

COSTS and RETURNS



**MIGRATORY
SHEEP
RANCHES**

Utah - Nevada

1969

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FARM COSTS AND RETURNS STUDIES

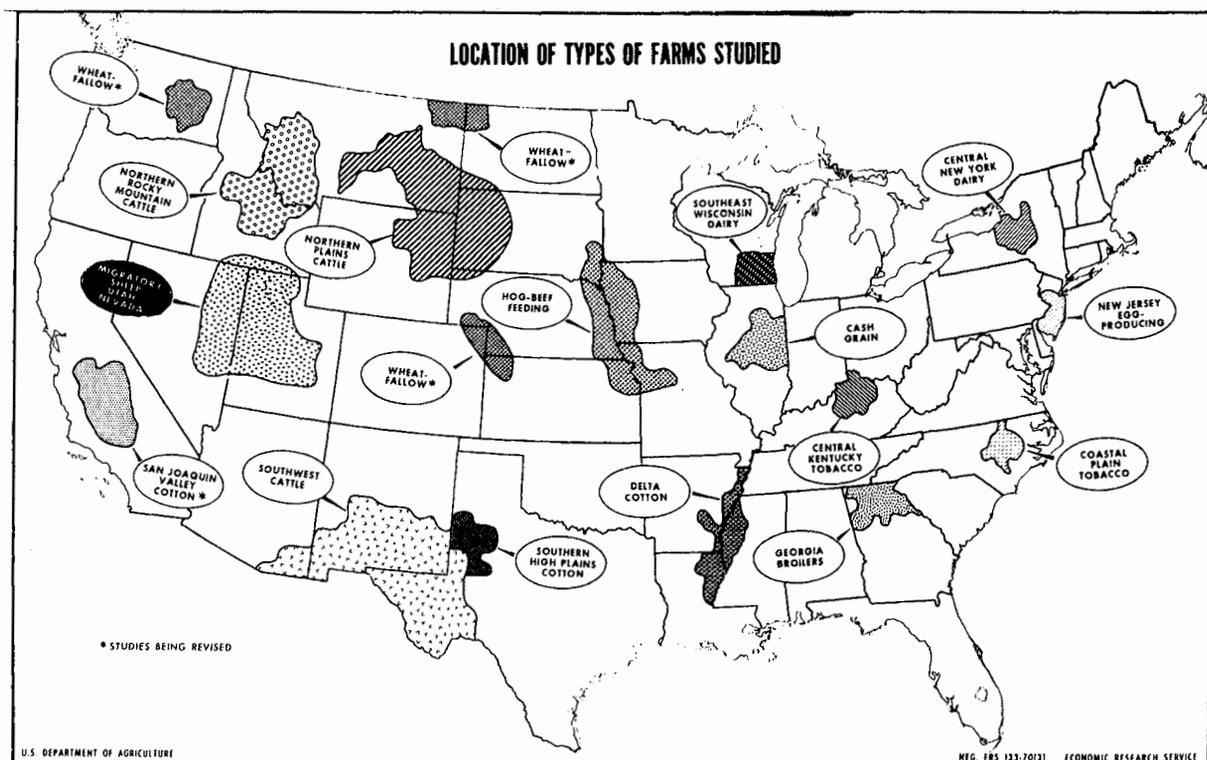
This report is part of a continuing nationwide study of costs and returns on commercial farms and ranches in selected farming regions. The study is conducted under the general supervision of Wylie D. Goodsell, Farm Production Economics Division, Economic Research Service. Objectives, methodology, procedure, and terms are uniform for all areas studied.

The 1969 costs and returns studies cover the following commercial farms and ranches by type and size:

- Dairy Farms, Southeastern Wisconsin and Central New York
- Cash Grain Farms, Corn Belt
- Hog-Beef Feeding Farms, Corn Belt
- Egg-Producing Farms, New Jersey
- Broiler Farms, Georgia
- Cotton Farms, Mississippi Delta
- Cotton Farms, Southern High Plains, Texas
- Tobacco Farms, Coastal Plain, North Carolina
- Tobacco-Livestock Farms, Bluegrass Area, Kentucky
- Northwest Cattle Ranches
- Migratory Sheep Ranches, Utah-Nevada
- Southwest Cattle Ranches

Substantial revisions have been made in some series to portray farming operations representative of major producers of specified products. Some series were discontinued because they no longer represent a major sector of commodity production or because the farm enterprise could be better represented by another series.

Information on the studies can be obtained from Farm Production Economics Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.



COSTS AND RETURNS

MIGRATORY SHEEP OPERATIONS, UTAH-NEVADA, 1969

by Wylie D. Goodsell and Macie J. Belfield¹

Abstract: Record-high returns were obtained in 1969 by operators of 2-band migratory sheep ranches in Utah and Nevada, probably the top sheep and wool producing area of its kind in the United States. Much higher prices received for sheep and lambs, slightly higher wool prices and wool incentive payments, and modest improvements in range conditions and ranch production were responsible for these favorable returns. Despite these economic advances Utah and Nevada sheep ranchers look to the future with caution.

Key Words: Ranch returns, lamb prices, wool incentive payments, high cash costs, and improved production.

Introduction

Sheep and wool producing units in the United States can be classified into three general groups. Farm flocks are by far the largest numerical group, making up almost 95 percent of the units, but producing less than 35 percent of the sheep and less of the U.S. wool. In 1950 they produced almost 40 percent of the sheep. Farm flocks average less than 40 head per unit, require very little labor, and generally utilize resources that would not be effectively used by other enterprises. The financial returns are relatively high for the inputs used. From many of these farms come most of the purebred animals. Ranchers depend on them for their breeding rams.

The second group comprises larger sized units that are also kept under fence and are managed much like farm flocks. They generally average much less than 1,000 head per

unit. This group also includes some relatively large units, some operated jointly with a cattle or wheat enterprise. These units are common in the Northern Plains and Southwest. This group has become more important. Nearly 18 percent of the U.S. production comes from this source. In 1950 less than 13 percent came from these flocks.

The third group comprises two subgroups and is the backbone of the U.S. sheep industry. Half of the sheep and somewhat more of the Nation's wool is produced by ranchers in these two subgroups. Despite the substantial reduction in sheep numbers in recent years production in these two subgroups has held out reasonably well. The sheep in both groups graze extensively on public lands during the summer and are on private deeded land in the late spring and early fall. Those sheep in one subgroup generally summer on public range for a shorter period and winter on hay and supplements. The ewes lamb in sheds early in the spring, thus producing relatively heavy lambs for fall markets. The sheep are herder

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controlled on the open range and when they glean the harvested fields.

The other subgroup is under control of herders the year-round. It makes extensive use of public grazing lands during summer and winter, or two-thirds to three-fourths of the year. Generally at lambing time and late spring the sheep are on private range. In early fall they are grazing on private range or gleaning harvested fields. Thus the sheep are not grazed under fence, but migrate from range to range.

Light hay feeding is common during lambing. Supplements are fed when there is a heavy snow or when the winter range cannot sustain the animals. Ewes lamb in late April

and May on the range or in corrals and stockades. Shearing usually takes place prior to lambing.

The year-round migratory operation is common in the Great Basin, the Nation's largest sheep producing area and by far the dominant producing unit in Utah and Nevada (figs. 1 & 2). In those States, around 75 percent of the sheep and a greater percentage of the wool are produced on these types of units. However, both States contain many farms and ranches with small flocks of sheep as supplementary enterprises. One-fourth of the farms have sheep. Of these, approximately 80 percent have fewer than 300 head of sheep and lambs per farm, and produce only about 10 percent of the area's sheep.

THE STUDY AREA

Commercial ranches making major contributions to sheep and wool production in Utah and Nevada are included in this study. In many respects operations here typify ranching in a much broader area where sheep are grazed extensively on Federal lands in the public domain and in the National Forest System.

These sheep ranches are commonly termed "migratory" units. Trained herders are hired to control the sheep year-round. The sheep are "trailed" (driven), trucked, or shipped by railroad from area to area. During the winter the sheep are grazed in desert areas almost exclusively public domain. Water is scarce in this area. During the summer there is not sufficient moisture to produce vegetation for livestock. Fall rains usually produce sufficient vegetation for winter grazing. Snowfall provides much of the water for sheep and also produces some vegetation. Occasionally the snow cover is so heavy that sheep are unable to graze, and supplemental feed must be provided. Sometimes the snowfall is so

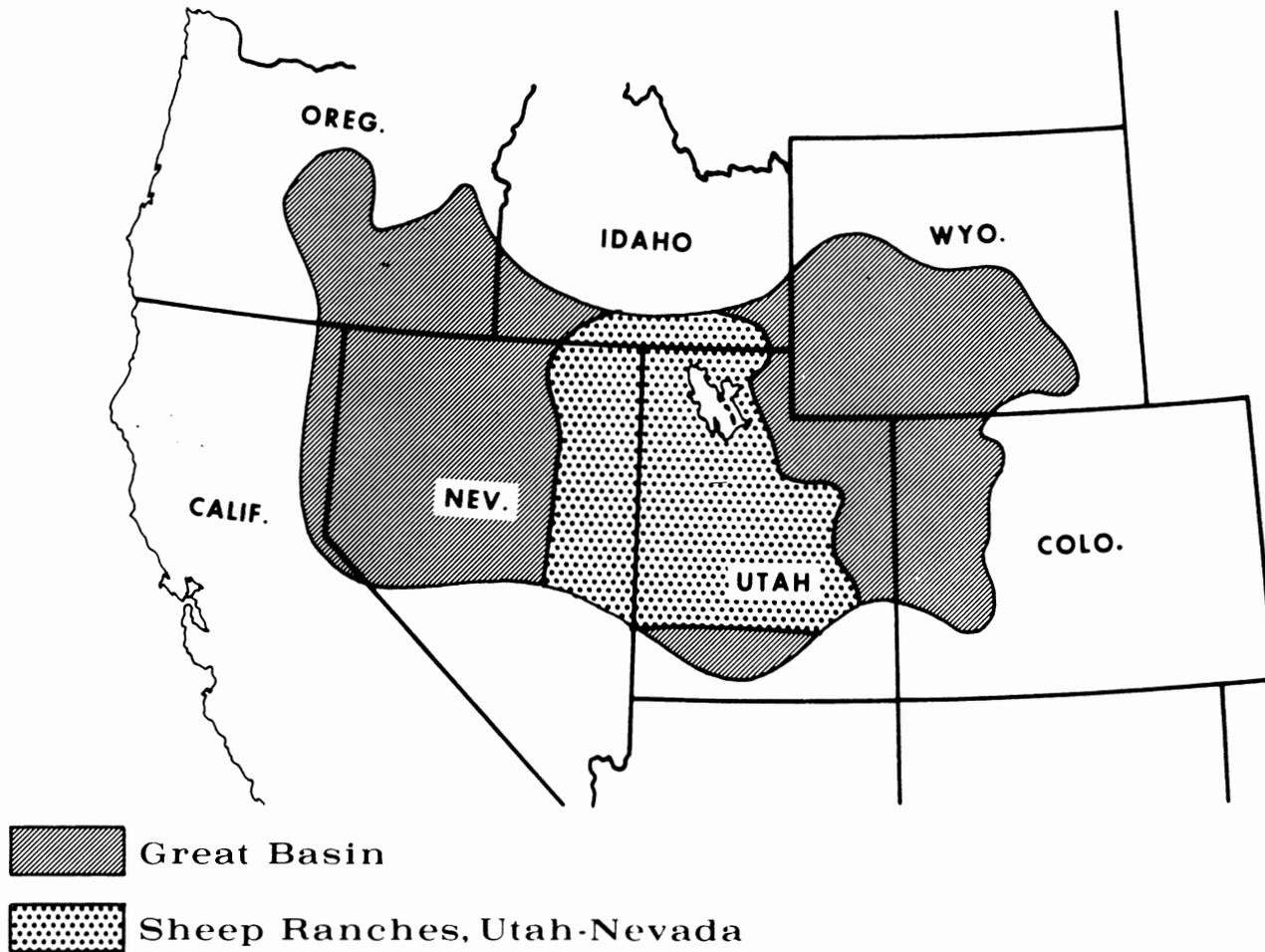
light that water must be hauled to the sheep.

Around April, the sheep are moved to the "spring-fall" range. This is largely private or deeded land. Here the sheep are sheared, the ewes are lambled out, and the lambs are docked and marked. Because range growth is not well advanced at this stage, and the ewes are somewhat confined, a substantial amount of feeding is done.

In late June or early July the ewes and their lambs are moved to the summer range. This is highland almost exclusively under the National Forest System. Carrying capacity is generally good. But frost comes early in the fall, reducing growth of vegetation. Also, snow comes early and the pack is so deep that grazing is impossible.

In late September the lambs and ewes are cut out for marketing, the replacement ewes are selected, and the basic breeding flock is established for another year. The breeding

LOCATION OF SHEEP RANCHES STUDIED



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ewes and replacement lambs are then moved to the private "spring-fall" range and to open fields. Here they graze crop aftermath until around November when they are moved to the public domain for winter grazing.

The breeding season begins in late November or December and lasts about 2 months. Except for this period the rams are kept under fence on private range, generally with supplemental feeding.

Sheep ranches depicted in this study account for more than three-fifths of the sheep and wool production in the area. They average about 2,500 total stock sheep per management unit, and range in size from around 1,800 to 3,000 head per unit. They are commonly called 2-band units as the ewes and their lambs are generally divided into units for summer grazing, each unit under the control of a herder. In the winter they are combined and managed as one unit. Operators of these highly specialized operations derive nearly all of their ranch income from the sheep enterprise.

These ranches are owner-operated. When a rancher obtains permits to graze public lands he must give satisfactory evidence that he owns both land and livestock, and that he has sufficient land to maintain his livestock when they are not under permit. These sheep are under permit up to 8 months a year.

These operators are specialists and generally efficient in the sheep ranching business. Most of them grew up with the family enterprise. Their average age is around 55 years.

Through the years the sheep industry has undergone many significant changes and the ranchers have faced many problems. The U.S. sheep population virtually mushroomed with the early western expansion and settlement. By 1884, U.S. stock sheep numbered over 51

million head—a record. From then until 1942 the number cycled in about 12-year periods from around 33 million up. Since 1942 the number declined year-by-year to around 18 million head in 1970. Numbers in the Great Basin and the Utah-Nevada area have followed a similar pattern. Since 1950 and particularly the last decade, sheep numbers have held up rather well in Utah and Wyoming. People associated with sheep and their products are wondering when and at what number will the Nation's sheep industry stabilize.

With the passing of the frontier has come a contraction in the public domain and other open range on which these ranchers depend for their very existence. The production and utility of manmade fibers have made great strides, eroding ranchers' wool markets. In 1969, U.S. wool production was about three-fifths of the amount in 1960, whereas production of non-cellulose manmade fibers, which compete directly with wool, was about 5 times greater. The opening of the western wilderness with surfaced roads, making it more accessible to urbanities and sportsmen, has imposed additional problems on the sheep rancher. Sheep trailing areas and feed lanes have been reduced drastically, making it virtually impossible to trail sheep without trespassing or running into other serious problems.

Costs of trucking sheep have gone up and up and now command a significant cash outlay for the rancher. Wage rates are high, and dependable, experienced help is scarce. Fewer and fewer sons are interested in continuing the family's sheep ranching operations.

The cow-calf enterprise, having less labor problems and generally wider appeal to farmers and ranchers, has pushed back the sheep enterprise to the more restricted resources. In many instances sheep and cattle complement each other on the range, but sheep are more effective users of arable range,

particularly where water is scarce. Many of the resources now used by sheep are not suitable for raising cattle.

Numerous small, less efficient sheep operations have gone out of business. This accounts for most of the reduction in sheep numbers. Many ownership units with around 1,000 head of stock sheep have combined, particularly for the winter season, to form a more economical unit.

Despite relatively favorable economic returns the last few years, compared with many other ventures, these sheep operators look to the future with uncertainty. Much of their apprehension stems from the shortage of suitable herders, high cost-rates, competition of manmade fibers, and the contraction of public lands.

Cost and Returns

Net and gross ranch incomes were record high in 1969 (table 1). Net ranch income was up 18 percent from a year earlier and 172 percent above the 1960-64 average.

Gross ranch income last year averaged slightly over \$54,000 per ranch or \$27 per breeding ewe. Gross income per animal unit (5 sheep) in the breeding herd was approximately \$110. This compares with \$116 for Northern Plains cattle ranches and \$113 for Northern Rocky Mountain cattle ranches. Gross income per sheep ranch was up nearly 11 percent from a year earlier and 56 percent above the 1960-64 average. This was due primarily to higher prices received for all products sold. Prices received were up 11 percent from a year ago and 40 percent from the 1960-64 average (table 2). Quantities of items sold gained about 1 percent, but averaged nearly 13 percent above 1960-64.

Lamb marketings were a record in 1969. Ewes lambed out at about the 1968 rate,

which was relatively high. Range conditions were better than in 1968, particularly during midsummer and prior to marketing. Lamb weights improved slightly; market weights were second only to 1967. The trend has been up for both range conditions and lamb weights.

Coupled with these improvements were the highest lamb prices since the record high in 1951. Lamb prices last year averaged \$27.30 per hundredweight, \$3.60 higher than in 1968 and nearly \$10 higher than in 1960-64. As a result, gross receipts from lamb marketings amounted to nearly \$32,000 per ranch.

Receipts from lambs comprise approximately 58 percent of total cash receipts, and those from wool about 37 percent. Thus, wool and lamb sales make up around 95 percent of cash receipts on these ranches. Wool prices and wool incentive payments were up from 1968, and combined wool income was around 2 percent higher.

Total expenditures continued to move up as they have each year since this series began in 1959. Increases occurred last year in each major category, ranging from nearly 2.5 percent in real and personal property taxes to nearly 21 percent for livestock purchases and miscellaneous livestock expenses. Overall, expenditures averaged 6 percent above 1968 and 22 percent higher than the 1960-64 average.

The property base for taxes edged up less than 1 percent. Thus, a slight increase in tax rates was the cause for the increase in taxes paid. Livestock purchases increased because of much higher prices paid for rams. Feed and grazing cost went up about 13 percent. About 4 percent more hay and supplements were fed in 1969. More supplements were required because of less productive winter range. More hay was fed because poor forage growth during the spring necessitated heavier feeding at lambing. Prices of concentrate feeds remained unchanged, but hay prices were nearly

Table 1.—Costs and returns, migratory sheep operations, Utah-Nevada, 1968 and 1969

Item	Unit	Average 1960-64	1968	1969 ¹
Total land operated ²	Acre	12,300	12,300	12,300
Land owned	do.	7,180	7,180	7,180
Livestock on ranch:				
Total stock sheep	Number	2,358	2,420	2,455
Ewes 1 year and older	do.	1,966	2,025	2,025
Ewe lambs	do.	327	329	364
Lamb crop	Percent	88	92	92
Fleece weight	Pound	10.5	10.6	10.4
Total ranch capital, Jan. 1 ³	Dollar	178,850	207,330	215,030
Land and buildings	do.	119,270	128,970	129,560
Livestock	do.	47,070	62,870	69,580
Machinery and equipment	do.	11,020	13,240	13,950
Crops	do.	1,490	2,250	1,940
Total cash receipts	do.	33,672	47,523	53,688
Sheep	do.	876	1,575	2,301
Lambs	do.	17,500	26,639	31,859
Wool	do.	10,799	10,531	10,738
Wool payments	do.	3,766	7,625	7,802
Crops and miscellaneous	do.	731	1,153	988
Value of perquisites	do.	747	995	1,010
Inventory change:				
Livestock	do.	369	868	-720
Crops	do.	76	-290	403
Gross ranch income	do.	34,864	49,096	54,381
Total operating expense	do.	27,014	30,978	32,999
Grazing costs	do.	2,187	2,656	3,136
Other feed	do.	2,781	2,172	2,320
Livestock purchases and miscellaneous expense	do.	1,361	1,697	2,052
Shearing and clipping	do.	1,948	2,266	2,372
Contract trucking	do.	2,490	3,004	3,180
Machinery purchased	do.	1,678	2,020	2,119
Machinery operating cost	do.	1,696	1,993	2,090
Ranch buildings and fences	do.	397	435	455
Labor hired	do.	9,056	10,565	10,980
Taxes	do.	2,667	3,328	3,409
Other	do.	753	842	886
Net ranch income	do.	7,850	18,118	21,382

¹ Preliminary. ² Land rented is grazing land. Charges for use of it are included in expenditures for feed and grazing fees. The value of the rented land is not included in ranch capital, and no real estate tax or related costs are included in ranch expenditures.

³ Excludes estimated value of grazing permits.

Table 2.—Production, costs, and prices, migratory sheep operations, Utah-Nevada, 1968 and 1969

Index numbers 1960-64=100

Item	Average 1960-64	1968	1969 ¹
Net farm production . . .	100	115	116
Range condition	100	107	108
Production per unit of input	100	112	112
Operating expense per unit of production . .	100	103	108
Total cost per unit of production	100	107	112
Prices received for products sold	100	126	140
Prices paid, including wages to hired labor	100	115	122

¹ Preliminary.

6 percent higher in 1969. Expenditures for feed increased by about 7 percent. Rates paid by ranchers to graze lands controlled by Federal and State agencies and by private owners increased substantially from 1968.

Total inputs per ranch increased less than 1 percent from 1968. Therefore, most of the 7 percent increase in operating expenses in 1969 was due to higher prices paid for inputs purchased.

There was a slight increase in net ranch production in 1969, indicating further gains in operating efficiency. Net ranch production was 16 percent greater than in 1960-64, but the quantity of inputs used remained unchanged.

The method of operating sheep ranches and the kinds and amounts of inputs used have changed greatly. Ranchers are very much concerned about their ability to continue operating under these changing conditions. In former days trailing sheep from area to area was the rule. Now the feed lanes or trails are gone because the land has gone into private hands. Public roads and highways have cut up

the trail lanes. This has forced the rancher to truck his sheep from range to range. Good herders and hired hands are difficult to obtain as they have other opportunities for employment in less isolated areas and less arduous tasks. Thus herder and other labor costs are high. Draft and pack animals have been replaced largely by pickup trucks and other motor vehicles. Shearing has become more mechanized and sophisticated. Portable shearing units with considerable capacity are becoming common. These innovations and technological changes have many advantages, but they require greater cash outlays and larger investments.

Livestock ranching is a longtime venture. It requires considerable experience, know-how, and capital. In 1969 capital investment per ranch was \$215,000. Based on an animal unit in the breeding herd, a common standard of measure for ranchers and ranch experts, capital invested was around \$440. This compares with \$760 for Northern Rocky Mountain cattle ranches and \$920 for Northern Plains cattle ranches.² However, Northern Plains ranchers use practically no public grazing land whereas Northern Rocky Mountain ranchers and Utah-Nevada sheep operators depend heavily on public grazing.

Total capital invested in these sheep ranches increased from around \$179,000 per ranch in 1960-64 to \$215,000 in 1969. During this period ranchers had much the same physical plant, except for slight increases in sheep numbers and machinery. For the most part the overall increase in investment was due to higher prices and land values.

These increases in ranch investment and operating capital require considerable financing. A cash operating expense of around \$33,000 requires borrowing funds. An enumerative survey of ranchers indicated that

² These estimates are exclusive of any values for grazing permits.

many ranchers had debt obligations. There was considerable variation in the amount of the debt, but the general average or common pattern appeared to be about \$60,000 per rancher. About half of this debt was on real estate. This means that average indebtedness amounted to about 28 percent of ranch assets.

Most of these funds were obtained a few years ago. Most of the mortgages on real estate were obtained in the last 15 years, and those on livestock in the last 5 years. Some mortgages had been refinanced. Many ranchers had operating or production loans which they renewed or obtained annually. Interest rates averaged 6 percent on real estate loans outstanding and 8.5 percent on livestock loans and related items.

Interest paid in 1969 amounted to \$1,800 for real estate loans and \$2,550 for mortgages on livestock. Thus after a charge for operator's capital is made at 6 percent for land and 8.5 percent for livestock, machinery, and crops in inventory the return to operators labor amounts to around \$6,660. However, capital appreciation amounted to \$7,700, making a total return of \$14,360 to operator's ~~land~~, labor, and management (table 3).

In these estimates of ranch investment and cost, no allowance has been made for estimated value of permits to graze public lands. For many of these ranchers this is a very real cost because they paid a market price for permits. Permits to graze public lands have commanded a price because fees for grazing public lands are less than costs for leasing comparable private lands. Some of this differential may be due to real differences in productivity and location.

Table 3.- Allocation of returns, migratory sheep operations, Utah-Nevada, 1969

Item	1969
	<i>Dollars</i>
Net cash ranch income	21,699
Interest paid	4,530 4350
Cash return to operator labor, management and capital	17,349
Change in asset value:	
Land and buildings	590
Livestock	6,710
Machinery and equipment	710
Crops	-310
Gross operator returns	25,049
Investment returns:	
Land and buildings (\$99,560 @ 6%) ¹	5,974
Livestock (\$39,580 @ 8.5%)	3,364
Machinery (\$13,950 @ 8.5%)	1,186
Crops (\$1,940 @ 8.5%)	165
Operator labor and management return	14,360

¹ Land valued at current market value.

Private lease grazing lands are usually fenced and conveniently located relative to ranching operations. On the other hand, some of the differential cannot be attributed to these factors. The value of this residual accrues to the holders of public grazing permits and is the basis of a market price for the use of these permits. The going price for these permits has varied considerably, depending on range location and productiveness.

When grazing fees for public lands are adjusted, as current regulations require, to eventually reach fair market value equivalent, any unjustified differential market price for the permit value will presumably disappear.

Ranchers who paid for the privilege to graze public land would then incur a cost equal to the price paid for the permit. If this adjustment takes place within 10 years, as now planned, annual grazing costs would be increased by one-tenth of the purchase price of the permits.

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