United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

Meriwether blanketflower

Gaillardia aristata Pursh

A Conservation Plant Release by USDA NRCS Bridger Plant Materials Center, Bridger, Montana

Meriwether Germplasm blanketflower

Meriwether Germplasm Selected Class blanketflower *(Gaillardia aristata* Pursh*)* was released in 2011 in cooperation with the Montana and Wyoming Agricultural Experiment Stations. The germplasm is named in honor of Meriwether Lewis (Lewis and Clark Expedition), who, on July 7, 1806, collected a specimen of blanketflower along the Blackfoot River in Montana.

Description
Meriwether blanketflower is a native, perennial, tap-rooted wildflower with showy, yellow ray flowers and reddish-brown central disk flowers. The pubescent plants vary from 10 to 24 inches in height. Leaves are arranged alternately along the stem and are 3 to 6 inches long with margins that are coarsely-toothed and deeply divided. Blanketflower grows on sunny, well-drained sites in prairie meadows up to grassy openings in the mountains. It has an extensive bloom period beginning in early summer.

Source
Meriwether Germplasm blanketflower is a composite of 15 accessions selected over an evaluation period of 10 years. The composite consists of 14 collections from native populations in Montana and a single collection from Wyoming. The selection is based on uniformity in flowering, stature, seed maturity, and seedhead abundance.

Conservation Uses
Meriwether Germplasm was selected primarly for adding species diversity to native plant seed mixes in the rehabilitation of disturbed sites. It is suitable for use as an ornamental wildflower in low maintenance or naturalistic landscapes. It has utility as a cover and food source for pollinators, wildlife, and livestock.

Area of Adaptation and Use
Blanketflower is expected to perform well in areas depicted in Figure 1. In Montana, presence of blanketflower has been documented in all 56 counties including nine types of riparian plant communities. It is an important component of several habitat types in western Montana. Blanketflower is present in the mountain and foothill environments of more than half of the 23 counties in Wyoming. It does well on a variety of soil types, including loams to rocky to gravelly-sandy textures; and tolerates a soil pH range from slightly acidic to mildly alkaline. Blanketflower attains optimum growth in full sun, beginning in early spring until seed set in late summer. It occurs at elevations from 1,300 to 9,000 ft.

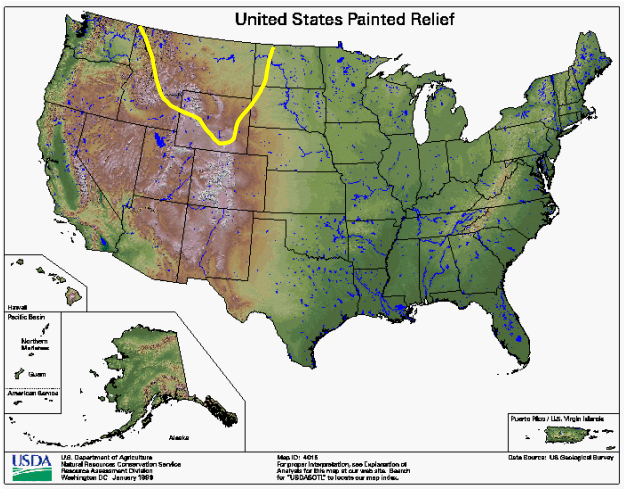

Figure 1. Anticipated area of adaptation for Meriwether Germplasm blanketflower

Establishment and Management for Conservation Plantings
Seed should be planted into a firm, weed-free seedbed, preferably with a drill that will ensure uniform seed placement depth of ¼- to ½-inch. There are approximately 220,700 seeds per pound of Meriwether Germplasm blanketflower. The full seeding rate is 5 pounds per acre pure live seed (PLS), but it would seldom be seeded in a pure stand. It is recommended that Meriwether Germplasm blanketflower be included as a component of a native seed mixture at a rate not to exceed ½ to 1 pounds per acre. When used in a mix, adjust the seeding rate to the desired percentage of mix. Spring seeding is preferred over late summer or dormant, fall planting dates. Periodic mowing during the establishment

year is one option for weed suppression. Gaillardia plants tend to be moderately long-lived and will re-seed in abundance.

Meriwether Germplasm blanketflower in full bloom at the BridgerPMC

Ecological Considerations

The extensive distribution, relative abundance, and quick establishment of blanketflower make it a valuable candidate for providing species diversity in seed mixes. A wide variety of pollinators and beneficial insects rely on blanketflower as a food source of pollen and nectar. The tender, young plant growth and insect-rich blooms of blanketflower are a potential food source for young and adult upland game birds, such as sage-grouse and sharp-tail grouse. Forage palatability is rated poor to fair for domestic livestock during early stages of growth. Blanketflower is an attractive native wildflower that is tolerant of drought conditions within its range of adaptation. Plant communities rich in perennial forb species, such as blanketflower, may be more resistant to noxious weed invasion. Additionally, indigenous, deep-rooted, forb functional groups (of which *Gaillardia* is a member) capture soil moisture and nutrients making them less available for weed establishment. Blanketflower has no serious insect or disease problems. Powdery mildew and root rot may occur in poorly-drained soils at times of elevated humidity and during extended periods of heavy rain. The genus *Gaillardia* generally is susceptible to aster yellows and fungal leaf spot disease and slightly susceptible to oat blue dwarf virus.

Production

Seed production fields should be established in rows at 25 PLS per lineal foot of row. Between-row spacing is dependent on the type of planting and cultivation equipment, and ranges from 24 to 36 inches. Adequate between-row space should be provided to perform mechanical cultivation. At 24-inch row spacing, the recommended seeding rate is 2.5 PLS pounds per acre, and at 30- and 36-inch row spacing, the seeding rate is 2.2 and 1.9 PLS pounds per acre, respectively. There are presently no herbicides specifically labeled to control weeds in seed production fields of this species. Seed harvest can be accomplished by direct combining when the seeds have just begun to shatter from the radiate flower head. Immediately after combining, spread out harvested material to dry and prevent mold. Due to the persistent hairy pappus, and poor seed flow, this species is fairly difficult to clean. Seeds are moderately viable and longevity can be expected for several years when stored at favorable temperatures and low humidity. Meriwether Germplasm blanketflower yielded approximately 150 pounds of seed per acre in experimental irrigated plots at the Bridger PMC on an average harvest date of July 29. Seed production is expected to be much higher when grown under conventional agronomic conditions.

Blanketflower seed with bristly pappus.

Availability

The USDA-NRCS Plant Materials Center in Bridger, Montana, maintains G_1 seed (equivalent to Foundation seed) and is available to commercial growers through the Montana Foundation Seed Program at Montana State University-Bozeman and the University of Wyoming Foundation Seed Service at Powell, Wyoming. Two generations (G_2 and G_3 equivalent to Certified) beyond G_1 are recognized.

For more information, contact:
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http://plant-materials.nrcs.usda.gov/mtpmc/

For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <http://www.nrcs.usda.gov/>, and visit the PLANTS Web site <http://plants.usda.gov> or the Plant Materials Program Web site <http://www.plant-materials.nrcs.usda.gov>