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Natural Resources Conservation Service

## NATIONAL PLANT MATERIALS CENTER BELTSVILLE, MARYLAND

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TECHNICAL NOTE

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### **WILDFLOWERS FOR THE MID-ATLANTIC: GRASS-LEAVED GOLDEN ASTER (*Pityopsis graminifolia*)**

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#### **INTRODUCTION**

Grass-leaved golden aster, *Pityopsis graminifolia*, is a native perennial wildflower found on sandy, dry soils from Delaware to Ohio and south to Florida and Texas (Gleason and Cronquist, 1963). It is a fairly short plant, reaching a height of 1 to 3 feet. It has linear, grass-like leaves with parallel venation; lower leaves are 10 inches long by 3/4 inch wide and become progressively smaller up the stems. Both the leaves and stems are covered with whitish, silky hair that gives the plant a silvery appearance from a distance. Bright yellow composite flower heads occur in clusters at the end of branches from August through September in Maryland (Brown and Brown, 1984). Seeds are 1/16 inch long, linear-shaped achenes, each with a hairy pappus attached; seeds turn dark brown at maturity.

#### **USES**

Grass-leaved golden aster is useful for roadside or beautification plantings in dry soils. The National Plant Materials Center (NPMC) produces golden aster seed and plugs for revegetation plantings within Cumberland Gap National Historical Park and Great Smoky Mountains National Park. The plant may also work well in decorative perennial gardens, provided it is placed in front of taller species.

#### **SUITABLE SITES**

Natural populations of grass-leaved golden aster can be found in dry, open-woodland sites. At the NPMC, the species is thriving in full sun on sandy-loam soil.

#### **SEED COLLECTION AND AVAILABILITY**

Seeds can be collected from wild populations once they ripen in late fall. Seeds turn dark brown and are easily pulled from seed heads when ripe. The NPMC has collected mature seeds from native stands in Tennessee in October. Seeds can be gathered into a paper bag.

In the NPMC production fields, a tractor-drawn harvesting machine designed and built by staff is used to vacuum ripe seeds off the seed heads. Because seed heads do not ripen uniformly, this "trac-vac" method allows selective harvest of ripe material while preventing wasteful collection of unripe seeds. Collections over a period of time from late October through mid-November may be necessary to obtain the maximum amount of ripe seed. Harvested seeds are run through a debarker twice to remove as much of the fluffy pappus as possible; a table top 2-screen clipper is

used to separate any chaff from the debearded seeds. The cleaned seeds are stored dry in cloth bags at 35°F.

## **ESTABLISHMENT AND MAINTENANCE**

The NPMC has used seedling transplants as a means of establishing grass-leaved golden aster. Seeds are sown on germination mix in 392-cell trays (TLC Polyform Inc., Minneapolis, MN) for transplanting to plug trays. A pregermination cold treatment is not needed. Germination generally occurs 9 to 12 days after sowing. After 7 weeks of growth, seedlings in 392-cell trays are transplanted into plug trays in preparation for planting into production fields or at revegetation sites. The NPMC uses a commercial peat : perlite mix and a time-release fertilizer in all seedling trays. A soluble fertilizer (20-18-18) is applied twice a week to young plants in the greenhouse. Seedling plugs are ready for the field in approximately 13 weeks.

There is currently no available information regarding direct seeding of grass-leaved golden aster.

Maintaining the production field of grass-leaved golden aster at the NPMC entails hoeing around plants to reduce weeds or planting a cover crop (e.g. hard fescue or red fescue) between rows when plugs are transplanted. The pre-emergent herbicide trifluralin (tradename: Treflan, produced by DowElanco, Indianapolis, IN) is used after hoeing to prevent weed seed germination. Plantings at revegetation sites have a better chance of survival if a non-selective contact herbicide, e.g., glyphosate (tradename: Roundup, produced by Monsanto, St. Louis, MO), is applied at least 10 days prior to transplanting plugs to remove any aggressive species (e.g. tall fescue, clover, or crown vetch).

## **SEED PRODUCTION**

A half-acre field of grass-leaved golden aster established at the NPMC in 1991 has produced an average yearly seed harvest of 9.6 pounds (cleaned weight) over the past 6 years. There are approximately 642,900 seeds per pound.

## **REFERENCES**

Brown, Melvin L. and Russell G. Brown. 1984. *Herbaceous Plants of Maryland*. Port City Press, Inc., Baltimore, Maryland. 1127 pp.

Gleason, Henry A. and Arthur Cronquist. 1963. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. D. Van Nostrand Co., New York. 810 pp.

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