CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

Sunflower Broomrape (*Orobanche cumana*)

Pest Fact Sheet

Introduction: Sunflower broomrape was recently discovered in Washington State (WSDA). This parasitic plant can reduce the productivity of commercially grown sunflowers. Seeds of this plant are microscopic and can be easily dispersed to new areas once a population is established. It is extremely important to keep this plant from entering California.

Distribution: *Orobanche cumana* is native to Afghanistan, Armenia, Azerbaijan, China, Georgia, Iran, Kazakhstan, Kyrgyzstan, Mongolia, Russia, Tajikistan, Turkmenistan, and Uzbekistan. It has been introduced to numerous countries throughout Europe (Hu *et al.,* POWO). The occurrence in Washington was the first in North America.

Description and Identification: The stems are tan to brown, fleshy, and have white or purple flowers with petals fused into a sickle-shape. The plant generally grows near the base of crop species. Identification of the genus is often easy, although identification to species is often difficult.

Biology and lifecycle: *Orobanche cumana* is a parasite and takes all of its nutrients from its host plant. When the fruit is mature, it will release hundreds of thousands of seeds which are easily dispersed by wind, water and farm equipment. The microscopic seeds germinate when they sense the host plant roots in the environment. This species attacks all members of Asteraceae, especially sunflower, and possibly some Solenaceae such as tobacco and tomato.



Sunflower Broomrape parasitizing sunflower.
Photo credit: Reuven Jacobsohn (bugwood.org).

Economic importance: Sunflowers are grown for oil and seed production in California, primarily in the Central Valley. *Orobanche cumana* seeds are minute, disperse easily and are persistent in the soil, remaining dormant for decades. This means that fields with previous infestations of Broomrape may be rendered unusable for growing the host plant again for decades. Sunflower broomrape may also be a potential threat to the ecology of native plants of California, as the wild ancestor to this crop pest was a parasite on *Artemisia*, a genus well known in California (Molinero-Ruiz *et al.* 2015).

References:

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Prepared by Samuel Skibicki (May 2026); Plant Pest Diagnostic Laboratory (https://www.cdfa.ca.gov/plant/PPD/).