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July 1977

Study Paper #77-4

Livestock or Crops, Land Conversion  
and Rancher/Farmer Adjustments

by

E. Bruce Godfrey

This paper was presented at a Conference on the Desert Land and Carey Act entries held at Twin Falls, Idaho, February 25 and 26, 1977, and was sponsored by the Idaho Conservation League.

Livestock or Crops, Land Conversion  
and Rancher/Farmer Adjustments

Let me preface my remarks today by saying that essentially very little empirical work has been done in this area. Thus the examples that I will use are hypothetical and will differ from the actual adjustments that will occur in the area being emphasized at this conference.

Pressure for the development of lands and water along the Snake River plain has existed for some time, as most of you are aware. A large percent of this pressure is within Ada, Elmore, Owyhee, and Elmore counties. As the data in Table 1 indicates, most of this land is owned by the Federal Government. Furthermore, most of the existing cropland is irrigated. The interim state water plan indicated that approximately 80% of the potential land that could be developed as cropland is rangeland at the present time. Most of this rangeland is grazed by domestic livestock and wildlife.

Table 1. Land area of type and ownership in selected counties of Idaho

County	Total acres	Percent federally owned	Cropland (acres and % of total)	Percent of cropland irrigated	Acres of private range
Ada	666,900	48.5	105,122 (15.8%)	86	183,100
Elmore	1,953,300	71.6	84,717 ( 4.3%)	62	406,800
Owyhee	4,889,000	82.6	119,298 ( 2.4%)	100	569,700
Twin Falls	1,242,800	53.0	236,400 (19.0%)	97	97,200

Sources: Public Land Statistics (BLM, USDI) and Idaho Agricultural Statistics (SRS).

These lands are important to ranchers who live in this area. For example, during 1974, 566 operators were permitted to graze 128,000 head of cattle and horses and 109,000 sheep in the Boise district of the BLM (BLM facts). This would equal approximately 550,000 Animal Unit Months of use.<sup>1/</sup>

These lands, therefore, provided approximately one-third of the total food requirements of animals that were permitted to use BLM lands in the Boise district. Similarly, livestock operators in the Burley and Shoshone districts obtained approximately one-sixth of the forage required by their animals during 1974 from BLM lands. All ranchers in this area would not be equally affected by any loss in permitted use resulting from a Desert Land or Carey Act entry. A simple example might illustrate the direct impacts that might occur.

Suppose some hypothetical rancher, who is permitted to graze lands that may be developed for intensive agriculture, owns 300 head of brood cows which produce feeder calves.<sup>2/</sup> His operation might involve calving in February with the sale of calves, cull cows, and bulls during October. If he is a typical operator, he will have about an 85 to 90 percent calf crop--a maximum of 270 calves could be sold each year--which could be sold or saved for replacement. He would also need 12 to 15 bulls to service his herd. Thus, the feed requirements, in AUMs, for this operator might look like the following:

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<sup>1/</sup>An Animal Unit Month (AUM) is the amount of forage required by a 1000 lbs. animal for a month.

<sup>2/</sup>Many types of operators might exist: fall calving, cow/calf, yearling, etc.

Table 2. AUMs of feed required for a hypothetical 300 cow herd

Month	Cows	Replacement	Bulls	Total
January	240	72	20	332
February	300	36	20	356
March	300	36	20	356
April	300	36	20	356
May	300	36	20	356
June	300	36	20	356
July	300	36	20	356
August	300	36	20	356
September	300	36	20	356
October	240	72	20	332
November	240	72	20	332
December	240	72	20	332
Total				4178

In general, this rancher will be affected differently depending upon when and how much he is permitted to graze the public land. He will also be affected by factors such as other uses of his private (commensurate land) property, other sources of forage that are available and if the BLM tried to provide use in other areas. Let's consider first a rancher who has a winter grazing permit and then we will consider a spring/fall operator.

#### Winter

If this rancher was located in the Hammett area (south of Mountain Home), it is likely that his period of use would be during the winter--for example, December 1 to February 28. If this was the case, this hypothetical operator would be taking about 1,000 AUMs from BLM lands.

If the land involved--approximately 12,000 acres--was transferred to farmland, what might this rancher do? Given the fact that essentially no private rangeland could be leased for grazing during this period, this rancher would probably reduce the size of his herd, buy additional hay and/or try to produce more hay on his base property. Let's review these alternatives.

Feed hay. If this rancher purchased hay for this period, his expenses would increase dramatically. For example, if hay was selling for \$50 per ton, it would cost this operator approximately \$16.50 per AUM (\$50 per ton - 3 AUMs per ton) for this forage. This would represent nearly \$15 per AUM above his present expenses (\$16.50 - \$1.80) and would increase his total expenses by approximately \$15,000. This increase would be nearly equal to one-third of this rancher's gross returns--a very expensive alternative. If this was the only alternative available, it is likely that this rancher would be either forced out of the livestock business or seek employment off the ranch to supplement ranch income.

Produce more hay. If this rancher was producing sufficient hay on his base property to provide forage for his animals during March, April, and May (1068 AUMs), it is not likely that he would be able to double his production of hay. This might be an alternative that could be used with the alternatives indicated below. Any increased production would only be forthcoming with additional expenses, however (e.g., fertilization, irrigation, or less other crops). In many cases, it would be cheaper to buy hay.

Reduce size of herd. If this rancher lost his winter grazing permit and if the preceding alternatives resulted in excessive costs, he might

consider reducing the size of his herd. A loss of 1000 AUMs of forage would force this rancher to reduce the size of his herd by approximately one-fourth (15 cull cows, 3 cull bulls, 33 steers, and 18 heifers), but his expenses would probably decline by one-sixth or less. This operator's net returns would probably become very small or negative. Thus, the dependence of this rancher on the availability of federal forage would cause severe financial stress if it was lost.

#### Spring/fall

If this rancher's permit was for spring/fall use, other possibilities might be available. For example, this rancher might be able and willing to outbid his neighbor(s) for private or state leases that might be available in the area, he might seed some of his private land to an early species, or he may change his type of operation to fall calving or yearlings. Thus, the impact of the loss for this type of operator might be less than the winter permittee because a larger number of alternative actions are generally available. All of these alternatives would probably decrease the rancher's net income. These are not the only effects that would be felt, however.

#### Secondary consequences

It is generally recognized that grazing permits have capitalized values. The forage resource report (PLLRC, 1970) indicated that approximately three-fourths of the sampled permits had been purchased by persons other than the original owners or their families. Thus, the elimination of grazing privileges in an area would result in the loss of this capital asset and/or a reduction in the value of private lands used as commensurate property. Furthermore, the value of privileges on Forest Service

lands could also decrease if this forage could not be fully utilized as a result of reductions on BLM lands. If permit values were lost, lending institutions would hesitate to use them as collateral for other ranchers. This action would either make loans less available or at higher rates.

One subtle consequence that conceivably could be felt by other ranchers might occur. If bidding for private leases became intense in these areas and if these lease rates became part of those sampled as a basis for determining federal fees, all federal permittees would be faced with increasing grazing fees.

#### Cattle vs. crops

If this rancher's federal grazing permit was terminated in favor of a desert land entry(s), what difference would it make? First, note that this rancher was using 1020 AUMs. This would, given the typical carrying capacity of most of the native rangelands in this area, involve anywhere from 8,000 to 14,000 acres of land. If this amount of land was converted to farm land, it might support 20 or more farms (20 families would replace the original operator). Note also that the gross returns from these lands would change significantly. If grazing was maintained, the gross returns of the BLM from grazing would be ( $\$5.00 \times 1020$  AUMs) approximately \$5,000, but the gross returns from wheat production might be as high as \$2,000,000 (10,000 acres  $\times$  70 bu. per acre  $\times$  \$3.00 per bushel). These values do not measure the net returns but ranchers during the past two or three years have generally experienced relatively low returns while many farmers have received at least average returns. Thus, it seems fairly likely that conversions of rangeland to farmland in some areas would result in increased net returns. The magnitude of any additional returns that



might result would, however, depend heavily upon the costs of development including factors that have been considered by previous speakers.

One can thus see why there is considerable pressure for these developments and why ranchers in the area affected may logically resist these changes. This, like many other problems, will boil down to who is being benefited and who pays the bill. Farmers may, however, be able to compensate the permittees involved for losses sustained but this is only possible if these lands are transferred under the Carey Act. Therefore, ranchers will find it in their interest to oppose Desert land entries and favor Carey if any land is developed in the Snake River plains.

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