



SMOOTH OXEYE

Heliopsis helianthoides (L.)

Sweet

Plant Symbol = HEHE5

Alternative Names

Common Names: oxeye sunflower, early sunflower, smooth oxeye, false sunflower

Scientific Names: Synonym: *Bupthalmum helianthoides* L.; infraspecific names: *Heliopsis helianthoides* var. *helianthoides* and *Heliopsis helianthoides* var. *scabra* (Dunal) Fernald

Description

General: Smooth oxeye is a perennial wildflower native to the Eastern United States and Eastern Canada. Plants usually grow 2-5 ft high, with 1-15 flowerheads per plant (Flora of North America [FNA], 2026), and the flowering season can be up to 3 months (Zlesak & Hanson, 2008). The flowerheads grow on 3.5-10 inch stalks and each flowerhead has 10-75 yellow disc florets surrounded by 10-18 yellow ray florets (FNA, 2026). The green bracts around the base of the flowerhead are in 1-3 rows (FNA, 2026). The leaves are toothed, arranged oppositely on the stems, and are 2.5-6 inches long. *Heliopsis helianthoides* var. *scabra* has rougher, narrower leaves (usually 0.5-2 in. wide), and usually occurs in more open habitats. *Heliopsis helianthoides* var. *helianthoides* has smoother, oval shaped leaves that are usually 1.5-4 in wide (FNA, 2026).



Figure 1: Smooth oxeye. Beltsville PMC

Distribution: Smooth oxeye is native to Eastern North America and is introduced into South America and Eurasia (Plants of the World Online [POWO], 2026). For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Habitat: Smooth oxeye grows in many habitat types including along roadsides, railroads and powerline right of ways, in meadows, prairies and old fields, in open woods and thickets, and along streambanks (Symbiota, 2026).

Adaptation

Smooth oxeye grows in full sun to partial shade and tolerates a wide range of soils from shallow soils with dry sand and gravel to silt loams, including marshy habitats, shales, and calcareous soils (Symbiota, 2026).

Uses

Ornamental: Smooth oxeye is widely used as an ornamental in gardens (Tennessee Invasive Plant Council [TN-IPC], 2016; Zlesak & Hanson, 2008; Sullivan & Howe, 2009)

Restoration: Because of its ability to grow in a variety of soil types, smooth oxeye can be used for revegetation of construction and demolition waste landfills (Sun et al., 2022). WV researchers consider using it as part of a planting mix to control erosion on cuts and fills (Hopkinson et al., 2015). It is also used in prairie restorations, including in Iowa (Meissen et al., 2020) and Ontario (Seahra et al., 2018).

Wildlife: The flowers are frequented by honeybees, flies, and native bees (including *Ceratina*, *Megachile*, *Missodes*, *Agapostemon* and *Augochiorella* (Dickinson and McKone, 1992)), in addition to 15 species of butterflies (Bray, 1994). Richwine et al. (2024) suggest adding it to native warm season grass pastures to provide floral resources for pollinators. It is also consumed by deer (Torgerson, 1970), voles (Sullivan & Howe, 2009), bobwhite quail (Thacker & Springer, 2016), and hummingbirds (Waldron et al., 2024).

Forage: Smooth oxeye can be used as forage for nonlactating cows. Grazing and mowing earlier in the season improves forage quality (Bonin and Tracy, 2011)

Ethnobotany

Densmore (1928) reported that people in the Chippewa nation topically applied extracts of dried roots to their limbs for strength.

Status

Threatened or Endangered: Smooth Oxeye is not a threatened plant (Bachman et al., 2024)

Wetland Indicator: Smooth oxeye is a facultative upland plant except in the Atlantic and Gulf Coastal Plain, where it is classified as an upland plant (U.S. Army Corps of Engineers, 2023).

Weedy or Invasive: Smooth Oxeye is not considered weedy or invasive in the United States, although it escapes from gardens in Latvia (Nāburga, 2021).

This plant may become weedy or invasive in some regions or habitats and may displace desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, state natural resource, or state agriculture department regarding its status and use.

Please consult the PLANTS Web site (<http://plants.usda.gov/>) and your state's Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

Planting Guidelines

Seed: Plantings of smooth oxeye seed should be made on a well prepared, weed free, firm seed bed. Ensure that no herbicide residues remain in the soil of the field. Seed should be planted in the spring between March and April. Germination generally starts four weeks after sowing if soil temperatures remain in the 60° – 70°F range.

Cuttings and Divisions: Spring cuttings taken before flowering, from the top 12 inches of the stem, including 5-7 nodes, typically root in 2-3 weeks and do well in the landscape when at least one node from the rooted cuttings is placed below the soil (Zlesak & Hanson, 2008).

Pests and Potential Problems

The plant pathogenic mildew *Erisiphe cichoracearum* and the leaf spot *Stagonosporopsis heliopsidis* have both been reported on smooth oxeye (Tiffany & Knaphus, 2004), but they aren't reported to cause extensive problems.

Control

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

Seeds and Plant Production

Seed germination can be increased by soaking dormant seeds in ethephon solution (1-5mM), exposing them to red light for 90 minutes, and cold stratifying them for at least one week at 4°C (Zlesak, 2007). Seed germination decreases after controlled burns (Rohn and Bragg, 1985). Smooth oxeye is easily seeded in fall. Fall is also a good time for propagating by dividing clumps of plants into individuals or smaller clumps by separating the roots. Smooth oxeye can also be propagated using stem cuttings in the spring, and it transplants easily (Rock, 1981). Fields planted for seed production in rows spaced approximately 3 ft. apart should have about 45 Pure Live Seeds (PLS) per ft. of row.

Smooth oxeye will produce seed during its establishment year if environmental and management conditions are ideal; seeds mature from mid-August to early September. Seed shatter can be a problem when the majority of seed heads have turned brown. A conventional combine can be used to harvest smooth oxeye - the equipment settings offered here should be considered a starting point and modified as harvest demands change. Combine settings: 1) concave clearance 0.5 in, 2) Cylinder speed 1000 RPMs, and 3) air intake at 15 percent. These settings are based on years of harvest experience at the Plant Materials Center (PMC) in Manhattan, KS. Freshly combined material should be dried carefully at no greater temperature than 43 degrees Centigrade (°C) with a forced air system. Seed yield of native plant species can be variable, with production yields of 65 to 244 kg/ha. Under good growing conditions and proper management, smooth oxeye can be maintained in seed production stands for up to five years. Thus, it may be considered a short lived perennial plant.

Cultivars, Improved, and Selected Materials (and area of origin)

'Midas' was released by the Manhattan, Kansas PMC in 1984. It is recommended for the western extent of the native range of this species.

Northern, central and southern Iowa source identified materials were released in the mid and late 1990's by the Elsberry, Missouri PMC.

Cultivars should be selected based on the local climate, resistance to local pests, and intended use. Consult with your local land grant university, local extension or local USDA NRCS office for recommendations on adapted cultivars for use in your area.

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Figure 2: 'Midas' Smooth oxeye. Manhattan PMC

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