

Source Identified Release

General

Oxeye False Sunflower

State of Problem:

Currently many conservation groups support the planting of native species for erosion control and for the maintenance of related resources. Many locally adapted native forb and grass species are currently not available or are not available in sufficient quantities to meet these needs. The Iowa Department of Transportation (IDOT) and the Iowa Integrated Roadside Vegetation Management Program (IIRVMP) have emphasized the need for native materials in stabilizing roadbanks. A lack of sufficient seed sources of this kind of material limits the reestablishment of native plants and correspondingly limits native habitat for wildlife.

State of Need:

Well adapted native grass and forb species offer many advantages as sustainable vegetative cover for stabilization and management of soil and water resources. Native plant communities resist noxious weed invasion, provides excellent erosion control, and generally requires relatively low maintenance. The lack of species or lack of sufficient seed supplies limits the use of these plants in conservation work.

Producers are often unwilling to risk the dollars needed to collect and increase these materials without guarantee of a ready market. By collecting the materials, providing the initial increase, and providing an initial market through the IDOT this program brings plant needs to the attention of producers and provides a means of reducing their risk.

The implementation of this program and release of this species will help solve a high priority problem identified by the Iowa State Plant Materials Committee. Erosion control is the top priority of this committee. Additionally, other priority items such as water quality and wildlife needs will be benefited through this plant release. The seed source problem will be solved for this native species and seed will be available in sufficient quantities to be used in conservation seedings. The plant when released will be immediately marketed to the IDOT and IIRVMP. Development of other markets are anticipated through promotion by wildlife organizations and through private interest when IDOT needs have been satisfied.

Heliopsis helianthoides
oxeye false sunflower
'Central Iowa'

USDA-Natural Resources Conservation Service

Notice of Source Identified Plan Release

Oxeye False Sunflower

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 a source identified (Central Iowa) germplasm of oxeye false sunflower, *Heliopsis helianthoides*, L.

The oxeye false sunflower has been assigned the NRCS accession number 9068606.

Origin: Central Iowa

Ecotype Description:

Oxeye false sunflower is an erect perennial .4-2 m. tall arising from a short rhizome, leaf blades ovate to lanceolate 4-14 cm. long and 1.5-8 cm. wide, the apex acute, the margins coarsely serrate, both surfaces covered with rough, siliceous-based hairs or sometimes only slightly rough. Flowers are mostly 3-7 cm across on stout naked peduncles, rays dark rich yellow 1-3 cm. long, bisexual. The range of oxeye encompasses the eastern one half of the United States, but its occurrence is not common.

Oxeye false sunflower seeds per pound average 139,000. A seeding rate of 40 pure live seeds (PLS) in 30 inch rows for seed production is sufficient. Rates for solid seed should be (15 to 25 bulk pounds/acre). Seed should be planted 1/4 to 1/2 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 oxeye false sunflower has been used to reduce competition when weeds begin to severely encroach into the planting. This procedure is probably the best way to control unwanted weed invasion.

Seed yields are good and can be readily harvested with a combine. Yields of 250 to 400 pounds per acre have been commonly harvested on managed non-irrigated stands.

Collections of oxeye false sunflower from east to west across Iowa prevent positive assessment of all pollination or chromosome characteristics. Plants are cross-pollinated. For isolation requirements, oxeye false sunflower will be considered cross-pollinated.

Oxeye false sunflower is adapted to soils of a lower fertility level, neutral to mildly acid conditions. Oxeye is found in open or rocky woods, thickets, prairies, and along railroads. It is found in most counties of the three state served by the Plant Materials Center, Iowa, Illinois and Missouri. Collections from each zone in Iowa guarantees the adaptation of releases to the entire zone.

Site Description:

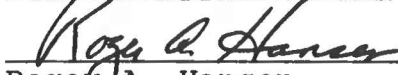
Collections were made from the following locations (see attached) and included in the composite oxeye false sunflower, Central Iowa origin (9068606).

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:


Breeders material is being produced by the Plant Materials Center, Elsberry, Missouri and University of Northern Iowa (UNI) at Cedar Falls, Iowa.

Release Approved By:

 Chairman, PM Advisory Committee, NRCS
Roger A. Hansen
Missouri State Conservationist

 President, UNI
Robert D. Koob

 Program Director IRVM
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 Iowa State Conservationist
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 Secretary/Treasurer ICIA
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 Representative IDOT
Steve Holland

<u>Zone</u>	<u>County</u>	<u>Twp.</u>	<u>Range</u>	<u>Section</u>	<u>Collector</u>	<u>Species</u>	<u>code</u>
2	Marshall	T- 83-N	R- 17-W	19	Scott Sauer	<i>Helionsis helianthoides</i>	O 40
2	Marshall	T- 83-N	R- 17-W	19	Scott Sauer	<i>Helionsis helianthoides</i>	O 38
2	Marshall	T- 88-N	R- 17-W	9	Scott Sauer	<i>Helionsis helianthoides</i>	O 41
2	Marshall	T- 88-N	R- 17-W	9	Scott Sauer	<i>Helionsis helianthoides</i>	O 39
1	Pocahontas	T-	R-			<i>Helionsis helianthoides</i>	O 18
1	Pocahontas	T- 90-N	R- 32-W	24	Keith Franzen	<i>Helionsis helianthoides</i>	O 26
1	Pocahontas	T- 91-N	R- 31-W			<i>Helionsis helianthoides</i>	O 19
2	Story				Jimmie D. Thompson	<i>Helionsis helianthoides</i>	O 8
2	Story	T- 84-N	R- 24-W	34	Kirk & Keith	<i>Helionsis helianthoides</i>	O 7
3	Union	T- 71-N	R- 31-W	5 SW4 NW4	Carole Kern	<i>Helionsis helianthoides</i>	O 46
3	Union	T- 72-N	R- 29-W	25 NW4 SE4	Carole Kern	<i>Helionsis helianthoides</i>	O 47
2	Webster	T- 89-N	R- 29-W	33 SE4 & 34 SW4	Keith Franzen	<i>Helionsis helianthoides</i>	O 28
2	Webster	T- 89-N	R- 30-W	25 W2	Keith Franzen	<i>Helionsis helianthoides</i>	O 12
2	Webster	T- 89-N?	R- 29-W?		Linn Reece	<i>Helionsis helianthoides</i>	O 36
1	Wright	T-	R-		Keith Franzen	<i>Helionsis helianthoides</i>	O 29
1	Wright	T- 92-N	R- 24-W	2 E2	Keith Franzen	<i>Helionsis helianthoides</i>	O 43
1	Wright	T- 93-N	R- 23-W	16 SE4 SE4	Keith Franzen	<i>Helionsis helianthoides</i>	O 25
3	Appanoose	T- 69-N	R- 19-W	1 SW4 NW4	Paul Egeland	<i>Helionsis helianthoides</i>	O 34
3	Appanoose	T- 70-N	R- 19-W	10 NW4 SW4	Paul Egeland	<i>Helionsis helianthoides</i>	O 33
3	Appanoose	T- 70-N	R- 19-W	25 NW4 SW4	Paul Egeland	<i>Helionsis helianthoides</i>	O 35
1	Bremer	T- 92-N	R- 13-W	30 NW4 SW4	Keith Franzen	<i>Helionsis helianthoides</i>	O 14
1	Butler	T- 91-N	R- 16-W	18 NE4	Keith Franzen	<i>Helionsis helianthoides</i>	O 42
1	Butler	T- 92-N	R- 16-W	22 NW4	Keith Franzen	<i>Helionsis helianthoides</i>	O 31
2	Cedar	T- 79-N?	R- 3-W?	12 SW4 NE4?	Richard 'Sandy' Rhodes	<i>Helionsis helianthoides</i>	O 45
1	Cerro Gordo				Joel C. Hanes	<i>Helionsis helianthoides</i>	O 1
1	Cerro Gordo	T- 95-N	R- 21-W	22 NW4 NW4	Keith Franzen	<i>Helionsis helianthoides</i>	O 13
1	Chickasaw	T-	R-		Keith Franzen	<i>Helionsis helianthoides</i>	O 32
3	Clarke	T- 72-N	R- 24-W	22 SE4	Carole Kern	<i>Helionsis helianthoides</i>	O 6
2	Clinton	T- 83-N?	R- 5-E?	28 NW4 NE4?	Walt Wickham & Paul	<i>Helionsis helianthoides</i>	O 22
2	Crawford	T-	R-		Kirk Henderson	<i>Helionsis helianthoides</i>	O 10
3	Decatur	T- 70-N	R- 27-W	11 SW4 NE4	Carole Kern	<i>Helionsis helianthoides</i>	O 2
1	Fayette	T- 93-N	R- 8-W	31	Paul Frana	<i>Helionsis helianthoides</i>	O 4
1	Floyd	T-	R-		Keith Franzen	<i>Helionsis helianthoides</i>	O 30
1	Franklin	T- 90-N	R- 21-W	24	Keith Franzen	<i>Helionsis helianthoides</i>	O 20
2	Hamilton	T- 86-N	R- 24-W	10 E2	Keith Franzen	<i>Helionsis helianthoides</i>	O 11
1	Hancock	T- 94-N	R- 26-W	7 NE4 NE4	Keith Franzen	<i>Helionsis helianthoides</i>	O 23
1	Hancock	T- 95-N	R- 25-W	25 SW4 SW4	Keith Franzen	<i>Helionsis helianthoides</i>	O 27
2	Hardin	T-	R-		Doug Sheeley	<i>Helionsis helianthoides</i>	O 37
1	Humbolt	T- 92-N	R- 29-W	20, 27, 28	Keith Franzen	<i>Helionsis helianthoides</i>	O 24
2	Jasper	T- 78-N	R- 19-W	14 NW4 NE4	Kate Heckroth	<i>Helionsis helianthoides</i>	O 9
2	Johnson	T- 81-N	R- 6-W	9 SE4 NW4 to 9 NW4	Richard 'Sandy' Rhodes	<i>Helionsis helianthoides</i>	O 44

<u>Zone</u>	<u>County</u>	<u>Twp.</u>	<u>Range</u>	<u>Section</u>	<u>Collector</u>	<u>Species</u>	<u>code</u>
2	Jones	T- 86-N	R- 3-W	9 W2	Keith Franzen	<i>Helionsis helianthoides</i>	O 15
2	Jones (Cedar?)	T-	R-			<i>Helionsis helianthoides</i>	O 16
1	Kossuth	T- 95-N	R- 30-W	13 SE4 NE4	Keith Franzen	<i>Helionsis helianthoides</i>	O 21
2	Linn	T- 82-N	R- 8-W	20 NE4 SW4	Richard 'Sandy' Rhodes	<i>Helionsis helianthoides</i>	
3	Lucas	T- 71-N	R- 23-W	7 NW4 NW4	Carole Kern	<i>Helionsis helianthoides</i>	O 3
3	Lucas	T- 72-N	R- 22-W	19 NW4 SE4	Carole Kern	<i>Helionsis helianthoides</i>	O 5
2	Marshall	T- 82-N	R- 19-W	25 SW4 SW4	Keith Franzen	<i>Helionsis helianthoides</i>	O 17

References

Flora of Missouri; p. 1553; Steyermark, J. A.; Iowa State University Press, Ames Iowa, 1968.

A Field Guide to Wildflowers; p. 80; Peterson, R. T. and McKenny, M. Houghton Mifflin Company, Boston, Mass, 1968.

Forage Crops; p. 260; Ahlgren, G. H.; Rutgers University, New Jersey, 1949.

Gray's-Manual of Botany, p. 1479; Fernald, M. L.; Harvard University, Boston, Mass, 1950.