

U.S. National Early Detection and Rapid Response System for Invasive Plants

EDRR Fact Sheet

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Common Name: Witchweed

Scientific Name: *Striga asiatica* (L.) O. Kuntze

Family: Scrophulariaceae

Description: An herbaceous parasitic plant up to 12” tall that attaches to the roots of other plants via a structure known as an haustorium. **Leaves** linear, about 1” long. **Flowers** small, irregular shaped, less than 0.5” in diameter, in loose spikes, normally red or yellow in color. **Seed pods** contain thousands of microscopic seeds. The seeds can survive in the soil for 10 or more years.

Habitat: Witchweed is a root parasite of grasses. It will live anywhere that grasses will grow. This includes croplands, pastures, ditchbanks, open forest areas, etc.

Native Range: Witchweed is native to Asia and Africa.



Pathways of Introduction and Spread: Witchweed was first discovered infesting corn in Columbus County, North Carolina, in July, 1956. It was accidentally introduced sometime before that – perhaps as a contaminant of equipment returning from Africa after WWII, or as a contaminant of imported guano fertilizer. It is spread primarily by contaminated farm equipment. At the height of the infestation, Witchweed infested over 432,000 acres in 38 counties in the eastern Carolinas.

U.S. and Canada Distribution:

Ecological and Economic Impacts: Witchweed parasitizes important grain crops such as corn, sorghum, sugarcane, and rice. Symptoms in host plants include wilting, stunted growth, and chlorosis. The host plant’s nutrients are depleted, and energy is spent support the parasite. Globally, Witchweed and related species have a tremendous impact on human welfare because their hosts are often subsistence crops in marginal areas of agriculture in arid and tropical regions. Infestations commonly reduce yields by 5-15% or more.



Control Strategies: The USDA-Carolinas Witchweed Eradication Program and Federal/State Quarantine was first established in 1957 to address Witchweed in the United States. Since that time, the initial infestation of 432,000 acres has been reduced to about 2,000 acres in southeastern North Carolina. Remaining infested acres were released from federal/state quarantine in South Carolina in December, 2009. Once released from quarantine, previously infested acres are surveyed annually for 10 years to ensure that the parasite has actually been eradicated.

Witchweed is controlled by a variety of methods aimed at denying further reproduction (herbicide treatments) and killing the seeds in the soil. Seeds in the soil are killed by direct fumigation (e.g., methyl bromide), or by ethylene injection (which induces suicidal germination of the seeds). Trap crops such as cotton will also induce suicidal germination of Witchweed seeds in the soil.

To date, over \$250 million has been spent in eradicating Witchweed from the United States. However, this is a fraction of the costs and losses that would be seen through a permanent 10% loss of the U.S. corn crop of 10-13 billion bushels per year – which is currently worth about \$3.66/bushel.

Regulatory Status: Witchweed is listed as a [U.S. Federal Noxious Weed](#). It is regulated as a state noxious weed in [Alabama](#), [Arizona](#), [Arkansas](#), [California](#), [Hawaii](#), [Massachusetts](#), [Minnesota](#), [North Carolina](#), [Oregon](#), [South Carolina](#), and [Vermont](#).

Online Resources:

Witchweed Fact Sheet – USDA APHIS PPQ.

URL: <http://www.invasive.org/publications/aphis/fswweed.pdf>

Witchweed Images - U-GA Bugwood Image Gallery.

URL: <http://www.invasive.org/species/subject.cfm?sub=4576>

Witchweed Profile – ISSG Global Invasive Species Database.

URL: <http://www.issg.org/database/species/ecology.asp?si=968&fr=1&sts=>

Witchweed Profile - USDA Plants Database.

URL: <http://plants.usda.gov/java/profile?symbol=STAS2>