

SAMPLE COSTS FOR
SPRINKLER IRRIGATED PERMANENT PASTURE
IN NAPA COUNTY - 1963

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This cost analysis sheet may be used as a guide in determining irrigated permanent pasture inputs and costs for two specific sets of conditions. It is designed to help growers analyze their practices with a view toward increasing efficiency of production. Along with similar sheets dealing with other agricultural enterprises, it can be used as a basis for making cost comparisons with the most profitable alternatives. The figures are not intended to represent average costs for irrigated permanent pasture in Napa County.

In this county irrigated pastures are planted on a variety of soil types, some of which may be adapted to the production of much more profitable crops. Costs and productivity will vary widely between individual locations. For instance, yield records collected on several irrigated pasture fertilizer tests show that productivity may be as low as 4 (or less) animal unit months of feed per year from unfertilized irrigated pasture on poor soil. These same tests show that irrigated pastures on better soils are capable of producing 15 or more animal unit months of feed per year, if a recommended fertilizer program is followed consistently, and if good irrigation and rotation grazing management methods are used.

The amount of feed obtained from a pasture is influenced greatly by grazing practices. Also, all types of stock do not utilize pasture to the same degree of efficiency. Milk- ing cows may use only 3/4 of the available feed that growing stock might use. Also, sufficient stock must be on hand to fully utilize feed produced. Therefore, in determining the amount of feed which may be obtained from a pasture, one should consider whether it will be used to maximum capacity.

SAMPLE COSTS AND COST ANALYSIS WORK SHEET FOR SPRINKLER IRRIGATED PERMANENT PASTURE 1/
Napa County, 1963

	Annual Cost Per Acre	
	Sample Cost (Better Soils)	Your Cost
Cash Costs:		
Land preparation, seed, plant, and extra first year costs: \$24.00 - 8 years life (1/8 of \$24)	\$ 3.00	
Mow, fertilize, drag, fence work, etc.: 2.8 man hours and 2 tractor hours	6.08	
Irrigation labor: 12 man hours (14 irrigations)	19.20	
Irrigation water: power for 2 1/2 acre feet @ \$6.50	16.25	
Fertilizer: Average per year 120 lbs N and 50 lbs P ₂ O ₅	19.00	
Miscellaneous materials	1.50	
County taxes	8.00	
Office, car, operating capital, etc.	3.50	
Repairs	3.00	
Total Cash Costs	\$ 79.53	
Depreciation:		
Irrigation system - (40 acre basis)		
Well and pump - original cost \$160 per acre	10.00	
Sprinkler system - original cost \$80 per acre	5.50	
Tractor: 2 1/2 hrs. including 1/8 first year hours @ 40¢	1.00	
Other equipment: cost \$20 per acre - 10 year life	2.00	
Fences: cost \$30 per acre - 12 year life	2.50	
Total Depreciation	\$ 21.00	
Total Cash and Depreciation Costs	\$100.53	
Interest on Investment (except land) @ 6%:		
Irrigation system: on 1/2 original cost (\$120 per acre)	7.20	
Tractor: 2 1/2 hrs including 1/8 of first yr hrs. (20¢/hr)	.50	
Other equipment: on 1/2 original cost (\$10 per acre)	.60	
Fences: on 1/2 original cost (\$15 per acre)	.90	
Total Interest on Investment (except land)	\$ 9.20	
Total Cost of Production (except interest on land)	\$109.73	

ANNUAL COST PER ANIMAL UNIT MONTH* AT VARYING PRODUCTION LEVELS

Production level - A.U.M. per acre	Claypan and Shallow Soils**			Deep Soils		
	6	8	10	12	14	16
Cash and depreciation cost only	\$14.09	\$10.57	\$8.45	\$8.38	\$7.18	\$6.28
Total cost per A.U.M.* (except interest on land) ***	15.62	11.72	9.37	9.14	7.84	6.86
Interest on land: each \$200 value per acre @ 6%	2.00	1.50	1.20	1.00	.86	.75
Total cost per A.U.M.*: assumed value of land \$600 per acre	\$21.62	\$16.22	\$12.97	\$12.14	\$10.42	\$9.11
Your total cost per A.U.M.*						

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* } See back page
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*** The first 3 values on this line calculated as follows: (\$109.73 - \$14.00) ÷ 6, 8, and 10 respectively. The last 3 values on this line calculated as follows: \$109.73 ÷ 12, 14, and 16 respectively.

1/ Man labor: \$1.60/hour, including Social Security and Compensation Insurance.

Tractor per hour: cash cost 80¢, depreciation 40¢, and interest 20¢.

* Animal Unit Month (A.U.M.) = 400 pounds of total digestible nutrients (TDN) or 0.4 tons hay. A.U.M. equivalents for different kinds and ages of livestock may be obtained from the Farm Advisor's office.

** Cash costs on claypan and shallow soils figured at \$16 per acre less than on deep soils due to lower allowances for fertilizer and county taxes. Fertilizer tests indicate that on claypan and shallow soils the most profitable fertilizer program is the application of phosphorous (P_2O_5) and possibly sulfur. Both of these plant nutrients are supplied by single superphosphate. On these soils, nitrogen fertilizers increase production but not enough to justify the cost. Also, on these phosphorous-deficient soils, nitrogen fertilization tends to eliminate the clover in the pasture even when phosphorous is included in the fertilization program.

SUGGESTED FERTILIZATION PROGRAM

Claypan and shallow soils: 250 pounds of single superphosphate per acre once a year applied in February or March.

Deeper, better grade soils: 250 pounds of 16-20 ammonium phosphate-sulfate in February or March followed by two applications of 200 pounds of ammonium sulfate per acre during the summer.

UNIVERSITY OF CALIFORNIA AGRICULTURAL EXTENSION SERVICE

Cooperative Extension work in Agriculture and Home Economics, College of Agriculture, University of California, and United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8, and June 30, 1914. George B. Alcorn, Director, California Agricultural Extension Service.