

Seed News

February 2017
Plant Materials Center, Bismarck, North Dakota
<http://Plant-Materials.nrcs.usda.gov/ndpmc>

Seed Quality

High quality seed production is fundamental to sustainable agricultural systems. Most crops in the Northern Plains are typically established from seed. The quality of that seed has a major impact on the crop's potential to fulfill its intended purpose. Seeds serve as a delivery system for improved genetics and newer technologies that improve overall efficiency and environmental impacts of agriculture. Genetic purity is the foundation for producing and maintaining high quality seed of a particular cultivar or ecotype. Genetic purity standards



established by each state and administered by their seed certification agencies, help assure growers that the seed they buy is accurately labeled. The Bismarck Plant Materials Center is committed to producing genetically pure, high quality Foundation seed. This includes ensuring integrity of the planted seed, properly identifying and labeling fields, planting seeds on clean land, plant rogueing, isolating cultivars, and harvesting,

handling, and cleaning seed in a way that maintains purity and genetic integrity. This entire process requires ongoing planning, intensive management and labor, specialized equipment, and land and water resources.

Seed Origin and Invasive Weeds

In September 2016, Palmer amaranth *Amaranthus palmeri*, (Palmer's pigweed) was identified in 13 field sites of first year conservation plantings in two Minnesota counties. The Minnesota contamination appears to have entered the state via a forb seed mix from a more southern vendor. Originating in the southwestern U.S., this weed has recently spread further north. It is currently present in a majority of Nebraska and Iowa counties. This extremely invasive weed, with its developed resistance to multiple classes of herbicides and modes of action, is a nightmare for producers. It is both difficult and expensive to control. The seed looks identical to redroot pigweed. Until recently, there has been no test to differentiate these pigweeds. Unfortunately, most seed labs do not yet have the new seed test technology.

The introduction of Palmer amaranth into conservation plantings in Minnesota is one example of what can happen when seed quality is not up to par with established standards. It illustrates the importance of knowing the origin, purity, and contaminant weeds in seed sources, and the credibility of growers, seed conditioners, and vendors who ultimately provide seed to consumers. During periods of high demand for scarce species, vendors sometimes look beyond their typical trusted providers to fill needs of the consumer. The importance of purchasing seed from trusted providers who deliver quality seed and will not compromise quality standards cannot be overemphasized.

Potential Future Releases

A PMC selection of Virginia wildrye is scheduled for release in 2018. The PMC is currently increasing seed to meet grower demand once it is approved for release. It is yet unnamed, and final data collection will be completed this summer. This selection has a broad genetic base sourced from plants collected within 77 counties in North Dakota, South Dakota, and Minnesota. It has performed well in various on and off-center plantings in all 3 states.

Who We Are

The Bismarck Plant Materials Center (PMC) is one of 25 PMCs operated by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). The Bismarck PMC serves the States of Minnesota, North Dakota, and South Dakota. It is the mission of the plant materials program to develop plant materials and plant science technology for the conservation of our natural resources. The Bismarck PMC was established in 1954 as part of the Soil Conservation Service, now Natural Resources Conservation Service.

USDA-NRCS

Plant Materials Center
3308 University Drive
Bismarck, ND 58504
(701) 250-4330

Plant Materials Specialist
Wayne Markegard
(701) 250-4330 x107
or (701) 530-2075

<http://Plant-Materials.nrcs.usda.gov/ndpmc>

The PMC continues to evaluate other herbaceous species as possible candidates for future release. These include selections of Indiangrass, prairie dropseed, cupplant, and sand bluestem.

Vendor Lists

The PMC continues to maintain two seed vendor lists: 1) the [Conservation Seed / Plant Vendors List: Minnesota, North Dakota, and South Dakota](#) and 2) the [Prairie Landscaping Seed / Plant Vendors List](#). These lists can be accessed via the web links above or at the [Bismarck PMC publications webpage](#) under the 'other publications' category. If you are aware of additional providers that should be considered for one or both of these lists, please contact the PMC with that information.

Growers of Bismarck PMC Releases

There is good demand for foundation seed of most PMC releases. Inventories of some are limited or currently unavailable, as indicated in the list below. The PMC is committed to maintaining inventories of its releases, and continues to add new production fields of species that are in low supply or unavailable. From the vendors' perspective, it appears there will be ample supplies of commercial seed available in 2017. Brochures that provide detailed information on all of the PMC releases are available online at the ['Publications'](#) link found on the [Bismarck PMC home page](#).

Order Information 2017

Listed in the table are prices of Foundation and Select Class grass and forb seed produced by the Bismarck PMC. This seed is for sale through NDSU Foundation Seedstocks to commercial seed growers for the sole purpose of certified seed production. To order seed, contact wayne.markegard@nd.usda.gov or call (701) 530-2075 or (701) 250-4330. All seed prices are subject to change. Once ordered, a confirmation letter will be sent from the PMC and billing will be sent from NDSU Foundation Seedstocks. Payment in full to NDSU Foundation Seedstocks must be received before seed shipment or pickup. Prices are based on a Pure Live Seed (PLS) pound. Shipping charges (in the U.S.) will be \$1.00/PLS pound.

RELEASES	CLASS*	COMMON NAME	COST/PLS LB	AVAILABILITY
Native Warm-Season Grasses			U.S. Dollars	
Badlands Ecotype	Select (G2)	little bluestem	18.00	good
Itasca Germplasm	Select (G2)	little bluestem	18.00	limited
Bad River Ecotype	Select (G2)	blue grama	20.00	good
Bison	Foundation	big bluestem	14.00	good
Bonilla	Foundation	big bluestem	14.00	good
Bounty Germplasm	Select (G1)	big bluestem	14.00	good
Dacotah	Foundation	switchgrass	12.00	none
Forestburg	Foundation	switchgrass	12.00	good
Pierre	Foundation	sideoats grama	13.00	good
Red River Germplasm	Select (G1)	prairie cordgrass	95.00	limited
Tomahawk	Foundation	Indiangrass	20.00	none
Native Cool-Season Grasses				
Lodorm	Foundation	green needlegrass	18.00	none
Mandan	Foundation	Canada wildrye	18.00	none
Rodan	Foundation	western wheatgrass	10.00	limited
Introduced Grasses				
Mankota	Foundation	Russian wildrye	7.00	good
Nordan	Foundation	crested wheatgrass	5.00	limited
Manifest	Foundation	intermediate wheatgrass	5.00	limited
Manska	Foundation	pubescent wheatgrass	5.50	limited
Reliant	Foundation	intermediate wheatgrass	5.00	none
Native Forbs/Legumes				
Bismarck Germplasm	Select (G1)	narrow-leaved purple coneflower	450.00	none
Bismarck Germplasm	Select (G1)	purple prairieclover	35.00	none
Bismarck Germplasm	Select (G1)	stiff sunflower	600.00	none
Medicine Creek Germplasm	Select (G1)	Maximilian sunflower	40.00	none