



Symbol of impending desert, a dust storm approaches Alice Springs, in Australia's perennially dry outback.

FROM AUSTRALIA

Drought becomes disaster

Over exploitation is threatening to turn an ever-dry continent into a huge desert

Perennially dry Australia, home of the sheep station and the dusty outback, has had to struggle with lack of rain since the first colonist set foot on the other-worldly continent.

The so-far successful struggle has bred a certain familiarity with the problem, as well as an inevitable accompaniment of contempt. If drought is a difficulty, it is one that has been dealt with adequately and profitably in the past.

But the very success of struggling with drought has brought the continent to what soil scientists say is a crisis point: Three-quarters of the Australian continent—three million square miles—may become a perpetual desert.

Australia's chief of plant industry, Dr. John Falk, after an extensive tour of the more arid areas, confesses himself shocked.

Great spaces left by the blown soils are like huge outbreaks of chicken pox on the land, he says.

Alarmed by the grim picture, agriculture and soil conservation scientists, under agronomist Dr. Ray Perry, have formed a new rangelands research group to focus public attention on the situation.

Some areas of the threatened land could deteriorate rapidly into Sahara-type deserts, he claims.

Inland winds blow off the topsoil over millions of acres of sparse sheep and cattle country to inflict red, pink

and brown rain on cities 1,000 miles away.

The danger comes from over-grazing under the current system of lease of Government-owned country. Native pastures and plants are being grazed out of existence.

The disappearance of plants that evolved to withstand the harsh conditions of the world's driest continent, where in some parts rain comes once in seven years, leaves bared soils at the mercy of heat, contraction and wind.

The area carries 48 million sheep and 4.5 million cattle. Maintained at its present level, its export earning over the next three decades would be at least \$14,000 million. Unless the danger is averted the dust bowl could become a national disaster.

Dr. Falk is grim and unhopeful. The best that can be done is to prevent further desolation, he says. There is nothing in sight either in plant material or technique that can reestablish the blighted millions of acres.

The chairman of Australia's Commonwealth Scientific Industrial Research Organization, Sir Frederick White, has called for a concerted attack to save the national resource.

Dr. Perry warns the Government that time is fast running out. "Alternatives are clear. Either we learn how to maintain the condition of this vast area or watch it go down into wasteland with no hope of restoration."

The research group's plans are now to call in scientists from universities and state conservationists to weld scientific resources into a national blueprint.

Centers will be set up throughout the outback to establish management techniques based on research into animal behavior, plant recovery systems, and a continent-wide stocktaking of native pastures.

A world search for arid zone lucernes (a kind of alfalfa) will be intensified. But the scientists feel there is little chance that anything will be found more suitable than the existing native plant species.

In the fringe areas where annual rainfall raises above 15 inches a year, there will be a case for careful use of soil nutrients, nitrogen and phosphate. But these are only segments of the immense canvas of country.

The problem is compounded because the worst danger areas are not necessarily the driest. They can usually be found where the pastoral occupation has been longest; the earliest settled areas show the greatest deterioration.

Even worse is the problem of mobilizing the full force of Government and nation, since only two percent of the Australian population of 12 million lives in this huge area, and one-third of that two percent lives and works in the mining towns of Broken Hill, Mount Isa and Kalgoolie.

Lennard Bickel

220/science news/vol. 94/31 august 1968