

APPLICATION ABSTRACTS

Some characteristics of the trees used by sheep for diurnal camping and differences between the shade and nocturnal camps in a paddock on the Northern Tablelands of New South Wales

J.A. Taylor and D.A. Hedges

Provided individual trees were tall and their canopy deep and broad, sheep preferred to camp under apple (*Angophora floribunda*) and kurrajong trees (*Brachychiton populneum*) on the Northern Tablelands. The ground beneath the canopy of these trees was dominated by a grass (*Microlaena stipoides*) that remained green throughout the winter period. These camp sites are thus one of the few natural sources of green feed in a native pasture in the critical winter/early spring period. Thus the trees in a paddock constitute more than fence posts and firewood; trees like the apple are not useless, as they are commonly thought to be, but are an important source of shade and during winter provide green feed beneath their canopy for sheep.

The occurrence, distribution and characteristics of sheep camps on the Northern Tablelands of New South Wales

J.A. Taylor, D.A. Hedges and R.D.B. Whalley

A survey indicated that sheep camps occur in all types of paddocks on the Northern Tablelands of New South Wales but are most conspicuous in winter/early spring in native pastures. This is because the green feed on the camp stands out against the hayed-off pasture that predominates. Merinos and Dorset Horns have a different camping behaviour. The locations of Merino sheep camps were not associated with water or shelter but occurred at or about the highest point in a paddock. Where there was a choice, Merinos would camp on high sites with a north-easterly aspect. The camp can be the major source of green feed in native pastures in the late winter/early spring period, provided the vegetation is composed of palatable species.

Defoliation and its effects on *Enneapogon avenaceus* and *Cenchrus ciliaris* populations during two summer growth periods in central Australian rangelands

O.J.H. Bosch and the late M.L. Dudzinski

Persistence of the shortlived *Enneapogon avenaceus* (oat grass) populations in the open woodland communities of central Australia depends largely on how they are grazed and on the effects of the grazing on seed production during each growth period. Populations in which more than 60 per cent of the plants are either ungrazed or only lightly defoliated at the end of a growth period produce sufficient seed for their persistence. This can be achieved at grazing pressures of not more than one beast per 300 kg of *E. avenaceus* biomass.

Some open woodland communities now contain small patches of introduced *Cenchrus ciliaris* (buffel grass) populations. Although they were planted for range reclamation purposes, their maintenance is also important because of their role in reducing grazing pressure on the *E. avenaceus* populations. Because of the tolerance of *C. ciliaris* plants to grazing, the use of defoliation thresholds for their management is not important. However, defining management strategies to ensure the further spread of small planted *C. ciliaris* patches by allowing sufficient seed replenishment is of great importance and warrants further longer term investigation.

Productivity and management of western Queensland's rangelands

A.J. Pressland

This article documents the history of the pastoral industry in western Queensland, and presents a description of the various pasture types which comprise the basis of the industry. The Mitchell grass and mulga regions are treated in detail because of their geographical extent, and their contribution to rural productivity. An account of the present management systems, particularly as they affect the composition and stability of the pastures, follows, and the conclusion is drawn that these rangelands will continue to contribute significantly to the economic viability of the Australian nation.

Vegetation management of chenopod rangelands in South Australia

R.T. Lange, A.D. Nicolson and D.A. Nicolson

This article examines a method originally published by the pastoralist Peter Waite in 1896 for managing chenopod shrublands under sheep grazing in the South Australian arid zone. Waite's method aimed to achieve a situation where the shrubs were never eaten out, and where there was never any need to destock during drought for lack of water or feed. The Nicolson experience on Roopena station is reviewed in which most of the same principles as underlie Waite's method have been applied since 1919. This review shows how the main aims of Waite's method have been achieved and it demonstrates the advantages of this method of chenopod shrubland pastoralism.