

Book review

Forage seed production Volume 2: Tropical and subtropical species

Edited by D.S. LOCH and J.E. FERGUSON.
Published by CAB International, 1999. 496 pp.
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Seed production of tropical forage species is a primary constraint to the expansion of improved pastures and this compendium reports scientific and commercial progress in an area of vital concern. It complements an earlier Volume about temperate species, both of which were developed by collaboration between the International Herbage Seed Production Research Group and the publisher. The editors have each devoted more than 30 years of professional life to research and education in this field; whilst the bias of the book is towards research in Queensland and at CIAT, Colombia, the editors have drawn on their wide experience and contacts in other tropical regions.

After a brief introduction, the reader is offered 24 pages to digest, which list the species and cultivars released. There is then a sequence of chapters which outline the basic principles of seed production: crop growth and development, flowering and reproductive physiology, factors influencing choice of site location, and the agronomic principles of crop establishment and husbandry. These lead into the more technological questions of seed harvesting, drying, processing, treatment and storage, and quality assurance. There follow 15 case studies detailing history and practice with respect to the main species which have been commercialised; the large volume of seed traded in Brazil is notable. One is struck by the many innovations contributed by seed producers. For example, Roy Eykamp at Quirindi, New South Wales, evolved a system for *Pennisetum clandestinum* embracing repeated mowing at controlled heights to stimulate flowering, and a complex technology which recovered pure seed from sites closely appressed to the stem and to the soil.

The editors were fortunate to capture distinguished scientists such as J. Bryan Hacker and Rainer Schultze-Kraft to write crisp and authoritative chapters about crop growth and development. There are 31 authors from 11 countries; the rather minimal input from Africa probably

reflects the level of forage seed production research in that continent. There is an interesting chapter by John Ferguson which differentiates types of seed supply systems: formal, traditional and integrated community-based. The Thai government intervention to promote and to buy and sell some forage seed from smallholders is probably a successful example of the last.

The editors take a narrow view that 'Seed ... has no intrinsic value of its own other than derived demand' (for a particular cultivar), whereas we know forage seed is ingested to benefit animal nutrition and often determines ecological success via plant replacement. The hardback is handsomely produced, well but not exhaustively referenced, beautifully illustrated and has an index.

Faced with such a large and costly book, readers are entitled to ask how they might have been better served. There are the usual faults of a multi-authored book: differences in the level and discursiveness of the writing, and repetitive themes; the influence of determinate or indeterminate habit on legume seed production is reinforced in at least 3 chapters. Whilst the provenance of cultivars is of great ecological significance, the detail of past commercialisation is of tangential interest. The hardseededness of temperate legumes is surely peripheral. Principles are often clearly enunciated but more quantitative illustration would benefit the reader. Some key principles, such as the control exerted by nitrogen supply on grass seed production, are not well developed in the context of the many field factors influencing nitrogen availability. The model of grass crop development produced by J.M. Hopkinson and B.H. English (*Seed Science and Technology* 10: 379) is mentioned; it was quite seminal and deserved presentation.

The book contains a wealth of information that is invaluable for pasture agronomists, seed scientists and technologists, and educated seed producers, but lacks new paradigms for those familiar with the topic.

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