

Mini data sheet on *Bidens subalternans*

Added to the EPPO Alert List in 2017 - Deleted in 2020

Reasons for deletion:

Bidens subalternans was transferred in 2020 to the EPPO List of Invasive Alien Plants.

Why

Bidens subalternans (Asteraceae) is native to South America and was first recorded in Europe from Belgium in 1903. Although recorded from a number of EPPO countries, the species can often be confused with closely related congeners (for example *B. bipinnata*) and is often recorded as a rare ephemeral species. A better understanding of the occurrence of the species throughout the EPPO region along with reports of impacts is desirable.

Geographical distribution

EPPO region: Belgium, Croatia, France, Italy, Russia, Serbia, Spain, Switzerland.

South America: Argentina (native), Bolivia (native), Brazil (native), Chile, Colombia (native), Paraguay (native), Uruguay.

Asia: Republic of Korea.

Oceania: Australia.

Morphology

B. subalternans is an annual, herbaceous plant with an erect and branched stem. The stem is 40-100 cm, 4-angled, glabrous or sparsely hairy. Leaves are petiolate, 6-21 cm long, 2-pinnatisect or simply incised; lobes with short, dense or sparse hairs, more or less dentate, or coarsely serrate, oblong-lanceolate or oblong-linear, acuminate. Capitula terminal, solitary, at the time of flowering 8-10 × 5-6 mm, at the time of fructification up to 17 × 16 mm; peduncles 1-4 cm long. Achenes numerous, 30-50, linear, 4-angled, furrowed, blackish, glabrous or sparsely hairy at apex. Flowering in August to October, fruiting in September and October.

Biology and ecology

Throughout its native and introduced range, seed production is very high and dispersal can occur up to 50 m from the parent plant facilitated by wind.

Habitats

In many countries, *B. subalternans* can invade a variety of habitats including stream and river banks, ruderal habitats, coastlines, roadsides, vineyards, olive groves and gardens and parks. The population of *B. subalternans* in Serbia was recorded from the town of Niš in the central railway station in ruderal habitats around the abandoned tracks and platforms. The population, which covers an area of several hundred square metres, is thought to have been established for several years now even though management measures (manual and chemical control) have been applied to the site every year to facilitate the functionality of the railway infrastructure.

Pathways for movement

B. subalternans has been historically recorded as a wool contaminant but more recent reports associated the species with grain importation.

Impacts

B. subalternans is reported to invade agricultural habitats in Serbia but to-date yet there are no data to show impacts on crop yields or biodiversity.

Control

There are few reports on the management of *B. subalternans* using chemical or manual control methods. It is reported that the species can become resistant to some herbicides especially those that include acetolactate synthase inhibitors.

Source: Bogosavljević SS, Zlatković BK (2015) Two alien species of *Bidens* (Compositae), new to the flora of Serbia. *Phytologia Balcanica* **21**(2), 129-138.

Manual of the alien plants of Belgium (2017) *Bidens subalternans*.
<http://alienplantsbelgium.be/content/bidens-subalternans>