LONG TERM MANAGEMENT OF CHENOPOD SHRUBLANDS: A 46 YEAR PERSPECTIVE

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LONG TERM MANAGEMENT OF CHENOPOD SHRUBLANDS: A 46 YEAR PERSPECTIVE

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SUMMARY

This report presents the results of a re-evaluation of the long-term shrub-density surveys of Jessup in 1948 and Lay in 1971, in the North-west sheep pastoral zone of South Australia.

These surveys examined the dynamics of the main perennial pasture shrubs upon which sheep are dependent during dry periods. They use the original Jessup technique of driving a vehicle across the stands to calibrate an estimation of density of the stands, using a system of six density stages.

At the same time, ecological status of the two main topfeed species in the area, Mulga and Western Myall, was also studied, using the same traverse routes.

Results have revealed that there has been a modest but significant improvement in the density and regeneration status of most of the shrub populations and a dramatic recovery in both tree species over the last 23 year period in the area studied. This has reversed the significant decline evident in these populations revealed by Lay during the 23 year period from 1948 to 1971. It is explained by

the occurrence of several significant rainfall events, resulting in extensive recruitment. Many of these seedlings have been able to establish with conservative stock management practices in most areas, coupled with low feral animal (rabbit) populations over the period.

There had been major fires in the western part of the area after record rainfalls in the early 1970's . The impacts of these fires on the vegetation was clearly apparent from the survey results.

The benefits arising for sheep growers in the district from this study are summarised. These are more fully detailed in a section of the Kingoonya District Plan, a document shortly to be printed detailing land management of the district, and produced by the Kingoonya Soil Conservation Board. In general it can be stated that sheep numbers of 300-350 per stock watering-point can be sustainably carried over the long-term, with much higher numbers possible during favourable climatic periods when ephemeral forage is abundant.

In common with other parts of the rangelands, a drought management strategy is a necessary component of management of the pastoral enterprises in this area, in order to avoid damage to these valuable drought-reserve shrubs.

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