Teaching Tomorrow's Ranchers Today

DICK WILSON

Agricultural Writer, Division of Public Information, Oklahoma A & M College, Stillwater, Oklahoma

The old question of which came first—the hen or the egg—is still open to conjecture, but it is not hard to determine whether the cow or the grass came first. The difficult problem is to teach which grass came first—and why. These are the words of Clarence Bunch, Oklahoma Extension Range Specialist, who says the pioneer practice of taking everything away and returning nothing is still common in many areas and has been just as prevalent on ranches as on cultivated land in this state. As a result, millions of acres of virgin prairie support only a small percent of the livestock they once did. In Oklahoma, subclimax grasses and undesirable weeds have appeared on more and more ranges, until now, less than half a century after statehood, it is unusual to find properly managed grasslands.

Oklahoma extension specialists early recognized these facts and set about to develop an educational program of range management that would have practical application on farms and ranches as well as in the classroom. After reviewing extension range work in several states and incorporating ideas gleaned from previous experience, the specialists designed a scientific method of teaching practical pasture and range management.

Based on the contest method of stimulating learning by competition, it utilizes fundamental knowledge of land capability classes, native grasses and range management practices. The contests, similar to livestock judging in that classes consisting of four fields or pastures are used for comparison, have been especially successful in rural youth training.

They have greatly simplified teaching of grassland conservation for county agents and vocational agriculture instructors in this state. The average Oklahoma 4-H member is only 13 years old, and even though the score cards alone are effective teaching aids, added interest generated by competition cannot be duplicated in classroom teaching for youths this age.

Originators of pasture and range judging were looking forward to the time that 4-H and FFA club members of today would be the custodians of our agricultural resources. Recognizing that knowledge of potential production of the land and different range plants are basic to understanding good range management, they developed score cards based on those factors.

Range and Pasture Judging

The first step in pasture and range judging is to know the pasture and range plants in your locality. Participants in Oklahoma contests must identify different range plants as they view them in a display or out on the range. After identifying the plant, the contestant must know whether it is a perennial or annual, cool or warm season grass, native or introduced plant, and if it is a climax, increaser or invader species.

No contestant can successfully complete this card without a thorough understanding of the habits and characteristics of pasture and range plants in his area.

Next, the range judge must complete score card No. 3, while appraising an average sample of pasture or range, usually a circular area about 40 feet in diameter. Here, the judge must determine the kind of range site, how hard it has been used, its condition, and what conservation treatments are needed to protect and improve it.

Most farm youth readily recognize differences in productivity and crop adaptation of cultivated land, but few of them are aware that differences are just as great in range production. Similarly, they know that fertilizing, and using improved varieties and proper methods of pest control pay off on cultivated crops. Many, however, are not aware of the advantages of proper stocking, pasture rotation, brush eradication, deferred grazing and other money-making range management practices.

Research results at Oklahoma A. & M. College and the Red Plains Conservation Station at Guthrie, Oklahoma, indicate that brush removal will increase grass production as much as 300 percent in some cases.

Steers on rotated pastures at the Great Plains Field Station at Woodward, Oklahoma, made 55 pounds gain per head greater than those on continuous grazed range, and gain on reseeded native grasses was nearly 1¾ times more per acre than on average native range. The simple operation of mowing sagebrush each June doubled grazing returns in a four-year test at the station.

Harold A. Murnan, assistant farm agent of Pawnee county, Oklahoma, has successfully used the contest method of training to teach 4-H members the importance of these range practices. His boys learned well because they won championship honors at the national pasture and range judging contest this year. David Sharp stood third nationally, and Wayne Garner was seventh. Other team members were Dwayne Edwards and Grover Wayne Adams.

The boys had been judging range less than a year. They give a lot of credit for their success to previous experience in land judging, which is closely related to pasture and range judging. All grass production, in the final analysis, is dependent upon the soil and both contests were developed on this basis.

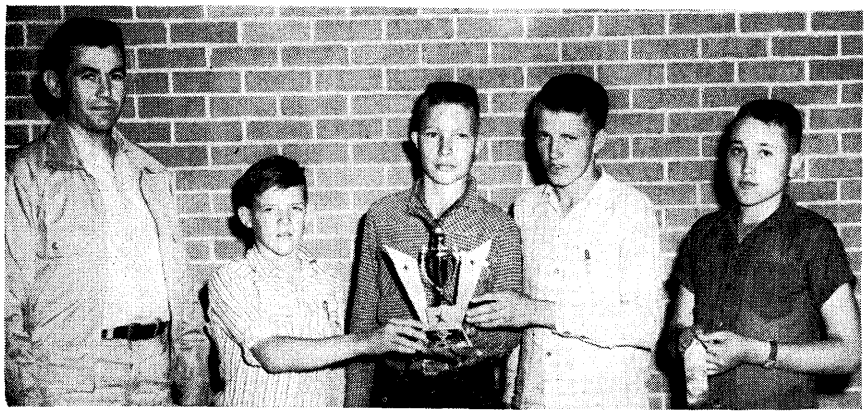

FIGURE 1. 1st place team, National Pasture and Range Judging Contest, 4-H division, Oklahoma City, April 30, 1955. Harold Murnan, Pawnee County, Oklahoma Assistant Farm Agent and team coach; Grover Wayne Adams; David Sharp; Wayne Garner; Dwayne Edwards.

Pasture Judging Involves Land Judging

In the Oklahoma program, separate score cards are used for land, pasture and range judging. Murnan believes that all of them are necessary to do a good job of teaching range management in this region. This is significant because Pawnee County is in the fabulous Osage grazing country, nationally known for its fine native grass. Yet he pointed out that the pasture judging card which incorporates land judging as a basic factor in grassland establishment and management made the transition from land judging to range judging much easier for the 4-H judges.

Developed primarily for cultivated fields that should be returned to grass, the pasture judging card consists of two divisions. In the first, the judge must determine the land class, and in the second he must choose one or more of the listed treatments.

Land class factors include texture, permeability, depth, slope, erosion and drainage. A multiple choice selection is made under each heading. For instance, under slope, the judge may choose one of the following classifications: nearly level; gently sloping; moderately sloping; strongly sloping; steep, and very steep.

The Pawnee County team members were familiar with these terms, all of them having been active in land judging in prior years. Sharp and Garner were on the second place team at the 1954 national land judging contest, and Edwards was a member of the first place district land judging team in both 1954 and 1955.

As a result, Murnan concentrated this year on the second division of the card. Main headings in this section include mechanical practices needed, such as brush control or sloping gullies; kind of plants to be reseeded; seedbed preparation and planting methods; fertilization; and management, which covers deferred grazing, brush and weed control, rotation grazing and similar practices.

His boys were first introduced to this phase of range judging at a summer camp in 1954. They continued their studies informally during the following months, then really concentrated on studying all range management practices on the score cards when Soil Conservation District Supervisors offered prize money for winners in the county contest in March, 1955. Soil Conservation Service, Indian Service and other agencies cooperated with the students in their quest for additional knowledge. An expense-paid trip was provided for team members going to the national contest.

Murnan held training sessions on Saturdays. Each time, he set up a contest and reviewed the score cards with the farm youths. It is significant that the 4-H members were interested enough in these contests to sacrifice their free Saturdays. And it is here that the values of range judging contests are really demonstrated, according to Murnan, who said, "before the contest was devised it was almost impossible to interest youngsters in any phase of range management."

More encouraging to farm youth educators is the fact that interest is comparable in nearly all sections of the state. Take the case of John Smith, 13-year-old eighth-grader from Hammon, a small town located in the Rolling Red Plains of Western Oklahoma. He and two other classmates, Billy Don Jordon and Lloyd Murdock, gave up many an afternoon this spring to roam pastures in that area with Billy Don's dad, Henry Jordon, a local Soil Conservation Service specialist particularly interested in farm youth education.

FIGURE 2. A typical judging contest. Boys must identify plants, determine whether they are perennial or annual, cool or warm season and native or introduced. On a separate card they decide on management practices or treatments needed to bring range to maximum production.

They studied grass identification religiously and after participating in two county schools they came to the national contest. Their preparation paid off, because Smith placed first, and the team placed seventh. Can anyone question their remembering these grassland conservation principles, or Smith's retention of the well-learned range management practices when he takes over part of his father's 2,200 acre ranch or gets a place of his own? You wouldn't, if you had seen how impressed they were about winning. When Smith was asked how he won, he said, "I just listened real close to everything that was said and studied the score cards." He added with all sincerity that the team intended to place first next year.

Whether the contest method is a result or partly the cause of the wave of interest in "grassland farming" the past few years is inconsequential. The important points are: first, general recognition that with proper management some land will produce more profit when used for pasture or range rather than with one of the more traditional feed or cash crops; and second, that grassland farming contributes not only to soil and water conservation but also to improved soil structure and fertility.

Rapid Development of Contest Method

The increase in use of the contest method of range management training has been almost phenomenal since the first experimental judging contest and school was held in 1952 at Norman, Oklahoma. Approximately 20,000 Oklahoma 4-H clubbers and FFA members participated in pasture and range judging events this year in preparation for the first national contest which was held in late April at Oklahoma City. Several states now have their own range conservation training program. According to Dr. L. I. Jones, former federal extension pasture specialist, and now extension field representative, it is one of the few programs that has the backing of every agricultural organization both in and out of government. Many foreign visitors have come to the state to study the training method.

FIGURE 3. Knowing the land and which grasses will do best on it are factors given ample consideration in the judging method of training. Here 4-H clubbers inspect both subsoil and topsoil before making final decisions.

Value of the program to the national economy is recognized by civic clubs, chambers of commerce and industrial leaders who are contributing medals, plaques and awards to contest winners.

Radio station WKY and television station WKY-TV furnished trophies and some $1,250 in cash prizes in contests this year, and sponsored the national pasture and range judging event in conjunction with the fourth national land judging contest. The Kansas-Oklahoma section of the American Society of Range Management provided ribbons for winners in the national judging events and all state contests.

Much of this popularity has been due to the practicality and versatility of the range judging score cards which were developed for use on our western ranges, tame pastures or on cultivated fields being returned to grass. Although designed primarily for Oklahoma conditions, the cards are adaptable to almost any area in the U. S. with minor changes.

Clarence Bunch believes that a new era has dawned in grassland conservation and management education, but he still has ideas on improving the cards. For one thing, he would like to see a section of the range judging score card devoted to the stocking rate of each area. The misuse and overgrazing of natural grasslands has been one of the most powerful agents in soil destruction down through history. Grasses and legumes must be considered a crop that requires as careful management as does a cultivated crop.

More than one-half the land area of the United States is in pasture and grazing land. He believes these areas still represent the greatest undeveloped agricultural resource in this country.

Most of all, he believes in teaching young people the interrelationship of the land, plants and livestock in achieving a permanent agriculture.