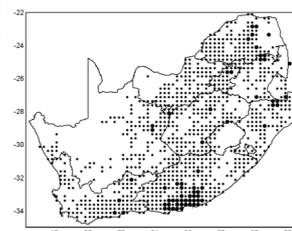


ARC-PPRI FACT SHEETS ON INVASIVE ALIEN PLANTS AND THEIR CONTROL IN SOUTH AFRICA

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PRICKLY PEAR is a branched shrub or tree cactus, which may reach a height of 5m (i). It is indigenous to Mexico, and the spined variety is thought to have been introduced into South Africa by the early colonialists in the eighteenth century who used it as fencing. Flattened, grey to green cladodes branch from a trunk which becomes woody with age. The cladodes are longer than broad, and vary between heavily spined to spineless. Raised areoles are woolly and may be small to large. If spined, each areole contains 3-6 straight or curved spines up to 10 cm long. Young cladodes develop minute leaves, but these soon fall off. Attractive, bright yellow or orange flowers (ii) are borne between October and December. Flowers are followed by succulent berries which redden when ripe. The fruit are edible and tasty (iii), and are eaten as is, or used for making jam. Prickly pear is a category 1 declared weed in South Africa and must be controlled, or eradicated where possible. However, this regulation excludes all spineless cactus pear cultivars.



THE PROBLEM

In the arid regions of the Karoo and the Eastern Cape, prickly pear was planted as an ornamental, for fencing, and for use as fodder for livestock during drought. Both the spined and the spineless variety were used for this purpose. The plants spread vegetatively when cladodes come into contact with the soil, and by seed spread by birds and other animals. When reproducing from seed, the spineless variety reverts to the original, spined variety. By 1890, prickly pear had become a serious problem in this region of the country, infesting an area of some 900 000 ha, where it formed impenetrable thickets (iv) which destroyed agricultural land. Darker dots on the distribution map show where plants are abundant, lighter dots show where the plants are more sparsely distributed.

THE SOLUTION

Owing to the density of the infestation, attempts to control prickly pear mechanically and with herbicides were largely ineffective and, in 1932, a biological control programme was initiated. Although four biological control agents were released on prickly pear, only two have been significant in its control—the cochineal insect, *Dactylopius opuntiae*, and the moth, *Cactoblastis cactorum*. The cochineal insect is especially effective and, consequently, almost 90% of the original infested landscape has been restored. Unfortunately, it is not as effective in cool, wet habitats, and does not attack woody parts of the plant. Although the moth is extremely damaging, it is only effective on smaller, more succulent plants. In addition, the larvae and eggs are heavily preyed on by natural enemies, especially ants. Biological control has been so effective against prickly pear that most people have forgotten how severe the problem was before the biocontrol agents were released. Currently, the spineless variety of cactus pear is valued for its fruit and as fodder and, unfortunately, the biocontrol agents are being seen as pests.



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



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