

Tropical pasture establishment

Proceedings of a workshop held at Brian Pastures Research Station, Gayndah, Queensland in June 1992.

This issue of *Tropical Grasslands* contains papers on technical and practical aspects of tropical pasture and forage crop establishment presented at a workshop sponsored by the Meat Research Corporation.

The theme for the workshop recognised the vital impact that successful establishment has on tropical forage use and pasture development, and on the important and expanding role these forages have in sustaining agricultural systems and land resources throughout the tropical world over the past 30 years. In northern Australia, in particular, there has been significant investment on research into pasture establishment and management, and producers have accumulated a wealth of experience with a range of development methods and management practices.

With this background, the workshop was timely in bringing together producers, extension specialists and research workers to collate past and currently emerging knowledge, to identify strengths and weaknesses of existing establishment technology, and to determine future priorities. The workshop program specifically aimed to better link establishment-related biological and ecological knowledge, the perceptions of research workers on significant issues in establishment and producers' views on and practical experiences with establishment.

This special issue of *Tropical Grasslands* should interest those who are seeking more reliable and sustainable pasture, livestock and livestock/crop systems in tropical environments. The papers comprehensively span many important establishment concepts and issues through the following topics: a systems perspective of pasture and forage crop establishment, seed characteristics and field establishment, competition and seedling establishment and survival, population dynamics of sown species in developing pastures, seed treatment to modify physical and physiological properties, sowing methods and seedbeds, management of establishing pastures, establishment in difficult environments, producers' pasture seed requirements, regional establishment practices and experiences in Queensland, band-seeding experiences, the prospects for weather forecasting and for useful decision support tools, and economic considerations.

Priority areas or issues identified were:

- Better knowledge of population dynamics and the development of more reliable, least-cost practices for introducing new species, especially grasses, into native or sown pastures.
- Overcoming establishment problems with new tropical legumes adapted to clay soils.
- Increased understanding of nutritional, allelopathic and symbiotic aspects of plant associations in pastures and opportunities for their manipulation.

- Assessment of the need for practical seed treatment methods for exploiting strophiole breaching to improve legume establishment, and if relevant, their development.
- Improved knowledge of dormancy in panicoid grasses.
- Continuing effort to define appropriate seed treatments for newly released species.
- Maintaining seed standards of purity, especially to exclude undesirable weed species.
- Linkage of biological, environmental and economic risks.
- Capture of existing technical knowledge and practical experience in establishment decision support packages that are flexible, comprehensible and relevant for users.
- Benefits and applications of weather forecasting.

The workshop provided a stimulating experience for those who attended. This special issue is designed to provide the opportunity for a much wider audience to have access to the information generated.

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Convenor

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