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The Australian Rangeland Society

PATTERNS OF CHANGE IN THE LYNDON LAND CONSERVATION DISTRICT

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Recognizing the need for a concerted, co-ordinated land care programme in their area, a group of pastoralists formed the Lyndon Land Conservation District in 1987.

The group is made up of station owners and managers from 19 pastoral properties, together with representatives from the state government departments of Agriculture and of Conservation and Land Management. The Lyndon Land Conservation District covers an area of almost 3.5 million ha in a strip of land extending between 50 km and 300 km north of Carnarvon, Western Australia.

The climate is semi-arid with most stations receiving about 225 mm rainfall annually. Property sizes range from 75,000 ha to 450,000 ha with most carrying Merino sheep (approximately 300,000 head) and some cattle (approximately 2,000 head). Together, these enterprises generate about \$12 million of export income each year.

Much of Australia's rangeland suffers from land degradation, and the Lyndon Land Conservation District is no exception. Department of Agriculture surveys show that approximately 10 percent of the area is in a poor or severely degraded condition.

The Lyndon Land Conservation District members have formulated a set of objectives and strategies to begin addressing the land management problems in their area.

1. Total grazing control of rehabilitated areas
 - Encourage effective commercial kangaroo shooters.
 - Investigate a system of co-operative goat control.
 - Ensure adequate fencing of rehabilitated areas.
 - Remove stock from degraded areas.
 - Investigate electric fencing options for vermin control.
2. The development of alternative management strategies.
 - The investigation and documentation of rotational grazing systems.
 - Destocking of severely degraded areas.
 - Open days on stations adopting successful management strategies.
 - Demonstrations of alternations of management strategies using computer spreadsheet models.
3. The identification of cost effective successful regeneration strategies.
 - Purchase of tractor and plough.
 - Use of equipment in a range of country types and configurations.
 - Evaluate success of work.
 - Cost out different techniques.
 - Extend results to District members.
4. Education of newcomer pastoralists.
 - Invite new pastoralists to participate in group activities.
 - Visit new pastoralists.

- Supply new pastoralists with relevant information and results of previous work.
5. Identification of plants suitable for regeneration work.
 - Examine results of previous regeneration work.
 - Request further studies from WADA.
 - Request information feedback from WADA.
 6. Monitor results of goals 1,2,3,5.
 - Co-operative installation of monitoring sites with WADA.
 - Document monitoring site information.
 - Make regeneration monitoring information available to other members.

Funding from both State Assistance to Soil Conservation and the National Soil Conservation Programme has enabled the District to embark on a major project to demonstrate a range of regeneration strategies. Because of the enormous range of vegetation and soil types scattered throughout the District, no single strategy will be enough to cope with the problem.

Degraded coastal dunes will be rehabilitated using access control of both stock and human traffic, with the worst areas being covered in brush cuttings to hasten the regenerative process.

A grazing management demonstration will soon begin on an area of very fragile but productive soil that responds well to a more sophisticated type of grazing management than simply set stocking.

By far the biggest part of the project will be demonstration of different types of cultural regeneration on a range of land systems using the Lyndon Plough.

The Lyndon Plough is a unique arid zone regeneration implement jointly developed by District members, the Agriculture Department and Pederick's Engineering of Wagin. Commercially available ploughs were neither robust nor versatile enough to cope with the needs of the District due to the very hard soils and the range of land systems encountered.

The Lyndon Plough is a trailing implement that can be transported behind a 4WD vehicle. A tractor of between 100hp and 120hp is necessary to use the plough depending on soil type.

Hanging from a basic frame are three rippers at the front of the implement. These take most of the strain in breaking the soil surface. Behind the rippers, on two separate tool bars are a set of two opposed discs (for building banks) and behind these a set of four disc pitters. A revolving seed box is also included to enable reseeding of native shrubs and buffel grass into degraded areas.

Changes of configuration from opposed discs to disc pitters can be made in less than five minutes, making the implement extraordinarily versatile.

The plough has been used on about half the stations within the District, and will continue to travel throughout the area over the next three years.

The Lyndon Plough is on display during the field tour of this conference, following the Wednesday morning poster session.