

BOOK REVIEW

Tropical Pasture Science. P. C. Whiteman (1980). Oxford University Press. 392 pp. A\$31.

Tropical Pasture Science is a very useful addition to the books available on tropical pastures. The author, Dr. Peter Whiteman of the University of Queensland, has had many years of experience with tropical pastures and has been associated with research in many countries, and his breadth of experience shows up in this book. It will be particularly useful for undergraduate and postgraduate university students and will also be a very useful general reference for all those interested in tropical pastures. It could be particularly helpful in isolated centres with meagre library facilities.

The book is divided into six sections. The first (29 pp.) describes climatic factors, such as radiation, temperature and moisture, which limit pasture growth and yield. The second (85 pp.) deals with soils and soil fertility. Among other features this section contains an introduction to the mysterious terms used in the recent United States Soil Classification. I am sure I am not the only person who will be pleased to know where he can track down the meaning of such delightful words as "Plinthaquults". The section on assessment and maintenance of soil fertility will be useful to many readers.

The third section (65 pp.) has the heading "Tropical Pasture Species". After a critical discussion of plant introduction and evaluation some thirty pages are taken up outlining the important features of the main tropical pasture species. The chapter concludes with a discussion of plant adaptation to stress factors such as frosting, moisture stress and soil fertility.

The fourth section on management of tropical pastures (93 pp.) deals with pasture establishment, then with nitrogen fixation and legume content, and finally with integration of pastures in cropping systems. The fifth section (76 pp.) deals with animal production for tropical pastures. After describing the nutritive value of tropical pastures, a discussion on stocking rates and grazing management leads to a review of beef and milk production from tropical pastures. The sixth section (34 pp.) deals with the development of a pasture research program and the different options open for pasture improvement in different situations. The references, over 600 in all, are placed at the end of each chapter as appropriate, and the book ends with a six page index.

Although the text is strongly oriented towards tropical pastures, the author, quite rightly, in my opinion, has referred to findings from temperate pastures where these illustrate more clearly the particular point he is making—for example, the sub-section on the effect of a pasture phase on weed control (p. 248).

With such a wide coverage of subject matter it is inevitable that reviewers or readers will query the balance between subjects. For example, the one deficiency I found, and this inevitably reflects on my own interest, is that the coverage is inadequate in the field of pasture ecology. Concepts such as pasture stability and persistence are certainly of more practical importance—and also more under managerial control—than some other topics which are discussed in greater detail. Seed production is another important aspect of tropical pasture science, yet does not even rate a mention in the index. The sentences dealing with phosphorus in relation to animal production also appear inadequate in view of the importance of this subject.

The book is reasonably up to date—there are several 1977 references and at least one from 1978. The writing style is easy to follow and this should assist readers whose mother tongue is not English. There are very few misprints or printing errors, though some captions for figures are missing in Chapter 2. Factual errors are also very unusual, one rare example being the finding that Kenya white clover is less "frost tolerant" than Siratro (p. 155-6).

In conclusion, this book is a very useful addition to the field of tropical pasture science and complements rather than competes with other books that have appeared in the last few years. It will be widely used. The price of A\$31.00 appears a little high for a soft cover edition, although it is available in the U.K. for £9.50.

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