



FITZROY BASIN ASSOCIATION

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Reducing the spread

Treating Parkinsonia has broad benefits

On Donald Black's property Langley, a 4,881 hectare cattle property about halfway between Middlemount and Clarke Creek, Parkinsonia—a Weed of National Significance—has gained a foothold, reducing the land available for grazing cattle and contributing a massive weed seed load for other properties further downstream.

Langley has large floodplain areas fed from both the Connors and Isaac rivers and it receives massive deposits of Parkinsonia seed when floodwaters recede, leading Donald to seek help from Fitzroy Basin Association Inc. (FBA) and delivery partner Capricornia Catchments to control the invasive weed.

Parkinsonia (*Parkinsonia aculeata*) is an introduced shrub that forms dense, thorny thickets, which are often impenetrable to stock and humans alike. It is regarded as one of the worst weeds in Australia because of its invasiveness, potential for spread, and economic and environmental impacts.

Floodplains and riparian areas are particularly vulnerable to Parkinsonia infestations as it is a prolific producer of seeds that are readily transported downstream in floodwaters, so controlling it upstream is particularly important in preventing its spread.

If left untreated, Parkinsonia displaces native vegetation and reduces access to land and waterways. "It causes a significant economic loss to landholders due to the increased difficulty in mustering stock, the reduction in stock access to watering points and the decrease in primary production of grasses that are displaced," said Donald.



Monitoring the success of biocontrol methods, in this case a leaf-eating looper moth known by its nickname UU, is crucial to the future management of Parkinsonia infestations on Langley.

"Additionally, Parkinsonia infestations provide refuges for feral animals, especially pigs," he said.

With the support of FBA and Capricornia Catchments through funding from the Queensland Government's Regional Natural Resource Management Investment Program, Donald was able to treat over 1100 hectares of Parkinsonia on Langley's floodplains and riparian areas.

He mainly used the basal bark spraying technique, which involves spraying herbicide on the shrub's bark around the entire trunk, and from ground level to at least 30 centimetres above the ground. Although the method is time-consuming, it is the method recommended for use near waterways as it minimises the potential for herbicide drifting accidentally onto non-target plants or into the water.

Donald also released a biocontrol agent, *Eueupithecia cisplatensis* (known by its nickname UU), a Parkinsonia leaf-eating looper moth and is monitoring its impacts on a trial area. Through the project, Donald identified a significant area of Parkinsonia with a naturally occurring dieback fungi, which could also prove to be useful for controlling the invasive weed.

As part of Langley's weed control program, Donald is monitoring and spraying regrowth, as well as managing grazing to maintain dense groundcover in seasonal times, thus reducing favourable conditions for weed seed germination.

Controlling the Parkinsonia infestation on Langley has helped lessen the spread of this weed downstream. It has also helped provide groundcover and has lessened soil erosion in the previously infested areas, which helps improve his enterprise's profitability as well as the quality of water entering the Great Barrier Reef.

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