
Indiangrass	<i>Sorghastrum nutans</i>	'Lometa'	'Tomahawk'		
alkali sacaton	<i>Sporobolus airoides</i>	'Saltalk'	'Salado'	Vegas Germplasm	
Nevada bluegrass	<i>Poa secunda</i>	Opportunity Germplasm			
Sandburg bluegrass	<i>Poa secunda</i>	High Plains Germplasm			
blue grama	<i>Bouteloua gracilis</i>	'Hachita'	'Alma'	Bad River Ecotype	
Indian ricegrass	<i>Achnatherum hymenoides</i>	'Nezpar'	'Rimrock'	'Paloma'	NV-not released
sideoats grama	<i>Bouteloua curtipendula</i>	'Haskell'	'Niner'	'Vaughn'	'Pierre'

## Perennial Grass Establishment into Winter Small Grain Stubble

The objective of this study is to evaluate establishment of selected perennial grass species when planted into winter rye (*Secale cereale*) stubble. Planting into rye stubble is not currently recommended by NRCS in North Dakota and South Dakota due to its abundant residue and potential allelopathy.

Monocultures of five perennial grasses were seeded into individual strips of black fallow and stubble of winter rye, winter wheat (*Triticum aestivum*), and spring wheat (*Triticum aestivum*) that had been harvested for grain. Preliminary results show adequate grass establishment in all stubble types.

Winter rye, as a cover crop, is often terminated when plants are vegetative, prior to grain maturity. A future study related to grass establishment in such a seedbed may be warranted.

## Effects of Seeding Rate, Date, and Termination date of cereal rye (cover crop)

The objective of this study is to evaluate the effect of seeding dates, rates and timing of termination on adapted varieties of cool-season legume and grass species used as cover crops across a range of climatic conditions. At Bismarck and 13 other PMCs, winter rye is being evaluated at five seeding rates and three seeding dates, beginning in 2023. Seeding rates are 15 lb/A, 30 lb/A, 60 lb/A, 90 lb/A and 120 lb/A. Targeted seeding dates at Bismarck each year are September 2, September 14, and September 27. 'Aroostock' is the winter rye cultivar being seeded.



Big bluestem and western wheatgrass establishment in winter rye stubble.



Rye canopy on November 8, 2024 for plot seeded on August 29, 2024 (left); plot seeded on September 16, 2024 (center) and plot seeded on October 1, 2024 (right).

To estimate over-winter erosion protection, a measure of fall canopy is being collected using electronic imaging. In the spring, an estimate of canopy cover remaining after winter and biomass production prior to seed set is measured with 3-D imaging and mechanical clipping. At freeze-up, canopy cover differences have been noticeable among seeding rates and dates, but the most canopied plots at freeze-up have not consistently produced the most clipped biomass.

The study will continue through 2027.

## Evaluating Plains muhly for Conservation Use in the Northern Great Plains

The objective of this study is to evaluate plains muhly (*Muhlenbergia cuspidata*) as a potential stress tolerant native perennial warm-season grass for planting on marginal land. It is a bunchgrass species that is most abundant in short and mixed grass prairies on dry, shallow, gravelly and sandy soils. However, it can grow in a variety of prairie types and is not restricted to coarse soils.

The study, now the sole responsibility of the Bismarck PMC, began as a joint project with South Dakota State University. Beginning in 2022, plants have been collected from 18 sites in North Dakota, South Dakota and Iowa. An evaluation plot was planted at the PMC in 2024. Data collection, which began in 2025, noted growth habit and size differences between



Assembly of plains muhly collections.

collections, All collections had seed heads, although those with more southern origins produced heads later. Data collection will continue to further evaluate its release potential.

### Alkali sacaton for conservation cover on saline soils

The objective of this non-replicated trial is to evaluate performance and growth of alkali sacaton (*Sporobolus airoides*) on saline soils in the Northern Great Plains. Alkali sacaton is a warm-season bunchgrass known to grow on salty and alkaline soils in western North America. If adapted, it would provide cover and forage when cool-season species are dormant. In phase 1 of the trial, seedlings of released cultivars of 'Saltalk', 'Salado', and Vegas Germplasm were planted at saline sites in central (near Kathryn in 2024), western (near Dickinson in 2025), and northern (Langdon in 2025) North Dakota and at the PMC on non-saline soils (2024 and 2025). Live plants were found at the end of their first growing season at each location and live plants were found at Kathryn and the PMC after enduring one winter. Along with salinity tolerance, long term winter hardiness, vital in the Northern Great Plains, will be monitored.

Additional phases of the trial are under consideration: utilizing seeds to establish alkali sacaton and collecting seeds from native populations in the Northern Great Plains. Establishment of alkali sacaton from seed rather than plants would be more practical for large areas. Seed from the Northern Great Plains would presumably be more winter hardy than the releases of Saltalk, Salado, and Vegas Germplasm, which have origins from more southern USDA hardiness zones.



At the Dickinson, ND plot, only a few alkali sacaton plants were alive in the area with highest EC values (left) in September 2025. Seedlings planted into an area with vegetative cover were smaller, but all planted seedlings were surviving (right).

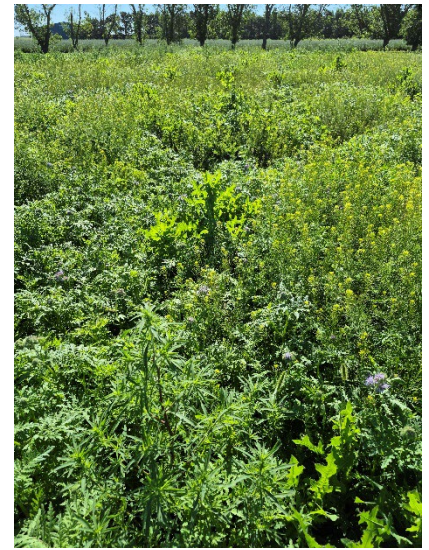
### Phacelia companion crop trial

The objective of this trial is to evaluate how different seeding rates of phacelia (*Phacelia tanacetifolia*) mixed with a diverse grass/forb pollinator mix affect pollinator habitat establishment. Phacelia is a cool-season, annual broadleaf that can suppress weeds during the first year of establishment, while also providing a prolonged, indeterminate flowering period beneficial for honeybees and native pollinator species.

Phacelia was mixed at 1,2,3,and 4 lb/A rates with a diverse 75/25 grass/forb pollinator mix and planted on May 13, 2025. The pollinator mix was also seeded without phacelia as a comparison check. The mixes were seeded on two types of prepared no-till seedbeds. One of the seedbeds was burned on May 6, 2025 due to excessive sudangrass (*Sorghum x drummondii*)/millet (*Setaria italica*) cover crop residue, while the other seedbed was left unburned. There was notably less weed pressure on the burned plots for the duration of the growing season, compared to the unburned plots. Data collection included canopy cover, weed ratings and phacelia bloom dates. In future years, grass/forb stand counts will be recorded to determine stand establishment ratings for varying phacelia seeding rates.



*Burned seedbed, 2 lb/A phacelia, 50 days after planting*



*Unburned seedbed, 2 lb/A phacelia, 50 days after planting.*

## Urban Pollinator Program

This activity is part of the Urban Pollinator Program (UPP) initiated by North Dakota Game and Fish to facilitate the creation of pollinator habitat at local schools in North Dakota. The UPP garden provides an opportunity for education and resources related to native pollinator species and native plants. Each year, since 2019, 5-10 schools have participated in the program and received plants.

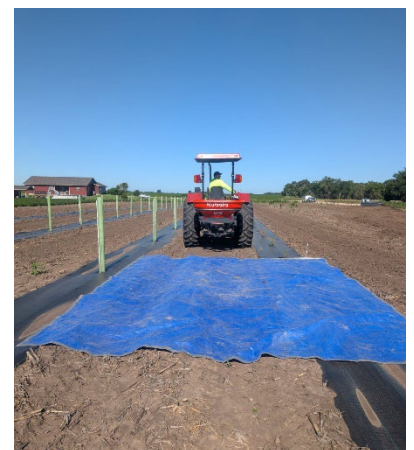
Plants distributed to schools each year are greenhouse grown by the Bismarck PMC. Each school receives a minimum of 100 plants consisting of 10 plants each of at least 7 forbs and 3 grasses. Five schools received plants in 2025.



*Pollinator garden at Belcourt, North Dakota school.*

## Grass Seeding Between Tree Rows

Traditional guidance for selection of grass species to seed between tree rows has been blue grama and sideoats grama (*Bouteloua curtipendula*) in the Dakotas and Minnesota. These species have low water use in early spring that is critical for trees, partial shade tolerance, and would tolerate the use of herbicides early in the season. Some producers implementing this guidance have experienced slow establishment, weeds and invasive grass invasion with the blue grama and sideoats seedings. In 2025, the Bismarck Plant Materials Program (PMP) worked in partnership with the South Dakota Department of Agriculture and Natural Resources, Davison County Conservation District, South Dakota NRCS, and a private landowner to test different grass species treatments between the rows of a newly planted windbreak. Treatments included 100% fallow; 50% sideoats grama and 50% blue grama; 50% Virginia wildrye (which is shade tolerant, fast-establishing, and short lived) 25% sideoats grama and 25% blue grama; and 100% Virginia wildrye. Weed competition, tree growth and vigor, and grass performance data will be collected in future years.



*Broadcast seeder distributes grass treatments between tree rows.*

## Establishment of Grass on Acidic Soils

Many grass seedings are failing in western North Dakota on low pH or acidic soils. While some soils are naturally acidic, excess nitrogen fertilizer use can also lower soil pH values. In general, plant establishment becomes challenging at pH 5 and below, yet levels as low as pH 3 are being found in western North

Dakota. While general guidance can be found for some grass species, many do not have defined acidity tolerances. Additional information on acidity tolerance of grass species and cultivars would provide NRCS field offices a tool for designing improved seed mixes for acidic soils or determining if alternative measures such as soil remediation are needed for a site.

NRCS and the Dickinson Research Extension Center (DREC) have partnered to study the acidity tolerance of various perennial grass species/cultivars. Replicated plots of 14 individual grass species/cultivars and 1 grass mix were seeded in Dickinson, North Dakota at the DREC in May 2025. Soil was sampled at 0-3 in and 3-6 in for each plot shortly after seeding for baseline information on pH, organic matter, and aluminum.

By the end of the 2025 growing season, most of the cool-season grasses and several of the warm-season species had emerged. Plans are to collect data on emergence, weed pressure, stand establishment and forage production over the next several years and relate performance to soil properties.

## Off-Center Tree Planting Update

Currently there are active Off-Center Evaluation Plantings (OCEP) located at Dickinson, North Dakota and Brookings, South Dakota. Their primary purpose is long-term evaluation of woody species. It is a place to screen species for potential conservation use prior to widespread field evaluations. Vigor, disease, size, and overall performance are evaluated annually. New entries in 2025 included bur oak (*Quercus macrocarpa*), Mongolian oak (*Quercus mongolica*), and Mongolian Scotch pine (*Pinus sylvestris* var. *mongolica*).

Mongolian oak is native to Asia and is showing potential as a tree that can perform well in this region. Both, Mongolian oak and bur oak were planted at each test location to provide a comparison in performance, survival percentage, and growth. Mongolian Scotch pine was planted in the OCEP's as part of a larger study to find a seed source that is resistant to pine wilt disease. At Dickinson, both northern white cedar (*Thuja occidentalis*) accessions, planted in 2023, were doing well in 2025. Northern catalpa (*Catalpa speciosa*), planted in 2022, was also thriving. These are unexpected findings, as both species were not expected to do well that far west from their natural habitat.

Special thanks to the Brookings Conservation District, NRCS Area Office, and NRCS Field Office for planting the new entries in 2025.



Northern catalpa had rapid growth.

## Field Plantings

Field plantings are a means to evaluate new plants and/or plant technology under actual use conditions at sites away from the PMC. Staff from NRCS field offices, conservation districts, tribes, and other partners locate sites with local producers and coordinate plantings and data collection. This data is a valuable component for NRCS Field Office Technical Guides (FOTG). In 2025, there were 40 active field plantings under evaluation including gray birch (*Betula populifolia*), Virginia wildrye (Tober Germplasm), Mongolian Scotch pine, and cup plant (*Silphium perfoliatum*).

Gray birch is a fast-growing deciduous tree that is native to the Northeastern United States. The species is being tested for its adaptability in our area, but the species has performed poorly, with a 6% overall survival rate.

Tober Germplasm Virginia wildrye is a recent release, from the Bismarck PMC, of this native, cool-season, perennial grass that likes moister sites, establishes easily, can tolerate shade, and is short lived. The species is being tested with slender wheatgrass



Tober Germplasm Virginia wildrye is thriving in a mixed seeding of grasses and forbs.

(*Elymus trachycaulus*) and Canada wildrye (*Elymus canadensis*) to compare performance with similar growth type species. The release has performed well.

Mongolian scotch pine is being studied for its potential resistance to pine wilt disease. Results may be prolonged, as it can take more than 10 years for trees to develop symptoms.

Cup plant is a native, warm-season, perennial forb that is unusually tall with large leaves that wrap around the stalk creating cup like structures that can hold water. In 2024, cup plant was included in a seeding south of Jamestown, North Dakota on the banks of the James River to evaluate its ability to slow the movement of sediment. In 2025, cup plant was included in three separate plantings near Cando North Dakota, as a component of multi-species pollinator plantings, to evaluate winter hardiness of an accession originating from a native stand in southeastern North Dakota.

### Field Planting Followup-Renville County Meyer Spruce Evaluation Tour

Meyer spruce (*Pinus meyeri*) is an introduced conifer that has potential to be planted in conservation windbreaks within North Dakota. Following distribution by the Bismarck PMC in 2013 and 2014, NRCS and several partners expressed interest in species information and data related to Meyer spruce for inclusion in technical guides. Follow up evaluations were conducted in 2024 at prior field planting sites and in 2025, the Bismarck Plant Materials Specialist, Renville Conservation District, NRCS field offices, and the Bismarck Soil Survey partnered to identify Conservation Tree and Shrub Groups (CTSG) and evaluate 10-year-old Meyer spruce at six sites where it was planted. This provided valuable information previously unavailable for the north and west parts of North Dakota. Overall survival was 72% and average height was 5 ft., with performance coinciding with changes in CTSG's. Observations led to a discussion on the value of evaluating soil components and observing the performance of vegetative cover prior to planting.



Meyer spruce evaluators (left to right) Jared Andrist, Kyle Thomson, Jordan Robinson, Lena Bohm, Mackenze Ries, and Grace Lautenschlager.

## Urban Conservation

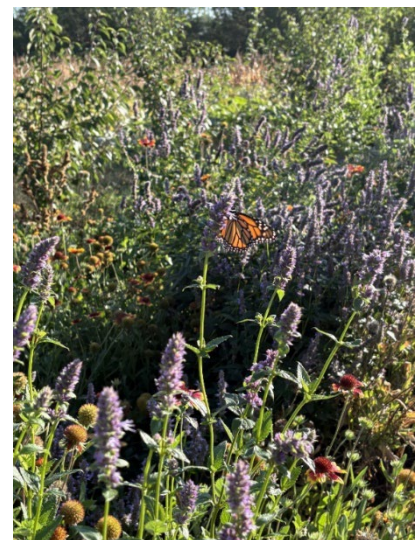
### Pollinator habitat between fruiting Shrub rows

Article by Casey Olson, North Dakota NRCS Urban Conservationist

A small-scale pollinator demonstration plot and native grass seeding demonstration were planted during the 2025 growing season at the Bismarck PMC.

For the pollinator demonstration, native grass and forb plugs were planted into a firm, weed free seedbed between two rows of fruiting shrubs established in 2023. Plants were randomly spaced at 1 ft x 1 ft and at 2 ft x 2 ft spacing to mimic an urban pollinator planting. A portion of the plot was planted with 75% native grasses and 25% native forbs at 2 ft X2 ft spacing following ND NRCS herbaceous vegetation establishment specifications. The pollinator plot will be clipped with residue removed in early Spring 2026. Species survival and growth will be documented throughout the growing season.

A native grass demonstration consisting of a blue grama/ sideoats grama mix was seeded at 1.5x, 3x and turf rates along the outside of the established fruiting shrub rows using a hand seeder with cat litter as a carrier and raked into the seedbed. The plot was clipped for weed control with residue removed during the growing season. The planting will be used to demonstrate the use of native grasses as a living walkway and soil cover in urban and small-scale settings.



Forbs and grasses planted between fruiting shrub rows were vigorous and attracted pollinators.

## Publications/Presentations

Following are lists of publications and presentations by the Bismarck PMC in 2025. All publications from the Bismarck PMC can be found at <https://www.nrcs.usda.gov/plant-materials/publications/search> by searching NDPMC.

Plant Chat (October 2024) newsletter	publication
Plant Chat (March 2025) newsletter	publication
Plant Chat (April) newsletter	publication
Plant Chat (August) newsletter	publication
Foundation Seed Availability/Prices	publication
Brookings Off-Center Evaluation Planting Annual Report	publication
Dickinson Off-Center Evaluation Planting Annual Report	publication
Seed News	publication
Progress Report 2024	publication
Prairie Turnip Propagation	publication
White Sage Propagation	publication
Addendum to McKenzie Black chokeberry Release	publication
Technical Committee Meetings- SD, ND, MN	presentation
Herbaceous Establishment workshop-Virtual ( SD )	presentation
Tree and Shrub Characteristics/PMC Woody Releases	presentation
United Tribes Technical College Plant/Seed Foraging Class	presentation
Urban Conservation and Outreach	presentation
Tribal /Cultural Needs	PMC Tour
PMC Study overview for ND Ecological Science staff	PMC Tour

## Bismarck Plant Materials Center Releases (1946-2024)

### *Cool-Season Grasses*

'Mandan' Canada wildrye  
 'Garrison' creeping foxtail \*  
 'Nordan; crested wheatgrass  
 'NU-ARS AC2'\* crested wheatgrass  
 'Lodorm' green needlegrass  
 'Haymaker' intermediate wheatgrass \*  
 'Manifest' intermediate wheatgrass  
 'Reliant' intermediate wheatgrass  
 'Manska' pubescent wheatgrass  
 'Mankota' Russian wildrye  
 Tober Germplasm Virginia wildrye  
 'Rodan' western wheatgrass

### *Warm-Season Grasses*

'Bison' big bluestem  
 'Bonilla' big bluestem  
 Bounty Germplasm big bluestem  
 'Sunnyview' big bluestem \*  
 Bad River Ecotype blue grama  
 Bismarck Germplasm buffalograss  
 'Tomahawk' Indiangrass  
 Badlands Ecotype little bluestem  
 Itasca Germplasm little bluestem  
 Red River Germplasm prairie cordgrass  
 Killdeer sideoats grama  
 'Pierre' sideoats grama  
 'Dacotah' switchgrass  
 'Forestburg' switchgrass

### *Trees*

'Homestead' Arnold hawthorn  
 'McKenzie' black chokeberry  
 'Centennial' cotoneaster  
 'Cardan' green ash  
 'Oahe' hackberry  
 'Prairie Red' hybrid plum  
 'CanAm' hybrid poplar (discontinued)  
 'Legacy' late lilac  
 'Midwest' Manchurian crabapple  
 'Scarlet' Mongolian cherry (discontinued)  
 'Regal' Russian almond  
 'Sakakawea' silver buffaloberry  
 'McDermant' Ussurian (Harbin) pear  
 Survivor Germplasm false indigo  
 Riverview Germplasm black currant  
 Prairie Harvest Germplasm hackberry  
 Silver Sands Germplasm sandbar willow

### *Forbs/Legumes*

Medicine Creek Germplasm Maximilian sunflower  
 Bismarck Germplasm narrow-leaved coneflower  
 Bismarck Germplasm purple prairieclover  
 Bismarck Germplasm stiff sunflower  
 Antelope Germplasm slender white prairieclover \*  
 'Sholty' yellow-flowered alfalfa \*

\* Bismarck PMC is secondary releaser

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