



Managing New South Wales Rangelands



MANAGING NEW SOUTH WALES RANGELANDS

The semi-arid and arid rangelands, or pastoral country, of New South Wales cover over 30 million hectares (nearly half the area of the State) and support over 7 million sheep and about 120,000 beef cattle. Opportunity cropping of winter and summer grain or fodder crops is increasing along their eastern and southern margins.

Many land types are found in the rangelands, including low mountain ranges, low undulating stony and gravelly country, dunefields and plains of red sands, and extensive open river floodplains. These land types carry a variety of vegetation communities, including mallee, belah-rosewood, saltbush-bluebush, mulga, bimbale box – cypress pine and grasslands.

Each land type is able to carry different numbers of stock, according to its topography, its soil type, its tree and shrub cover and its pasture type.

The pastures of many areas are now less productive than they could be. There have been widespread losses of the better forage plants and replacement by less desirable plants and inedible woody shrubs.

Many areas still bear the scars of the catastrophic erosion that took place following settlement and in the first half of this century. These areas produce little if any forage of real value.

MANAGEMENT OF RANGELANDS IS DIFFERENT TO THAT OF AGRICULTURAL LAND

Farmers and graziers in agricultural areas can take advantage of longer and more reliable seasons of pasture growth. They also have a wide range of improved pastures and cropping and grazing rotations to choose from. Graziers on rangelands do not have this degree of flexibility and for them keeping stock in good condition depends on maintaining a base resource of mainly native vegetation in good order.

KEEPING RANGELAND COUNTRY IN GOOD CONDITION

Applying an appropriate grazing pressure is the key to successfully managing this land. However, determining the appropriate grazing pressure is not easy, and requires an understanding of a number of complex variables.

Rainfall recorded in any one month or year varies widely, from nil to flood proportions. Frequent droughts impose stress on perennial plants.

Following winter rainfall **annual grasses and herbage** provide excellent nutrition for stock. However, it is the **perennial edible bushes and grasses** that must get the stock through the rest of the year and provide protective ground cover during dry periods.

Good stands of perennials should be maintained.

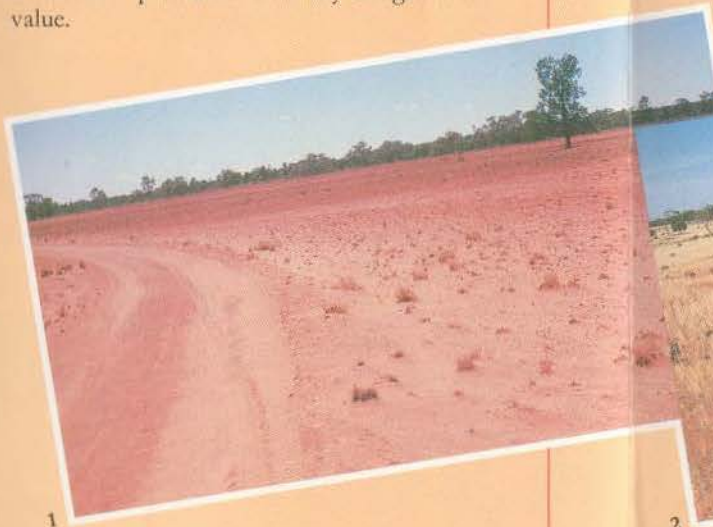
Changes in the composition of pasture can occur either too slowly or too infrequently for most people to notice. For example, some nutritious saltbush pastures have given way to unpalatable stands of poverty bushes. Perennial grass pastures have given way to annuals and inedible woody shrubs. Such “weeds” may dominate previously productive areas.

Soils have different susceptibilities to erosion. Red and brown texture-contrast soils often support valuable communities of saltbush and bluebush. But these soils are prone to serious erosion once plant cover is removed.

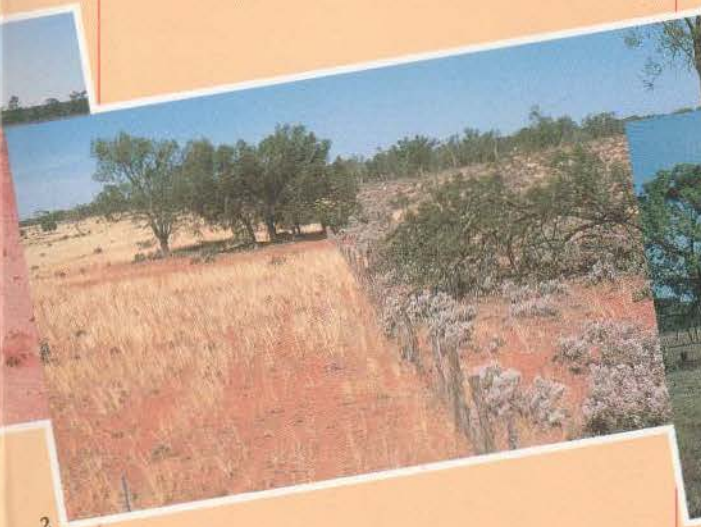
1. *Stocking during drought helps destroy grass butts and accelerates wind erosion.*

2. *Pearl bluebush provides drought fodder and protects the soil from wind erosion. Where bush has disappeared the short-lived pastures die off in dry times, blow away and leave the ground bare.*

3. *Although pasture degeneration occurs on heavy clay soils after heavy stocking the soil withstands erosion unless powdered by stock trampling.*



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When topsoil is lost, the exposed subsoil becomes scalded and bare. Natural regeneration of plants is extremely slow.

Hard red earths on sloping country have been severely watersheeted, have become unproductive, and now lose most rainfall as run-off.

Sandy soils lose topsoil by windsheeting if vegetation is removed causing dust storms and sand drift.

STOCK AND NATIVE VEGETATION CAN CO-EXIST

Provided appropriate grazing pressures are exercised these lands can support profitable livestock numbers and remain in good condition. Degraded areas require special consideration or treatment and less use if they are to recover.

DEGRADED AREAS CAN BE REHABILITATED

Revegetation programs, with the aid of soil mechanical treatments, are proving effective but are slow and often expensive. Revegetation programs can provide a gradual cure but not a prevention for degradation.

HOW CAN THE RANGELANDS BE MANAGED TO PREVENT DEGRADATION?

To maintain or improve pastures and their productivity, graziers need some way of checking on their resources and how they respond to management.



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Without an early warning system, they remain at risk to resource depletion, especially during droughts. Graziers need a pasture monitoring system that works and is practical.

The Soil Conservation Service has been researching and advising on many aspects of rangeland management and rehabilitation in western New South Wales since the 1940's. The Service is helping graziers to adopt effective pasture monitoring systems and to design property development and management strategies which will maintain the soil and pasture resources. In addition, the Service provides advice and assistance for land rehabilitation programs.

4. Inedible woody weeds are invading formerly open grasslands, competing successfully with grasses and herbage, and gradually forming dense stands over bare soil.

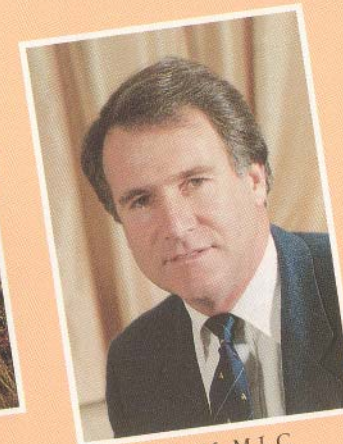
5. Rangeland pastures can support stock in most seasons as long as a mixture of stabilising perennials and palatable annual species can be maintained.

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