How to Interest High School Students and Graduates in Range Management As a Career

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There are definite career opportunities in the various branches of the range profession. From the rancher's viewpoint, it would be highly desirable to have a greater number of qualified and trained men to help them discover more profitable ways of using our range land resources. Colleges and universities generally have staffs and facilities to provide adequate training at the college level to young men interested in the range management profession as a career. Let us consider, then, some things that can be done to interest and attract young men into this useful and necessary profession.

A Look At The Problem

What is the present situation regarding awareness of career opportunities in range management? In my own experience and from all the evidence which I can find, very few young men in the position of choosing a career, or their parents or other advisors, know of the existence of the field of range management. Obviously, if they don't know about it, they can't choose range management as a career. The number-one problem then seems to be to gain greater general recognition for the profession.

Of those people who are cognizant of the range management profession, relatively few do better than vaguely understand the career opportunities offered by the field. In spite of the fact that the western states are range states, area-wise, the agricultural generalists who have wide contact with the public, such as vocational agricultural instructors and county agents, usually lack training in range management.\(^1\) They have the traditional broad background in animal husbandry, agronomy, soils, horticulture, dairying, etc., in a pattern set largely in the older, more completely cultivated eastern states, but seriously lack the concepts of wild land or range management so important in the west. The state extension service organizations of the west have been especially slow to recognize range management, and it is barely more than ten years ago that the first state range specialist in the United States was appointed in Texas. Certain of the western states still do not have an extension range management program.

Furthermore, range management as a career seems to lack the natural attractions associated with many other fields. There is a certain romanticism attached to the job of forest ranger (though forest rangers may be primarily range managers), and an instinctive attraction associated with wildlife management. Likewise, many other more widely recognized professional careers have become associated with some naturally appealing aspect of life which attracts recruits into those fields.

What Can Be Done About It?

Now that the situation has been described and evaluated to some extent, let us consider a solution. In three words, the obvious solution could be stated as "Better Public Information." But, how can this best be accomplished? In the first place, the American Society of Range Management will most likely have to shoulder a major part of the responsibility for getting the job accomplished. The particulars of organizing to accomplish this objective will have to be worked out by the society officers. We can more profitably examine some of the avenues through which a program might be projected. Traditionally, a large proportion of our young people choose careers while in high school. Juniors and seniors are particularly interested in career opportunities and welcome information or advice. A large proportion of our young men are in high school; consequently, career information provided at this level should be especially effective in recruiting.

Vocational Agriculture Departments in the high schools offer a natural opportunity for contacting large numbers of agriculture-oriented young men. In the State of Washington for example, there are 141 vocational agriculture departments having a total enrollment of approximately 7,000 boys. Nearby states have similar programs, there being a total of more than 200 such departments in Oregon, Idaho and Montana, with an enrollment of just less than 10,000 students. It should be evident that with the enrollments of vocational agriculture departments of the other range states added to those of the northwest, there is a tremendous number of high school students who can be contacted and informed of range management career opportunities through the vocational agriculture program. None of us would dream of recruiting 10,000 range management students, but we would like that many to know about career opportunities in this field so that they could

\(^1\) A notable exception to this general pattern is the Soil Conservation Service, U. S. Department of Agriculture, which has many range technicians on its staff.
consider it as a career possibility. Each year there are fewer full-time farm jobs, so more and more high school boys with farm backgrounds are looking for jobs in related occupations, such as range management.

Vocational agriculture teachers very often find themselves in the position of advising students concerning their future careers. They would welcome information and assistance in presenting the story of the range profession and its opportunities to their students. The Society should provide them with such specific information as: What kind of work does a range manager do? What are some of the problems he must deal with? What are beginning salaries, and opportunities for advancement? Who hires range managers? What abilities, attitudes, and other personal qualifications are required for success in this profession? Answers to these questions and others should be available to the teacher so he can provide them, as needed, to young men at the time they are thinking of selecting their life’s work.

Most high schools have guidance counselors whose job includes advising students of careers they might follow upon graduation, and arranging interviews between students and professional people in their field of interest. He may also suggest courses of study in high school which will better prepare the student for college training in his selected career. While it might be supposed that a person in this position would aggressively seek out information about range management as a career, this is not often the case. Generally speaking, these advisors have their time so completely taken up, and there is such a great number of possible careers overall, that if we want them to recognize range management, we must put information in their hands.

Students in junior colleges often delay making the final selection of a career until enrolling in a four-year institution. Thus, professors in the position of advising students at this level should also be provided with range management career information.

It seems apparent that some sort of printed material is needed to provide the career information described above. The Society has a committee working on the preparation of a careers brochure for high school students which should be useful when completed. However, there also seems to be need for a more detailed and higher level publication organized for the busy guidance counselor.

The 4-H club program provides another excellent medium for making career-conscious young men aware of the opportunities in range management. The Society could assist this program in two major ways. First, by helping to promote the establishment of a range subject matter specialist position at the federal extension service level. This is a key position to the organization of state range management programs, including 4-H range management projects. Second, by providing sample 4-H projects in range management for adoption by state extension organizations not now having them. Some states have pioneered in this work, and some experience exists in conducting 4-H range projects, which would be valuable to states not now having such a program.

During the past few summers, the Pacific Northwest Section of the Society has conducted range management camps in Washington and Oregon for about 50 selected high school students each year. These boys have come from the far corners of their respective states, as well as from British Columbia. Several other sections also sponsor similar summer camp programs. In camp, the boys have not only had an opportunity to learn some of the more important principles of range and multiple use management, but have also rubbed elbows with dedicated range managers and learned something of their work, firsthand. This is a fine opportunity for those who are fortunate enough to attend, and the boys have expressed great interest and appreciation. My principal suggestion for improvement of the camps which I have attended is that more time could be devoted to presentation of material on careers in the range profession.

Still another means by which the Society can use to inform key people is to offer intensive summer range management courses to high school agriculture teachers, biology teachers, and others in the related fields. The State College of Washington Department of Forestry and Range Management offered such a course in the summer of 1958, and rewarded the “students” with one hour of college credit toward maintenance of their teaching certificates. The entire course was conducted right out in the range area. The seventeen teachers in attendance were highly gratified by the instruction offered, and went back to their classrooms converted to the idea that range management instruction should have a place in their annual high school teaching programs. As part of the course, they prepared a teaching unit outline on the subject of range management to aid in their own future teaching of the material. The final lesson in this outline, and of the short course, was a discussion of career opportunities in range management. This effort has already borne fruit in the recruitment of budding range managers.

Summary

The “new blood” needed in the range profession can be
found if the members of the American Society of Range Management are willing to embark upon a public information program to make more people aware of career opportunities offered by the profession. This can be accomplished in several ways, including: (1) contact high school agriculture students through vocational agriculture depart-
ments, (2) contact other students through high school and junior college guidance departments, (3) prepare careers information for both the student and teacher levels in high school, (4) support the establishment of recognized range management extension programs at the national level and in all western states, (5) prepare sample 4-H club projects in range management for distribution to states needing assistance, (6) conduct range management summer camps for high school students, and (7) provide intensive range management short courses with college credit, for key youth leaders and advisors, such as high school agriculture and science teachers, county agents, etc.

Forage Production on Sprayed and Burned Areas In the Missouri Ozarks

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Some partially wooded areas in the Missouri Ozarks are better suited to producing herbaceous vegetation than timber. One of the biggest deterrents to maximum herbage production on such land is brush crowding out the grass. The problem has been to find ways to control the undesirable hardwood. Burning the woods in the spring has been the traditional way to solve this problem. However, it has been demonstrated that the new chemical plant killers do a more effective job. (Elwell et al., 1950; Elwell et al., 1954; Martin et al., 1954; Silker and Darrow, 1956; Koshi et al., 1954).

An opportunity arose in 1952 to evaluate the effect of both a typical spring burn and herbicides on herbage yield and composition when an accidental fire burned over part of a study area where herbicides were to be tested to control unwanted hardwoods.

The study was made in Dent County, about 10 miles east of Salem, Missouri, on rolling land with moderate slopes. The soil is a Clarksville stony loam with a surface that consists mainly of cherty stones covered by a light leaf litter.

Forest cover in the area is primarily blackjack (Quercus marilandica) and post oak (Q. Stellata) with some black oak (Q. velutina), hickory (Carya), sassafras (Sassafras albida), and other hardwood species. The stand studied consisted almost entirely of sprouts about 6 to 10 feet high. A few sapling, pole-size and larger trees were on the area, and some shrubs such as sumac (Rhus) and blueberry (Vaccinium) occurred in the understory. Herbaceous vegetation consisted mostly of unpalatable species such as goatstrue (Tephrosia virginiana). Little bluestem (Andropogon scoparius), the predominant grass in the study area, was rather uniformly distributed, although the plants were in general spindly and of low vigor.

Periodic burning and grazing had long been common in this area except for several years just before the start of the study. The fire which occurred on May 11, 1955, burned an area of about 20 acres.

The herbicide was Estron 2,4,5-T applied in early June at a rate of 4 pounds acid per hundred gallons of an oil-water emulsion. It was sprayed on the smaller trees with hand equipment until the foliage was dripping. The larger trees on the study area had been girdled in June 1952.

Nine rod-square plots were randomly selected on each of the sprayed, burned, and control areas. Herbage yield (clipping to a height of 1 inch) and composition measurements were made on 4 randomly located 2.4 square-foot quadrats in each rod-square plot. Estimates of tree cover were based on 40 observations on each rod-square plot and used as a measure of hardwood competition.

Results and Discussion

Sprayed areas produced more herbage of quality than either spring burned on control areas. Spring burning in fact did not significantly increase total yield at all. Five years after treatment with 2,4,5-T, total herbage yield on sprayed areas was about 4.5 times greater than on burned areas and about 5.5 times greater than on control areas (Figure 1). Little bluestem and other perennial grasses accounted for prac-