

## **AWARDS OF THE TROPICAL GRASSLAND SOCIETY OF AUSTRALIA**

The Society awards Fellowships to those within its membership who have made significant contributions to the understanding, use and improvement of subtropical and tropical pastures.

An annual award, The Tropical Grassland Society-ANZ Bank Award, is made to a commercial operator who has been an innovator on some aspect of tropical or subtropical grassland development.

### **FELLOW OF THE TROPICAL GRASSLAND SOCIETY 1989**

**DONALD GORDON CAMERON**

Don Cameron was born in Gunnedah in New South Wales and obtained his B.Sc.Agr. degree at the University of Sydney in 1949. He worked for the Soil Conservation Service of the New South Wales Department of Conservation from 1950 to 1961 and was successively stationed at Wagga Wagga, Cowra, Sydney and Goulburn. He conducted research on developing pastures and farming systems to minimize soil erosion and land degradation, publishing 16 papers on this work.

In 1962 he joined the Queensland Department of Primary Industries at Biloela Research Station as an Agrostologist, where his main research activities were on plant introduction and evaluation and irrigated pastures for sheep and cattle. In particular Don conducted a substantial program on the agronomy and management of lucerne, as well as research on grazing assessment and nutrient trials with other improved pasture species. In 1968 he became regional leader of QDPI's pasture research group in Central Queensland and supervised programs of seven other pasture scientists, whose activities ranged from native pasture management to plant introduction and evaluation.

He spent 1970 at the Waite Agricultural Research Institute, Adelaide on an Australian Meat Research Committee Study Award researching factors affecting lucerne in wet soils.

In 1971 he moved to Brisbane and in the following year he was appointed Assistant Director of Agriculture in charge of the Agrostology research section. This section consisted of 45 graduates and a similar number of technicians who were located at 15 centres throughout Queensland. When he retired from the QDPI in 1988 Don was Assistant Director of the Pasture Management Branch.

Don Cameron was President of the Tropical Grasslands Society of Australia in 1976 and Editor of the Tropical Grasslands Journal in 1983 and 1984. He has been a member of many important committees. His contributions to the Queensland Herbage Plant Liaison Committee and the North Australian Pasture Plant Introduction and Evaluation Liaison Committee have been especially noteworthy.

Don's contribution to agriculture has been outstanding. He has published 112 papers and the diversity of subjects covered attest to his broad experience and knowledge of temperate and tropical pastures. He has also played an important part in improving pasture research cooperation and coordination. The pastoral industries and the Agricultural profession owe a great debt of gratitude for his dedication to tropical pasture science in northern Australia.

For his contributions to pasture research and development in Australia, the Tropical Grassland Society of Australia is pleased to enrol him as a Fellow of the Society.

**TROPICAL GRASSLAND SOCIETY-ANZ BANK AWARD — 1989****BERNIE VON PIEN**

Bernie von Pien's contribution to crop and pasture agronomy in Southern Inland Queensland is through the development of a land use system which integrates grain crops, leguminous forage crops and animal production with resultant benefits to soil fertility and condition. Innovative thinking and persistence over a period of 25 years have resulted in a profitable commercial system which maintains soil fertility and plant production.

Bernie von Pien believes that the application of the ancient principles of organic farming may well be the way of the future. The availability of his 'natural farming system' at a time when soil fertility decline is emerging as a major problem, is timely.

*Background.* An alternative was sought for the widely used wheat, fire, short fallow, wheat system as grain yields and quality declined and soils became more difficult to work. Other objectives were lower costs through non-use of fertilisers, herbicides and insecticides and an erosion free surface.

Bernie von Pien was influenced by Sir Albert Howard ('Agricultural Testament') who proposed that if natural ecosystems were self-sustaining and self-regulating, then a farming system which resembled a natural ecosystem would require the lowest level of inputs. He was also impressed by the ley farming systems of Southern Australia, which improve soil fertility. A key factor in the development of his system was the recognition of the inefficiency of fallowing operations for moisture storage.

*The Rotation System.* The land use system which has emerged for this vertisol soil on the western edge of the Darling Downs, involves grain crops in rotation with legume leys. Sheep are an important part of the system, recycling nutrients, generating income from forage plants and assisting in weed control. Often, forage crops occupy parts of the rotation which were previously bare fallow. Legume leys are either snail medic or lab lab. The grain legume, mung bean, is also used. The principle gramineous crops are wheat, barley, oats, rye and sorghum.

The major benefits of his land use system are:- higher yields and grain quality; reduced number of cultivations; better soil condition leading to improved water infiltration and workability and reduced erosion and 'hardpan' development; diversification of product and chemical free grain.

*Profitability.* While detailed economic analysis is not available, the operation is a commercial success. Increased profitability stems from: increased production of higher quality grain which is acceptable to a select, but increasing market demanding chemical free products; additional returns from wool and sheep sales; reduced energy input; and the absence of fertilisers, herbicides and insecticides.

*Application of Natural Farming Systems.* Maintenance of soil fertility through ley farming has, until recently, been ignored by the farmers of Southern Queensland. For many this innovation was unnecessary, as productivity on the fertile Darling Downs and Brigalow lands was maintained even with exploitive farming practices. However, with a cropping history of 50 to 100 years, fertility has declined and increasing areas are now mineralising insufficient nitrogen to maintain production. It is estimated that 0.3 M ha of land show serious fertility decline. By the year 2000, this will increase to 0.6 M ha. Bernie von Pien's system is now seen to be appropriate and increasing numbers of farmers are using his rotations.

*Personal Contribution.* Bernie von Pien's contribution has been noteworthy on many counts, but two warrant particular comment. (i) he has been innovative in the face of lack of interest from colleagues and scientists alike and (ii) he now provides information to hundreds of people (farmers, students, government) with no reward for his time or effort.