Range Management Goes to Africa

Donald L. Huss

Twelve-six delegates from Tanzania, Kenya, Uganda, Sudan, Zambia, Botswana, Swaziland, Gambia, Sierra Leone, and Ghana participated in 3 weeks of training in range management in Tanzania. Their training was part of an overall training course in pastures and fodder crop production sponsored jointly by the Grassland and Fodder Crop Bank of the Food and Agriculture Organization of the United Nations (FAO) with the generous contribution of the Swedish International Development Agency (SIDA). The range management part of the Course, held at the Ministry of Agriculture's Dairy Training Institute near Arusha, followed lectures by an Australian team in tropical pastures and fodder crops at the University of Dar-es-Salaam, Faculty of Agriculture at Morogoro. Range Management training was conducted by an international and local lecturing staff generously sprinkled with Society for Range Management members.

In addition to the author, who arranged the Course and who acted as Team Leader, the international lecturing staff consisted of Martin H. Gonzalez, Head of the Department of Range Management, National Institute of Livestock Research, and Director of Rancho Experimental La Campana, Mexico; Lucas J. Ayuko, Head of Range Management Division, Kenya; and, Ian R. Lane, Lecturer in Animal Production, University Dar-es-Salaam, Tanzania. All but Lane are SRM members. Local lecturers from Arusha were L.M. Parkipuny and James A. (Al) Martin, Director and Range Specialist respectively, Masai Range and Livestock Development Project; Salum Juma Salum Ally, MATI Tengeru and R.S. McCandliss, Project Leader, USAID. Lecturers from Dar-es-Salaam were Milton Pate, Range Specialist, Texas A&M University, Livestock Development Project; Justice A. Rwebangira, Tanzania Livestock Development Project; and Gail Pate, DVM. Both Martin and Pate are SRM members.

The Course stressed the practical and applicable aspects of range management and their importance in respect to livestock and wildlife production, soil and water conservation, and desertification control and rehabilitation. These were demonstrated various times and from different angles by means of lectures, field demonstrations, slide presentations, and movies. The first part of the Course pertained to fundamentals essential to the understanding of range management concepts, practices, principles and interpretations. These were described and later demonstrated in the field. These prerequisite subjects were followed with discussions of range management techniques and practices essential to an overall development and improvement programme for the countries concerned.

Field practicals were conducted on the lands of the Masai Range and Livestock Development Project and the National Ranching Company's Manyara Ranch. Wildlife management as related to range management was covered via a 4-day safari to the Serengeti Wildlife Research Institute on the Serengeti National Park, Ngorongoro Conservation Area and Manyara National Park. Lectures were given and field observations were directed by renowned international and local wildlife scientists.

A part of the curriculum pertaining to delegate statements regarding the range situation and range management development and management programmes in their countries clearly showed that those who are interested in fostering and advancing practical range management on a worldwide basis have their...
work cut out for them. Supposedly, the delegates were leaders or at least instrumental individuals in the development of livestock industries and natural resources in their countries. Yet, many stated that their countries did not have rangelands; but upon questioning it was determined that ranges indeed produce the bulk of their meat and milk supplies. Only Kenya, Sudan and Tanzania have formally trained range scientists and while this cadre is capable of conceiving a ranch development program, its numbers are too few to fully implement one. Only a few countries have range use policies and departments with mandates to execute them, but these efforts are hampered by a deficiency in funds, resources, and manpower.

In the meantime, the rangelands of east and west Africa continue to deteriorate and the southern boundary of the Sahelian zone continues to march southward. This downward trend can in time be stopped and reversed with the inexpensive application of range management practices and principles. If for no other reason, this course was a success because 26 men have returned with concepts and ideas that they never had before, and perhaps some of them might be able to start something worthwhile. Now that range management has gone to Africa, we must work to keep it there.

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**Water—A Critical Factor in the Arid Southwest**

Larry Seymour

The vast Chihuahuan desert covers the Big Bend area of Texas plus much of Mexico. This area consists of many large ranches. In the past most of these ran sheep, but in the last 20 years many have converted to cattle because of predators. In addition, this area supports numerous wildlife species such as mule deer, pronghorn antelope, mountain lions, and an occasional bear.

![Water storage facilities are essential for grazing and managing rangeland in the arid southwest.](image)

In this 4–8-inch rainfall area, water is a critical factor. All needed water is furnished by wells. These wells range in depth from 500 to 2,000 feet. Even at this depth they pump only 1 to 2 gallons per minute. Large water storage facilities are necessary and are generally built in strategic locations so that one well can provide water for several thousand acres.

Installation of these permanent waterings has helped to achieve better grazing distribution on the land. This has enabled ranchers to utilize the native forage to provide meat and other essentials for people. These waterings have also helped the wildlife. Wildlife are now able to utilize areas that they were restricted from before because of the lack of water.

From a range standpoint water is a limiting factor in ranching in the Southwest. The development of water has opened up a large area of rangeland for production of livestock and wildlife as well as a place of scenic beauty.

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**Energy, Rangeland, Cattle, Meat, and Man**

Stewart H. Fowler

In a world faced with a severe energy crisis, we must consider the efficiency of energy cost to produce food. Livestock grazing of rangelands can reduce the drain on future fossil energy requirements for red meat production by providing an opportunity to tap the energy of the sun without major alterations of natural ecosystems. Rangelands furnish an annual renewable source of energy for producing red meat, so we may have a realignment of our beef industry toward greater utilization of range, pasture, and roughage with less long-term heavy-grain finishing in feedlots. We must start with the efficiency of solar energy conversion into plant material and the transfer of this energy to animal products. Plans should be made now to produce acceptable beef at less cost in fossil fuel through the use of more forages from rangelands combined with less concentrates or cereal feeds. We will need to capitalize on the ruminant’s unique advantage—its ability to convert organic substances not usable by man and other monogratric animals into human food of high quality and desirability. There are far greater tonnages of biological material in the world that the ruminant must convert for man’s use than of the materials that humans can consume directly. Inedible by humans, most of this material, which produces millions of pounds of meat, would be wasted if not utilized by cattle, sheep, and wildlife.

Thus, forage-consuming animals do not compete directly for human food. Instead, they supply red meat, which provides high quality protein, essential minerals and vitamins, and considerable food energy for human nourishment. The trend toward increased pressures on world food supplies appears inevitable; and with the increasing cost of energy, our rangelands must be used more intensively for meat production in the future. Currently, we are realizing only about 20% of the efficiency of our forage and grassland potential. In contrast we, must increase as rapidly as possible the role that our millions of acres of rangeland can fulfill in ruminant animal production.

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Author’s Note: This fact sheet was developed for use in the public educational effort of the Society for Range Management to show the growing need for beef and other ruminant production from rangeland.