

Mini data sheet on *Andropogon virginicus* (Poaceae)

Added in 2011 - Deleted in 2014

Reasons for deletion:

Andropogon virginicus was added to the EPPO Alert List in 2011 and transferred to the Observation List of invasive alien plants in 2014.

Why

Andropogon virginicus (Poaceae) is a perennial grass native to North and Central America. One of its English common names is 'broomsedge'. This species has been introduced into other continents; for example it has naturalized in Australia, New Zealand, and Japan. Prior to 2006, the only report from the EPPO region was in Russia. In 2006, it was first found in France in a military camp ('Camp du Poteau' - located partly in Gironde and Landes departments). Because the population of *A. virginicus* has multiplied significantly in the infested area in France (from 2 to 500 plants in two years) and the species is considered to be invasive in other parts of the world, the French NPPO suggested adding *A. virginicus* to the EPPO Alert List.

Geographical distribution

EPPO region: France, Russia.

North America (native): Canada (Ontario), Mexico, USA (Alabama, Arkansas, California (alien), Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii (West Maui - alien and invasive), Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, North Carolina, New York, New Jersey, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Virginia, West Virginia).

Central America and Caribbean (native): Bahamas, Belize, Bermuda, Costa Rica, Cuba, Dominican Republic, Guatemala, Honduras, Jamaica, Nicaragua, Panama, Puerto Rico, Trinidad and Tobago.

South America: Colombia.

Asia: Japan.

Oceania: Australia (New South Wales, Queensland, Victoria), French Polynesia, New Zealand.

Note: in France, the species has been found in 2006 on the military camp of "Camp du Poteau" (Landes and Gironde departments) and has also been recorded in Arjuzanx (Landes).

Morphology

This perennial bunchgrass has tufted stems and can reach 40-210 cm high. The leaf blade is approximately 40 cm long, and 2-5 mm wide. Ligules are yellow-brown, membranous, truncate with a white-fringe at the edge. Inflorescence branches emerge at upper nodes with 2-4 racemes 3-4 cm long, covered with silky hairs. Spikelets are sessile, 3-4 cm long.

Biology and ecology

A. virginicus is found on a wide range of soils, including infertile soils (low in nitrogen or phosphorus) where it acts as a long lived competitor. It may also grow in soils polluted with heavy metals. Vegetative growth begins in the winter or spring when the daytime temperatures average 15-18°C.

A. virginicus has an average life span of 3-5 years, and flowering begins when plants are 2-3 years old and continues thereafter. Flower stalks form by September and seeds ripen by late October. Dispersed seeds readily establish on exposed soils, germination levels being relatively high after cold stratification. At the end of the growing season, nearly all green material dies, leaving a large accumulation of standing dead material. Surviving burned plants quickly grow back and the cover of the species therefore increases after fires. The species can also colonize ephemeral wetlands, and is considered to be resistant to waterlogging. It is also reported to be drought and frost tolerant and to be hardy to zone 6 (-20°C).

In which habitats

In its native range, *A. virginicus* grows in grasslands, degraded pastures, abandoned agricultural land, quarries, and open woodlands. Where introduced, the species also colonizes recently burnt areas, wetlands, as well as open and dry habitats.

According to the Corine Land Cover nomenclature, the following habitats are invaded: pastures, natural grassland, conifer forests, mixed forests, broad-leaved forests, banks of continental water, inland wetlands (marshes, peat bogs), road and rail networks and associated land, other artificial surfaces (wastelands).

Pathways

In France, it is suspected that *A. virginicus* was introduced into the military camp with NATO munitions in the years 1950-1967. In Australia, seeds of *A. virginicus* are also reported to be spread through the movement of hay and livestock.

The fine achenes of the species are spread naturally by wind, by floating on water and can also adhere and be transported by waterfowl, on wool, fur or on people's clothes. The species is also likely to be spread by machinery. Concerning its natural spread potential, in 2 years the population of *A. virginicus* found in France increased from 2 plants to more than 500.

Impacts

A. virginicus forms monospecific populations and releases persistent allelopathic substances, out-competing other species. This species produces abundant material that increases risks of fires in late summer. It is also considered unpalatable and of low forage value. However as the species is mainly reported to invade poorly managed and/or marginal areas of pastures, the pastoral impact is thought to be minor. As seeds can catch in wool, they may be recognised as minor contaminants.

On steep hillsides, in particular on islands, as the species is dormant during the rainy season, its presence has led to increased erosion.

Control

The species does not tolerate close continuous grazing after mowing. To reduce its abundance, pastures should be heavily grazed in early spring when *A. virginicus* is most palatable, and then not grazed for 60 to 90 days. In Missouri (US), a combination of planting tall grasses, fertilization, winter mowing and grazing eliminated *A. virginicus* after 4 years.

Effective control has also been achieved through the use of diverse phytosanitary products, although glyphosate on intact old growth was not effective, it provided satisfying results after removal of old growth (e.g. after fire).

Sources

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Impact Assessment - Whiskey grass (*Andropogon virginicus*) in Victoria

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