

A Conservation Plant Released by the Natural Resources Conservation Service
Aberdeen Plant Materials Center, Aberdeen, Idaho

Amethyst Germplasm

Hoary Tansyaster

Machaeranthera canescens (Pursh)

A. Gray



Amethyst Germplasm hoary tansyaster is a late season flowering forb that attracts a variety of pollinators.

Amethyst Germplasm hoary tansyaster (*Machaeranthera canescens*) was released in 2014 by the Aberdeen Plant Materials Center for use in wildlife habitat and pollinator plantings in the Intermountain West.

Description

Hoary tansyaster is a short-lived perennial forb with pale to dark purple flowers. Plants are 6 to 30 inches tall with diffuse branching. Leaves are about 2 inches long and oblong or lance shaped with entire to sharply toothed margin. The flower heads have many subtending bracts that reflex away from the flower at the tip. These bracts are white and membranous at the bottom and green at the tip. Leaves and flower heads are very sticky and heavily scented. The pappus of the achene is dirty white and hair-like. There are approximately 1.3 million seeds/lb based on seed counts conducted by Aberdeen Plant Materials Center.

Source

A total of 9 accessions were collected at elevations ranging from 4,300 to 7,500 ft in eastern Idaho and northern Utah. A common garden study was conducted at the Aberdeen Plant Materials Center Home Farm 2 miles north of Aberdeen, ID from 2009-2011. Plots were

evaluated for percent stand, average plant height and plant vigor.

Most accessions performed similarly for stand, vigor, and plant height. Accession 9076670 was chosen for release as a Selected Class Germplasm for having superior establishment and stands in 2009 and 2010 with the greatest vigor rating in 2010.

Conservation Uses

Hoary tansyaster blossoms in late summer and early fall and is visited by bees, wasps and butterflies. The primary intended users are land management agencies or landowners enrolled in USDA conservation programs. Amethyst Germplasm hoary tansyaster should be considered for use in pollinator plantings and for adding biodiversity in rangelands and to enhance wildlife habitat. Due to its attractiveness to native insects, hoary tansyaster is an excellent species for sage-grouse habitat restoration. It is especially useful for post wildfire seedings where quick establishment of pollen and nectar sources is desired.

Area of Adaptation and Use

The original source population of Amethyst Germplasm hoary tansyaster is located near the St. Anthony Sand Dunes in Fremont County, Idaho at 1,524 m (5,000 ft) elevation. This population was discovered by Scott Engle and Nate Matlack, NRCS Idaho. The soil at the collection location is Eginbench loamy fine sand supporting an antelope bitterbrush, Indian ricegrass, rubber rabbitbrush, and lemon scurfpea plant community. The location receives approximately 12 inches mean annual precipitation.

It is anticipated that Amethyst Germplasm hoary tansyaster is suited for conservation plantings in MLRA B11, Snake River Plains and B13 Eastern Idaho Plateaus (USDA 2006). It is also likely adapted in arid locations throughout the Intermountain West, but has not been tested to that extent.

Establishment and Management for Conservation Plantings

Seed should be drilled or broadcast seeded in late fall into a firm, weed-free seed bed at a depth of 0 to 1/4 inches. For a pure stand, target delivery of 20 to 30 pure live seeds (PLS) per square foot, or 2 lbs PLS per acre. If seeding as part of a mix, adjust seeding rate to the desired percentage of the mixture. Broadcast seedings should be followed with a cultipacker to ensure good seed-to-soil contact.

Seed should be mixed with a diluent such as rice hulls to assist seed flow through seeding equipment. When

calculating rice hull amounts based on seed bushel weights, it is important to determine the condition of the seed. Hoary tansyaster seed which has not had the pappus removed has a bushel weight of approximately 3 lb/bushel, while highly processed and cleaned seed bushel weights range from 20 to 24 lb/bushel.

When planted in a native reclamation seed mix, it will be a minor component of the establishing plant community; therefore management should be based on other key species in the mixture.

Ecological Considerations

This Selected Class Germplasm is from a species native to the Intermountain West and has no known negative impacts on wild or domestic animals. It can spread to adjoining vegetative communities under ideal environmental conditions.

Seed and Plant Production

Seed production fields of hoary tansyaster can be hand-planted into weed barrier fabric at 9 to 18 inch plant spacing or mechanically seeded into larger field plantings at 30 to 36 inch row spacing at 0.35 lb pure live seed (PLS)/ac. Seed can be planted in in spring or late-summer with irrigation, or late fall on non-irrigated fields. Late summer seedings are recommended to reduce annual weed competition. Plants grown in weed barrier fabric at Aberdeen, Idaho (an 8- 12 inch mean annual rainfall zone) required no supplemental irrigation. Flowering begins in late summer and continues for several weeks into the autumn.

Seed is harvested by hand, direct combining, flail-vac, or by a vacuum harvester. Harvested material should be air dried. Once dried, the seed can be processed using a brush machine followed by air-screen separators and indent cleaners

Purity and viability of 60 to 90% is achievable. Hand harvested and vacuum harvested seed is much easier to process, and higher purities (80 to 90%) are easily obtained due to the reduced amount of inert matter collected.

Mechanical harvest yields range between 2 and 7 lbs PLS/ac. Increasing the number of harvests beyond 2 in a single year may slightly increase the total yield. As more experience with harvest and seed processing occurs, clean seed yields may be increased incrementally.

Weed control efforts should begin prior to planting. Planting into a weed-free seed bed, or using weed barrier fabric greatly reduces management inputs. Weeds can be controlled using pre-emergent herbicides and by hand

rouging. Weedy grasses can be controlled with selective herbicides.

Availability

For conservation use: Certified seed is available from commercial seed vendors.

For seed or plant increase: G1 and G2 seed of Amethyst Germplasm hoary tansyaster will be maintained by the USDA Natural Resources Conservation Service, Aberdeen Plant Materials Center, Aberdeen, Idaho in cooperation with the Idaho Agricultural Experiment Station, University of Idaho. Seed through the G5 generation will be eligible for certification. G1 and G2 seed will be made available to commercial growers for distribution by the University of Idaho Foundation Seed Program and Utah Crop Improvement Association.

Small quantities of seed will be provided to researchers by request to the Plant Materials Center.

For more information, contact:
Aberdeen Plant Materials Center
P.O. Box 296, Aberdeen, ID 83210
Ph. 208-397-4133
Fax 208-397-3104
<http://plant-materials.nrcs.usda.gov/idpmc/>

Citation

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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/>>

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