

Range Management for the Small Ranch

NORWIN E. LINNARTZ

Range and Forestry Department, Texas A. & M. College, College Station

RANGE Management is not for my small ranch." This attitude is often encountered by educators and professional agricultural workers and is one that must be overcome before the maintenance and improvement of range productivity becomes a way of life in American agriculture.

Several things have contributed to the development of this attitude. Probably of major importance is a lack of understanding on the part of the rancher as to just what a range management program is. Another is the relatively common idea that carrying out a range management program is expensive—too expensive for the small operator. A third contributing factor is that a sound range management program does not immediately become profitable.

Just what is a range management program? The exact nature of the program will vary from ranch to ranch according to the conditions existing. It may include such items as (1) adjusting the kinds and numbers of livestock to balance with the forage produced by the present range; (2) a system of rotation or deferred grazing to improve the composition and cover of the range; (3) brush eradication; (4) better distribution of grazing through proper fencing and salt placement; and (5) reseeding. Too often ranchers hold the idea that range management enthusiasts advocate selling off livestock and not much else. Even without a material reduction in number of livestock, often an increase in the amount of forage produced is received through deferred and rotation grazing alone or in

conjunction with other management principles.

Every good businessman knows that it takes money to make money. Therefore, if any unit is large enough to be operated at a profit under normal management, the same unit should be capable of producing a larger profit with some additional investment. Any improvement in farming or ranching operations usually means additional expense and lapse of time in order to produce the desired increase in profits. The same is true of range management. Ordinarily the small ranch of from 100 to 600 acres consists of some cultivated land which often produces as much or more feed and income than the native rangeland. Judicious use of cropland can materially reduce the expense and length of time involved in increasing range profits through a balanced range management program.

A typical range management program is that practiced on a 330-acre ranch in Kendall County, in the southeastern portion of the Edwards Plateau. The ranch consists of 65 acres in cultivation and two native pastures totaling 250 acres. Early in 1945, a complete conservation program was started on this ranch. First to receive treatment was the cropland, which was then used in conjunction with a range management program on the 250 acres of native range. The range improvement program consisted of a reduction in livestock numbers, clearing brush, and rotation grazing between the two pastures. The stocking rate with cattle, sheep, and goats at one animal unit to



FIGURE 1. RESULTS OF BRUSH CLEARING

Upper—Clearing a pasture of Texas oak (*Quercus texana*) and brush and piling the waste in windrows. Larger wood is being saved for fuel. This area is practically bare of grass, only scattered remnants of good forage plants being present in the brush. *Lower*—Area shown above after clearing and grazing with goats and after being rested two years to allow grasses to reseed. The pasture was grazed during winter and spring prior to date picture was taken. (Photographs by Soil Conservation Service)

6 acres was reduced to one animal unit to 10 acres with cattle and goats alone. Some brush was cleared by ax, some by bulldozer. Grazing was rotated between the two pastures according to the needs

of the grass and to the amount of brush sprouting.

The results of this management program have been outstanding (Fig. 1). Forage production on the pastures has

been increased by more than 50 percent and no feeding has been done since 1945. Feed produced on the cropland that was previously needed to maintain livestock on the range during the winter is now utilized for fattening calves prior to marketing. Range calves which were previously marketed at eight months weighing 400 pounds now average 550 pounds. Feed produced on the cropland is used to fatten these calves during the winter so that they are placed on the early spring market averaging 900 pounds. Since 1945 the calf crop consistently has been 100 percent and the kid crop has jumped from 75 to 90 percent. The average production of mohair, per goat, has increased from six pounds to eight pounds.

The cost of the establishment of the conservation program was \$728 for the construction of four miles of field terraces, \$600 for the construction of 2,200 feet of diversions, and \$630 for clearing brush; or a total of \$1,958. The average yearly increase in mohair has been 200 pounds. The average yearly increase in beef production has been 2,700 pounds, since the calves are now being fattened before marketing. At average market prices for the period 1945-1950, this represents a yearly increase in income of \$795. Thus, the monetary expense of establishing the entire conservation program was eradicated in less than three years. In addition, the smaller number of livestock has decreased the labor required for handling and decreased the capital investment; and the improved grass growth, with its subsequent improved soil condition and reduced soil erosion and water run-off, has materially increased the real estate value of the ranch.

The rotation grazing system has been continued and the droughts of 1951 and 1952 that prevailed throughout the Southwest have not noticeably reduced

the amount of forage available for grazing. Consequently, the original increase in production of pounds of beef and mohair have been maintained. Here is another small operator who is thoroughly convinced that a range management program is practical and profitable for the small rancher.

The use of cropland for grazing livestock during periods of range deferment should be an integral part of a range management program. Mixtures of small grains and sweetclovers for fall, winter and spring grazing and sudan for summer grazing provide excellent opportunities for periods of range deferment. Although a complete deferment from early spring until after frost is desirable, any period of rest during this season will be beneficial.

Cropland can be especially useful in a coordinated range management program where irrigation is possible, particularly in the more arid regions of the state. On a ranch in Tom Green County, Texas, in a 20-inch rainfall region spring deferment of native range was made possible by the use of irrigated pastures. A level border irrigation system was installed in 1951 on 38 acres of cropland. On September 1, 1951, the land was seeded to Kentucky 31 fescue, orchardgrass, perennial ryegrass, vetch, and alfalfa. On March 1, 1952, grazing was started on these cool season plants with 90 cows and 88 calves. In late April, an additional 42 yearlings were placed on the 38 acres. All of the stock were removed late in June to permit the grasses to enter their summer dormancy. In spite of this heavy grazing pressure, about two tons of hay had to be removed.

The rancher asserts that the irrigation system more than paid for itself in this four-month period by furnishing excellent grazing for beef production and by allowing deferment from grazing of his

native range, which made some remarkable growth under drouth conditions. Additional rest will be allowed when fall grazing is practiced on the irrigated pastures.

Although few small ranches may be equipped with irrigation systems on cropland, other grazing crops may be extremely useful in a range management

program. The important fact is that a range management program can be carried out on any economic agricultural unit. The small rancher must realize that any range improvement program is a long-range program and some monetary outlay may be necessary.

Range Management can be both practical and profitable for the small ranch.



EXHIBITS AT ANNUAL MEETING

At the Seventh Annual Meeting of the American Society of Range Management being held in Omaha, Nebraska, January 26 to 29, 1954, each section of the Society is invited to display an educational exhibit. Those planning to participate are encouraged to contact *H. W. Cooper*, Chairman, Contest and Display Committee, Post Office Box 713, Lincoln, Nebraska, to arrange for space.

NEW EDITOR FOR JOURNAL SELECTED

The Board of Directors has selected Dr. Robert A. Darrow, Department of Range and Forestry, A. & M. College of Texas, College Station as Editor of the Journal. Beginning as of October 1, 1953 members of the Society submitting manuscripts for publication in the Journal, either as a major article or technical note, should send them to Dr. Darrow.—*Joseph F. Pechanec*, Editor.