Awards of the Tropical Grassland Society of Australia Inc.

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

An annual award, The Tropical Grassland Society — MRC Award, is made to a commercial operator who has been an innovator in some aspect of tropical grassland development.

Fellow of the Tropical Grassland Society of Australia Inc. 1994

John Compton Tothill

John Tothill obtained his B.Agr.Sci. from Lincoln College in Canterbury, New Zealand and his Ph.D. from the University of California, Davis, USA. He spent the greater part of his career (1962-1985) with the CSIRO Division of Tropical Crops and Pastures. His work during this period made John one of the foremost international authorities on native grassland and savanna systems.

His early research with CSIRO concentrated on the ecophysiology of pastures dominated by black speargrass (*Heteropogon contortus*), which occupies some 25Mha of tropical and subtropical Queensland. This work examined the reproductive system of the species, variation in ecotypes, and the responses of speargrass pastures to grazing, burning, application of fertilisers and oversowing of new pasture species. John also carried out work on the interaction between grass and associated tree species in subtropical Queensland, quantifying the large increases in pasture and animal production that can follow tree clearing and oversowing of legumes in that environment.

John was one of the first pasture scientists to study native pastures in northern Australia and his work, ideas and philosophies have had a profound effect on other ecologists and agronomists. In light of the present greater interest in native pasture management and landcare, his work has proved timely and extremely valuable in helping to form the basis for the development of sustainable pastoral systems in the speargrass zone.

His botanical expertise is reflected in his authorship (with J.B. Hacker) of 2 books on the grasses of subtropical Queensland that have become standard texts. Many agronomists are grateful to John and his colleagues for developing less arduous but informative techniques for the measurement of pasture yield and composition. These techniques, known collectively as BOTANAL, were a major breakthrough in increasing the amount and speed of processing of data that could be collected in grazing trials.

From 1985-1989, John was Head of ILCA's Forage Research Group, based in Ethiopia, where he successfully developed and implemented an integrated feed resource program for Subsaharan Africa. He has also undertaken consultancies in Brazil, Argentina, other Latin American countries and East Africa.

Following his retirement from CSIRO in 1991, John was commissioned (with Col. Gillies) by the Meat Research Corporation to conduct a review of the condition of the pasture lands of northern Australia. This review has been published in the Society's Occasional Publication Series, and contains the first detailed pasture map of northern Australia, unifying the information from many sources to describe 24 pasture communities, with 151 local pasture units. They also quantified the condition of each of these units and identified research priorities. This work has aided the development of well focussed research projects.

John has participated in many national and international research conferences as speaker and session chairman and was co-chairman of the 1984 International Savanna Symposium. He has published more than 70 papers on a wide range of topics associated with ecology and native pasture management.

John was a foundation member of the Tropical Grassland Society. He edited the Proceedings of the Society (1965-66) prior to publication of *Tropical Grasslands*, was the first editor of *Tropical Grasslands* (1967-69) and was President in 1974. He is also highly regarded by all for his personal character, absolute integrity and willingness to assist wherever possible.

John Tothill is an eminent ecologist, who has made an outstanding contribution to tropical grassland science and agricultural development. He is a worthy recipient of a Fellowship of the Tropical Grassland Society.

Peter Trevor Mears

Peter Mears belongs to the group of scientists who contributed to the major expansion in research on tropical pastures during the 1960-80s. This work placed Australia in the forefront of tropical pasture research.

On obtaining a B.Sc.Agric. from the University of Natal, South Africa in 1956, he was employed as a Conservation and Extension Officer with the Federation of Rhodesia and Nyasaland. He became heavily involved in land classification, preparing land use plans for farmers in the Mazoe region of Rhodesia.

In 1962, he moved to Australia, to begin a 31-year stint as a research agronomist with NSW Agriculture in the Northern Rivers district of New South Wales. Initially, Peter was located at Wollongbar Agricultural Institute evaluating the new tropical legumes for both dairy and beef production. Nutritional work with *Glycine javanica* and *Setaria sphacelata* formed the basis of his M.Agr.Sc., awarded by the University of Queensland in 1968.

With buoyant beef prices, the aim was to maximise the number of weaner calves that could be grown out on pastures on fertile soils in high rainfall zones. Peter implemented a major grazing study that examined the nitrogen and stocking rate responses by weaner cattle on kikuyu pastures. This resulted in the awarding of a Ph.D. by the University of Queensland in 1973, and several pathfinding papers in the Journal of Agricultural Science (Cambridge). The project also provided the setting for a number of field days, and interaction with extension staff both from NSW Agriculture and fertiliser companies, which were strongly promoting the use of intensive pasture systems based on the use of nitrogen fertiliser. Peter had not lost his extension touch from Rhodesia and balanced the differing needs for a scientific and advisory output from the project.

At this stage, he moved to Grafton Agricultural Research and Advisory Station, as Supervisor of Research. He continued his work on the nutrition of subtropical pastures, in the lower rainfall and on the less fertile hill soils of the Clarence Valley. He took the classical pot experiment in the glasshouse and field plot experiments one step further, by using grazing experiments to assess the nutritional requirements where recycling was part of the system. His work contributed to the present understanding of the rate of decline in soil phosphorus after fertilising, and the seasonal fluctuations in sulphur availability. From the whole-system point of view, he also defined the seasonal changes in liveweight gains by cattle on fertilised pastures in the Clarence Valley.

Peter has always had an interest in integrating results to reflect real systems, and in communicating these results to producers. As a Supervisor of Research at Grafton, he encouraged approaches which integrated the studies done by various researchers. Where possible, he used grazing experiments so that treatments were assessed under more natural conditions. He was involved in the "whole-farm" studies which evaluated the new "feed-year" systems on dairy farms in the Richmond Valley. Later he contributed to the development of a computer decision support system which utilises computers to access a complex array of information whilst providing simple and useable recommendations to beef producers.

Peter's skills in disseminating results have been utilised also in overseas development projects. He was a consultant to projects in the Seychelles, China and Ethiopia, and reviewed the forage species network in South-East Asia. Perhaps a less demanding chore was to serve as the Technical Adviser to an Australian Cattlemen's Tour to tropical Africa.

Peter has maintained his links with researchers and producers through the Tropical Grassland Society, The Australian Society of Animal Production, and the North Coast Beef Research Liaison Committee. He helped organise many meetings including the XVII International Grassland Congress, Australian Tropical Pastures Conference (twice) and a number of major field days.

Peter retired from NSW Agriculture in 1993. He operates now as an agricultural consultant and manages his own beef property. He has also taken on new challenges both as a Member of the Council of Southern Cross University, and as Chairman of the Board of Management of the Clarence Valley Open Learning Access Centre. These roles represent a natural claim on his ability to bridge the gap between researchers and the users of new information.

Campbell Petrie (Joe) Miller

Campbell Petrie (Joe) Miller is a pasture scientist who has had a distinguished career with the Queensland Department of Primary Industries in north Queensland. His research and communication with industry have contributed significantly to pasture development and improved grazing animal production in the seasonally dry tropics of northern Australia in the past 30 years.

Joe was born in Scotland and emigrated to Australia as a child. He was awarded a B.Agr.Sc. and a M.Agr.Sc. from the University of Queensland in 1962 and 1976, respectively, and a Ph.D. from Massey University, New Zealand, in 1983. He joined QDPI in 1963 at Walkamin Research Station and moved to Mareeba in 1980. Joe has chosen to remain as a hands-on, practising field research scientist rather than join the administrative ranks, a fate that few in middle age seem able to avoid.

His contribution has been of two kinds. His intellect and motivation have left their mark on his colleagues through a sharp questioning of conventional wisdom and superficial answers, forcing others to focus their thoughts more rigorously. He has always taken a broad view, seeing issues from the perspective of both producers and research workers. Unlike many scientists, he has taken a holistic view, balancing the needs of the animal against those of the pasture resource. This influence is reflected in the quality of pasture research and extension in north Queensland.

Of equal importance has been the contribution of Joe's own research. Joe's career began as a sacrifice to the then fashionable god of irrigated pastures, but he soon turned to the challenge of identifying alternatives to Townsville stylo on the basalt country of the McBride Plateau near Mt Surprise. He adopted a low-cost approach to experimental work that has influenced research programs in the dry tropics ever since. Joe worked on cattle stations not research stations with the owners' cattle. The involvement of the owner and neighbours ensured the relevance of the work and made the results immediately applicable. Designs were simple and budgets very modest and this approach led to the establishment of the importance of sulphur for pasture and animal production on the basalt.

Buoyed up with this success, Joe embarked on a major project in conjunction with colleagues at the University of Queensland. This characterised the response surface of steer gains on native pastures oversown with perennial stylo, to different levels of phosphorus as fertiliser or supplement in a way that eliminated site specificity. Sited on a private cattle station, it has made a major contribution to the understanding of the biology and economics of stylo-based grazing systems in the dry tropics. Joe has now embarked on a third phase to clarify the role of phosphorus in breeding herds on these pastures.

Joe's research has been documented in 16 substantial scientific papers on which he is senior author; at least 10 more on which he is a co-author; two theses; and countless documents in meeting proceedings, course manuals and extension publications. The common denominator in these publications is a refreshing and often irreverent originality.

The Tropical Grassland Society — MRC Award 1994

Kenneth Grant Morris

A long history of innovation in the development and utilisation of improved tropical pastures has won the MRC Award for outstanding contribution to pasture development for 1994 for Cooktown property owner, Grant Morris.

Grant owns and operates 'Hazelmere', on the Endeavour River near Cooktown, which he took up in 1960. Since that time, he has been actively developing the property as a breeding-and-fattening operation. This has involved a multi-pronged approach to the challenge of improving overall productivity.

Development of improved pastures has always figured prominently in the program. Grant began almost at the very beginning in the classic sequence, producing seed of Siratro for quick cash flow in the early stages of the cattle production enterprise. He was one of the first to mechanise the seed-production operation, contributing to the price reduction for legume seed, which boosted tropical pasture development with legumes. In addition, he took a leading role in the formation of the small local seed industry, which gave Cooktown farmers an important source of income in the 1960s and 1970s. He was an early member of the Cooktown Farmers' Association.

His long-term plan, however, was to develop 'Hazelmere' as a grazing block. Early species sown were ruzi grass and green panic plus Siratro, centro and Schofield stylo. Every new pasture plant that was released was tried at 'Hazelmere'. Grant considers that the brachiarias provided the real breakthrough. His present enterprise is based on pasture mixtures of brachiaria and calopo, supported by long-established pangola pastures and forage sorghum. In the signal grass-calopo pastures, calopo makes a clear contribution to the nitrogen economy of the system, is grazed to some extent, and can be kept in balance with the grass by judicious grass management.

To further enhance productivity, water harvesting has been developed for subsequent dry season irrigation. Initially, run-off water was held on a small scale in a swamp, and in recent times, a dam has been constructed on the river.

Grant runs a breeding herd of predominantly Droughtmaster cattle and aims to turn off young cattle suitable for the local domestic market. A measure of his success in this area was the obtaining of a number of awards in the 1994 Trade Steer Competition held on the Atherton Tableland. This competition attracts entries from a wide cross-section of local graziers and produces high quality carcases.

Grant's initiatives have been taken in spite of the isolation of the Cooktown area, and only through sheer determination to keep abreast of pasture developments in the tropics. He is undoubtedly the leading innovator in improved pasture technology for the wetter part of Cape York Peninsula. His successes have provided the lead for others to venture into pasture improvement, an undertaking which was formerly regarded as a hazardous exercise.

The award was presented at a field day held on the station early in 1994.