

Dependency on Federal Grazing in Eastern Oregon

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The western states often are termed public land states since 29–87% of the land is owned and managed by the federal government. The majority of this land is rangeland, both nonforested and forested. The U.S. Forest Service, charged with managing the National Forests, and the Bureau of Land Management, who manage what was known prior to the 1934 Taylor Grazing Act as the Public Domain, have historically allowed local livestock operators to graze public lands through a system of permits. Grazing of public lands predated creation of managed federal ownership and set the precedent for historical dependency of grazing upon federal lands for at least part of the yearly forage needs.



Fig. 1. Seeded crested wheatgrass on rangeland in the BLM Vale District near Jordan Valley, Oregon, provides an important source of spring forage.

In many places in the West beef cattle and sheep may be found grazing on some public rangelands at any season of the year. However, traditional usages suggest dependency upon BLM lands for early spring to early summer forage and upon the National Forests for summer-early fall forage (Fig. 1 and 2). The concept has been to complement forage produced and provided by privately owned range and haylands.

Because dependency implies a weak position if a change in the public rangeland forage supply were to occur, some improvement in the knowledge base regarding the idea of dependency and dependent livestock operators is recog-

nized as important. Both the Forest Service and Bureau of Land Management have compiled considerable information relative to their respective lands and resources. However, in Oregon, there is virtually no information on facts such as, how much forage is provided from various public and private sources. This discussion summarizes survey results intended to document forage allocation.



Fig. 2. The Malheur National Forest in Oregon provides excellent forage during summer for these Grant County cattle in Logan Valley.

Objectives

Most of the publicly owned rangelands in Oregon occur east of the Cascade Mountain range. Approximately 70% of the beef cattle and calves in Oregon are raised there. Because so little was known about the federal range-dependent cattle industry, a study of it was requested and supported by the Oregon Cattlemen's Association, U.S. Forest Service, and Bureau of Land Management. Personnel from Oregon State University's Departments of Rangeland Resources and Agriculture and Resource Economics conducted a study in 1980 and 1981 intended to describe characteristics of the dependent beef industry, including a number of economic parameters.

Due to the limitations in time and funding, a representative area composed of 5 eastern Oregon counties was surveyed. A questionnaire was developed and interviews made of

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ranchers from the selected 5 county area which contains approximately 36% of all eastern Oregon land area and 40% of all federal land in eastern Oregon. Cattle producers were selected for the survey on a county by county basis from lists provided by the Forest Service, BLM, and Oregon State University extension agents. Each operator was identified as accurately as possible as to the number of brood cows. The total sample was then stratified by herd size groups in order to aid in the statistical evaluations and determine the relationship between dependency and size of operations. All responses were kept confidential. Both economic and non-economic data were collected, but to date, only the physical operation characteristics have been summarized.

Results

The land/vegetation types and the patterns of federal ownership differ somewhat in the 5 counties sampled. Some differences in results were, therefore, expected. Many other statistics were generated including those relating to economic costs and income. Of primary importance to the livestock industry, local government, those in resource education, and perhaps most importantly the land managing agencies, was the question of the extent of federal land forage contributions to physical and economic well being within the community.

Total land area in the counties surveyed was over 15 million acres of which 9.7 million acres or 64% is federally owned. In the 5 counties, 592 ranches had federal grazing permits; this was an estimated 55–60% of all ranches. However, based upon estimated forage from all sources, from 69–77% of the total range forage available to all cattle ranches was consumed by cattle from ranches dependent upon federal grazing. Counties which contained large federal land holdings tended to support larger ranch operations. In Harney County, which contains 6.5 million acres and is 62% BLM and 8% Forest Service owned, 14% of the ranches had over 750 brood cows. In other counties, only 6–9% of the ranches exceeded 750 brood cows. Harney County had 36% of its ranches classified as larger than 450 cows. Other counties had only 15–17% of their ranches in that category. Conversely, 49–63% of the other county operations contained fewer than 200 brood cows. The ranches containing over 750 cows sold over 44% of all the yearlings and 41% of all cull cows and bulls, but only 18% of all weaned calves marketed. Ranches of smaller size tended to sell relatively more weaned calves than yearlings, perhaps because they may have less flexibility of operation.

Information was collected on the contributions of all forage sources including hay as related to herd size. Naturally operations with larger herds used proportionally more total forage because they ran proportionately more cattle. As an example, in Baker County, which has 33% Forest Service, 15% BLM, and 50% deeded land, some 50% of the ranches have fewer than 200 cows. However, these ranches have only 17% of the cows in the county. Only 6% of the ranches were in the greater than 750-cow category but they ran 29% of the total livestock in Baker County. In Grant County, which is predominantly controlled by the U.S. Forest Service, some 63% of the ranches are in the less than 200-cow category, but

contribute only 24% of the total animals. In the Crook-Deschutes County area, which is 36% Forest Service and 24% BLM, data showed that 9% of the ranches were in the over 750-cow size class and produced 53% of the cows.

Were there differences between herd sizes regarding sources of forage contributing to their base? Forage source data were analyzed statistically to determine whether there was any difference due to herd size in the contribution of BLM and Forest Service forage to the total. Results within any given county showed no differences, but the amount of statistical variation was high. The variation among counties was even higher. Conclusions were that no differences occurred between BLM and Forest Service forage sources as affected by size of operation.

What does the forage use picture appear like? Hay fed during winter constituted from 29–36% of the total year round forage supply when all counties were compared. There was some tendency for the small-size herds to rely

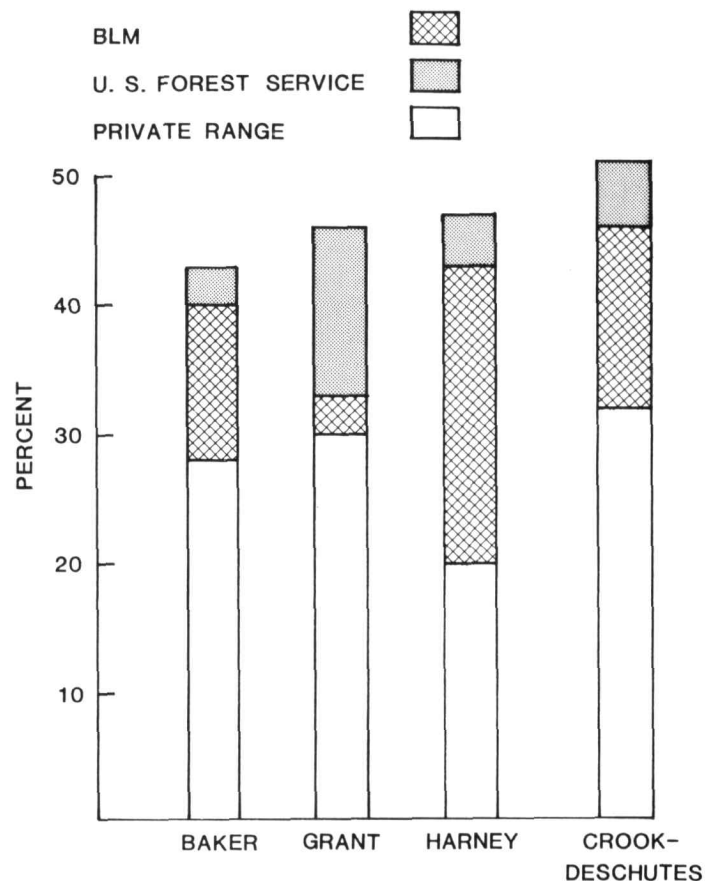


Fig. 3. Percent of total forage provided by private, BLM, and National Forest Range.

more on hay in winter than did the larger operations, probably reflecting an inherent flexibility in the larger operations. Crop aftermath provided 9–15% of the year-round supplies but this was primarily in October–December. Irrigated pasture contributed 5–10% of the total, also. Subtracting out the contributions of hay, irrigated pasture, and crop aftermath left range forage to supply anywhere from 43–51% of the

total. Large differences occurred among counties (Fig. 3). For example, BLM contributed 23% of all Harney County forage, 14% of the Crook-Deschutes County sample area, but only 3% of that in Grant County. On the other hand, the National Forest forage supplied 13% of Grant County's total but only 3-5% in the other four counties. Private range, whether owned or rented, provided from 20% in Harney County to 32% of the forage in the Crook-Deschutes County area.

The real importance of forage from BLM and National Forests relates to the seasonality of its use and how it complements other sources of forage (Fig. 4). April, May, and

County, an average of 15% of the total forage came from that source in June and July. When placed on a range forage basis (excluding hay, aftermath, and irrigated pasture), BLM provided 44% of all range forage consumed in Harney County, the largest single forage source category.

Grant County, which borders Harney County to the north contains relatively little BLM land but greatly more National Forest land. About 60% of Grant County is federally owned. As may be expected, the National Forest provided a very important forage source for the June through September period, 31-36% of any of those months' totals. Conversely, BLM only provided 4-6% of the April to June forage. Deeded range in Grant County supplied 74% of the May total and leased private range and grazing associations (private) provided another 9%. On a range forage basis the National Forest provided 27% of all range forage, BLM 6%, and deeded range 67% to Grant County dependent ranches. Thus, rather large contrasts do occur due to the composition of ownerships and predominant vegetation types. Interestingly, county lines sometimes occur such that a county is dominated by one or another federal ownership class. This was apparent for Grant County with a predominance of National Forest land and Harney County with most federal lands managed by BLM.

Examination of hay feeding and purchasing practices showed a 130-140 day feeding period with most of the hay being raised on the property. In two counties with higher amounts of BLM land, an average of 91% is produced on the ranch where it is used. In a high Forest Service county, Grant, 95% was home grown. Carryover hay supplies varied from 8-20% of the total but this may be more indicative of hay production in a previous year than of a desired or planned amount of carryover.

Dependent ranchers were asked which options they felt were most viable if they were to lose some of their federal grazing privileges. This information is very subjective. Operators tended to view options differently in the various counties. For examples, in Harney County where BLM contributed 45% of the range forage and private range only 39%, there was a strong tendency, especially with the larger herd size operators to consider herd reductions over any other option. In the Crook-Deschutes County sample the BLM provided 27% as compared to private provision of 63% of range forage. These operators tended to feel that improving their deeded range would be their first choice if faced with reductions in federal permits. In Grant County where 95% of hay was home grown, many operators apparently feel they could divert some hay land to grazing as a first option. Perhaps they feel they could make up the difference in hay yields by using better hay production practices. Since no overall conclusion between the counties can be made, the value of definitive county surveys is further illustrated.

Conclusions

Forage estimates from surveys conducted in five eastern and central Oregon counties show some 70-75% of the total AUM's of forage used were by cattle from ranches with federal grazing permits. The single most important source of forage was hay fed during the winter period. Hay costs,

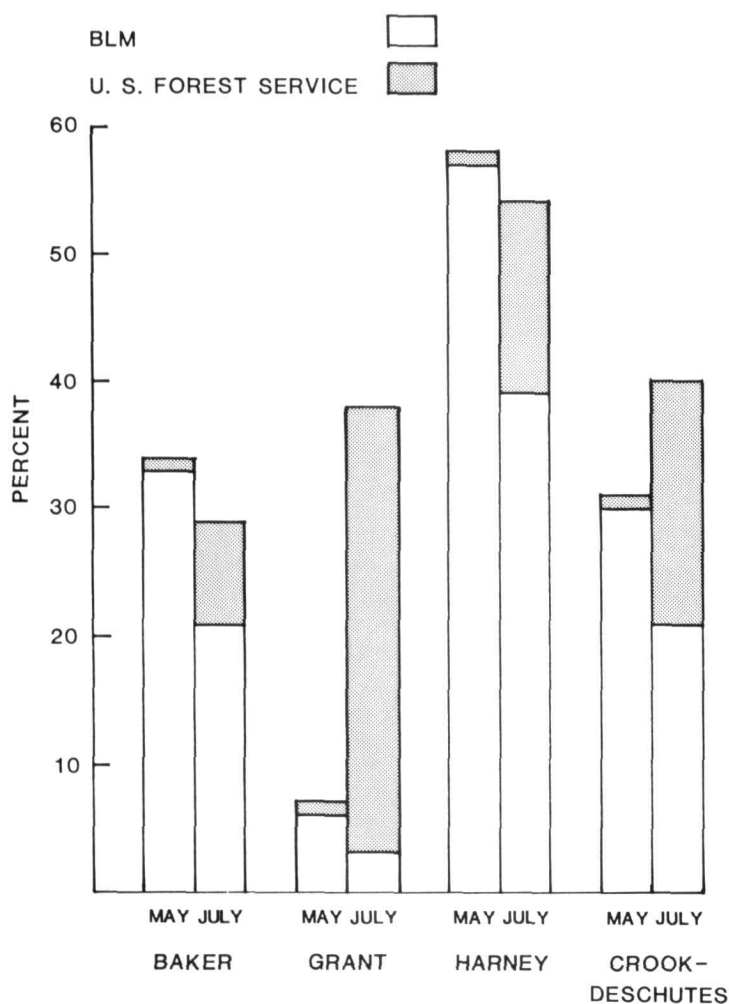


Fig. 4. Percent dependency of ranches on BLM and National Forest Range forage in May and July.

June are critical feed months in eastern Oregon. On ranches holding BLM permits, access to grazing at these times of year can allow a larger herd to be carried in other months of the year. In Harney county, forage from BLM made up 50, 57, and 43% of all forage consumed in April, May, and June, 1980, respectively. As much as 74% of the forage was from BLM in May for the 100-200-cow herd size category. Although National Forest acreage is not large in Harney

regardless of whether raised or purchased, commonly exceed costs of grazing. Thus, any reduction of the 29–36% dependency on winter hay could have net positive benefits if animal performance is not hampered. Larger herd sizes on the average were feeding less hay which probably reflects greater flexibility in their management of the resource base.

Combining both Forest Service and BLM forage data shows that from 34–53% of the range forage consumed is provided by these two land ownerships. When placed on a seasonal basis, the contribution is even more significant. Federal land management agencies need to recognize that the forage produced under their management is extremely

important, especially when viewed from the perspective which shows the importance of critical feed periods. However, until actual AUM amounts are known from the various land ownerships represented within a county, there is no good way to estimate what effects any change in permitted grazing may have. When seasonal dependence is known by forage source, both ranchers and management agency personnel can cooperatively evaluate impacts brought about by any given management change. Thus, proposed forage reallocations could be suggested in the light of more factual information and should result in greater cooperation between the public and private sectors. ●

Conservation on Hopi Rangelands

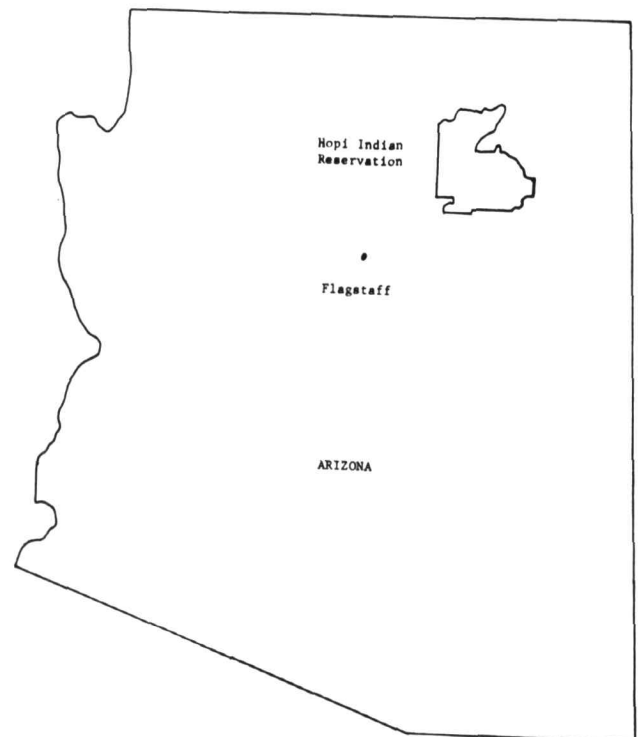
Harmon S. Hodgkinson

The effects of soil and water conservation on range resources often are not realized until years later. The land user or manager knows that conservation practices applied and maintained will pay in the long run. He also realizes that as technology advances, systems need to be improved.

A Soil Conservation Service (SCS) soil-vegetation survey team was assigned to the Hopi Indian Reservation in north-eastern Arizona in 1980 to provide the Bureau of Indian Affairs (BIA) and the Hopi Tribe with a cooperative soil survey and a range site and condition survey to be used in the planning, application, and use of Hopi lands.

The Hopi Tribe in 1882 was granted 2,600,000 acres, but presently is living on about 650,000 acres. The Hopi have lived in this area for nearly 1,000 years. Old Oraibi, built at least by 1150, is probably the oldest continuously occupied city in the United States today. The Hopi people dryland farm some areas close to the villages, raising corn, beans, squash, melons, and some fruit trees. Cattle and some sheep are the livestock commonly grazing the rangelands.

The Hopi farmers and ranchers over the years have received assistance in applying conservation practices from the BIA at Keams Canyon. As a member of the SCS survey team, I have seen many conservation and range manage-



ment practices on the land. Some of the practices were installed recently. Others were installed 40 years ago. BIA photo files document the past, and new photos taken in 1982 show how these conservation practices have improved and protected Hopi soil, water and range resources. The areas are located in a 6 to 10-inch precipitation zone at elevations of 4,800 to 6,000 feet.

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The author thanks the BIA at Keams Canyon for access to their photo files and Oscar Lalo, who assisted in this project.

Editor's Note: The Soil Conservation Service worked on the Hopi Indian Reservation from 1935 until 1940, when a Government Departmental major reorganization took place and moved the SCS from all Indian lands.