

## **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-ANZ Bank 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. 1993**

DENNIS JOHN MINSON

Dennis Minson started his association with agriculture at a very early age, having been born on a Sussex farm. After obtaining his B.Sc. in Honours Agricultural Chemistry from the University of Reading in 1953, he spent 6 years working at the Grassland Research Institute at Hurley, during which time he gained his Ph.D. Dennis did key work on the digestibility of forages and was the first to show conclusively that ryegrass was more digestible than cocksfoot, and that late flowering varieties were more digestible than early flowering varieties. This work, presented at the 1960 International Grassland Congress, led to his later invitations to New Zealand and Australia.

After a year as a post-doctoral fellow in Canada, Dennis moved to Ruakura Animal Research Station, New Zealand in 1961. It was here that Dennis developed the technique for covering silage with plastic. This project, which involved research and development, extension and negotiations with plastics companies, led to a 30% increase in silage available for dairying, and has been accepted as a practice world-wide.

In 1963, Dennis moved to Australia to join the CSIRO Division of Tropical Crops and Pastures at Lawes. He continued his work on measuring the intake and digestibility of forages in ruminants, and developed laboratory techniques for measuring total intake and digestibility. He was the first to recognise the importance of chewing and particle size on forage intake by ruminants.

Dennis moved to the Cunningham Laboratory in 1969 to extend his work on the nutritive value of forages. In conjunction with Mack Rees, Dennis conducted a survey of the Gympie

dairying industry. This survey of 86 farmers, over 6 years, was a great practical achievement, showing the importance of undernutrition at night in reducing milk production. As a result, 'night paddocks' are now no longer used.

Dennis has a world-wide reputation for his work on the chemical, physical, and environmental factors influencing the nutritive value of temperate and tropical forages. He has produced 200 research papers and reviews, including 3 papers in the prestigious journal, 'Nature'. These have culminated in the publication, in 1990, of his landmark book, 'Forage in Ruminant Nutrition'.

Over the years, Dennis has demonstrated significant management ability, serving in the following roles: OIC of the Cooper Laboratory (1963-1969), and of the Cunningham Laboratory (1985-1993); Chairman of the organising committee for the international symposium on 'Nutritional Limits to Animal Production from Pastures'; Board member of the Faculty of Agriculture at the University of Queensland (1983-1992); and treasurer of the Australian 17th International Grassland Congress Association. These are just a few of his contributions to the corporate welfare of agricultural science.

In 1977, Dennis was awarded a D.Sc. by the University of Reading, and in 1979, the Medal of the Australian Institute of Agricultural Science. For the past 30 years, he has been an active member of the Tropical Grassland Society, and was President in 1986. He has always been willing to help and advise his fellow workers, and has had a major impact, world-wide, on improving the understanding of the nutritive value of forages.

## Fellow of the Tropical Grassland Society of Australia Inc. 1993

LESLIE ANDREW EDYE

LES EDYE obtained his B. Agr. Sc. with First Class Honours from the University of Queensland in 1955 and his M. Agr. Sc. from the same University in 1962. He joined the CSIRO Plant and Soil Laboratory in Brisbane in 1955 and later moved to the CSIRO Cooper Laboratory at Lawes as Officer-in-Charge in 1959. In 1962, he was appointed OIC of the CSIRO Pastoral Research Laboratory at Townsville, and returned to full-time research in 1975.

Les concentrated initially on pasture development for the brigalow lands, in particular pasture agronomy studies and animal production on *Sorghum almum*. He released several new pasture cultivars including Cooper glycine and Tarewinnebah and Nunbank buffel grasses. He also commenced the breeding program on creeping-rooted lucerne and made considerable progress in transferring this character from Canadian germplasm to Hunter River lucerne.

At Townsville, he guided the construction of the new Davies Laboratory and joined forces with Joe Ritson in developing the Lansdown Research Station. One of Les's first priorities was to establish close linkages with leading graziers from the northern cattle industry. This strong commitment to the solution of practical problems for industry has characterised Les's approach to research throughout his career.

In addition to his administrative role, Les pursued a vigorous research program. Apart from general pasture agronomy trials at various sites, he developed key grazing experiments with Townsville stylo which showed the value of these pastures for breeding cows, weaners and store steers. Along with other scientists and beef producers, Les recognised major deficiencies in Townsville stylo-based pastures.

These observations led him to search for new adapted cultivars in other species of *Stylosanthes*. With colleagues from the Davies Laboratory, he co-ordinated a major assessment of the new collections of stylo from Latin America.

A multi-institutional approach was adopted, which ensured that selected genotypes were rapidly tested across the major ecosystems in northern Australia. Elite genotypes were moved

to graziers' properties to measure animal production under near-commercial conditions and to develop cost-effective methods for establishment and maintenance of productive stylo-based pastures.

Two new species of stylo were released by Les to industry: *S. hamata* cv. Verano, an annual-biennial, in 1973 and *S. scabra* cv. Seca, a perennial, in 1976. Strong resistance to the damaging fungal disease, anthracnose, has been a key feature in their success. Les demonstrated their benefit in commercial pastures through his work with the Australian Agricultural Company at Wrotham Park. Carrying capacity was increased 10-fold and animal production per unit area 20-fold.

In recent years, Les has continued his efforts to provide benefits for the cattle industry. A new cultivar of *S. hamata*, Amiga, was released in 1989 for use in more marginal environments. He is currently testing a further stylo, which promises to extend stylo pastures to the very large areas of clay soils in the tropics and subtropics.

As well as his major interest in the cattle industry, Les has been closely associated with the development of University education in north Queensland. From 1974-1986, Les served on 9 committees for James Cook University, and was Chairman of the Research Committee for 16 years. He has also contributed significantly to the development of international agriculture, acting as a consultant to New Guinea, Tanzania and India, and making professional visits and collecting missions in Latin America.

In recognition of his outstanding service to the northern cattle industry, Les was elected a Fellow of the Australian Institute of Agricultural Science in 1985 and received the Sir Ian McLennan Achievement for Industry Award in 1992. In 1993, he received the Cattlemen's Union Industry Research Medal for his work on legume development for the cattle industry.

It is fitting that Les's major contribution to tropical pasture research and development should be recognised by the award of a Fellowship of the Tropical Grassland Society of Australia Inc.

## **Fellow of the Tropical Grassland Society of Australia Inc. 1993**

JOHN MOORCROFT HOPKINSON

John Hopkinson obtained his B.Sc. and Ph.D. from the University of Nottingham. From 1962–1969, he worked as a Research Scientist at the CSIRO Tobacco Research Institute, Mareeba. Since 1970, he has worked on tropical pasture seed production with the Queensland Department of Primary Industries, initially at Atherton and then at Walkamin Research Station.

In 1970, a range of problems facing the seed industry led to shortfalls in supply, and to poor quality of much of the seed. These deficiencies severely hampered the adoption of new pasture plants. The present ample availability and good quality of pasture seed in northern Australia is a rewarding testimony to the success of John and his co-workers.

John has an excellent appreciation of the problems facing pasture seed producers, beef producers and dairy farmers. This has enabled him to focus his attention on the critical seed production problems. The main aim of his work has been for seed producers to produce good quality pasture seed as efficiently and cheaply as possible. In achieving this he has had frequent contact with seed producers and a great deal of the credit for establishing the seed industry at its present high level of efficiency is due to his endeavours.

John is widely regarded, nationally and internationally, as a foremost authority on tropical pasture seed production. He has a particular reputation for innovative research and a highly perceptive approach to problem solving at both scientific and practical levels. His views and opinions are widely sought. He is able to reduce highly complex problems to very simple issues and concepts, which can then be resolved by simple experimentation. Examples of his achievements are:

1. Through sequential measurements, he helped define causes of poor seed production and identified potential areas for improvement.
2. He developed an understanding of factors controlling flowering, and in particular identified the flowering responses to stress, primarily water stress. This provided new opportunities for improving seed yield of several legume cultivars.
3. By clarifying the seeding behaviour of many tropical grasses, he enabled rational harvesting and post-harvest management for maximising yields of high quality seed.
4. He developed management packages for new legume and grass cultivars.

John not only conducts research but also ensures that the results are applied by the seed industry. His team's integrated service to seed producers has been a major contributor to the growth, sophistication and commercial viability of the seed industry. His interaction with seed producers and the strong focus of his work on their problems is a model which should be emulated by other tropical pasture research workers.

He has written many chapters for books and seed production manuals. Results of his research have been published in more than 80 papers. He writes well and can quickly put on paper ideas and arguments which are a joy to read.

He is widely sought after as a speaker at conferences, workshops and field days, and in overseas countries, particularly by FAO. He has participated in many seed-production training courses for overseas students and maintains close links with his many friends overseas.

Among John's outstanding qualities are his enthusiasm for his work, and his professional approach. He is very approachable and helpful to those who seek his advice and has earned wide respect.

His outstanding contributions to tropical pasture seed production research and development qualify him to be made a Fellow of the Tropical Grassland Society of Australia Inc.

## The Tropical Grassland Society — ANZ Bank Award 1993

SCOTT AND MARGO MCGHIE

Innovative use of the leguminous browse tree, leucaena, has won the ANZ Bank Award for 1993 for Blackwater district property owners, Scott and Margo McGhie.

Scott and Margo own and operate 'Minnie Plains', an 8800 ha property 25 km north of Blackwater, as a breeding and fattening operation. They have taken advantage of advances in technology to improve the productivity of their property. From a base Hereford herd, they have exploited the benefits of crossbreeding by introducing red Brahman bulls, and later using Belmont Red bulls over the Brahman cross breeders. The resulting progeny have the advantages of tick resistance, fertility, docility and rapid growth.

The country is made up of a mosaic of soil and vegetation types, mainly brigalow-yellow wood, open downs and eucalypt woodland. Despite pulling of the brigalow and sowing to buffel, plus strategic use of sugardrip forage sorghums, Scott and Margo were not satisfied with lifetime gains in their turnoff animals.

In an endeavour to increase lifetime gains and reduce age of turnoff, Scott and Margo have developed a pasture system based on leucaena. In the mid 1980s, they pioneered the growing of leucaena in the area in widely spaced rows on previously cultivated areas. This included a combination of appropriate cultural practices — scarified, inoculated seed; correct planting depth into moist soil; cultivation between rows to minimise grass and weed competition. In the following year, when leucaena plants were established, a mixture of buffel grass, creeping bluegrass, green panic, purple pigeon grass and silk sorghum was planted down the middle of the inter-row spaces to provide a better balanced diet.

This pasture system has had a dramatic impact on beef production from the property, especially in relatively good years. Country that carried a steer to 3.5 ha on buffel grass now carries a steer to 1-1.5 ha. In addition to this increase in carrying capacity, annual gains have increased from 150 kg per head on buffel grass to 300 kg per head on leucaena-grass. The combination of increased carrying capacity and increased gain per head represents a 4-6 fold increase in production per unit area.

Scott and Margo experimented to determine the best use for the leucaena pastures. They compared weaners and finishing steers. While both groups performed very well, the older steers were considered more profitable. The enterprise now turns off steers dressing in excess of 300 kg carcass weight, suitable for the Japanese chiller trade, at less than 30 months of age.

Although cost of establishment is high (\$225 per ha in 1990), the McGhies are adamant that the increased returns soon cover the costs. In addition, leucaena corrects the decline in fertility in straight grass pastures. More than 500 ha of leucaena have now been established and the ultimate goal is to plant about 800 ha.

Scott and Margo have always shown a willingness to share their experiences with the beef industry. Three large field days, attended by hundreds of beef producers, have been held at 'Minnie Plains'. In addition, the McGhies have made their time available on numerous occasions to show individual producers and other interested parties around the property and discuss their system. Many beef producers have now adopted this leucaena-grass system or a modified version following a visit to 'Minnie Plains' and discussions with Scott and Margo.

Unfortunately, 'Minnie Plains' was droughted in 1993 so the award was presented at a field day at 'Serocold', the Rolleston district property of Frank Burton and his daughter, Yvonne. Frank also uses a combination of forage crops, supplements and more recently leucaena to turn off steers dressing more than 300 kg before 30 months of age.

The ANZ has now sponsored this award for 7 years and has decided to discontinue this sponsorship. The Tropical Grassland Society of Australia Inc. is most appreciative of the support of the ANZ which has done much to foster adoption of new pasture technology. Fortunately, the award will continue as the Meat Research Corporation has agreed to be the major sponsor. The geographical area has been expanded for 1994 and nominations will be sought from the Top End of the Northern Territory and the Kimberleys as well as northern Queensland.

### **Fellows of the Tropical Grassland Society of Australia Inc.**

Since the first awards of Fellows of the Tropical Grassland Society of Australia Inc. were made in 1985, a total of 18 awards have been presented. The following list sets out the names and addresses of those who have received the award since its inception.

<i>Year</i>	<i>Name</i>	<i>Address</i>
1985	J.S. Pulsford	3 Forest Hills Drive, Morayfield, Qld 4506
"	R.E. Harrison	M/S 185, Beaudesert, Qld 4285
1987	K.B. Addison	101 Woongara Scenic Drive, Bargara, Qld 4670
"	J.P. Ebersohn	PO Box 88, Buderim, Qld 4556
"	E.F. Henzell	CSIRO Institute of Plant Production, PO Box 2, Dickson, ACT 2602
"	L.R. Humphreys	Emeritus Professor of Agriculture, Department of Agriculture, University of Queensland, Brisbane, Qld 4072
1988	T.R. Evans	Meirs Rd, Ocean View, Dayboro, Qld 4521
"	F.H. Kleinschmidt	PO Box 850, Lawes, Qld 4345
"	J.R. Wilson	CSIRO Cunningham Laboratory, Carmody Rd, St Lucia, Qld 4067
1989	D.G. Cameron	15 Tin Can Bay Rd, Goomborian, Gympie, Qld 4570
1990	V.R. Catchpoole	CSIRO Cunningham Laboratory, Carmody Rd, St Lucia, Qld 4067
1991	R.M. Jones	CSIRO Cunningham Laboratory, Carmody Rd, St Lucia, Qld 4067
"	G.J. Murtagh	Agricultural Research Centre, Wollongbar, NSW 2480
1992	B. Walker	3 Mungala St, Buddina, Qld 4575
"	R.J. Jones	CSIRO Davies Laboratory, Aitkenvale, Townsville, Qld 4814
1993	D.J. Minson	CSIRO Cunningham Laboratory, Carmody Rd, St Lucia, Qld 4067
"	J.M. Hopkinson	QDPI Research Station, Walkamin, Qld 4872
"	L.A. Edye	CSIRO Davies Laboratory, Aitkenvale, Townsville, Qld 4814