GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Cortaderia selloana***

Cortaderia selloana 简体中文 正體中文 **System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Cyperales	Poaceae

Common name Uruguayan pampas grass (English), silver pampas grass (English), silwergras (Afrikaans), pampas grass (English), herbe de la pampa (French, France)

Synonym *Cortaderia dioica* , (Spreng.) Speg.
Arundo selloana , Schult. and Schult. f.
C. argentea , (Nees) Stapf
Gynerium argenteum , Nees

Similar species *Cortaderia jubata*

Summary Cortaderia selloana is a tall tussock grass that can reach heights of 4 metres. It is found in subtropical regions in habitats such as disturbed areas along roads and trails. It forms dense stands that can exlude other plants and quickly become a fire hazard, and its sharp leaves can cut skin and limit recreational use. It is often planted as an ornamental, and is also used as a wind barrier along highways and fodder for stock. A combination of physical and chemical control is required to manage this species.

view this species on IUCN Red List

Species Description

Cortaderia selloana is a robust, tussock grass that stands up to 3.5m in diameter, and has flowering stalks that can reach upwards of 4m in height. The leaves are gray or bluish-green with narrowly tapering tips. The leaves are also bristle-like with the blade often forming a v-shape when viewed as a cross section. The margins are rough and somewhat cutting, and the leaves are mostly basal to two-thirds of the height of the flowing stalks. The inflorescence can be described as a silver or white with heavy branching and a feathery appearance, and is 400-700mm long (PIER, 2002).

Lifecycle Stages

Cortaderia selloana is a perennial tussock. Flowering begins in late summer - early autumn and are capable of flowering in the first season from seed (Connor, 1974)

Uses

Cortaderia selloana is a vigorous ornamental grass widely used as a lawn specimen, but its quick growth rate and large size make it unsuitable for most home landscapes (Gilman, 1999). However, it is ideal for barrier or windbreak plantings and has a place in larger areas such as along highways or in commercial or industrial landscapes. *C. selloana* has been used to control erosion in serpentine soils (Danielsen *et al.* 2003). Selected strains were produced and used from the 1930's in New Zealand as a supplementary fodder for cattle (Lynch and Osborne, 1948)

Habitat Description
In its native range, in South America *Cortaderia selloana* grows in relatively damp soils and along river margins. *C. selloana* is found along streams and in the low wet areas of Argentina and southern Brazil. In its introduced range *C. selloana* can be found in sub-humid and semi-arid subtropical regions. Pampas is capable of becoming established on a wide variety of soil types. Deep soil with good drainage gives best growth results. It is often found in open sunny places which receive added moisture, becoming naturalised as a weed in damp places, depressions, along stream banks, the margins of mangrove swamps and, in particular, disturbed areas associated with roads, pipeline cuts and walking trails in forest areas and waste places. Knowles and Ecroyd (1985) state that pampas is sensitive to frost at the seedling stage but will become more frost tolerant with age.

Reproduction
Cortaderia selloana reproduces by seed. Seeds are primarily wind-dispersed and are capable of dispersal distances up to 20 miles (Starr *et al.* 2003). *C.selloana* is gynodioecius but behaves dioeciously in nature (Knowles and Ecroyd, 1985). Female seeds have long fine hairs on the lemma making it ideal for wind dispersal. Hermaphrodite seeds don't have these hairs (McGlone MSc thesis, 2003). Female plants are capable of producing up to 100 000 seeds per flowerhead (Ecroyd et al. 1984)

Nutrition
Cortaderia selloana succeeds in most soils, preferring a damp well-drained sandy or loamy soil. It is inclined to be intolerant of cold clay soils. It succeeds in dry soils. *C. selloana* prefers a sunny sheltered position, and is very tolerant of maritime exposure (Plants for a Future, 2000)

General Impacts
Cortaderia selloana can form dense stands that exclude other plants. Its sharp leaves cut skin and can limit recreational use of areas, and it can form dense colonies that can become or increase fire hazards (May *et al.,* UNDATED). Once seedlings become established, it is a substantial threat to the ecological quality of preserves, particularly in coastal and grassland sites due to competition with native plants. Its rapid growth and accumulation of above ground and below ground biomass allow it to acquire light, moisture, and nutrients that would be used by other plants. It can be damaging even at low densities because of the amount of cover it can occupy (Starr *et al.* 2003). Studies comparing *C. selloana* with *Cortaderia jubata* a similar species found that *C. selloana* is genetically more diverse and could be one of the reasons of its success (Lambrinos, 2001).These results are consistent with the hypothesis that genetic variability enables better utilisation of heterogeneous habitats as well as promoting greater competitive abilities. In California, *C. selloana* inhabits a greater range of environmental conditions expanding into continental climatic zones.
The rapid spread of pampas into exotic forests in New Zealand is a particular problem due to it's competition with pine, fire hazard, reduced accessibility and cost of control (Gadgil *et al*., 1984). Also the great quantity of fluffy seed has caused problems for kiwifruit growers since it clings to the fruit and causes it to be rejected for exprot (Knowles and Tombleson, 1987).

Management Info
Preventative measures: A Risk assessment of *Cortaderia selloana* for Australia was prepared by Pacific Island Ecosystems at Risk (PIER) using the Australian risk assessment system (Pheloung, 1995). The result is a score of 24 and a recommendation of: reject the plant for import (Australia) or species likely to be a pest (Pacific).
Physical: Seedlings and small plants can be hand pulled or dug up especially in loose ashy soils. It is somewhat harder to pull or dig up in lava and compounded soils. Larger plants can be removed by heavy machinery. Care should be taken to contain any seeds or flowering stalks and these should be double bagged and disposed of in the garbage or left on site. Workers should take care to protect themselves when manually removing Cortaderia as it has sharp serrated leaves that can cut unprotected skin (Starr *et al.* 2003). Care should also be taken that all rhizomes are removed so there is no re-establishment.
\r\nChemical: Chemical control is resorted to when mechanical removal cannot be employed. Foliar applications of Roundup (4% solution) or Roundup Pro (2% solution) (any glyphosate product) are effective in controlling pampas grass (Starr *et al.* 2003). Plants should be sprayed until wet but not to the point of run off. In wild areas, aerial spray by helicopter is employed. Leaving plants in place after spraying will result in less disturbance and may help reduce subsequent seedling germination in the area. May *et al.* (UNDATED) suggest removing the foliage first through cutting or burning, and then treating the re-growth with a post-emergence herbicide.

Pathway
Cortaderia selloana has value as fodder (Gadgil *et al.,* 1984)*Cortaderia selloana* is ideal for barrier or windbreak plantings and has a place in larger areas such as along highways or in commercial or industrial landscapes (Gilman, 1999).*Cortaderia selloana* is a vigorous ornamental grass widely used as a lawn specimen (Gilman, 1999).

Principal source: *Cortaderia selloana* (PIER 2002).
Pampas Grass (May *et al.*, UNDATED).

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Mrs Heidi Pene (Msc), Pest Plant Contractor to Environment Waikato.

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ALIEN RANGE

[2] AUSTRALIA
[1] FRANCE
[1] ITALY
[8] NEW ZEALAND
[1] SWAZILAND
[1] COOK ISLANDS
[1] FRENCH POLYNESIA
[1] NEW CALEDONIA
[1] REUNION
[19] UNITED STATES

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Spanish:
La lista de especies del Sistema de informaci&#65533;n sobre especies invasoras de m&#65533;xico cuenta actualmente con informaci&#65533;n aceca de nombre cient&#65533;fico, familia, grupo y nombre com&#65533;n, as&#65533; como h&#65533;bitat, estado de la invasi&#65533;n en M&#65533;xico, rutas de introducci&#65533;n y ligas a otros sitios especializados. Algunas de las especies de mayor riesgo ya tienen una liga directa a la p&#65533;gina de alertas. Es importante resaltar que estas listas se encuentran en constante proceso de actualizaci&#65533;n, por favor consulte la portada (http://www.conabio.gob.mx/invasoras/index.php/Portada), en la secci&#65533;n novedades, para conocer los cambios.
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