

proven bulls for semen production for local and overseas distribution. Currently there are 500 head of AFS distributed over about 55 cooperative herds for evaluation. The breed is considered as an alternative to existing breeds and not a replacement. Heavy culling is based on the ability of cows to let their milk down without the presence of a calf.

The AFS seems to be a better producer under dryland conditions but not as productive as current breeds in the higher producing herds on irrigated farms.

BOOK REVIEWS

Proceedings of the XIV International Grassland Congress. Eds. J. Allan Smith and Virgil W. Hays (1983). ISBN 0-86531-280-X. Published by Westview Press. Distributed by Bowker Publishing Co. Erasmus House, Epping, Essex, U.K. 878 pp. US\$52.00.

With the continued expansion of the numbers of people working in pasture science, the size of the regular International Grassland Congresses must also expand. In 1970 some 750 delegates attended the XI Congress and 257 papers were presented. The XIV Congress held at the University of Kentucky in 1981 attracted approximately 1500 scientists from around the globe and nearly 500 papers were presented on previously unpublished original research or experimental research and development projects. The publication of the proceedings of a congress of such size presents substantial problems in space and cost. The solution adopted in the present instance was to severely edit the papers and publish only 273 in the proceedings. These cover the current basic and applied research on production and utilization of forages from grasslands the world over.

The papers appearing include 10 Plenary papers, 2 invited papers (Grassland development in Japan and other Asian countries—I. Nikki; and Livestock resources in the world food supply—J. A. Pino); 53 on Plant Introduction, Evaluation and Breeding; 9 on Seed Production; 16 on Soil Fertility; 8 on the Nitrogen Cycle; 11 on Multiple Use of Grassland; 16 on Physiological Processes; 22 on Grassland Ecology; 17 on Evaluation Techniques; 28 on Management of Grazed and Conserved Forages; 17 on Mechanization and Treatment of Forages; 25 on Utilization of Forages in Animal Production; 17 on Tropical Grasslands; 11 on Transfer of Grassland Research Findings and 10 on Socio-Economic Aspects. The usual sections on opening and closing ceremonies, business meetings, committees and list of congress delegates are also included in this one large (29 × 22 cm × 878 page) volume.

The inclusion of a special section on tropical grasslands is of interest and indicative of the interest this area creates these days. It contains papers ranging from intensive beef production in the humid tropics, to pasture research programs in the Brazilian Amazon, and the tropical savanna region of Brazil and Bolivia, to diet-quality considerations and pasture development in the Australian dry tropics, subtropics and semi-arid areas with other papers from Thailand (Verano stylo), Nigeria (lowland humid tropics), Florida (*Aeschynomene* sp. and *Hemarthria altissima*) and Brazil (*Galactia striata*). All are worth reading. As well many other papers on tropical pastures occur within the subject sections of the contributed papers.

The Plenary papers are presented along with remarks by the Discussion Leader and questions, comments and responses. Invited and section papers are not so adorned. Overall presentation of the material is excellent and this volume will join those of previous IGC as a widely used reference and a permanent record of the "state of the art" in grassland science in 1981.

D. G. CAMERON