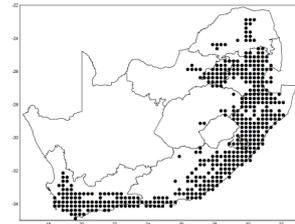


# ARC-PPRI FACT SHEETS ON INVASIVE ALIEN PLANTS AND THEIR CONTROL IN SOUTH AFRICA

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## Black wattle *Acacia mearnsii*



**BLACK WATTLE** is a tall-growing and thornless evergreen tree with deep green, bipinnate leaves, which have golden tips when young. Small glands occur along the main stem of the leaves (i), both at and between the junctions of the pinnae pairs. Trees bear sprays of creamy-yellow, globular and fragrant flowerheads (ii) in spring. These are followed by bunches of green seed pods (iii) that turn brown as they ripen, and split open to release small black seeds during summer. Black wattle was first introduced into South Africa from Australia in the mid 1800s. In the following years it was planted extensively to satisfy demands from a burgeoning forestry industry, and for production of tannin from the bark, as well as for pulp used in the production of high quality paper. It remains a valuable tree crop with large areas under commercial plantations. However, black wattle has become invasive in almost every province in South Africa. It is registered as a category 2 declared invader in South Africa, and may only be grown for commercial reasons under strict conditions. In all other situations black wattle must be controlled or eradicated.



### THE PROBLEM

This is one of several Australian *Acacia* species that has become invasive in South Africa where it has invaded grasslands and forest gaps extensively, as well as river courses (iv), in all provinces except the Northern Cape. Black wattle is a very fast growing plant, which reaches reproductive maturity within a few years. The thousands of seeds produced annually by each plant have hard, water-impermeable seed coats, and seeds can accumulate in the soil at high densities where they remain viable for up to 80 years. Germination of seed is stimulated by fire, which often results in dense thickets of black wattle emerging in burned areas. Black wattle is drought resistant and it is able to fix atmospheric nitrogen and enrich poor soil. Consequently, it is able to outcompete, and eventually displace, indigenous vegetation. In addition, dense stands that grow along rivers dramatically reduce water volume and impede flows.



### THE SOLUTION

Registered herbicides are available to control black wattle but, together with mechanical control, are costly and labour intensive. The only sustainable solution is a well planned approach integrating biological control to reduce seed production, mechanical and chemical control, and rehabilitation of cleared areas. Owing to the fact that black wattle is of commercial importance, only seed-reducing insects have been released to control it. These insects are the seed-feeding weevil *Melanterius maculatus* and the flower-galling fly *Dasineura rubiformis*. In addition, a locally occurring wood-rot fungus *Cylindrobasidium laeve* has been developed as a cut-stump inoculant. It can be used to prevent coppicing of felled trees instead of herbicides, particularly in ecologically sensitive areas.



environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

