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MESQUITE - A MAJOR THREAT TO QUEENSLAND'S RANGELANDS

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ABSTRACT

Mesquite is a major threat to Queensland's rangelands. In small areas of south west and north west Queensland mesquite has already demonstrated the devastation it can cause. If not controlled, mesquite has the potential to cause an immense cost to the grazing industry.

INTRODUCTION

Mesquite has devastated part of Queensland's rangelands, as it has done in most other rangelands of the world (Harding, 1987). It will continue to do so if not controlled. Mesquite is adapted to most areas of Queensland. The seed is spread by several mechanisms and is estimated to have a longevity of at least 20 years. Unless continued control efforts are made, mesquite could well devastate more of Queensland's rangelands.

Mesquite species found in Queensland

Several species of mesquite have been found in Queensland. The major infestations include *Prosopis flexuosa* at Quilpie, *Prosopis limensis*, Benth and a hybrid, *Prosopis juliflora* (SW) DC. X *Prosopis velutina* Wooton in the Mckinlay area.

Mesquite as a Weed

Mesquite affects both rangeland production and the ecosystem (Harding, 1987). Mesquite has minimal fodder value in Queensland. Mesquite forms impenetrable thickets which render grazing land useless and increase management costs. Mesquite's resprouting ability and extensive rooting system make control difficult, and costly. If unchecked, mesquite could render vast tracts of Queensland's rangelands useless.

Environmental Adaptations

In Queensland and in the USA (Anon 1973) mesquite grows on a range of soil types, rainfall conditions and at varying altitudes. There are no environmental barriers to the spread of mesquite over Queensland's rangelands. Mesquite plants reproduce by seed, and vegetatively by growing points located on the basal crown. Large numbers of hard, long lived seeds are produced.

Most Queensland mesquite seed is spread via the digestive tracts of animals and embedding in manure. This allows ideal conditions for germination and establishment.

The main cause for mesquite spread in US rangelands since European settlement has been attributed to the spread of seed by domestic animals and lack of fires (Brown and Archer, 1989). This history of invasion could well repeat itself in Queensland's rangelands where fire is restricted and domestic, native and feral animals spread seed. This is particularly true of the mulga lands where perennial grass cover is low due to degradation and drought (Miles 1988).

Spread of Mesquite in Western Queensland

Reportedly, mesquite was introduced as two plants to Quilpie in south west Queensland in the 1930's. Mesquite now covers 300 000 ha in a strip north and south of Quilpie. In the Winton to Mckinlay area of north west Queensland, mesquite has become a similar problem. Mesquite seed is spread by floodwaters and native and domestic stock, including travelling stock.

Mesquite Control

At present, control options are limited to basal bark chemical application and individual tree grubbing for sparse infestations, and bladeploughing for dense infestations. With low commodity prices, and low land values, mesquite control is not economic in terms of increased production. Government control programs and subsidies for mesquite control are in place to assist graziers and must be maintained. Awareness among graziers, local authorities, government departments and others must also be maintained to ensure the control of this weed.

DISCUSSION

Mesquite affects pasture production, species composition and management, is a haven for feral animals and eventually renders grazing land useless. This has been witnessed in other rangelands of the world, and several areas of western Queensland. Government subsidised control programs and awareness campaigns must be continued. The sooner the seed source is eradicated, the less the future problem will be. The cheapest control is achieved by doing more, and doing it sooner. Mesquite has, and most probably always will have, the potential to devastate Queensland's rangelands.

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