



# Yellow Starthistle

*Centaurea solstitialis* L.

**Native Origin:** Europe- Mediterranean region

**Description:** An annual herbaceous plant in the aster family (Asteraceae) growing from 1.5-3 feet in height. Plants are gray-green to blue-green and have deep taproots. Stems and leaves are covered with cottony wool. Basal leaves are 2 to 3 inches long and deeply lobed. Upper leaves are short and narrow, with few lobes. Flowers are bright yellow with tubular florets and sharp spines surrounding the base. Spread of yellow starthistle is by seed and each seed head can produce from 35 to 80 or more seeds. Most seeds move no more than two feet from the parent plant without assistance of animals (wildlife, livestock, and humans).

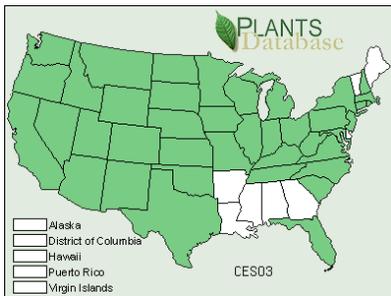


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**Habitat:** Plants typically thrive in full sunlight and deep, well-drained soils, where annual rainfall is between 10-60 inches, and is especially common in disturbed areas, roadsides and rangelands.

**Distribution:** This species is reported from states shaded on Plants Database map. It is reported invasive in CA, ID, OR, NJ, UT, and WA.

**Ecological Impacts:** It chokes out the native plants, reducing biodiversity, and wildlife habitat and forage. It is legally controlled in some states where it is replacing important forage vegetation and reducing rangeland values.



## Control and Management:

- **Manual-** Plants can be pulled, hoed, tilled or mowed before bloom. Controlled burns are successful if repeated for 3 consecutive years.
- **Chemical-** It can be effectively controlled using any of several readily available general use herbicides such as glyphosate, triclopyr, clopyralid or picloram between December and April seems to be the most effective. Application during the winter encourages the growth of other, more desirable, plants. Follow label and state requirements.
- **Biological Control:** Six biological control insects have been released in the United States for yellow starthistle control: *Bangasternus orientalis*, *Eustenopus villosus*, *Urophora jaculata*, *Urophora sirunaseva*, *Larinus curtus*, and *Chaetorellia australis*. Of these, five became established and three (*B. orientalis*, *U. sirunaseva* and *E. villosus*) are widespread. Also, the accidentally introduced fly, *Chaetorellia succinea* has a strong affinity to yellow starthistle and is found almost everywhere yellow starthistle occurs. All of these insects attack the seed head of yellow starthistle, effectively limiting the number of seeds the plants are able to produce. Current research indicates that the insects have reduced seed yield by at least 50%. The rust fungus, *Puccinia juncea* var. *solstitialis* was released in California in 2003. It is too early to know if this rust will establish and eventually cause high mortality of yellow starthistle in the wild. Several more fungi and insects are currently being tested for introduction into the United States.
- **Grazing:** Sheep, goats, and cattle graze on yellow starthistle in early spring, before the flower's spines develop. Goats also graze plants in the spiny or flowering stages. Grazing reduces biomass and seed production.

**References:** [www.forestimages.org](http://www.forestimages.org), <http://plants.usda.gov>, [www.nps.gov/plants/alien](http://www.nps.gov/plants/alien), Czarapata, Elizabeth J. Invasive Plants of the Upper Midwest, An Illustrated Guide to their Identification and Control, 2005 p. 134, [www.invasive.org](http://www.invasive.org)