

GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: Verbena brasiliensis

Verbena brasiliensis 简体中文 区



Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Lamiales	Verbenaceae

Common name Brazilian vervain (English), gin case (English)

Synonym Verbena quadrangularis, Vell.

> Verbena litoralis , var. brasiliensis Vell. Verbena bonariensis, auct. non L.

Verbena litoralis, var. pycnostachya Schauer

Verbena litoralis, var. brevibracteata (Kuntze) N. O'Leary

Similar species Verbena bonariensis, Verbena litoralis

Verbena brasiliensis is a herb native to South America. It displaces native **Summary**

vegetation through most of its non-native range and is considered invasive. Management for Verbena brasiliensis includes avoiding its introduction into

new areas and using herbicide where necessary.

view this species on IUCN Red List

Species Description

Verbena brasiliensis is an annual or short-lived perennial herb with erect, hispid, quadrangular stems of 1-2.5 metres in height. Upper branches are 4-9cm long, opposite, and ascending. Opposite, elliptic leaves are simple and serrate, 4-10cm long by 0.8-2.5cm wide. Leaves are generally hispid, with veins on undersides bearing large bristles. Bracted flowers are borne on terminal, loosely arranged spikes which are 0.5-4.5cm long by 4-5cm wide and are arranged in triads. Lanceolate bracts subtend the 5-lobed calyx, which is 2-3.5mm long, with lobes united nearly to the apex. The bluish purple corolla is salverform, zygomorphic, and is exserted from the calvx slightly. The tube is 2.75-3.25mm long and lobes are less than 1mm in length. Bracts, calvx, and corolla tube are all pubescent. Anthers are attatched in the upper part of the corolla tube. Fruit is a schizocarp which usually produces 2 brown nutlets, 1.2-1.9mm long (Radford, Ahles, and Bell, 1968, Yeo, 1990).

Habitat Description

Verbena brasiliensis is a facultative wetland species that can be found both in wetland/riparian areas as well as in drier, upland habitat (USDA, 2007). In its native areas it is found in dry fields and arable land as a weedy species (Verloove, 2006), but in areas in which it is invasive it thrives in riverine areas or roadsides, old fields, and other disturbed areas (Hoagland and Johnson, 2004; Verloove, 2006).

Reproduction

Verbena brasiliensis reproduces sexually by the production of seeds.

General Impacts

Verbena brasiliensis is an invasive plant that may threaten native plants species by displacing them (SE-EPPC, 2007). It is considered a significant invasive species of the mid-south United States (Maddox, Byrd, and Madsen, 2005), and is prohibited on National Forest System Lands of the United States (SE-EPPC, 2007).

System: Terrestrial



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Management Info

<u>Preventative measures</u>: In an effort to manage the species, *Verbena brasiliensis* should not be planted or sold as an ornamental (SE-EPPC, 2007).

<u>Chemical</u>: The herbicide Triclopyr 480. has been used in Gauteng, South Africa for the eradication of *V. brasiliensis* (GEMCA, 2009). 2,4-D (2,4-D L.V. 4 ESTER & 2,4-D L.V. 6 ESTER) is reported to provide good control of *V. brasiliensis*.

A new herbicide Oustar (a new pre-mixed blend of hexazinone (Velpar DF) & sulfometuron (Oust XP)) was tested at six sites in the southeastern US for herbaceous weed control and resultant loblolly pine seedling performance. Certain Oustar (0.91 and 1.33 kg) treatments were found colonized by *V. brasiliensis* more than plots treated with other rates (Yeiser *et al* 2004). It is observed that *V. brasiliensis* is tolerant of sulfometuron and hexazinone, the active ingredients in Oustar (DuPont, 2002, 2003 in Yeiser *et al* 2004).

The <u>Weed Control Methods Handbook</u> provides you with detailed information about the tools and techniques available for controlling invasive plants, or weeds, in natural areas. This Handbook is divided into eight chapters, covering a range of different control methods: manual, mechanical, promoting competition from native plants, grazing, biocontrol, herbicides, prescribed fire, solarization, flooding, and other, more novel, techniques. Each control method has advantages and disadvantages in terms of its effects against the target weed(s), impacts to untargeted plants and animals, risks to human health and safety, and costs.

Pathway

In Belgium and Britain Verbena brasiliensis may have been introduced with cereal and wool trade, respectively.

Principal source: Southeast Exotic Pest Plant Council (SE-EPPC) Website. Bugwood Network, The Univeristy of Georgia. Viewed July 25 2007

Verloove, 2006. Verbena brasiliensis (Verbenaceae), a new record for the flora of Georgia (former USSR)

Compiler: National Biological Information Infrastructure (NBII), Comité français de l'UICN (IUCN French Committee) & IUCN SSC Invasive Species Specialist Group (ISSG)

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ALIEN RANGE

[5] AUSTRALIA

[1] COOK ISLANDS

[1] GEORGIA

[1] INDONESIA

[1] JAPAN

[1] MADAGASCAR

[1] MOZAMBIQUE

[2] NEW ZEALAND

[1] PORTUGAL

[1] SOUTH AFRICA

[1] TAIWAN

[1] UNITED KINGDOM

[1] ZIMBABWE

- [1] CONGO, THE DEMOCRATIC REPUBLIC OF THE
- [1] FIJI
- [1] HONG KONG
- [2] ITALY
- [1] KENYA
- [1] MEXICO
- [1] NEW CALEDONIA
- [1] PAPUA NEW GUINEA
- [1] REUNION
- [1] SPAIN
- [1] TANZANIA, UNITED REPUBLIC OF

[16] UNITED STATES

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18 references found for Verbena brasiliensis



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FULL ACCOUNT FOR: Verbena brasiliensis

Herbicide Information: Verbena bonariensis L. & brasiliensis Vell (Purpletop vervain) Herbicide Information

Summary: Available from:

http://el.erdc.usace.army.mil/pmis/mergedProjects/Herbicides/html/verbena_bonariensis_l_brasiliensis_vell_purpletop_vervain_herbicide_information.htm [Accessed 26 July 2010]

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Summary: Available from: http://www.gemca.co.za/index.php?option=com_content&task=view&id=13&Itemid=27#verbena [Accessed 26 July 2010]

Yeiser, J.L., T.L.L. Temple Chair, A.W. Ezell. 2004. Oustar herbicide for efficient herbaceous weed control and enhanced loblolly pine seedling performance in the southeastern US. Forest Ecology and Management, 192: 207 215.

Summary: This article reviews the herbicide Oustar.

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Summary: This website provides descriptions and facts about the flora of Australia.

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Hoagland, B.W. and F. Johnson. 2004. The Vascular Flora of Red Slough and Grassy Slough Wildlife Management Areas, Gulf Coastal Plain, McCurtain County, Oklahoma. Castanea, 69 (4): 284-296.

Summary: An article documenting the results of an inventory of the flora at the Red Slough and Grassy Slough Wildlife Management Areas in Oklahoma.

ITIS (Integrated Taxonomic Information System), 2005. Online Database Verbena brasiliensis

Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=32086 [Accessed 25 July 2007].

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Summary: A dichotomous key and guide to the vascular flora of the Carolinas.

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Summary: A website that provides information about the exotic pest plants of the southeast United States.

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Summary: A paper assessing invasive weeds and their future impact on the Galapogos Islands, Ecuador.

Available from: http://www.hear.org/iwraw/1999/papers/tyefinal.pdf [Accessed 03 August 2007].

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Summary: A website that provides standardized information on the plants of the US.

Available from: http://plants.usda.gov/java/profile?symbol=VEBR2 [Accessed 25 July 2007].

Verloove, Filip. 2006. Verbena brasiliensis (Verbenaceae), a new record for the flora of Georgia (former USSR). Systematics and Geography of Plants, 76 (2): 185-189.

Summary: An article explaining that Verbena brasiliensis has been determined to be in Georgia (former USSR).

Wu, S., C. Hsieh, S. Chaw, and M. Rejmanek. 2004. Plant invasions in Taiwan: Insights from the flora of casual and naturalized alien species. Diversity and Distributions, 10: 349-362.

Summary: An article discussing the potential invasive qualities of casual and naturalized alien speicies in Taiwan.

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Summary: This database provides nomenclature and distribution information of vascular plant and bryophyte species.

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Summary: An article reviewing *V. brasiliensis* and its close congenors *V. bonariensis* and *V. litoralis*. Differentiates between the species by giving lengthy descriptions of their morphology. Also provides an extensive world-wide distribution list.