The Grass Genera of the World

By LESLIE WATSON and MICHAEL J. DALLWITZ, CAB International, Wallingford, Oxon, United Kingdom, 1992. Hardbound, 1024 pages. Price £75.00.

This book is a scholarly taxonomic treatment of the grass genera of the world and would qualify as a 'definitive reference work' as claimed by the publishers.

It provides detailed descriptions of the 778 genera of grasses (Poaceae, Gramineae) recognised by modern taxonomists. These descriptions have been generated by computer from a taxonomic data bank, using the DELTA computer system developed by one of the authors. A total of 496 characters, dealing with nomenclature, general morphology, leaf anatomy and physiology, biochemistry, haploid and 2c DNA values, fruit and embryo structure, seedling form, cytology, intergeneric hybrids, phytogeography and distribution, ecology, pathogens, classification and economic aspects, are used to differentiate between grasses.

The book is presented in four chapters — the first deals with the DELTA system and the data used; the second lists the 496 characters used; the third deals with how the grasses are classified into subfamilies, supertribes and tribes; and the fourth lists the 778 genera and describes the implicit character states e.g. vegetative habit, reproductive organisation, inflorescence, fruit-embryo-seedling etc. Genera are presented in alphabetical order.

An extensive list of references used in preparing the publication follows, plus a list of species which were examined for leaf blade anatomy in constructing the data bank.

Despite its completeness, the book will have limited use to other than grass taxonomists, and as such, would have extremely limited appeal to most readers of *TROPICAL GRASSLANDS*. Its home will be limited to serious (biological) reference libraries.

Most people interested in pasture production would focus on the sections — 'Ecology' and 'Economic importance'. As the book sets out to describe the grass genera from a taxonomic data bank, these sections might be expected to be brief. This proved to be the case as comments under these sections were extremely limited and in some cases inaccurate. Examples of this were:

(a) The ecology of *Astrebla* (Mitchell grasses) is described as 'dry sandy grassland'. These are certainly 'dry grasslands' but 'sandy' is texturally at the wrong end of the scale as Mitchell grasses grow on clay soils.

(b) In the genus *Bothriochloa*, under the 'economic importance' section, *B. pertusa* is regarded as a 'significant weed species', when it is regarded as a valuable fodder species in heavily grazed areas of northern Queensland. *B. erwatiana* and *B. bladhii*, both important native pasture species in northern Australia, do not rate a mention.

(c) While *Brachiaria mutica* (paragrass) is listed as both a significant weed species and a cultivated fodder, *Hymenachne acutigluma* (hymenachne) is mentioned only as an important native pasture species (in swamps).

It seems significant that the authors, in dealing with the 'economic importance' section, considered weed potential first, then cultivation potential, followed by role as a native pasture species and grain cropping potential.

In summary, unless the reader is particularly interested in taxonomy of grasses, this book will have little appeal.

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