

BIOLOGICAL CONTROL OF GRASS WEEDS AFFECTING THE CARRYING CAPACITY OF PASTURES IN AUSTRALIA

Jeremy Bradley

INNOVATION

The highly invasive, introduced weed, giant rat's tail grass, *Sporobolus* and its relatives pose a major threat to Australia's livestock industries. These unpalatable grasses cause severe tooth wear and reduce the lifespan of livestock by several years. The invasion has been assessed to reduce the carrying capacity of pastures by 50%. Many farmers shy entry into organic and biodynamic farming fearing these weeds.

A widespread Australian native saprophytic fungus has been found effective to control these introduced plants.

JEREMY BRADLEY



Jeremy Bradley is a farmer on the Mid North Coast region of New South Wales, Australia. Soil security and catchment health are his passions. He has twice been recognised for innovations in sustainable agriculture through the

NSW Landcare Awards. Over the years, Jeremy's work with soil biology has inspired and informed many of his fellow farmers.

CONTACT: Beechwood Biological Solutions Pty Ltd, 83 Capararos Rd, Beechwood, NSW 2446, Australia.

Web: www.parra-trooper.com.au

Email: jeremy@parra-trooper.com.au

DESCRIPTION

Primarily out of the necessity to control *Sporobolus* weeds on his own property, Jeremy Bradley employed his practical skills and knowledge of biological farming to develop a product containing the fungus, actively growing on a substrate based on its saprophytic affiliation. The substrate is made primarily from certified organic ingredients, and Australian certifying bodies have allowed the product as an input on certified organic and biodynamic farms.



Giant rat's tail grass is invading vast areas of Australian pasture

The fungal concentrate is added to water and sprayed over affected areas. The product contains the hyphae and spores of the fungus, and when sprayed out in moist weather conditions, fragments of fungal hyphae continue to grow and rapidly initiate crown rot, thus destroying the invasive grasses which damage the pastures and valuable livestock.

RELEVANCE

The innovation is a particularly important weed control tool for dairy farmers and those farming in the catchments of the Great Barrier Reef (2,300km of coastline) where the use of residual herbicides can impact on the World Heritage Area.



Nigrospora crown rot in giant rat's tail grass

The availability of a biological control option for weedy *Sporobolus* grasses will improve the productivity and profitability of grazing systems. This solution is also likely to encourage the skeptical and hesitant to start organic and biodynamic farming, and greater participation in the Australian organic livestock industries.