

Journal of RANGE MANAGEMENT

Changing with the Times¹

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It is most appropriate that your society has chosen to meet here in Kansas, and here in Wichita for its Seventeenth Annual Meeting. With the great bluestem grazing area to the east and the broad expanse of short-grass country to the west and with beef cattle all around the town, a more appropriate location could not have been selected.

Although Kansas is known as the wheat state, it may surprise you to know that beef cattle provide on the average, about as much cash farm income as wheat and that these two enterprises make up 60 to 70 percent of our total cash farm income. In recent years, we have produced on the average some 10 million acres of wheat but we have some 20 million acres of grass. Our cattle numbers now exceed five million head.

The largest manufacturing industry in Kansas is the aircraft industry, centered here in Wichita. The second largest is the meat packing industry which is based on the product of our ranges and pastures.

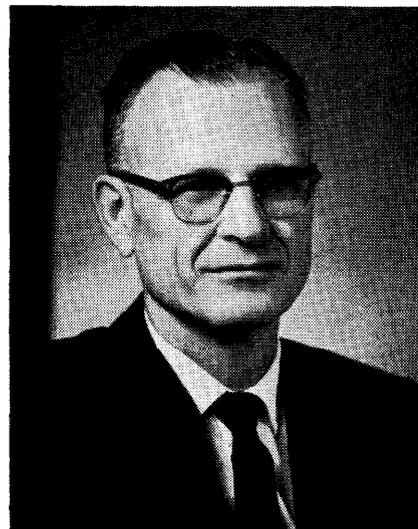
As a scientific and professional society, yours is one of the younger, newer ones. Your so-

ciety was established in 1947. Many scientific and professional societies have a history that extends over several decades. According to your journal, your society was created "to foster advancement in the science and art of grazing land management, to promote progress in the conservation and greatest sustained use of forage and soil resources, to stimulate discussion and understanding of scientific and practical range and pasture problems, to provide a medium for the exchange of ideas and facts among society members and with allied technologists, and to encourage professional improvement of its members."

Range management supports a very important part of our economy, covers a very large geographical area, and encompasses a very broad scope of scientific disciplines. As one contemplates the extent and scope of the disciplines involved in range management, it becomes clear why such a society is needed. It brings the knowledge of a variety of disciplines to bear on the problems of management. Technological progress is made by digging more and more deeply in more and more narrowly defined fields. If scientists are to push back the frontiers of knowledge, they must reduce large problems to small manageable parts and then in-

dividual scientists must concentrate on these small parts. No one will argue that we have not made scientific progress through this procedure. However, as scientists work in more and more narrowly defined fields, it becomes increasingly difficult to put the pieces back together. Each specialty tends to become an entity of its own. Not only do we have difficulty communicating across disciplines, we sometimes fail to communicate with students and laymen.

In looking over your program, I find persons of the following scientific and technical disciplines represented: Botanist, Ecologist, Pathologist, Soil Scientist, Animal Scientist, Agronomist, Economist, Forester, Agricultural Engineer, Land, Range and Watershed management and Soil, Water, Range and Wildlife Conservationist, and finally the rancher who has the toughest job of all. He must take the



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knowledge of all you specialists, understand it, evaluate it, synthesize it and use it. If this society does nothing more than facilitate the correlating and synthesizing of knowledge from all these disciplines it will fully justify its existence!

Let me turn now to the theme of this meeting: Range Management — Changing With The Times. That these are changing times, no one will deny. Within a single lifetime we have seen the common mode of cross-country travel change from the covered wagon moving at one mile in twenty or thirty minutes to jet aircraft moving at one mile every six seconds. We know that one plane can carry more explosive power today than all the planes of all the countries during all of World War II. Today, we produce more than twice as much food with half the number of farmers as fifty years ago.

Many of the dynamic changes that are taking place today are due to the application of science and technology to the task of getting things done. It is science and technology that makes it possible to travel a mile every 10 seconds. It is science and technology that made it possible to produce thermo-nuclear bombs. It is science and technology that have made it possible to feed twice the number of people with half the manpower formerly required. In the final analysis it is not nature that causes changing times—it is what people think and do that cause changing times.

Can we identify some of the changes with which the Range Management profession must deal in the years ahead? It seems to me that in the recent past, the profession has directed its efforts to increasing the sustained productivity of native and introduced forage plants as feed for ruminants. We have studied the basic soil-water-plant rela-

tionships and experimented at various locations and under varying conditions to determine practices that would result in maximum sustained forage yields. We have studied the physiology and nutrition of the ruminant animal which has been the principal user of the forage. We have learned much. We have made progress. There is much more to be learned.

One of the important changes imposed on us relates to a set of practices that have resulted from our studies. I am referring to chemical control of weeds, brush and insects. The changing times have brought the whole business of chemical control under question. Right or wrong, one book and a great deal of emotion has confronted us with a new challenge. Can we assure ourselves and the public that chemical control can be made safe? Can economical alternative methods of control be developed? I don't know the ultimate answers but I think the questions are important.

A second challenge concerns the competitive position between range land and crop land in meat animal production. Over the next several decades our human population will be increasing at a rapid rate. Total demand for meat will be increasing at least as rapidly as the population—perhaps, a little more rapidly. Where will the increased feed supply for meat production come from—from range land or from cropland? It is my observation, which you may wish to challenge, that per acre productivity of feed has increased more rapidly on crop land than on range land. Hybrid seed, fertilizers, mechanization and other technological developments appear to me to have favored crop land over range land. Will there be new technological developments in Range Management comparable to those in crop land management? The answer to

this question will have a great deal to do with the economic development of the feed-live-stock-meat economy.

A third question relates to recreation. As population increases, becomes more urbanized and as real incomes rise there will be increasing demand for open-country recreation. We have already heard a great deal about this and we will hear more—not less. On public lands, this will undoubtedly result in diversion of some land from livestock production. On private lands the opportunity for recreational use as a profit-making enterprise may also result in diversion from livestock production. Although on a year-to-year basis the amount of land diverted may be relatively small, it will be persistent over a long period of years. Much has been said of the concept of multiple land use. Although there is some degree of compatibility, perhaps a high degree of compatibility, between land use for recreation and for livestock production, there is also some degree of incompatibility. Relationships between individuals and agencies are certain to become more complex. The challenge will be to seek and to achieve understanding.

Fourth, a change that has far-reaching implications for the *American* society of Range Management is need for the profession beyond our own borders. If headway is to be made in banishing hunger and mal-nutrition over much of the globe, there is need for converting grass, which has little value in human nutrition, through ruminant animals into animal proteins which is a major deficiency in the diets of many people. In my limited travels in under-developed nations, it is perfectly obvious that in many cases, grasslands are badly neglected and abused and, in general, unproductive. This society and its members have much to

offer in service to mankind.

Finally, we come to the challenge of conservation in its most comprehensive sense. In Teddy Roosevelt's time, the term conservation carried heavy emphasis on conservation of the forests. In Franklin Roosevelt's time the emphasis was on soil conservation. More recently, the emphasis has been on wildlife conservation. Today, water seems to be receiving more emphasis. Just ahead is air conservation, or stated negatively, it is the

problem of air pollution. I think before too long we will hear much more about conservation of the beauty of all nature. Indiscriminate use of billboard's along highways, indiscriminate use of the front door of nearly every town and city as an automobile junkyard, indiscriminate use of bulldozers in destroying natural contours, trees and other natural vegetation may hopefully become things of the past. One of the changes I anticipate is that the thinking public, be-

coming increasingly sensitive to the destruction of beauty, will, by moral suasion or legislation, bring about an awareness for our individual and group responsibility for conservation in its more comprehensive sense. The range management profession will be deeply involved. Hopefully, mankind will come to look upon this planet as a place to preserve—not a place to destroy; a place to live—not a place to fight; a place to make bountiful—not a place to make barren.