

## 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.

### Fellows of the Tropical Grassland Society of Australia Inc. 1998

#### LEENDERT 'T MANNETJE

Len 't Mannetje, sometimes known in Australia as "apostrophe t", has made an outstanding contribution to tropical pasture science and to the development of tropical pastures in practice. He is particularly known for his work with legume-based pastures although he has contributed in many other areas. Following 22 years working in subtropical Australia (1959–1982), he moved to Wageningen Agricultural University in the Netherlands where he has been involved in research in many countries throughout the tropics as well as the training of pasture scientists.

After his graduation from Wageningen, Len commenced work with the CSIRO Division of Tropical Pastures (now CSIRO Tropical Agriculture). One of the first tasks Len was given was to assist in establishing a paddock of *Leucaena leucocephala* at Samford Research Station, possibly the first paddock established to this species in Australia. Interestingly, like Len, the paddock is still persistent and productive 40 years later!

In his early years with CSIRO, Len was involved in a wide range of activities, including plant evaluation, fertiliser requirements, taxonomy and *Rhizobium* affinities of African *Trifolium* species and *Stylosanthes*, and variation in *Paspalum* spp. One of his major achievements in these early years was the development of the dry-weight-rank technique for measuring botanical composition in pastures. This technique, with additions by many others, led to the development of the widely used BOTANAL package for measuring pasture yield and composition. His other major achievement was his studies on taxonomy and relationships with *Stylosanthes*, which led to the awarding of a Ph.D. degree by the University of Queensland.

With the opening of the Narayen Research Station in 1966, Len's interests turned increasingly to animal production and pasture management in the speargrass areas of southern Queensland. This was broken by a period in Malaysia where he was involved with MARDI in developing and enhancing pasture research in that country. At Narayen, he examined the role of improved pastures on animal production, including reproduction as well as liveweight gain.

He was one of the first to document the importance of yield of green leaf in enhancing liveweight gain and contributed in many other areas, including legume demography. Prior to leaving CSIRO, he initiated work at Narayen on defining phosphorus requirements of plants and animals on P-deficient soils.

Len was appointed as a professor at the Wageningen Agricultural University in 1982 where he remained on staff until his retirement in 1996. He continued his interest in legume-based pastures and animal production, but his interests extended to improving the efficiency of nitrogen use in temperate grasslands. The impact that he made through his teaching and research at the University was recognised by the publication of a volume entitled "Grassland Science in Perspective" on Len's retirement. This issue contains papers relating to some topics that Len addressed through his career: dry weight-rank, stocking rates and sustainable systems, legumes and their potential in pastures, and nitrogen use.

Len has been a prolific writer throughout his career, of both papers on experimental results and overview papers, e.g. his Harry Stobbs Memorial Address in 1994. He has written chapters for several books and edited the well-known "Measurement of Grassland Vegetation and Animal Production" published in 1978. This book is out of print and Len is currently editing a new book on the same topic. He also edited the Volume on Forages in the PROSEA (Plant Resources of South East Asia) series.

Len has had an unbroken association with the Tropical Grassland Society since its inception. He was Editor of *Tropical Grasslands* in 1970 and 1971, President of the Society in 1978, and part of the Executive Committee for 6 years. During his 22 years in Australia, he was a keen supporter of all its activities and presented addresses at many field days. He still serves on the Editorial Advisory Board of *Tropical Grasslands* after being one of the initial appointees in 1978. He is a continuing strong supporter of the journal and has published papers in it for each of the last four years (1995–1998). His outstanding contribution to tropical pasture development and

to the Society make him a worthy recipient of the award of Fellow of the Tropical Grassland Society.

### BRUCE COOK

Bruce Cook has made a very valuable contribution to the development of legume-grass pastures in the coastal areas of Queensland and in several other countries. Since his graduation in Agricultural Science from the University of Queensland in 1967, he has been employed by the Queensland Department of Primary Industries, at Gympie in coastal, subtropical Queensland.

Bruce's key interest is in legume-grass pastures, especially for the higher rainfall zone of Queensland. He has played a major role in the early phase evaluation of legumes and grasses and has a very wide knowledge of the natural variation within many different species. However, he is best known for his understanding of the forage potential of the genus *Arachis*. This understanding was reflected in an invitation to a workshop on *Arachis* at CIAT, Colombia in 1994, where he was the senior author of a paper outlining Australian experience with this genus. Bruce played a key role in getting *Arachis pintoii* cv. Amarillo commercialised in Australia, through both his agronomic work and his participation in the development of unique mechanical harvesting procedures necessary for harvest of a below-ground seed crop — as the well established procedures for harvesting peanut (ground nut) seeds were not appropriate. Bruce was also the driving force in the release of *Arachis glabrata* cv. Prine in Australia. He played a major role in the release of other cultivars, including Shaw creeping vigna and the 3 cultivars of *Desmanthus virgatus*, and has been involved with many other cultivars such as Floren bluegrass and Swann forest bluegrass. Bruce's expertise is recognised in his current role as chairman of the working committee on evaluation of pasture plants through northern Australia (NAPPEC).

Bruce has also supported the commercial development of these cultivars. A good example of this has been in the establishment of on-farm pastures of *Arachis glabrata* cv. Prine. Australian research workers have known about the persistence and productivity of this species for more than 30 years, but it has only been in the last 3 years that paddock-scale plantings have been established on commercial farms. This was entirely due to Bruce's enthusiasm combined with support that he was able to generate from the Dairy Industry.

Bruce has also aided pasture development in many other areas. He is part of the current research team looking at effective control measures for rats-tail grass, is an adviser to NSW projects on ground covers in macadamia plantations and pastures under native forests and to Queensland projects on pastures and post-harvest ground covers in pine plantations.

He has had a major role in several projects outside Australia: as a consultant on FAO projects in the South Pacific and Mauritius; on projects in south-east Asia funded by CIRAD and AUSAID; to a World Bank project in India; and a project in Sarawak. He is a team member on two current ACIAR projects, one on developing sustainable production systems for steep lands in the Philippines and another examining the role of legumes in smallholder production systems in southern Africa.

Bruce's wide range of interests is reflected in his publication list. He has published 50 research/workshop papers, 4 book chapters, 11 consultancy reports, 4 training manuals and 10 cultivar descriptions under Plant Breeder's rights. But his legacy in the long term will be based on such practical outcomes as the increasing areas of Amarillo being sown,

especially on the Atherton Tablelands, and the continuing demand for Shaw vinya. For his nationally and internationally recognised contributions to the development of legume-grass

pastures, Bruce is thoroughly deserving of the award of a Fellow of the Tropical Grassland Society of Australia.

## **The Tropical Grassland Society — MRC Award 1998**

### **DAVID ILLING**

David Illing of Hillview, Pittsworth, gained his background in pasture development when he worked with Selected Seeds over a period of 8 years. During this time, David developed a reputation among graziers as a practical adviser, with sound knowledge of the different species and their adaptation to varying soil types and locations.

David successfully introduced new species such as Premier Digit and Bisset Creeping Blue Grass into areas from the Northern Rivers of NSW to Coonamble and as far west as Broken Hill. He was the first person to promote treatment of seed to counteract seed-harvesting ants as well as custom blending of various species, specifically to suit different soil types.

David's experience extends from the Brisbane Valley to Gympie and west to Augathella and Roma. He has been a highly respected speaker at many Landcare Groups where his knowledge of pasture establishment and land reclamation is well recognised. David was one of the guest speakers at the opening of the 100th Landcare Branch at Mitchell in June 1992.

Over the last 10 years, David and his wife Robyn have conducted a number of trials on subtropical and temperate species on their own property near Mt Tyson. Through these trials, they have managed to refine many of their recommendations. They developed the practice of using short-term ley crops such as dolichos, medics and cereals as either cover crops which were left to die back naturally or were "sprayed out" to encourage the pasture to come through without competition.

David identified "Run Off" and "Evaporation" as the most important impediments to successful pasture establishment.

Experience has proved that the finely worked flat seed bed has in many cases prevented water from entering due to surface sealing. David has developed a system of forming deeply furrowed beds on the contour and blowing the seed directly into freshly furrowed ground. This system has improved moisture retention, allowing for fine silt to move to the bottom of the furrows improving seed, soil and moisture contact. David even purchased a seed planter which he used to conduct demonstrations at many field days etc. In steep, hilly country where erosion is a major problem, David promotes two applications of "Round-up" during spring to kill weeds and unwanted grasses. This then becomes a mulch for the protection of future seedlings. The country is then ripped directly across the slope at 75 cm intervals, and a mix of suitably competitive species is blown into the ripped furrows by a pasture air seeder mounted on the back of a 4wd utility. This system has worked well in the high country of the Brisbane Valley and around Cooya. David also uses this system with great success in the rehabilitation of mining sites at Ipswich.

Two years ago, Robyn and David started their own business "David Illing Pastures". This small company offers an advisory service including farm visits, seed supplies and contract planting. The contract planting makes this business unique to the industry.

In the last 12 months, David has been called on to speak at workshops conducted by both the Department of Natural Resources and Greening

Australia, at 14 different locations around southern Queensland. The addresses focused mainly on establishment techniques, erosion control, suitability of species for soil types, slotting the pasture program into the farmplan, planning and management of pastures and the personal commitment required to succeed in pasture establishment.

David's major contribution to pasture development in southern Queensland and his innovative and dedicated approach make him a most worthy recipient of the Tropical Grassland Society — MRC Pasture Award for 1998.