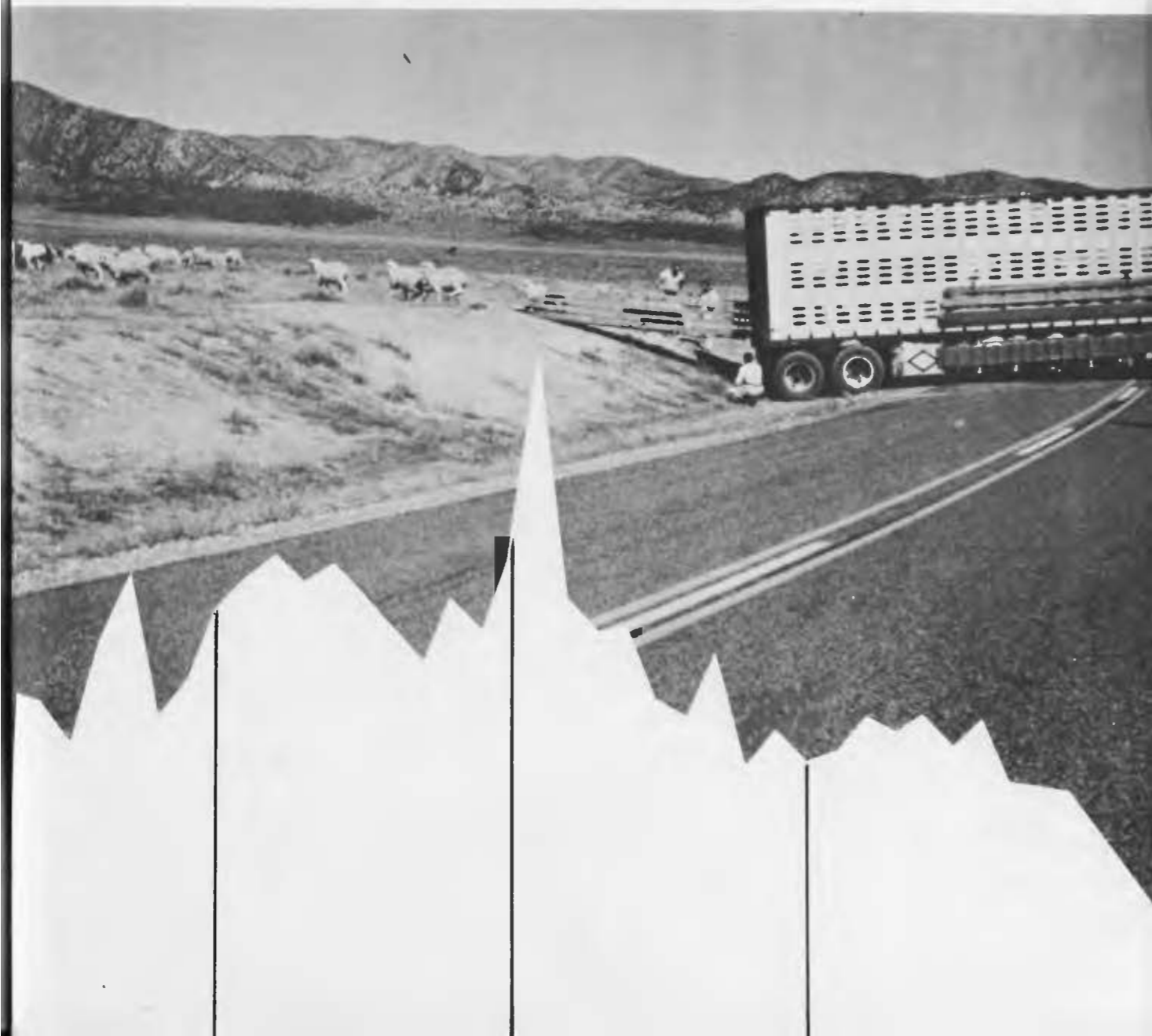
COSTS AND RETURNS MIGRATORY-SHEEP RANCHES UTAH-NEVADA, 1971

DEPARTMENT OF AGRICULTURE FCR–82 ECONOMIC RESEARCH SERVICE



ABSTRACT

Net returns in 1971 were almost a fifth below those obtained a year earlier by operators of 2-band migratory sheep ranches in Utah and Nevada, the top sheep and wool producing areas of their kind in the United States. Higher operating costs, particularly grazing fees and hired labor, and lower wool prices were responsible. U.S. sheep and wool production continue to decline.

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

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. Information for 1970 and earlier years for migratory-sheep operations, Utah-Nevada, is available in "Costs and Returns, Migratory Sheep-Operations, Utah-Nevada 1960-69", AER 195.

The 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
Cotton Farms, Missippi Delta
Cotton Farms, Southern High Plains, Texas
Tobacco Farms, Coastal Plain, North Carolina
Tobacco-Livestock Farms, Bluegrass Area, Kentucky
Wheat-Fallow Farms, Pacific Northwest, Northern Plains, and Southern Plains
Northwest Cattle Ranches
Migratory-Sheep Ranches, Utah-Nevada
Southwest Cattle Ranches

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

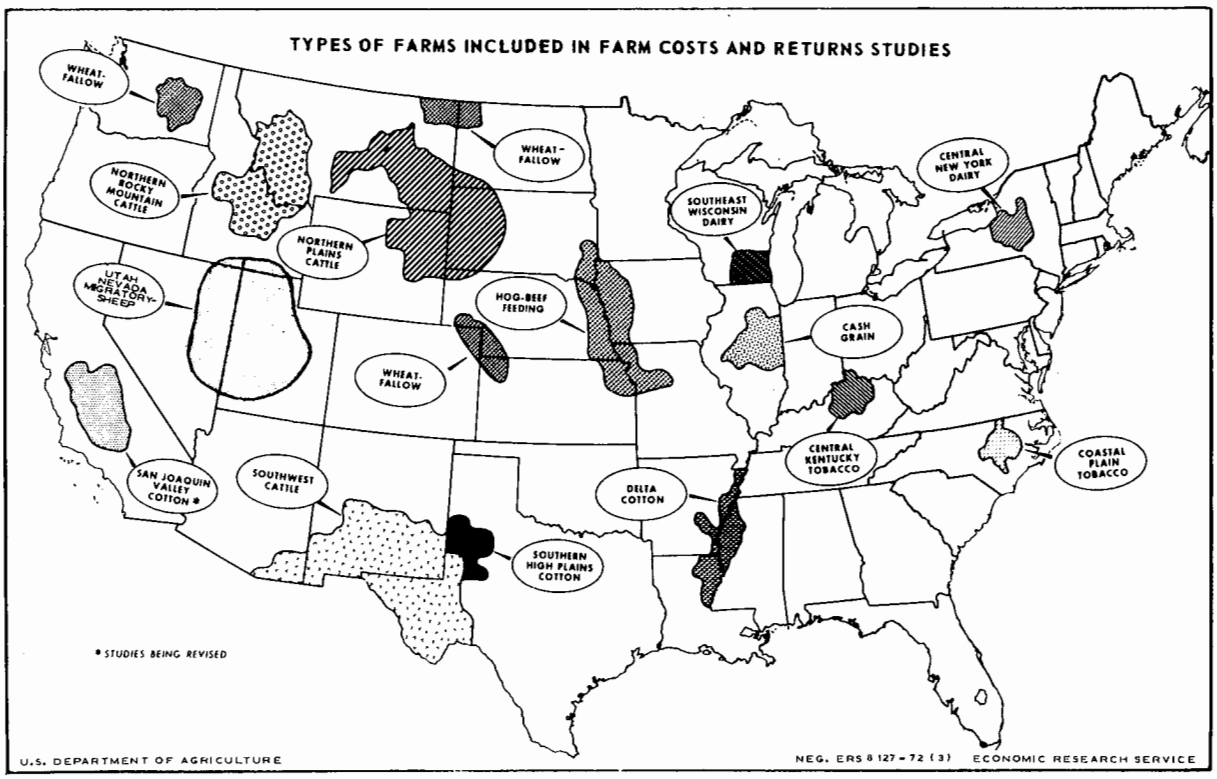


Figure 1

COSTS AND RETURNS
MIGRATORY-SHEEP RANCHES, UTAH-NEVADA, 1971

by
Wylie D. Goodsell and Macie Belfield[1]

INTRODUCTION

The sheep industry, once a thriving and important segment of the Nation's agricultural economy, has been beset with economic and institutional problems for three decades. The precipitous decline in sheep numbers since the early 1940's and the general decline in wool prices since 1951 are partial evidence of these problems. Wool prices in 1971 adjusted for the value of the dollar (1958=100) were a record low, and net ranch income on migratory-sheep ranches, Utah-Nevada, averaged $15,200 per ranch, a fifth below a year earlier and the lowest since 1966.

U.S. stock sheep numbers virtually mushroomed with early Western expansion and settlement. By 1884, stock sheep numbered over 51 million head—a record. From then until 1942, the number cycled in about 12-year periods from 33 to 49 million head. Since 1942, the number has declined by more than two-thirds, to 15.7 million in 1972.

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The expansion of sheep ranching in the West closely paralled the rest of the United States. About half the Nation's sheep are in the 11 Western States as are most of the sheep ranches, units which depend on sheep for a livelihood.

Sheep-producing units may be classed into farm flocks, stock or sheep farms, and sheep ranches. Farm flocks generally average about 40 head per unit. They make up nearly 95 percent of all U.S. producing units, but produce less than a third of the sheep. Stock or sheep farms generally average around 500 head per unit. Few exceed 1,000 head. This group produces about a fifth of U.S. sheep. Sheep ranches vary greatly in size depending on the kind and amount of resources available. They range from about 1,500 to several thousand head per ranch and produce more than half the sheep and wool in the United States.

Sheep ranches produce three-fifths to three-fourths of the sheep and wool in the study area (figs. 1 and 2). This region, although moderate in terms of land area, produces nearly a fifth of the lambs and wool in the

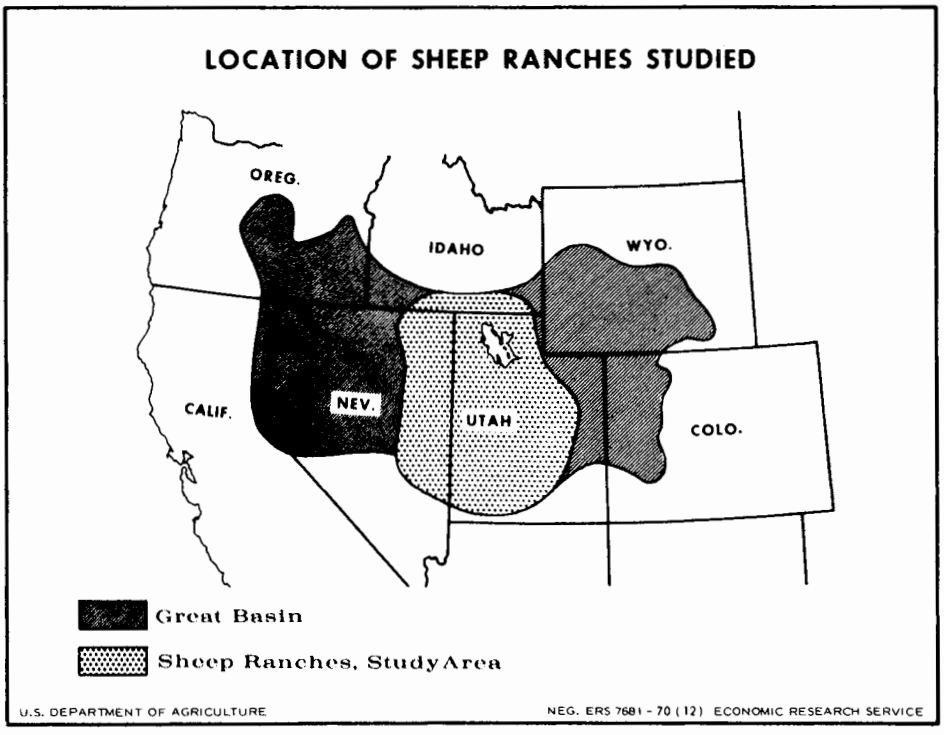

Figure 2

Intermountain States of Utah, Nevada, Idaho, Montana, Wyoming, and Colorado.

The typical viable sheep ranch in the study area has around 2,400 head of stock sheep.[2] Herd size changes little from year to year, limited by the number of sheep a shepherd can herd well, by the number of permits the operator has to graze sheep on public land, and by other operating restrictions.

The sheep operators in the study area generally are efficient ranchers with long experience in the business. Most of them grew up with the family sheep operation. Their average age is around 55 years, slightly older than farmers in most areas. Their age range is much narrower than for most farmers; very few are under 40. This may reflect the nature of the business and the fact that in recent years it has been difficult to sell a sheep ranch at a suitable price.

The ranches are owner-operated. When a rancher obtains permits to graze public lands, he must give satisfactory evidence that he owns both land and sheep, and that he has sufficient land to maintain his livestock when they are not on public land. Sheep graze under permit about two-thirds of the year.

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[2] For source of data and information on methods and procedures, see *Costs and Returns, Migratory-Sheep Operations, Utah-Nevada 1960-69,* AER-195, Econ. Res. Serv., USDA.

The sheep are under the vigilance of herders year around. The animals are moved from range to range, mostly by truck these days, under close surveillance and on a generally fixed pattern and timetable. Even if range feed in a given area is significantly advanced or retarded, the date of moving the sheep seldom changes by more than a few days.

"Bucking up" usually begins in late November or early December on a predetermined schedule. Breeding dates are closely tied to shearing dates. The rancher generally aims to shear before lambing; ewes that are lambing or have just lambed at shearing time pose a problem. Shearing usually takes place in mid-April, sometimes on the range and sometimes near lambing grounds close to the ranch quarters. Much of the shearing is now done by large portable outfits that move from herd to herd, shearing 2,000-3,000 head per day. Most of the wool is sold at the shearing corrals.

Lambing takes place very shortly after shearing. Early lambing is preferable, weather permitting, because it yields a heavier market lamb. Most of the lambs are marketed direct from the range in late September and early October. Around one-third to two-thirds, depending on range conditions, are sold as fat lambs. Some of the lightweight animals may be taken to spring-fall range or harvested fields for a brief period to condition them and to put on weight before marketing. Market weight averages around 87 pounds.

COST AND RETURNS

Net ranch income averaged $15,200 per ranch in 1971, nearly a fifth below a year earlier and the lowest since 1966, but double the 1960-64 average (table 1). Return to investment from this income was about $10,000, 4.3 percent of total ranch capital, after deducting $5,200 for the operator's labor and management.

Net ranch production continued its upward trend of the last 10 years to a new record in 1971, more than a fifth above the 1960-64 average. Lamb weights and marketings and crop production were record high (fig. 3). Wool marketings were slightly below a year earlier, mostly because of a modest decrease in wool clip per head.

Offsetting this favorable production picture were lower lamb and wool prices and higher operating costs, particularly feed and grazing costs. Costs of purchased feeds increased nearly a tenth and outlays for grazing fees increased nearly a fourth from 1970 levels. Together these 2 cost groups make up a sixth of total operating costs. Total operating costs were nearly a tenth higher in 1971 and total cash receipts were barely higher than in 1970.

Ranch Production

Lamb marketings from migratory-sheep ranches were record large in 1971. An open winter with slightly better winter grazing than a year earlier brought ewes to lambing corrals in generally good condition for a favorable lambing season. The lambing herd remained at the level of the previous 3 years, but the lambing rate matched the record high reached in 1970. Death loss of lambs in 1971 was well above average but slightly below a year earlier. Consequently, a few more lambs were marketed, and at record weights.

The increase in lamb losses in recent years has been of major concern to sheep ranchers. Losses vary widely from year to year as would be expected, but they have trended higher and particularly so in the last 5 years (fig. 4). Lamb losses in 1967-71 were 13 percent higher than in 1960-64. Ranchers attribute the higher losses to an increase in number of predators.

Lamb market weights and wool clip have trended upward as a result of better range management and improved breeding. Some of the important ranges used by these producers have been cut 15-25 percent in the last decade. But because of good management and improved range forage, average lamb weights have been stepped up by 15 percent.

Death loss of older animals was well above a year earlier but about average. Ewes were marketed at slightly heavier weights than in previous years, but the gain was not sufficient to offset the higher death loss. Total hundredweight of ewes marketed in 1971 was about 7 percent below a year earlier.

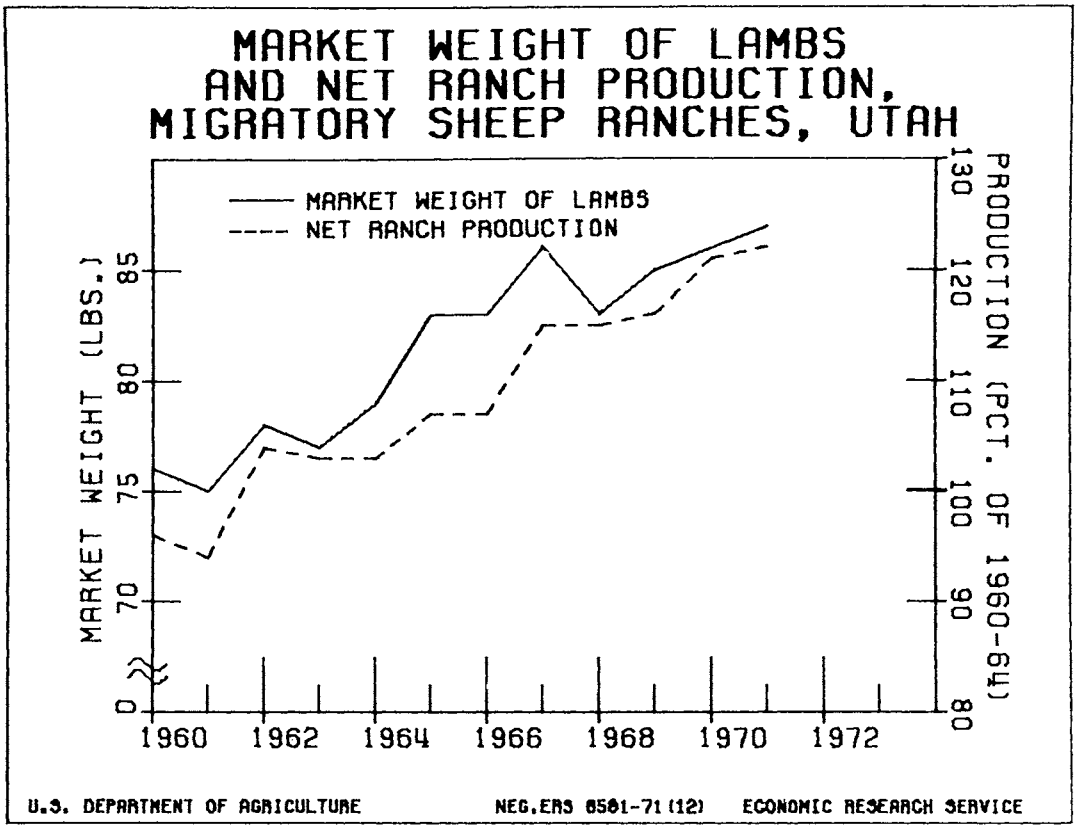


Figure 3

The number of sheep shorn on these ranches was slightly greater than in 1970, but the per-head clip was a little lighter, so less wool was marketed in 1971. However, it was the second largest clip in more than a decade.

The supply of irrigation water in 1971 was above average and growing weather about normal. Grain yields and production were record high. A combination of moderately larger hay acreage and lower per-acre yields produced the third largest hay crop. Total crop production was near record. However, except as a base feed supply, crop production is relatively unimportant on these ranches. Quantities of feed purchased were slightly below normal, but prices paid for both hay and concentrate feeds were the highest in several years.

Cash Receipts

Total cash receipts were a little higher than a year earlier but 3 to 4 percent below the record high in 1969. Combined receipts from sales of sheep and lambs were a shade higher than in 1970 and about 4 percent below the record high in 1969. Prices received for lambs in 1971 averaged about $25.55 per hundredweight, about the same as a year earlier. But because of the record high lamb weights in 1971, total cash receipts from lamb sales were only a little below the record of 1969. Prices received for ewes in 1971 dropped a fourth below a year earlier and total receipts were the lowest in 5 years. But cash receipts from sales of ewes make up only 3 percent of total cash receipts.

In the early 1960's, sales of wool, including Government wool incentive payments, made up nearly half of total cash receipts. Because of declining wool prices in recent years, this percentage has dropped and was 34 percent in 1971. In 1971, these growers received about 20 cents per pound for shorn wool, the lowest price since 1938. In terms of 1958 constant dollars, this was the lowest price on record (fig. 5).

In late December 1971, unadjusted wool prices in this area averaged about 9.5 cents per pound, less than the cost per head for shearing a small herd. In a few instances, shorn slaughter lambs brought more money than unshorn animals. However, the wool incentive payment continued at 72 cents per pound of shorn wool marketed in 1971 and wool payments per ranch were nearly $12,700, nearly a third higher than a year earlier and a record. Total receipts from wool including incentive payments equaled those of 1970 when the price received for wool was 60 percent higher.

Ranch Costs

Total operating costs, which exclude interest paid on borrowed capital and charges for operator's capital and labor, were up nearly 9 percent from 1970, almost entirely because of the continued advance in prices paid for items and services used in production. The index of

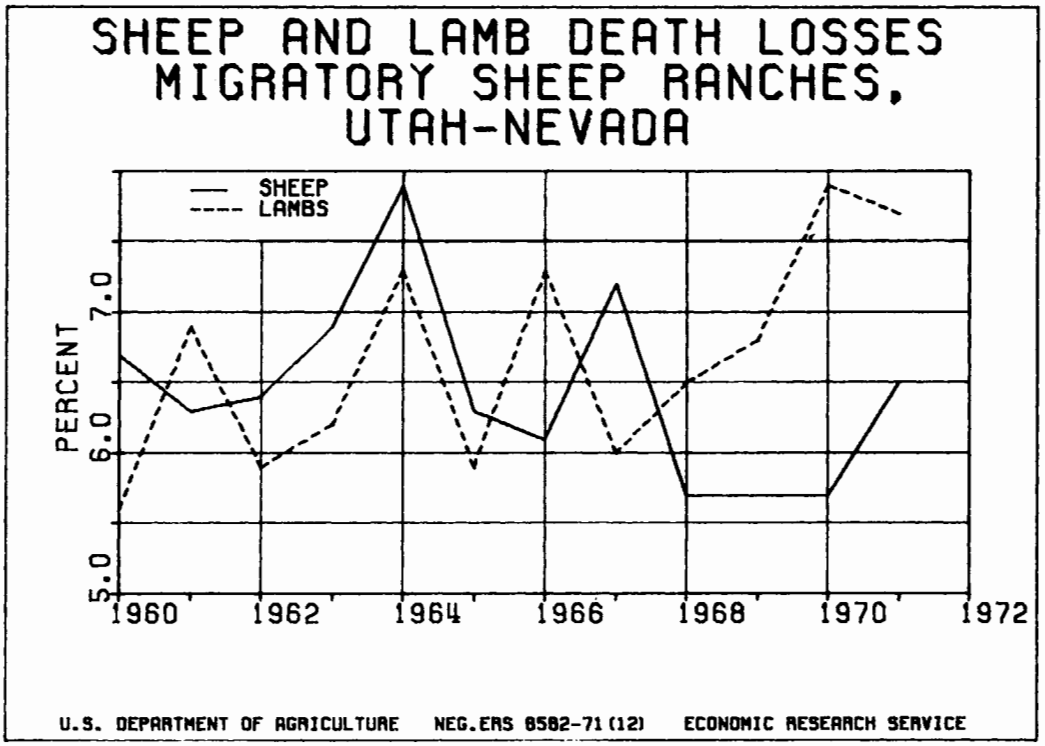


Figure 4

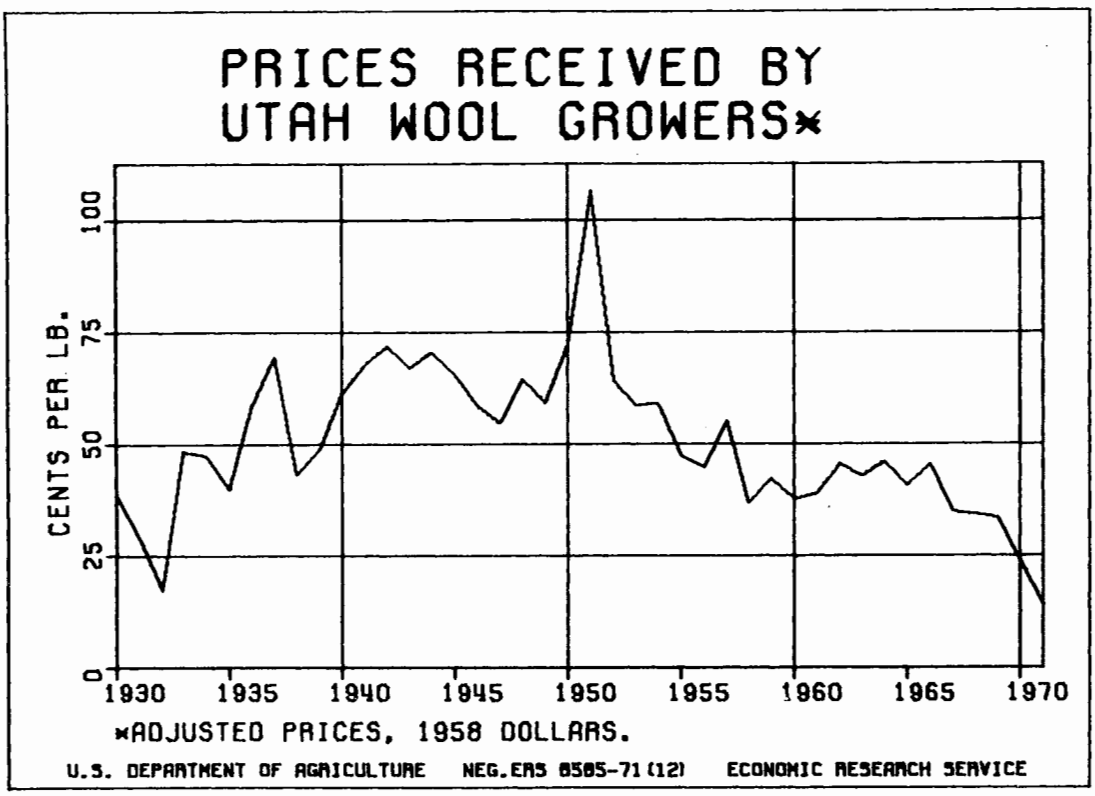


Figure 5

Table 1.—Costs and returns, migratory-sheep operations, Utah-Nevada, 1970 and 1971

Item	Unit	Average 1960-64	1970	1971[1]
Total land operated[2]	Acre	12,300	12,300	12,300
Land owned	do.	7,180	7,180	7,180
Land rented	do.	5,120	5,120	5,120
Livestock on ranch:				
Total stock sheep	Number	2,358	2,430	2,454
Ewes 1 year and older	do.	1,966	2,025	2,025
Ewes lambs	do.	327	339	363
Lamb crop	Percent	88	95	95
Fleece weight	Pound	10.5	10.7	10.5
Total ranch capital, Jan. 1[3]	Dollar	178,160	230,370	230,720
Land and buildings	do.	119,270	133,290	135,440
Livestock	do.	47,070	81,070	78,230
Machinery and equipment	do.	11,020	14,680	15,620
Crops	do.	800	1,330	1,430
Total cash receipts	do.	33,722	51,695	51,905
Sheep	do.	876	2,102	1,468
Lambs	do.	17,500	30,549	31,324
Wool	do.	10,799	8,134	5,043
Wool payments	do.	3,766	9,631	12,673
Crops and miscellaneous	do.	781	1,279	1,397
Value of perquisites	do.	733	971	944
Inventory change:				
Livestock	do.	369	631	96
Crops	do.	25	30	-122
Gross ranch income	do.	34,849	53,327	52,823
Total operating expense	do.	27,365	34,611	37,628
Grozing costs	do.	2,187	3,138	3,873
Other feed	do.	2,781	2,237	2,444
Livestock purchases and miscellaneous expense	do.	1,361	2,129	2,307
Shearing and clipping	do.	1,948	2,443	2,661
Contract trucking	do.	2,490	3,258	3,474
Machinery purchased	do.	1,678	2,251	2,405
Machinery operating cost	do.	1,696	2,160	2,326
Ranch buildings and fences	do.	397	495	520
Labor hired	do.	9,056	11,506	12,490
Taxes	do.	2,667	3,436	3,445
Other	do.	1,104	1,558	1,683
Net ranch income	do.	7,484	18,716	15,195
Interest paid on mortgage	do.	---	4,326	4,092
Return to operator labor and capital	do.	---	14,390	11,103

[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.

prices paid, including wages to hired labor, was a record, nearly 9 percent above 1970 and 37 percent above the 1960-64 average (table 2).

Outlays for herders and miscellaneous hired hands showed the greatest increase, nearly $1,000 per ranch, from 1970 to 1971. Expenditures for hired labor was the largest single item, comprising around one-third of total operating costs. Feed and grazing costs made up the second most important expense, nearly 17 percent of operating costs. Winter grazing fees paid to graze land administrated by the Bureau of Land Management almost tripled from the early 1960's, and summer grazing fees paid to graze lands administered by the

Table 2.—Production, costs, and prices, migratory-sheep ranches Utah-Nevada, 1970 and 1971

Index numbers 1960-64=100

Item	Average 1960-64	1970	1971[1]
Net farm production	100	121	122
Range condition	100	102	101
Production per unit of input	100	117	116
Operating expense per unit of production	100	108	117
Total cost per unit of production	100	115	120
Prices received for products sold	100	132	131
Prices paid, including wages to hired labor	100	126	137

[1] Preliminary.

Forest Service doubled during the same period. Fees per animal unit month will be up about 11 percent in 1972, and are to escalate considerably during the next 5 years, eventually reaching a level termed "fair market value," competitive with private grazing lands. Thus, these expenditures will be even more important in the future.

All other major groups of expenditure items except taxes increased 5-9 percent from 1970 levels. Prices paid for rams, particularly the black-faced or meat type, advanced smartly. There was some softening in prices of rams in the wool breeds, reflecting low wool prices.

Ranch Capital

Although total ranch capital was a record—high $230,700 per ranch on January 1, 1971, the increase from 1970 was the smallest in 5 years. Inventory value of sheep declined despite a slightly larger herd, and land values increased by less than 2 percent.

The outlook for cattle is relatively brighter than for sheep and for several years land values have moved up smartly on Western cattle ranches. From 1960 to 1971, per-acre values of grazing land increased 19 percent on migratory-sheep ranches but 67 percent and 73 percent, respectively, on cattle ranches in the Rocky Mountain and Northern Plains area (fig. 6). During the same period the value of a breeding ewe increased 44 percent and the value of a brood cow increased 35 percent.

Capital investment in a typical commercial livestock ranch is not a small matter these days, ranging from nearly a quarter to more than a half-million dollars. On Western livestock ranches land investment depends largely on such institutional factors as access to public grazing land. Ranchers who make wide use of public land naturally have relatively less investment in private land. Capital investment in land per animal unit on a migratory-sheep ranch where public lands are grazed two-thirds of the year are much lower than on a Rocky Mountain cattle ranch where livestock graze public lands from a third to a fourth of the year (table 3). Likewise, the investment is much higher on Northern Plains and Southwest cattle ranches where little or no public land is used. In these areas total investment per cow or animal unit ranges from $1,000 to $1,500. Land investment alone ranges from nearly $800 to $1,300 per animal unit.

Investment per animal unit on migratory-sheep ranches has increased significantly in the last decade, but the increase in returns per animal unit has been greater. In 1971, total investment per animal unit was one-fourth higher than in 1960-64, but gross income was nearly one-half higher and net ranch income was about double. On Northern Plains cattle ranches, investment per animal unit in 1970 was 43 percent higher and net income 90 percent higher than in 1960-64. On Rocky Mountian cattle ranches the 1970 investment and net return were 23 percent and 76 percent greater, respectively, than in 1960-64. This would indicate that although investment per animal unit appears high, it is not high relative to returns.

Returns to Capital

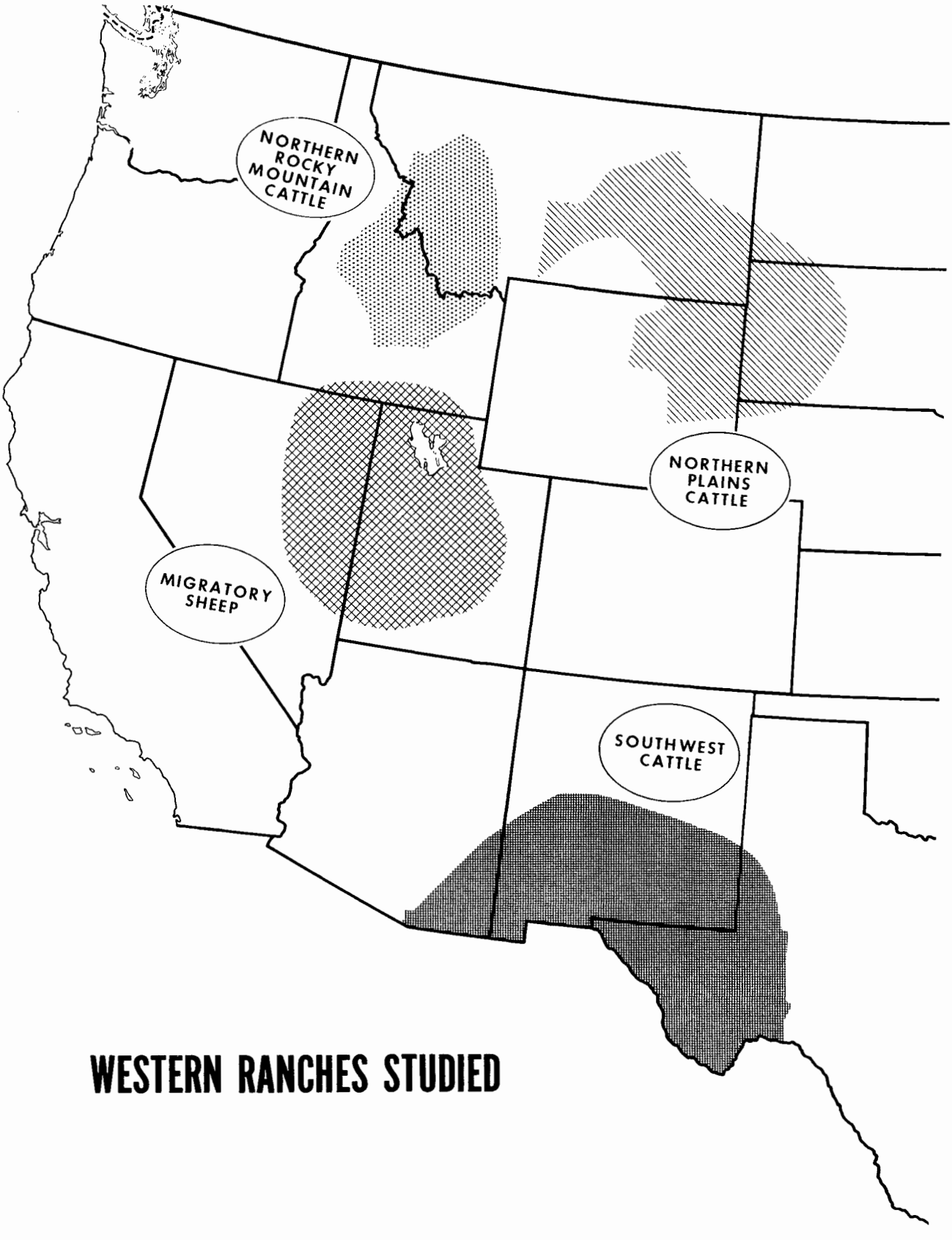
The net ranch income of about $15,200 is return to operator labor and management and to total capital. Two questions are often asked: "What return on investment does a ranch provide?" "Would an operator or an investor make a higher return on his capital investment in some other venture?" A glance at table 4 provides a partial answer to these questions.

Assuming a nominal charge for operator labor and management of $5,200, including living quarters and farm-produced perquisites, the return on total ranch capital was 4.3 percent in 1971, very close to the 1960-71 average of 4.2 percent. This average rate is lower than the long-term rate on Rocky Mountain cattle ranches, but higher than the rate on Northern Plains

Table 3.—Investment per animal unit, selected western livestock ranches, 1960, 1965, and 1971

Item	Cattle ranches									Migratory-sheep ranches[4]		
	Northern Plains[1]			Rocky Mountain[2]			Southwest[3]					
	1960	1965	1971[5]	1960	1965	1971[5]	1960	1965	1971[5]	1960	1965	1971[5]
	Animal units[6]											
Number	403	430	449	344	361	408	NA	348	342	470	484	491
	Dollar											
Investment in -												
Land and buildings	484	581	752	400	526	553	NA	908	1,304	247	255	276
Livestock	162	133	216	161	141	217	NA	124	250	111	121	159
Machinery and equipment	35	37	48	40	43	49	NA	30	35	23	24	32
Crops	7	10	12	24	30	24	NA	0	0	2	2	3
Total	688	761	1,028	625	740	843	NA	1,062	1,589	383	402	470

[1] Consists of 15 counties in Montana, 8 counties in Wyoming, and 9 counties in South Dakota. [2] Consists of 12 counties in Montana and 7 counties in Idaho. [3] Consists of 20 counties in Texas, 11 counties in New Mexico, and 3 counties in Arizona. [4] Consists of 19 counties in western Utah and 6 counties in eastern Nevada. [5] Preliminary. [6] An animal unit consist of 1.0 cow or heifer 2 years old and over, 1.33 steers or heifers 1 year old, 0.83 bull of breeding age, and 5.0 head of stock sheep.



WESTERN RANCHES STUDIED

Figure 6

Table 4.—Net ranch income and returns to resources, migratory-sheep ranches, Utah-Nevada, 1971

Item	Unit	1971
Net ranch income	Dollar	15,195
Interest paid on mortgages[1]	do.	4,092
Income available for family living	do.	11,103
Charge for operator's labor[2]	do.	5,200
Return to operator's capital	do.	5,903
Total ranch capital	do.	[3]230,720
Operator's capital	do.	[3]168,720
Return on total ranch capital	Percent	[3]4.3
Return on operator's capital	do.	[3]3.5

[1] Real estate mortgage of $31,000 at 5.6 percent and operating loans of $31,000 at 7.6 percent. [2] Annual wage to year-round hired hands x 1.25. [3] Excludes estimated value of grazing permits.

cattle ranches. However, as stated above, land values, particularly in recent years, have been relatively higher on cattle ranches.

Returns to the rancher's equity (termed operator's capital) are lower than returns to total ranch capital, because rates charged on borrowed money are higher than rates earned in ranching operations. In 1971, migratory-sheep ranchers carried real estate mortgages and production loans of approximately $62,000 per ranch, leaving operator's equity capital at about $169,000.

The average rates charged by institutions servicing ranchers' loans were 5.6 percent for real estate mortgages and 7.6 percent for production loans. These rates were slightly higher than a year earlier for real estate loans but lower for production loans. Total interest paid was slightly lower than in 1970.

Since the interest rates were well above the 4.3 percent return to total ranch capital, after deducting interest paid in 1971, operator's capital returns averaged about 3.5 percent. The composite return on common stocks in 1971 was 3.37 percent.

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