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The Australian Rangeland Society

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WHAT HOPES FOR THE PASTORAL INDUSTRY
IN THE ARID ZONE OF AUSTRALIA?

After 50 years of experience in the ARid Zone, I am not optimistic that it is possible for economic continuous grazing of the pastoral lands without very drastic management changes.

In an article of mine, written and published in 1935, I said :

"The man from the outback ... pastoral areas will be driven from the land sooner or later. A few good seasons may postpone the inevitable, but at the present rate of degeneration (SA) it will be in the near future ... "

To explain that statement :

At that time I was living in the Arid Zone, on a pastoral area of about 300,000 acres, where I ran up to 5000 sheep and 100 cattle. This was virgin country - Saltbush, Mulga, Bluebush, Myall, with well vegetated sand ridges; my carrying capacity was about one sheep to forty acres. My experience here, and in the northern part of the Flinders Ranges where I managed a property for twelve years, indicated to me that hard hoofed introduced animals (domestic animals) largely were responsible for the destruction of the soft soils of the Arid Zone. It is not generally appreciated that none of our native animals is hard hoofed. Their feet are padded and resilient, and thus adapted to cause little damage to an old and vulnerable land.

When small water supplies (200 gallons per day) were associated with large paddocks (25-30 square miles) and stocking rates were low, there was very little damage to vegetation. The large, lightly stocked paddocks meant that there was always good feed on the remote areas where stock moved in moist cool weather. Was it economic? Yes -- but only because

it was managed and worked by myself and one station hand, with irregular assistance from Aborigines.

The Arid Zone comprises over 75% of Australia, that is, according to Prescott --

	<u>000 Sq.Miles</u>	<u>Percentage of Aust.</u>
Extensive sheep and cattle country	1344	45.1
Sandy and stony desert areas	580	19.5
Stony table,ands and ranges of the deserts and tropics	379	12.7
	<hr/>	
	2303	77.3

There are three major users of the land resources of the Arid Zone - Pastoral, Recreational and Mining. The latter two are acting responsibly.

The percentage of the Arid Zone affected by mining or projected for mining is very small, and there is no doubt the mining industry's restoration work, now being done by professionals, is satisfactory in most mined areas.

Recreation is a relatively new industry and the authorities also are coping with the problem of an industry expanding faster than any other, and competitive with the pastoral industry nationally and economically.

The Standing Committee on Soil Conservation has estimated that about 30% of the Arid Zone is "too dry even for pastoral production." Prescott has estimated that this area comprises 'Sandy and Stony Desert' or 'Stony Tablelands and ranges of the deserts and tropics' (see table above). The major threat to this vast area is that of feral animals. Their impact on the Arid Zone has not been assessed or faced by Governments. We have seen how the European Rabbit and the Cat have adapted to existence in drought years; and how they can proliferate in good seasons. Other animals we know will also adapt to the Arid environment. It is significant that 70,000 camels were shot in the Northern Territory in 1979.

The pastoral industry in the Arid Zone is an important industry, providing grazing for about one-quarter of livestock in Australia. Statistics indicate that its relative value is declining, being based on a diminishing resource -- perennial vegetation. The Standing Committee on Soil Conservation (SCSC) states :

"The problems of the Arid Zone are still not fully assessed; the size, ecological fragility and low productivity of the Zone impose great difficulties."

It seems to be impossible to develop systems of land use and land management which maintain and, where possible, improve the productivity and stability of the land, and minimise land degradation.

Australia is the last great arid continent to be exploited by the white man, and I emphasise white, for the Aborigines have lived on the land for 40,000 years or more; and though they most certainly modified it over this period, they did not destroy it as we are destroying it today

We do not understand the functions of the inter-related resources of the Arid Zone -- we have not demonstrated that our land use practices are any better than those of pre-history exploitive land uses which resulted in the deserts of the Old World.

The fact the Rangeland Society has been formed and comprises pastoralists, scientists and others, indicates a real appreciation of the Arid Zone's problems.

There are very few pastoral properties which have been continuously stocked that do not show loss of perennial vegetation and tree cover, erosion and desertification. Huge areas of arid pastoral lands are now deserts. Anyone who has travelled from Marree in the South to Birdsville will have seen the utter devastation created in not much over 50 years. It does not appear that removal of stock has increased vegetative cover in this area east of

Lake Eyre. This scene is repeated throughout the pastoral lands, although not to the same extent.

The size of the deserts surrounding permanent water is in almost direct relationship to the volume of water for stock, and of course the soil type. Too much water is the cause of desertification because of the concentration of stock it engenders, particularly in times of drought. My little wells of 200 gallons per day carrying a few hundred sheep showed little vegetation deterioration and no desertification.

On one property not far from Katherine the land owner had not bulldozed the trees - he had removed some low scrub and under-storey vegetation, and spread super by air. His parklike woodland had a wide range of native grasses and clovers and his cattle were all fat. His neighbours, who had cleared every tree, were suffering from drought. Even the Research Station had no feed and miserable cattle. The answer surely was - Leave the trees and keep the canopy.

The benefit of the infrequent rains of the Arid Zone can be increased by maintaining tree and shrub cover, thereby reducing wind velocity and providing shade.

The stock-carrying capacity of the Arid Zone is not high, and it must tend to decrease as the perennial vegetation lessens and erosion increases. Some people think that irrigation is the hope of the Arid Zone, but there are very few areas in the world where broad-acre irrigation has not led to rising water tables and salting. Before spending money on costly irrigation schemes, a great deal more investigation and research is needed.

In conclusion --

I cannot do more than quote from the Preface to the published Proceedings of a Symposium held in the Academy of Science in Canberra, May 1969, edited by R.O. Slatyer and R.A. Perry. The Preface by Slatyer states --

- History has shown that man's utilisation of the world's arid lands has, in general, caused progressive deterioration of the natural vegetation, of the animal resources, and finally of the landscape itself.
- In Australia, although little arid land settlement extends for much longer than 100 years, limited areas have already been seriously damaged, and signs of increasing degradation are apparent in most regions currently being grazed. There seems little doubt that progressive deterioration will occur if present practices are continued.
- In order to arrest this tendency and preserve the arid lands for the future in a manner which is consistent with non-destructive utilisation, it is clearly desirable that the national character of the problems should be recognised and steps taken to solve them.
- The problems are complex. They call for an assessment of the resources of the arid lands, the changes that have resulted from utilisation and the significance of those changes, and planning to assure long term conservation of the arid lands.
- Differences of opinion as to the best means of arid land utilisation are inevitable. In particular, there is a conflict of interest between those whose primary concern is to conserve the arid land resource and those who wish to obtain an economic return from it.

At least there are indications of what we should not do.
Those who are not prepared to accept these land use practices
will destroy the Arid Zone and, in so doing, themselves.

DEWAR. GOODE
