

This WEED REPORT does not constitute a formal recommendation. When using herbicides always read the label, and when in doubt consult your farm advisor or county agent.

This WEED REPORT is an excerpt from the book *Weed Control in Natural Areas in the Western United States* and is available wholesale through the UC Weed Research & Information Center (wric.ucdavis.edu) or retail through the Western Society of Weed Science (wsweedscience.org) or the California Invasive Species Council (cal-ipc.org).

Cuscuta japonica Choisy.

Japanese or giant dodder

Family: Cuscutaceae

Range: South Carolina, Florida, Texas and California.

Habitat: Capable of growing in a wide range of environments and many soil types; found in fencerows, abandoned land, and residential yards, infesting trees and bushes. Can grow in semi-shade or no shade and requires moist soil.

Origin: Native to Asia and may have been intentionally, though illegally, introduced into the United States as a culturally important aphrodisiac.

Impacts: Japanese dodder is a very aggressive parasitic plant that affects ornamental plantings and agricultural crops as well as having the potential to severely alter the composition and function of riparian areas. This parasite threatens native vegetation by killing host seedlings or by making host trees more susceptible to disease. Poses a threat to crops such as alfalfa, asparagus, and tomatoes, in addition to horticultural plants. Also serves as a host for several viruses known to be detrimental to agricultural crops.

Western states listed as Noxious Weed: Arizona, California. Also on the Federal Noxious Weed list



Japanese dodder is a perennial parasitic vine that has recently been introduced into the United States. The stems are fleshy, circular, vibrant yellow-green or gold, with red spots and striations, and much branched. Leaves are minute and scale-like. Japanese dodder has thick, spaghetti-like, robust stems in contrast to native dodder stems, which are usually more thread or string-like. Infestations are often large, spreading, and web-like, covering large shrubs and small trees. In contrast, infestations of other dodder species are likely to be smaller, infecting non-woody plants or small shrubs.

Flowers are abundant, pale yellow, and sessile. While most dodders are spread both by seed and vegetatively, Japanese dodder does not produce viable seed and is therefore spread only vegetatively. It is thought that humans are the main dispersal agents, as the plants are intentionally moved around from one cultivated source to another. Japanese dodder attacks full-grown trees including natives and agricultural fruit trees.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	Hand roguing and pruning are often used in landscape settings where the use of herbicides would damage other plants. Hand pulling is only effective if the entire vine and adjoining haustoria are removed. In severely affected host plants, the entire plant may be removed and destroyed.
Cultural	No cultural control strategies have been identified.
Biological	There are currently no biological control agents available for the control of Japanese dodder. <i>Melanagromyza cuscutae</i> and the gall-forming weevils <i>Smicronyx</i> spp. have been tested for control of other <i>Cuscuta</i> spp. Similarly the fungi <i>Alternaria cuscutacidae</i> and <i>Colletotrichum gloeosporioides</i> have shown promise in some situations but none have proved reliable enough for use in practice. On <i>Cuscuta japonica</i> , a number of fungi have been studied for their potential as biocontrol agents, including <i>Fusarium solani</i> , <i>Fusarium semitectum</i> , <i>Pestalotiopsis guepini</i> [<i>Pestalotia guepinii</i>] and <i>Alternaria tenuis</i> , but they have not yet been fully developed for use.

CHEMICAL CONTROL

The following specific use information is based on published papers and reports by researchers and land managers. Other trade names may be available, and other compounds also are labeled for this weed. Directions

for use may vary between brands; see label before use. Herbicides are listed by mode of action and then alphabetically. The order of herbicide listing is not reflective of the order of efficacy or preference.

GROWTH REGULATORS	
Triclopyr <i>Garlon 4 Ultra</i>	<p>Rate: Broadcast treatment: 1 to 8 qt product/acre (1 to 4 lb a.e./acre). Spot treatment: 1 to 1.5% solution v/v <i>Garlon 4 Ultra</i> and water plus 0.25 to 0.5% v/v surfactant to thoroughly wet all leaves</p> <p>Timing: Postemergence when plants are growing rapidly. Applications in spring provide best control.</p> <p>Remarks: Triclopyr is a selective herbicide for broadleaf species. In settings where the host can be sacrificed, a systemic herbicide such as triclopyr can be used. This kills the host plant as well as the parasite, and ensures that it will not spread.</p>
AROMATIC AMINO ACID INHIBITORS	
Glyphosate <i>Roundup, Accord XRT II</i> , and others	<p>Rate: Spot treatment: 0.7% solution v/v <i>Roundup ProMax</i> (or other trade name with similar concentration of glyphosate) and water to thoroughly wet all stems</p> <p>Timing: Applications should be made to young dodder plants before they are extensively attached to the host plant. Repeated applications may be necessary for complete control.</p> <p>Remarks: Glyphosate is a nonselective systemic herbicide with no soil activity.</p>

RECOMMENDED CITATION: DiTomaso, J.M., G.B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center, University of California. 544 pp.