

## BOOK REVIEW

BOGDAN, A. V. (1977). *Tropical Pasture and Fodder Plants*. Tropical Agriculture Series, Longman, London & New York. Price £17.

Research workers and teachers in the tropics concerned with the development and improvement of pastures will be lastingly grateful to A. V. Bogdan for this book. Although a number of books is now available on tropical pasture research this is the first time that such a comprehensive range of information on so many species of significance in tropical pastures has been assembled. After nearly twenty years active research in the Kenya highlands, the home of a substantial proportion of our important pasture species, Bogdan is ideally qualified for drawing together research findings on the species of significance in tropical pastures.

The book is in two sections, the first, on the grasses, running to 300 pages, the second, on legumes, to 150 pages. In all more than 300 species are considered. Each of these major sections start with an introduction, in which there is a brief but clear discussion of classification and distribution, physiology, morphology, agronomy, nutritive value, reproduction, seed production and plant breeding. Much of what is discussed is well known, but it is the stated intention of the author that the work should be of use not only to those with experience in developed countries but also to research workers and students in developing countries where frequently libraries are inadequate. Then follows a species by species treatment of the more important grasses and legumes, arranged in alphabetical order by generic names. As indicated earlier, the range of species covered is considerable and there can be very few species of grazing significance which are not covered.

The space devoted to each species is proportional to its importance, and consequently to the work which has been done on it. Thus *Chrysopogon fallax* is discussed in a few lines, but *Panicum maximum* is given ten pages. Natural grassland species, such as the *Astrebla* species (Mitchell grasses) and *Dactyloctenium radulans* (Button grass), well known in the grasslands of western Queensland are also covered. A brief description is given, sometimes illustrated with a simple line drawing, but usually this is not sufficient to distinguish the species from related species in the same genus. Intraspecific variation is then discussed, and natural distribution. In more important species, sections are devoted to discussion of introduction, establishment, management, association in mixed pastures, pests and diseases, herbage yields, conservation, chemical composition and digestibility, animal production, reproduction and seed production. For each of these topics, coverage of the world literature is good and recent literature up to the first few years of this decade has been well covered (the bibliography lists some 750 references). Where available, data are presented on dry matter yields, stocking rates, animal production, protein content, digestibility etc. and the country where the results were obtained is always specified.

Some caution should perhaps be exercised in how this book is used. Any of the results quoted, whether on yield, animal production, chemical composition or seed production, will be strongly influenced by soil, rainfall and temperature conditions at the site of the experiment. Hence research workers in developing countries should be cautious when selecting species for study on the basis of performance elsewhere. At best, this can only be a very rough guide, and then those species from climatically similar areas should be chosen.

I have no major criticisms of this book. However, in the introductory sections one might argue with the balance between the different topics discussed. Several pages are devoted to physiological and botanical attributes of grasses, but management and fertilizer requirements are only sketchily covered. Similarly association of grasses and legumes in mixed pasture is not discussed adequately, especially as management for stable tropical pastures differs so radically from the maintenance of temperate pastures. These topics are better covered in the pages on individual species.

Also in the introductory sections much of the information is not supported by references. Where the information is widely known this hardly matters, but in some cases it would be useful to track down the experimental evidence. Further, where methodology is being discussed, the lack of references makes it impossible to find out whether a technique is being suggested as a possibility, or has been tried and found to be successful.

However, these are relatively minor criticisms. Bogdan's book provides an excellent complement to "Tropical Pasture Research: Principles and Methods", reviewed in *Tropical Grasslands* Vol. 10, 1976. Undoubtedly the work as a whole will have lasting value to pasture scientists in the tropics.

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