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Economic Study . . .
of Selected Livestock Ranches
. Douglas County, Oregon---1961



SPECIAL REPORT 140

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Agricultural Experiment Station
Oregon State University

Corvallis

ECONOMIC STUDY OF SELECTED LIVESTOCK RANCHES

DOUGLAS COUNTY, OREGON - 1961

by

D. C. Mumford, M. H. Becker, and W. D. Mosher ¹

During the spring of 1962, a detailed farm business and organization study was made of 23 livestock ranches in Douglas County. It included all receipts and expenses as well as information on crop and livestock programs for the calendar year 1961.

The purpose of this study was to obtain current economic data on livestock ranches in the county and to make a limited analysis of these data to help livestock producers with some of their management problems. Because of the small number and the fact that these ranches were not selected from a random sample, they do not necessarily represent all livestock production in the county. The data do point out, however, some of the problems and opportunities that exist for some producers.

TABLE 1. Financial Returns -- Douglas County, 1961

Type of Ranch*	Net ranch income*		Labor income*		Return to capital*	
	Low	High	Low	High	Low	High
Sheep ranches	\$-5,638	\$ 5,913	\$-10,753	\$ 90	-10.0%	1.0%
Mixed livestock	-9,516	10,259	-16,180	980	-24.9%	3.0%
Beef ranches	2,073	7,486	-4,693	598	-1.8%	1.7%

* See explanation of terms.

¹ Professor of Agricultural Economics, Oregon State University; Farm Management Specialist, Oregon State University; and County Extension Agent, Douglas County, Oregon, respectively. Ranch business schedules were obtained through personal interviews by James Youde, Roger Ritchey, and Gary Schneider, senior students at Oregon State University. Analysis and computations were made by Gary Schneider, major student in Agricultural Economics.

Financial results for the year 1961, on the 23 Douglas County livestock ranches in this study, showed a wide variation but most were low. Individual Operator's Labor Incomes varied from a low of -\$16,180 to a high of \$980 for this particular year. Table 1 presents a picture of the 1961 financial returns summarized by type of ranch.

The more important factors responsible for the relatively low earnings shown in this study are (1) low volume of business, (2) selling price of lambs, and (3) the percent lamb crop. These factors also partially explain the variation in financial returns between individual ranches.

Small volume of business helps to explain the low returns on some of the ranches in this study. In other words, many ranches did not have a sufficient number of units to sell, even with good prices, to return an adequate income.

The selling price of lambs in 1961 was disappointingly low from the standpoint of sheep ranchers not only in Douglas County, but in the entire United States. The 1961 average lamb price in Oregon (\$14.70 per cwt.) was the lowest in 16 years. In 1962, Oregon lamb prices on several occasions have been \$3 to \$5 per hundredweight higher than in 1961. The question naturally arises, "Would higher prices for lambs have resulted in satisfactory earnings on the sheep ranches in 1961?" Arbitrarily raising lamb prices four cents a pound would only raise labor incomes to a positive figure on two of the sheep ranches. The other 9 would still be negative. The volume of business in most cases was too small to return an adequate labor income even though lamb prices had been considerably higher.

The percent lamb crop was unusually low in Douglas County in 1961 because of exceptionally severe weather conditions in the early spring. Even with normal death losses, the number of lambs weaned would still appear low.

Financial and analysis summaries for each of the ranches studied in Douglas County in 1961 are presented in Tables 2 through 13.

TABLE 2. Financial Summary

Sheep Ranches, Douglas County, 1961

1. Ranch Number	1	3	7	10	15	16	17	20	21	23	25
2. Total Investment	\$130,670	\$143,440	\$111,827	\$ 68,264	\$ 92,726	\$107,690	\$ 24,786	\$ 92,315	\$ 76,615	\$ 50,818	\$158,792
3. Ave. No. of Ewes	565	595	570	919	235	432	175	500	288	234	510
4. Total Animal Units	120	171	129	211	71	114	36	128	91	62	125
5. Total Receipts	13,525	17,785	13,870	15,707	7,605	10,788	3,769	10,175	5,101	6,684	14,080
6. Total Expenses	11,332	12,599	6,242	30,591	6,815	7,926	2,253	7,018	4,081	4,024	11,119
7. Receipts - Expenses	2,193	5,186	7,628	-14,884	790	2,862	1,516	3,157	1,020	2,660	2,961
8. Inventory Change (Livestk & Crops)	-2,800	509	-125	15,982	-185	-162	-78	-2,140	-250	-418	800
9. Depreciation on Bldgs & Equip	1,981	430	1,140	1,629	1,007	1,780	400	800	--	318	1,925
10. Unpaid Family Labor	3,050	300	450	250	250	600	--	300	--	1,400	--
11. Net Ranch Income	-5,638	4,965	5,913	-781	-652	320	1,038	-83	770	524	1,836
12. Interest on Ave. Investment	6,738	7,292	5,823	3,673	4,763	5,559	1,282	4,765	3,928	2,618	8,227
13. Labor Income	-10,753	-2,327	90	-4,454	-5,415	-3,716	-244	-2,648	-3,158	-2,094	-5,708
14. Value Operator's Labor	4,800	4,200	4,800	6,000	4,800	4,800	1,600	3,600	5,000	3,600	3,600
15. Return to Capital	-8,815	765	1,113	-6,781	-5,452	-2,957	-568	-1,483	-4,230	-3,076	-1,081
16. Percent Return to Capital	-6.7%	.5%	1%	-10%	-5.9%	-2.7%	-2.3%	-1.6%	-5.5%	-6.1%	-7%

TABLE 3. Financial Analysis - Per Ewe

Sheep Ranches, Douglas County, 1961

Ranch Number	1	3	7	10	15	16	17	20	21	23	25
Total Investment Per Ewe	\$231	\$241	\$196	\$75	\$393	\$250	\$142	\$184	\$266	\$217	\$311
Receipts											
1. Livestock Sales	\$ 10	\$ 17	\$ 7	\$ 5	\$ 17	\$ 14	\$ 13	\$ 12	\$ 11	\$ 18	\$ 8
2. Livestock Product Sales	5	5	3	2	6	4	4	4	4	4	4
3. Crop Sales	--	5	8	1	3	1	--	--	--	3	11
4. Miscellaneous	9	3	6	9	6	6	5	4	3	3	4
5. Total Receipts	24	30	24	17	32	25	22	20	18	28	27
Expenses											
6. Hired Labor	\$ 4	\$ 5	\$ --	\$ 3	\$ 3	\$ 1	\$ --	\$ --	\$ 1	\$ --	\$ 2
7. Sheep Shearing	1	1	1	1	1	1	1	1	1	1	1
8. Livestock Purchases	1	--	--	18	9	--	3	1	1	1	5
9. Hay, Grain, Supplement	1	--	1	--	2	--	3	--	1	3	--
10. Other Livestock Expense	1	--	1	--	1	--	--	1	--	1	--
11. Rent	--	--	--	3	--	1	--	--	--	--	--
12. Seed	--	--	--	--	--	1	--	2	3	1	--
13. Fertilizer & Lime	--	--	2	1	3	3	1	--	1	--	2
14. Crop Expense	1	--	--	--	--	1	--	--	--	1	2
15. Mach. Hire & Custom Work	1	4	--	1	2	--	--	--	--	--	--
16. Gas, Oil, Grease, Elect.	1	3	1	1	1	2	1	1	3	2	2
17. Repairs (Bldg & Mach)	2	3	1	1	1	1	1	--	1	2	1
18. Taxes	2	3	2	1	3	2	2	1	2	4	2
19. Interest	3	--	1	3	1	4	--	7	--	--	3
20. Overhead & Miscellaneous	2	2	2	1	1	1	1	--	1	1	1
21. Total Expenses (6 thru 20)	20	21	11	33	29	18	13	14	14	17	21
22. Receipts - Expenses (5 minus 21)	4	9	13	-16	3	7	9	6	4	11	6
23. Inventory Change (Livstk & Crop)	-5	1	--	17	-1	-1	-1	-4	-1	-2	2
24. Depreciation (Bldgs & Equip)	4	1	2	2	4	4	2	1	--	1	4
25. Unpaid Family Labor	5	1	1	--	1	1	--	1	--	6	--
26. NET RANCH INCOME	-10	8	10	-1	-3	1	6	--	3	2	4
27. Interest on Ave. Investment	12	12	10	4	20	13	7	9	14	11	16
28. LABOR INCOME	-19	-4	--	-5	-23	-9	-1	-5	-11	-9	-12
29. Value Operator's Labor	8	7	8	7	20	11	9	7	17	15	7

TABLE 4. Management Analysis
 Sheep Ranches, Douglas County, 1961

	1	3	7	10	15	16	17	20	21	23	25
1. Ranch Number	565	595	570	919	235	432	175	500	288	234	510
2. Ave. No. of Ewes	2.8	2.1	1.2	1.8	1.3	1.5	0.3	1.0	1.0	1.6	1.4
3. Total Man Equivalents	35	210	316	*	59	52	--	--	80	--	150
4. Acres of Cropland	200	95	133	*	90	432	130	1,000	200	160	300
5. Acres Impr. Perm. Pasture	\$130,670	\$143,440	\$111,827	\$68,264	\$92,726	\$107,690	\$24,786	\$92,315	\$76,615	\$50,818	\$158,792
6. Total Ranch Investment	\$169	\$198	\$140	\$33	\$327	\$190	\$101	\$142	\$222	\$164	\$235
7. Land	25	23	16	13	13	19	16	13	10	20	20
8. Buildings	16	17	18	16	23	27	15	18	21	18	16
9. Livestock	--	--	3	3	4	--	1	--	5	4	9
10. Crops & Supplies	20	3	19	10	26	14	9	11	8	11	31
11. Mach & Equipment	230	241	196	75	393	250	142	184	266	217	311
12. TOTAL	1,089	839	867	324	1,299	848	689	721	842	820	1,270
13. Total Investment Per A.U.	\$47,516	\$68,962	\$89,462	\$39,008	\$69,340	\$71,793	\$74,654	\$85,477	\$73,668	\$31,564	\$111,825
14. Inv. Per Man Equivalent	\$18	\$13	\$10	\$9	\$25	\$14	\$9	\$8	\$18	\$22	\$9
15. Total Labor Costs	4	5	--	2	3	1	--	--	1	--	2
16. Hired Labor	2	1	1	1	2	1	1	1	--	2	1
17. Livestock Expense	2	4	4	2	3	4	2	2	5	*	3
18. Hay Fed	14	12	14	9	17	15	13	13	12	10	12
19. Ave. Value of Ewe (\$)	73	97	107	68	76	91	110	72	96	112	80
20. Percent Lamb Crop	11	7	7	22	16	3	8	10	3	3	10
21. Percent Death Loss, Ewes	18	11	14	*	11	3	3	17	8	13	22
22. Percent Death Loss, Lambs	44	28	*	46	12	31	41	25	28	38	47
23. Ewes Per Buck	7.5	*	5.2	4	8.5	7.7	7.3	6	6	7.3	7.3
24. Wool Per Sheep (lbs.)	184	279	323	152	238	282	126	224	479	*	372
25. Hay Fed Per Ewe (lbs.)	11	--	--	--	--	--	114	--	--	--	--
26. Purch. Hay Per Ewe (lbs.)	94	90	88	85	90	89	88	81	92	90	93
27. Ave. Weight of Lambs Sold (lbs.)	53	*	45	43	42	43	43	43	45	43	43
28. Ave. Price of Wool (c/lb.)	12	13	11.5	11	11	13.5	14	*	16	14	13.5
29. Ave. Price of Lambs Sold (c/lb.)	8	15	10	6	10	15	13	11	14	14	10
30. Net Livestock Increase/Ewe (\$)	37	74	45	31	36	65	65	43	44	64	41
31. Net Livestock Increase/A.U. (\$)											

* Not Available

TABLE 5. Financial Summary

Mixed Livestock Ranches, Douglas County, 1961

1. Ranch Number	2	4	8	9	13	14	18	19	22
2. Total Investment	\$ 67,075	\$ 33,980	\$ 159,285	\$ 179,352	\$ 125,405	\$ 40,783	\$ 16,257	\$ 287,143	\$ 53,084
3. Total Animal Units	110	37	135	413	267	62	165	266	63
4. Average Number Ewes	262	107	357	1,107	867	120	568	603	125
5. Average Number Cows	0	11	19	60	27	31	0	76	22
6. Total Receipts	\$ 20,188	\$ 4,131	\$ 6,960	\$ 33,359	\$ 25,261	\$ 4,385	\$ 21,611	\$ 13,841	\$ 6,817
7. Total Expenses	19,872	1,634	4,924	17,677	29,027	4,228	22,601	21,322	5,131
8. Receipts - Expenses	316	2,497	2,036	15,682	-3,766	157	-990	-7,481	1,686
9. Inventory Change (Lvstk & Crops)	621	887	-130	3,986	-3,780	1,354	3,423	13,109	56
10. Depreciation on Bldgs & Equip	958	910	302	3,349	1,970	1,670	398	1,955	1,406
11. Unpaid Family Labor	200	750	300	6,060	--	2,400	80	300	200
12. Net Ranch Income	-221	1,724	1,304	10,259	-9,516	-2,559	1,955	3,373	136
13. Interest on Ave. Investment	3,575	1,800	8,123	9,568	6,664	2,141	975	14,830	2,817
14. Labor Income	-3,796	-76	-6,626	691	-16,180	-4,700	980	-11,457	-2,681
15. Value Operator's Labor	4,800	3,000	6,000	4,800	3,600	4,200	6,000	4,800	3,600
16. Return to Capital	-5,021	-1,276	-4,503	5,459	-13,166	-6,759	-4,045	-1,427	-3,464
17. Percent Return to Capital	-7.5%	-3.8%	-2.8%	3%	-10.5%	-16.5%	-24.9%	-5%	-6.5%

TABLE 6. Financial Analysis - Per Animal Unit
Mixed Livestock Ranches, Douglas County, 1961

Ranch Number	2	4	8	9	13	14	18	19	22
Total Investment Per A.U.	\$610	\$918	\$1,180	\$434	\$469	\$658	\$99	\$1,080	\$843
<u>Receipts</u>									
1. Livestock Sales	\$154	\$57	\$30	\$54	\$67	\$41	\$109	\$38	\$87
2. Livestock Product Sales	10	8	15	17	14	9	10	10	8
3. Crop Sales	10	19	--	4	5	--	1	--	--
4. Miscellaneous	9	27	6	6	9	21	11	4	13
5. Total Receipts	184	111	51	81	95	71	131	52	108
<u>Expenses</u>									
6. Hired Labor	\$4	\$--	\$3	\$3	\$23	\$1	\$4	\$14	\$29
7. Sheep Shearing	3	--	3	2	3	--	1	2	1
8. Livestock Purchases	113	8	9	4	40	1	25	23	--
9. Hay, Grain, Supplement	9	1	2	4	2	1	58	6	1
10. Other Livestock Expense	4	2	1	1	2	2	3	3	2
11. Rent	1	--	--	--	8	--	20	--	--
12. Seed	2	1	--	--	3	4	2	--	3
13. Fertilizer & Lime	7	4	1	5	6	11	2	7	5
14. Crop Expenses	3	--	--	1	1	9	--	3	--
15. Mach Hire & Custom Work	1	--	2	2	1	5	8	1	--
16. Gas, Oil, Grease, Electricity	17	12	5	5	4	7	4	8	11
17. Repairs (Bldg & Mach)	3	1	--	6	1	12	3	3	9
18. Taxes	10	8	6	5	9	10	1	7	15
19. Interest	--	--	--	--	--	--	2	--	--
20. Overhead & Miscellaneous	4	7	3	5	6	5	4	3	6
21. Total Expenses (6 thru 20)	181	44	36	43	109	68	137	80	82
22. Receipts - Expenses (5 minus 21)	3	67	15	38	-14	3	-6	-28	26
23. Inventory Change (Lvstk. & Crop)	6	24	-1	10	-14	22	20	49	1
24. Depreciation (Bldgs & Equip)	9	24	2	8	7	27	2	7	22
25. Unpaid Family Labor	2	20	2	15	--	39	--	1	3
26. NET RANCH INCOME	-2	47	10	25	-35	-41	12	13	2
27. Interest on Ave. Investment	32	49	60	23	25	35	6	56	45
28. LABOR INCOME	-34	-2	-50	2	-60	-76	6	-43	-43
29. Value Operator's Labor	44	81	44	12	13	68	36	18	57

TABLE 7. Management Analysis

Mixed Livestock Ranches, Douglas County, 1961

1. Ranch Number	2	4	8	9	13	14	18	19	22
2. Ave. Number of Ewes	262	107	357	1,107	867	120	568	603	125
3. Total Man Equivalents	1.2	1.2	1.2	2.9	2.8	2.0	1.2	2.6	2.0
4. Acres of Cropland	140	27	--	48	88	9	50	--	81
5. Acres Impr. Perm. Pasture	275	42	120	2,000	817	91	350	300	80
6. Total Ranch Investment	\$67,075	\$33,980	\$159,285	\$179,352	\$125,405	\$40,783	\$16,257	\$287,143	\$53,084
7. Land	\$318	\$498	\$1,007	\$229	\$260	\$454	\$--	\$762	\$533
8. Buildings	92	146	55	60	62	40	--	140	46
9. Livestock	120	119	73	80	93	103	74	131	107
10. Crops & Supplies	14	24	14	3	3	3	5	18	40
11. Mach & Equipment	66	131	31	62	51	58	20	29	117
12. TOTAL	610	918	1,180	434	469	658	99	1,080	843
13. Inv Per Man Equivalent	\$55,434	\$27,184	\$131,640	\$62,492	\$45,602	\$20,090	\$13,006	\$107,554	\$25,521
14. Total Labor Costs	\$49	\$101	\$49	\$30	\$36	\$108	\$40	\$33	\$89
15. Hired Labor	4	--	3	3	23	1	4	14	29
16. Livestock Expense	7	2	4	3	5	1	5	4	3
17. Hay Fed	30	32	22	10	7	28	2	22	29
18. Ave Value of Ewe (\$)	12	7	8	12	13	8	15	12	8
19. Ave Value of Cow (\$)	--	175	150	175	175	130	--	172	120
20. Percent Lamb Crop	75	117	74	117	83	127	120	78	120
21. Percent Calf Crop	--	100	94	87	100	97	--	86	100
22. Percent Death Loss, Ewes	15	5	6	8	7	--	4	14	7
23. Percent Death Loss, Cows	--	--	6	1	--	--	--	1	8
24. Percent Death Loss, Lambs	11	14	2	10	7	5	5	13	20
25. Percent Death Loss, Calves	--	--	--	7	--	3	--	10	--
26. Ewes Per Buck	47	49	33	24	40	47	28	42	23
27. Wool Per Sheep (lbs)	7.5	6	6	7.5	6.8	7.6	*	*	6.1
28. Ave Wt of Lambs Sold (lbs)	85	*	*	95	81	89	92	83	94
29. Ave Price of Wool (¢/lb)	43	42	43	48	48	43	*	*	43
30. Ave Price of Lambs (¢/lb)	14	*	12	16	14	13	11	12	14
31. Net Livestock Increase/A.U. (\$)	67	82	42	77	28	73	106	64	92

* Not Available

TABLE 8. Financial Summary
 Beef Ranches, Douglas County, 1961

Ranch Number	11	12	24
2. Total Investment	\$127,239	\$145,704	\$ 58,068
3. Total Animal Units	142	256	96
4. Average Number of Cows	101	148	65
5. Total Receipts	12,265	33,461	8,313
6. Total Expenses	5,684	21,826	5,455
7. Receipts - Expenses	6,581	11,635	2,858
8. Inventory Change (Lvstk & Crops)	-1,111	60	1,225
9. Deprec. on Bldgs., Equip.	2,647	2,509	1,252
10. Unpaid Family Labor	750	1,800	250
11. Net Ranch Income	2,073	7,486	2,581
12. Interest on Ave. Investment	6,766	7,888	3,138
13. Labor Income	-4,693	598	-557
14. Value Operator's Labor	3,000	6,000	3,600
15. Return to Capital	-927	2,486	-1,019
16. Percent Return to Capital	- .7%	1.7%	-1.8%

TABLE 9. Financial Analysis - Per Cow
Beef Ranches, Douglas County, 1961

Ranch Number	11	12	24
Total Investment Per Cow	\$1,260	\$ 984	\$ 893
Total A.U.'s Per Cow	1.41	1.73	1.48
<u>Receipts</u>			
1. Livestock Sales	118	103	93
2. Livestock Product Sales	--	1	--
3. Crop Sales	1	107	27
4. Miscellaneous	2	14	8
5. Total Receipts	121	225	128
<u>Expenses</u>			
6. Hired Labor	10	32	3
7. Livestock Purchases	5	5	8
8. Hay, Grain, Supplement	--	8	11
9. Other Livestock Expense	--	3	--
10. Rent	4	--	--
11. Seed	4	9	5
12. Fertilizer & Lime	3	13	7
13. Crop Expenses	1	10	6
14. Mach. Hire & Custom Work	1	9	--
15. Gas, Oil, Grease, Elect.	8	16	11
16. Repairs (Bldg & Mach)	5	10	15
17. Taxes	6	9	6
18. Interest	--	12	--
19. Overhead & Miscellaneous	9	10	12
20. Total Expenses (6 thru 19)	56	146	84
21. Receipts - Expenses (5 minus 20)	65	79	44
22. Inventory Change (Lvstk & Crops)	-11	--	19
23. Depreciation (Bldgs & Equip)	26	17	19
24. Unpaid Family Labor	7	12	4
25. NET RANCH INCOME	21	50	40
26. Interest on Ave. Investment	67	53	48
27. LABOR INCOME	-46	4	-8
28. Value Operator's Labor	30	40	55

TABLE 10. Management Analysis
Beef Ranches, Douglas County, 1961

	11	12	24
1. Ranch Number			
2. Average No. of Cows	101	148	65
3. Average No. of A. U.'s	142	256	96
4. Total Man Equivalents	1.75	2.92	1.13
5. Acres of Cropland	120	255	70
6. Acres Impr. Perm. Pasture	150	1,000	--
7. Total Ranch Investment	\$127,239	\$145,704	\$ 58,068
8. Land	\$612	\$473	\$383
9. Buildings	247	104	148
10. Livestock	255	279	261
11. Crops & Supplies	5	50	1
12. Mach. & Equipment	141	78	100
13. TOTAL	\$ 1,260	\$ 984	\$ 893
14. Total Investment Per A.U.	\$ 896	\$ 569	\$ 605
15. Investment Per Man Equivalent	\$ 72,708	\$ 49,899	\$ 51,388
16. Total Labor Costs	\$ 47	\$ 85	\$ 62
17. Hired Labor	10	32	3
18. Livestock Expense	4	3	1
19. Hay Fed	49	25	70
20. Average Value of Cow (\$)	180	150	187
21. Percent Calf Crop	95	91	69
22. Percent Death Loss, Cows	4	4	4
23. Percent Death Loss, Calves	2	8	25
24. Cows Per Bull	25	12	22
25. Hay Fed Per Cow (tons)	1.94	1.18	2.78
26. Ave. Weight of Calves Sold (lbs)	400	385	425
27. Ave. Price of Calves Sold (¢/lb)	22½	25½	25
28. Net Livestock Increase/Cow (\$)	119	90	105
29. Net Livestock Increase/A.U. (\$)	85	55	71

Size

Investment
Per Cow

Expenses
Per Cow

Efficiency Factors

EXPLANATION OF TERMS

For purpose of comparison and analysis, the 23 ranches included in this study were divided into three main types as follows:

Sheep Ranches -- Those ranches where sheep constitute more than 80% of the animal units.

Mixed Livestock Ranches -- Those ranches having more than one kind of livestock, but no one kind constitutes more than 80% of the animal units.

Beef Ranches -- Those ranches where beef cattle constitute more than 80% of the animal units.

Receipts - include sales of livestock, livestock products and crops, value of livestock eaten and miscellaneous receipts (wool incentive payments, gas tax refunds, patronage dividends, etc.)

Crop Expense - includes irrigation water, crop sprays and dusts, crop supplies, etc.

Taxes - include personal property and real estate taxes only.

Interest - includes both interest on operating loans and interest on mortgage loans.

Overhead and Miscellaneous - includes insurance, licenses, legal and accounting fees, travel, office supplies, social security and industrial accident insurance, and other miscellaneous items.

Livestock and Crops Inventory Change - is the difference in total value of the crops and livestock on the beginning and ending inventories.

Unpaid Family Labor - is the estimated value of the labor sent by the family (excluding the operator) in the entire ranch operation that is unpaid. Paid family labor is included in the hired labor.

Net Ranch Income - is the return to the operator for his labor, management, and his own invested capital. It is obtained by subtracting total expenses (cash expenses, crop and livestock inventory decrease, depreciation, and unpaid family labor) from total receipts (cash, receipts, value of livestock eaten, and crop and livestock inventory increase).

Interest on Average Investment - is an allowance for the use of the capital invested in the ranch business. The investment includes the value of all land, buildings (excluding the operator's dwelling), machinery, livestock, crops, feed and supplies. A charge of five percent (5%) was used for investment in land, buildings and improvements, and six percent (6%) for investment in livestock, crops and machinery. Values placed on land, livestock and crops represent the individual operator's best judgment of market value. Machinery and most buildings were valued at purchase price less depreciation. Old buildings not listed on depreciation schedules were valued at replacement cost less depreciation. Livestock values were inventoried at farm value.

Labor Income - is the return to the operator for his labor and management skills after an allowance for interest on capital is deducted from net ranch income. It is computed by subtracting the interest on average investment from net ranch income, plus real estate mortgage interest payments.

Value of Operator's Labor - is the operator's estimate of the value of his own labor used in his ranching operation.

Return to Capital - is the return to total invested capital after an allowance is made for the value of the operator's labor and management. It is computed by subtracting the estimated value of the operator's labor and management from net ranch income, plus real estate mortgage interest paid. It is usually expressed as a percentage of the average ranch investment.

Average Number of Ewes - is the average number of mature ewes and yearling ewes in the flock at the beginning and end of the year.

Average Number of Cows - is the average number of cows in the herd at the beginning and end of the year.

Average Number of Animal Units - is the average number of animal units on the ranch at the beginning and end of the year. In this study animal units were computed as follows: cows, bulls, horses = 1 A.U.; heifers, steers over 1 year old = .75 A.U.; calves = .5 A.U.; ewes, bucks = .2 A.U.; lambs = .15 A.U.; goats = .2 A.U.; pigs - 40 to 100 lbs. = .25 A.U.; pigs - 100 to 200 lbs. = .4 A.U.; mature sows = .5 A.U.

Total Man Equivalents - is the total labor force used on the ranch expressed as the equivalent of one man working full time. It is calculated by adding all the man-months of labor and dividing by 12.

Acres of Cropland - the number of acres that is actually farmed. It does not include permanent pasture, brushland, timberland and farmstead and roads.

Total Ranch Capital - is the rancher's estimate of the average beginning and ending investment in land, buildings, livestock, crops, machinery and supplies.

Total Investment Per A.U. - is the total ranch investment divided by the average number of A.U.'s.

Investment Per Man Equivalent - is the total ranch investment divided by the total man equivalents.

Total Labor Costs - include an estimate of the value of the operator's labor, unpaid family labor, and the actual cost of hired labor.

Livestock Expense - includes the cost of sheep shearing, veterinary, medicine, breeding fees, and pasture rent.

Hay Fed - includes both purchased and home grown hay.

Average Value of Ewe - is the average value of all ewes in the beginning and ending inventories.

Average Value of Cow - is the average value of all cows in the beginning and ending inventories.

Percent Lamb Crop - is the number of lambs weaned divided by the number of ewes exposed.

Percent Calf Crop - is the number of calves weaned divided by the number of cows exposed.

Percent Death Loss of Mature Stock - is the number died divided by the number in the beginning inventory.

Percent Death Loss of Lambs and Calves - is the number that died divided by the number born.

Average Price of Wool - is the average price per pound of the ewes' wool sold, and does not include lambs' wool, or wool incentive payments.

Net Livestock Increase - is total sales of livestock and livestock products, plus value of livestock eaten, plus or minus livestock inventory change, and minus livestock purchased.