Fig. 1. Leo Dubay and Russel Loudhawk, Indian rangers, obtaining browse utilization information at permanent photo point.

soils and western wheatgrass (*Agropyron smithii*) on deeper soils.

The status of these key forage species provides a basis for exercising a number of options for managing the four species of big game—elk, bison, deer, and pronghorn. Economics as related to hunter preference, the population dynamics of each game species, and the competition for forage and space among game species, along with the management complexities concerning both animals and forage resources, will undoubtedly require that adjustments in the overall management plan be made in the future.

The Department of Wildlife and Fisheries Sciences of South Dakota State University has set up transects to determine plant use and is also making stomach analyses to determine plant use by animal species.

Licensing of hunters is coordinated with state authorities. In this instance, through the cooperation of the Department of Game, Fish, and Parks, legislation was passed permitting special hunting seasons, regulations, and licenses for the game range.

It appears that native game animals produced for fee hunting may bring as good a financial return to the Indians as would domestic livestock. Examining a hypothetical comparison of elk and cattle is quite interesting. Elk are fee hunted at $1,200 for bulls and $200 for cows, or an average of $700. A 100-elk herd would provide 25 harvestable animals annually. At $700 each, the return would be $17,500. Using the same amount of range for domestic livestock, 86 cows and 3 bulls could be grazed for 9 months. They should produce 75 calves weighing 450 pounds each. If the calves brought 65 cents per pound, this would be a gross return of $21,937. Subtracting $3,440 for cost of hay for 3 months and $830 for bull costs, the return for cattle is $17,667 compared to $17,500 for elk.

There are other costs to each kind of production such as labor costs for feeding cattle, labor costs for guiding hunters, and equipment and facilities depreciation and maintenance in either activity. A factor of considerable importance, not included in the preceding comparison, is the high initial investment for a game fence, which runs from $6,000 to $10,000 per mile. Maintenance costs of either kind of fence would be similar.

Although this may be a suitable activity for the Oglala Sioux, it would be difficult to say what the opportunity for others might be to develop a similar operation—particularly if it were necessary to acquire habitat where not only the range would be satisfactory but where an esthetically pleasing hunt could be offered. It is also interesting to speculate what problems might occur if a source of free or low cost elk or bison for initial stocking were not available.

Ninety-four years ago my grandfather established the family in the business of raising meat. At the same time he developed a land usage philosophy that was to guide the operation for 60 years to come. He had to take into consideration the scarcity of money (which has continued over the years), the difficulty of producing hay, and the necessity of having enough feed for the cattle year-round. Not only the cattle would eat, but so would his family. Thus his use, and in some years, his overuse, of the land was a direct economic necessity.

For the next 60 years our business, then run by my father and my uncles, followed the basic tenets laid down by grandfather. With the coming of mechanization, however, they were able to develop the land, particularly patented land, with their goal, of course, to produce more pounds of meat per acre of land.

In my grandfather's time the population of the Rogue River Valley, just north of the California border in...
southwestern Oregon, was small. So quite naturally there were few users of the land and consequently plenty of land for all. By contrast, in the late 1940's when my brother and I took over the business, the population had doubled many times over. No longer was there enough land for everyone to use for a single purpose. The pressure was already beginning to build for multiple uses of land formerly used only for grazing cattle. Timber production was rapidly becoming big business. This meant roads into land never easily accessible before. Hunting and fishing were no longer for sheer necessity. Now they were sports with many participants. Other recreations, such as camping, boating, hiking and the like, were growing by leaps and bounds. Then too, as the population grew, the watershed was of increasing importance. Each of these groups pulled for its goals with the cattleman who had always been, but now it was smack dab in the middle of progress.

We felt the pressure of these stepped-up demands on the land and yet still another on which our economic security directly hinged. We could no longer continue to operate and support our families with the small bunch of cattle that had carried the family in years past. We just had to expand to stay in business. That meant we were expanding, we developed a sensitivity to criticism and a growing awareness of one clear fact: if we were expanding, we developed a sensitivity to criticism and a growing awareness of one clear fact: if we hoped to continue to use the land, we had to develop a more viable system, allowing for our use without interfering with other uses and at the same time develop more and better forage.

An added plus to the working of the plan is the total cooperation of all those involved. We had a reasonably good relationship with the various agencies before, but I believe cooperation and understanding has greatly improved. Participant reaction has been tremendous, with each one giving just a little instead of pulling for its own course. The timber companies and ranchers both agreed to give consideration to an enhanced environment for the wildlife on their lands. In the past, the production of timber was the only point of concentration for the timber companies with little thought for range. Our attitude for years toward game and wildlife has been one of tolerance because we could do nothing else. Our thinking has changed as a result of this plan. We instituted a method for the manipulation of feed, water, and other factors to manage the deer herds as we would manage our cattle.

The plan is working and has caused us to continue to broaden our outlook. Still another outgrowth of this type of overall planning was the leasing of a ranch in the milder climate of California for our cattle to winter on. This move will have a dramatic effect to the betterment of our entire operation.

Aesthetically, we have always been concerned about what our total effect on the land will be. It is our sincere hope that when we have had our day the land will be undepleted and unscarred. I would hope that our properly planned use can help us to accomplish our end, that of helping to feed a demanding humanity, while also improving conditions for all the other demands put on the land.

The demise of the family-type operation, because the younger generation sees no future in most agricultural fields, is becoming an increasing concern. In order to save our way of life for our children and make it feasible for them to continue, we, the cattlemen, must take the initiative. A progressive attitude in our time may have an effect on whether or not they will continue. The land must be productive and available for grazing use tomorrow, as well as today, so that they will have a reasonable chance to achieve economic security. It is my belief that this type of coordinated planning and management can give more security of tenure than anything done so far. While there are many uncertain variables in the economics of the cattle business, the asset of a well-planned and managed range is the key factor to keeping a ranch solvent.

As a consequence of my changing attitudes, I strongly feel that it is imperative that we publicize to the greatest degree the efforts and results of these efforts that have been made in planning and management of grazing lands. There are two groups, or publics, we need to reach. First, there are all others who graze the land and are not now involved in good practices with the aim of immediately enlisting their efforts in a proper direction. The second group is the general public, in particular the concerned environmentalists who are now so intense in their efforts to eliminate grazing from public lands.

The public does have the right to know how the public land is being managed. We need to tell and show these people that the land can be managed in such a way as to insure its retaining productive capability, its cover and wildlife habitats, its scenic, recreational and aesthetic values and still produce adequate supplies of red meat for the demanding consumer.