



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

'Midas'

## Smooth Oxeye

*Heliopsis helianthoides* (L.) Sweet

A Conservation Plant Release by USDA NRCS Manhattan Plant Materials Center, Manhattan, KS



**Figure 1. A Midas plant in full bloom. Photo by Alan Shadow East Texas PMC**

'Midas' smooth oxeye (*Heliopsis helianthoides*) is a cultivar released in 1984 in cooperation with the Kansas and Nebraska Agricultural Experiment Stations.

### Description

Smooth oxeye is a member of the sunflower or asteraceae family. It is a vigorous, upright, native, perennial forb which growing 18 to 48 inches in height. Smooth, unbranched stems arise from a fibrous rooted caudex that develops stout rhizomes. The leaves are oppositely attached to the stem and have coarsely serrated margins. Leaves are dark green on the upper side and lighter green on the lower surface with siliceous based hairs that provide rough texture on both surfaces. The stem apex may contain a single flower head or branch into multiple stems with many yellow flowers. The flowers have both orange-yellow disk flowers and yellow ray flowers. The ray flowers are fertile, but contain no male flower parts. While disk flowers are considered perfect and contain both male and female parts. The fruit is a smooth three to four angled achene, usually without a pappus or crown of hairs that aids in windblown dissemination of the seed units.

### Source

This cultivar was selected from a small collection of *Heliopsis* species collected in Greenwood County, Kansas in 1970. Tested as PMK-1098 the germ plasm was successful in field plantings and most successful when planted with a drill. Midas produces vigorous seedlings.

### Conservation Uses

Smooth oxeye is used in prairie restoration and roadside beautification projects. It is considered one of the best hardy plants for wildflower garden plantings. It is especially suited for plantings in dry locations or typically dry sites.

### Area of Adaptation and Use

The location depicted on a map would include eastern Kansas, Nebraska, Oklahoma and then eastward into Iowa, most of Missouri and northwestern Arkansas and even western Illinois. Smooth oxeye is adapted to full sunlight and dry to moderately moist soil conditions. This species tolerates some drought and also a wide range of soil types, including nutrient poor soils.

### Establishment and Management for Conservation Plantings

Planting smooth oxeye in a pasture or range seeding mixture will require a drill with a separate legume or forb planting box attachment. Usually forbs are a rather minor component of pasture or prairie reseeding. If a prairie restoration or wildflower garden is to be planted then the forb component would become a bigger part of the mix. Typically a wildflower planting or planting for beautification would involve a no till drill and perhaps some mulch to ensure moisture and successful establishment of the mixture. Weed control also becomes important for establishment of desirable species. Mowing is a relatively safe method of encouraging certain species and discouraging vigorous weedy annual species.

### Ecological Considerations

There is no concern or probability that this plant will become a weed problem in cultivated agricultural systems or rangeland situations. It does move around by seed in landscape plantings and establishes in areas not originally seeded. Smooth oxeye has no serious disease or insect problems, but has been observed to have aphid infestations.

### Seed and Plant Production

The normal method of propagating this species is through seed or achenes. A spring planting is recommended with a stratification period of 30 days at 39°F to improve overall

germination. Planting in a well prepared, firm, weed free seedbed is ideal. Fallowing an area for a year prior to planting can reduce competition with undesirable, persistent weed species and reduce the chance of herbicide residue carry over in the soil that could potentially harm new seedlings. Smooth oxeye planting for seed production should be in rows spaced 32 to 40 inches apart. Seeds per foot of row should be from 30 to 45 pure live seeds depending on moisture availability of the site. Spring planting between March and April should produce vigorous seedlings which may produce seed the same year planted. If plants are to be cloned or physically divided to create additional numbers it is best to accomplish this in the spring when the plants are in a dormant condition. Harvest of smooth oxeye can be performed with a conventional combine with the proper settings and timing to complete the harvest. Seed harvested should be dried prior to processing and must be dried in order to successfully store the seed units. Processing can be accomplished with differential screening and a fanning mill. Midas seed yield ranged from 58 to 218 pounds per acre at Manhattan, KS under managed conditions including additional fertility and irrigation when needed. Under good growing conditions and proper management smooth oxeye can maintain seed production stands for five years. Thus it can be considered a short-lived perennial species.

#### Availability

*For conservation use:* Commercial seed of Midas is available from various native seed vendors.

*For seed or plant increase:* The Manhattan PMC maintains breeder and foundation seed stocks. There is no registered class of seed for Midas.

#### *For more information, contact:*

Manhattan Plant Materials Center 3800  
South 20<sup>th</sup> Street  
Manhattan, KS 66502  
(785) 539-8761 FAX (785) 539-2034  
<http://www.plant-materials.usda.nrcs.gov>

#### **Citation**

Release brochure for Midas smooth oxeye (*Heliopsis helianthoides*). USDA-Natural Resources Conservation Service, Manhattan PMC, Manhattan, KS 66502.  
Published: [April, 2013]

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>

*Helping People Help The Land*

USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER