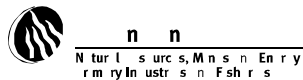


Parthenium weed management

May 2004



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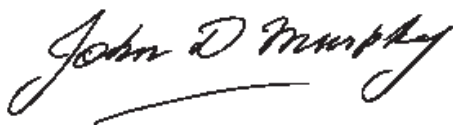
Front cover:
Left: Table Mountain, Clermont District, is in the heart of parthenium country in central Queensland. Right: Parthenium weed in the Rolleston district.

Foreword

Parthenium weed is currently found widely across the central highlands of Queensland, with smaller populations in southern and western Queensland and sporadic occurrences in New South Wales and the Northern Territory. Parthenium represents a potential threat to grazing and cropping lands and natural ecosystems across northern and eastern Australia. There is growing community concern over the spread of parthenium (both within Queensland and interstate), and its effects on agriculture, on the environment and on human health.

The Parthenium Action Group Inc. is a community group that was formed in the central highlands of Queensland in 1994. The group was contracted by the National Weeds Program through the National Parthenium Weed Management Group to produce this edition on the management of parthenium weed. It updates *Parthenium Weed Best Management Practice* (2000).

The book includes an extensive section of landholder and state agency experiences in parthenium weed control, representing a valuable opportunity to consider the merits of parthenium management strategies applied successfully by others.

A handwritten signature in black ink that reads "John D. Murphy". The signature is written in a cursive style with a long horizontal flourish underneath.

John Murphy
Chairman
National Parthenium Weed Management Group

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Introduction

Parthenium—a weed of national significance

Parthenium weed is an aggressive annual herb, colonising roadsides, fallow land and overgrazed pastures where grass cover is poor. It does not normally establish in vigorous pastures or intact native vegetation. As it can only reproduce and spread by seed, the seed ecology of parthenium weed contributes greatly to its success in semi-arid environments.

Parthenium weed was introduced to central Queensland forty years ago in a shipment of grass seed from the United States of America. In that short period, it has advanced from isolated outbreaks to establish large core areas of self-regenerating populations across the central highlands of Queensland, with smaller populations in the south and west, and sporadic occurrences in New South Wales and the Northern Territory.

Coming to terms with parthenium weed, particularly in Queensland grazed landscapes, has been an intensive learning process for land managers. They have had to accept its presence, understand its ecology, and develop management strategies to accommodate parthenium weed in grazing systems.

In Queensland the annual cost of parthenium weed to grazing and cropping industries (in production losses and on-farm control costs) has been estimated at \$16 million and \$6 million respectively. Biological control programs funded by Queensland government departments have cost a further \$9 million and the expenditure on roadside controls and washdown facilities has also been significant. In New South Wales the cost of parthenium weed prevention is high. The environmental and social costs have not been quantified but the serious allergic reactions in humans are well known, and significant impacts on biodiversity have been observed.



▲ Parthenium weed.

A national strategy

A national strategy was proposed in 2001. Its vision is that 'Parthenium weed is confined to Queensland and its social, economic and environmental impacts are reduced to a minimum'.

The strategy aims to deliver four outcomes:

- Parthenium weed is prevented from spreading to and impacting on new areas.
- The community is aware of parthenium weed and provided with quality information and the skills to assist in its detection and reduction.
- The impacts of established parthenium weed are reduced.
- Parthenium weed management is coordinated at a national level.

This book describes parthenium weed and provides basic information about its ecology and biology, reproduction and spread, current distribution, and potential threat. It also provides information on management and control aspects including spread minimisation, pasture management, herbicide use, biological control and health aspects.



▲ A dense infestation of parthenium weed in central Queensland.

