Book reviews

Tropical Grassy Weeds

F.W.G. Baker and P.J. Terry (eds). (1991). C.A.B. International, Wallingford, U.K. 203 pp. £E30. US$57.

Grassy weeds reduce tropical crop production and are indicators of degradation of pastures. This timely hardback arises from a symposium in Nairobi in 1990 organized by the Committee on the Application of Science to Agriculture, Forestry and Aquaculture.

The introductory chapters give an overview of weeds in the tropics, identifying grasses and sedges as the dominant problem species and indicating the physiological characteristics which make for their ecological success. There are 20 line drawings of the worst weeds. Approaches to weed management: herbicides and their safe use, herbicide resistance, seed quarantine, biological control and the concepts of integrated pest management are outlined. These are followed by chapters about specific crop and pasture situations and about problems in the regions: Kenya, the Philippines and northern Australia. Professor Len t'Mannetje's chapter on the control of weeds in grasslands and forage crops will have especial significance for readers of "Tropical Grasslands". He details the classes of weeds encountered in grasslands, and the approaches to their control in the establishment, productive and degradation phases. I was especially interested in a segment (p. 121) of the chapter by Dr J. Maillet which indicated the climatic and soil conditions specific to the occurrence of particular weeds.

We have come to expect uneven standards and some overlap of material in multi-authored books. This book is lucid, well-written and authoritative in the main. However, for example, we do read with amazement (p. 47) that "most tropical grasses appear to require short days (12 h or less) to initiate floral primordia at the apex". In fact it is the quantitative flowering response to shortening days longer than 12 h or the day-neutral response which enable most tropical grasses to flower and seed whenever there is enough moisture and warmth for seed production which contributes to their weediness.

The text emphasizes the role of multiple cropping in contributing to weed suppression; I should have been interested to see more material on the possibilities for weed control through intercropping with forages or through ley pastures. Recently the place of sheep in weed control in rubber plantations has attracted notice. There is, by implication, reference to the positive aspects of weeds in providing forage and in erosion control. Extension workers need to recognize the value of hand pulled weeds for feeding the cattle which are integrated with crop production in some mixed farming systems.

The concluding section makes far-sighted recommendations for future research. These emphasize our continuing dependence on herbicides, the need for detailed study of the biology of individual weeds, and the possible role of mycoherbicides.

L.R. Humphreys

Will it Rain? El Niño and the Southern Oscillation.

Ian Partridge (ed). (1991). Pastures Management Branch, Queensland Department of Primary Industries. 49 pp. A$15 plus $2.50 postage in Australia. Available from QDPI Publications, Queensland Department of Primary Industries, GPO Box 46, Brisbane Qld 4001, Australia.

At last a book is available which summarizes some of the research work completed so far on the El Niño/Southern Oscillation phenomena — at least as far as its effects on rainfall variability over Queensland are concerned.

Will it Rain? consists of only 6 short Chapters, each written by different authors. The first three chapters take the reader through a brief but reasonably thorough explanation of meteorological and climatological processes that affect much of eastern Australia. Certain climatological aspects associated with the Southern Oscillation and Southern Oscillation Index (SOI) are explained. The other chapters describe variations in plant growth and crop yields associated with the SOI and the implications for better decision making when using the SOI. The important concept of probabilities in dealing with rainfall amounts associated with the SOI is also explained. Thus, the reader is made aware of the benefits of using information such as the SOI in planning decisions associated with a farming enterprise.