Editorial
Range Management's Share of Agricultural Research

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The front cover of our Journal carries a statement of the purpose of our Society. Among other things, we are challenged to advance the science and art of grazing land management and to promote progress in conservation and sustained use. This is quite a challenge.

Grazing is still the largest single agricultural use of land in America. Over one billion acres are devoted to grazing by domestic animals and wildlife (Thomas and Ronningen, 1965). A national survey conducted in 1962 (USDA, 1962) indicated that these lands were producing only about half their potential.

My association with people in the range management profession has convinced me that there are no more devoted or able scientists in any group in the world than in the American Society of Range Management. Yet with these dedicated men working long and hard, our ranges still are producing only about half of the potential.

One of the major reasons we are barely holding our own is shown graphically in a recent report jointly sponsored by the U.S. Department of Agriculture and the Association of State Universities and Land Grant Colleges entitled "A National Program of Research for Agriculture" (Agriculture Research Institute, 1966). There simply are not enough people working in the range management research area.

Although the figure of 146 man years annually conducting range research does not include those working at non-land grant universities and for private organizations, it can be used as a basis of comparison with other fields. For instance in a "closely related" area of timber and forest products there are 1004 annual man years of research to our 146. There is one more man year, 147, devoted to potato research each year than to research on the entire billion acres of rangeland.

Cotton, our major surplus commodity, has 467 man years annually devoted to it. Tobacco, with all its recent publicity as a man killer, has 151 man years of research. Several other individual crops have more man years of research than the entire range management field: citrus fruit 242 man years, small fruit and tree nuts 527, ornamentals and turf 245, corn 298, wheat 304.

Each major species of domestic animal produced in this country has far more annual man years of research than the entire range field. The man years for each animal are poultry 460, beef cattle 514, dairy cattle 601, swine 259, and sheep 203.

Not only does the report show we have fewer people working in range than in many less important agricultural areas, but the projected growth in our field is behind other agricultural areas. The projection shows that 175 man years will be needed in range in 1977, while 1550 men will be needed in the area of improving biological efficiency of field crops.

These figures should say something to us as a profession and as concerned individuals charged with the "wise use" of the largest block of our nation's agricultural land. Either we have not made our needs known, or we are politically ineffective in getting the support our resource deserves. In either case, we must re-examine our position and improve our tactics if we are to meet our responsibilities.

We must make our needs known at all levels. We must not be reluctant to tell our story in the popular press or spend funds on advertising. We may or may not agree with the Sierra Club and the Audubon Society, but I dare say more congressmen know them and their objectives than know the American Society of Range Management.

If we are to truly live up to the aims of our Society, we cannot be content when only 146 man years of research each year are devoted to one billion acres of grazing land. We need to act as individuals, and corporately through our Society, to ensure that range management research is put in its proper perspective.

LITERATURE CITED


Editorial
The Use of Common Names in The Journal of Range Management

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In the early decades of the Twentieth Century, American literature developed a wealth of common names for plant species. In fact so many sprang into use that the American Joint Committee on Horticultural Nomenclature sponsored the first compilation called "Standardized Plant Names" (1917). This list was enlarged, revised, and republished in 1941. Now that this, also, is out of print, more and more splinter lists (Bureau of Land Management, Forest Service, Weed Society of America, and the like) are appearing. Does the range management
profession have, or should it have, a policy in regard to the use of plant names?

One can easily see that common names add interest and color to a world that would be, for many, coldly scientific and remote if only Latin designations were available. A scientific name usually tells a story, reflecting origin (virginiana), size (gigantea), color (rosea), or form (squarrosa). The same is true of common names, and where they have a useful and significant meaning, some thought should be given to their preservation. A good example is the unfortunate shortening of the Old World “goatfacegrass” to “goatgrass”. The first is descriptive, the second is meaningless.

Neither authority nor administration should force upon the literature the common name “centaurea” (cf. Standardized Plant Names) when general usage has brought acceptance to “knapweed” and “starthistle” (see list of Weed Society of America). Acceptance of a standardized list, reserving the right to make changes, is a compromise for both extremes.

Range science needs common names, just as it needs scientific names. Neither should be straight-jacketed into a status quo. Evolution and synthesis of lists will reflect a healthy growth in range science and related fields. Let’s “standardize”, but let’s not overdo it.

(Reprint with permission from Journal of Range Management, 206, A. A. Laycock.)

How Heavy Grazing and Protection Affect Sagebrush-Grass Ranges

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Highlight

Heavy late-fall grazing by sheep following spring deferment improves deteriorated sagebrush-grass ranges by reducing sagebrush and increasing the production of grasses and forbs. Fall grazing as a method for range improvement is more effective and practical than complete protection from grazing and is less expensive than mechanical or chemical means of sagebrush control. Heavy spring grazing damages good-condition ranges by increasing sagebrush and reducing herbaceous production.

Since 1924, researchers at the U.S. Sheep Experiment Station near Dubois, Idaho, have been studying the sagebrush-grass ranges which provide the primary source of forage for sheep

in both spring and fall on the Upper Snake River plains of southeastern Idaho. As they have reported previously, heavy spring grazing by sheep followed by fall grazing results in dense stands of sagebrush and low production of palatable grasses and forbs. Craddock and Forsling (1938) reported results of this study through 1932; Mueggler (1950) continued the report through 1949, and Laycock (1961) summarized results through 1957. All these reports showed that grazing only in the late fall maintains an open stand of sagebrush. This paper reports continuation of these studies through 1964; objectives of this continuation were to determine the effects on good and poor sagebrush-grass range of (1) complete protection, (2) heavy grazing in the spring only, and (3) heavy grazing in the late fall only.

The Study

This study was conducted in two 80-acre native range pastures. From 1924 to 1949 the two pastures were grazed at different seasons—one in the fall only, the other in both spring and fall. Stocking rates for the fall-grazed pasture averaged 43 sheep-days/acre; stocking rates for the spring fall pasture averaged 10 sheep-days/acre in the spring and an additional 10 in the fall.

In 1924, both pastures were in good condition when rated by the standards published by Peach and Stewart (1949). Both pastures had open stands of threetip sagebrush (Artemisia tripartita) and were producing abundant grasses and forbs. In 1949, the pasture grazed in the fall was still in good condition. The spring-fall pasture, however, dropped from good to poor condition during this period; sagebrush increased and grasses and forbs decreased. This deterioration was attributed primarily to the heavy spring use during the first few years of the study when

1 At Forestry Sciences Laboratory, maintained in cooperation with Utah State University.
2 Cooperative research by the Intermountain Forest and Range Experiment Station, Forest Service; Animal Husbandry Research Division, Agricultural Research Service; and the University of Idaho.

3 Nomenclature follows Hitchcock et al. (1955-1964) for dicotyledons and Hitchcock (1951) for grasses.