

**USDA-NATURAL RESOURCES CONSERVATION SERVICE
NOTICE OF SOURCE IDENTIFIED PLANT RELEASE
RIGID GOLDENROD**

The USDA-Natural Resources Conservation Service (NRCS), the University of Northern Iowa (UNI), the Iowa County Integrated Roadside Vegetation Management Program (IIRVMP), the Iowa Department of Transportation (IDOT), and the Iowa Crop Improvement Association (ICIA) announce the release of source identified (Northern Iowa) germplasm of rigid goldenrod, *Solidago rigida* L.

The rigid goldenrod has been assigned the NRCS accession number 9068617.

Origin: Northern Iowa Counties

Ecotype Description:

Rigid goldenrod is a native erect perennial that often occurs in clumps. The fibrous roots may penetrate the soil five feet, so it competes well with the dormant grass species. The plant may grow to a height of over three feet; even four feet may be reached in the eastern portion of its range. The leaves and stem are usually hairy, giving the plant a distinctive pale green or grayish cast. Leaves are alternate, with the lower ones long petioled and oval. The upper leaves are smaller, sessile, and ovate to oblong, they also have short petioles; they slightly clasp the stem. All are sparsely toothed and are harsh and leathery. The lower leaves form a large basal rosette early in the season or sometimes in the previous fall, so the plant is discernible throughout the growing season. The terminal inflorescence is bright yellow, more or less flat-topped to somewhat rounded, dense, and up to several inches across. The mass of tiny, golden flowers, individually about 1/3 inch long, combine to make a large, handsome spray. Reproduction is by lateral shoots and by seed.

It is an invader that increases in grazed pastures because it is eaten only in the early stages of its growth. Rigid goldenrod is a hardy species that is attractive in bloom, it would complement a flower garden.

The range of rigid goldenrod is from Massachusetts to Saskatchewan, south to Texas and Georgia.

Management:

Rigid goldenrod seeds per pound average 770,000. A seeding rate in a mixture of .25 pound of pure live seeds (PLS) is adequate. One pound PLS per acre is sufficient for seed production plantings. Seed should be planted 1/4 inch deep in a firm relatively weed free seedbed. Seedling vigor is good and stands are comparatively easy to establish where competition is controlled.

Mowing above the height of the rigid goldenrod has been used to reduce competition when weeds begin to severely encroach into the planting.

Available chemical sprays for use in the establishment of rigid goldenrod are limited. Post-emergence broadleaf sprays have been used during rigid goldenrod establishment.

Seed can be harvested with a combine using a wheat header. Collect goldenrod seed when they are still a little green because it is easier to rub the inflorescences through a cleaning screen. Otherwise, clean goldenrod just like the asters, through a cleaning screen with the mesh side up.

For isolation requirements, rigid goldenrod should be spaced a minimum of 900 feet from any other different rigid goldenrod selection.

Site Description:

Rigid goldenrod is adapted to dry prairie Mesic soils, dry open wood roadsides, and disturbed areas. It probably occurs in every prairie in the tallgrass biome. The number of collections from each zone in northern Iowa guarantees the adaptation of releases to the entire zone.

Collections were made and included in the composite rigid goldenrod from counties in northern Iowa origin (9068617).

Collections of rigid goldenrod from east to west across Iowa prevent positive assessment of all pollination or chromosome characteristics. Plants are cross-pollinated and many hybrids are formed in the area of adaptation.

Climate:

The average annual temperature is 48 degrees Fahrenheit. July is the warmest month with an average high of 85 degrees and low of 64 degrees. January is the coldest month with an average high of 27 degrees and low of 8 degrees. The average annual precipitation for this region is 30 inches with much of this coming during the growing season. The average frost-free growing period runs from April 30 to October 6.

Availability of Plant Materials: Breeder's material is being produced by the Plant Materials Center, Elsberry, Missouri and the University of Northern Iowa (UNI) at Cedar Falls, Iowa. Source identified seed will be released to interested commercial seed growers.

Release Approved By:

Roger A. Hansen, Chairman, PM Advisory Committee, NRCS Missouri State Conservationist	7/27/98
Robert D. Koob, President, UNI	8/17/98
Daryl D. Smith, Program Director, IRVM	8/25/98
Leroy Brown, Iowa State Conservationist, NRCs	8/31/98
Robert E. Lawson, Secretary/Treasurer, ICIA	8/27/98
Steve Holland, Representative, IDOT	8/25/98

References

Prairie Plants of Illinois; pp. 226-227; Voigt, John W. and Mohlenbrock, Robert H.; Both from Southern Illinois University, Edwardsville, Illinois.

The Prairie Garden, 70 Native Plants You Can Grow in Town or County; pp. 160-161, Smith, J. Robert and Smith, Beatrice S., University of Wisconsin Press, Madison, Wisconsin 1980.

Wildflowers of the Tallgrass Prairie, The Upper Midwest, p. 243; Runkel, Sylvan T. and Roosa, Dean M., Iowa State University Press, Ames, Iowa 1989.

Flora of Missouri; p. 1498; Steyermark, Julian A., Iowa State University Press, Ames, Iowa 1963.

The Tallgrass Restoration Handbook; p. 131; Jordan, R. William III., Island Press, Washington, D.C./Covelo, California, 1997.