

PRODUCTION COST STUDIES IN SACRAMENTO
AND SOLANO COUNTY - 1984

GENERAL REMARKS

The following crop production studies represent an average cost estimate to assist growers in economic management of their individual enterprises. Individual line items per study represent the average regional cost to accomplish the task. In this study five major crops grown in the region were analyzed. Also included are cost of production estimates of three alternate or double crops. Since the two county regions encompass both mineral and organic soil types, cost estimates are also provided for corn and wheat grown on either soil type.

The intent of this study is to supply growers, lending institutions, consultants, chemical advisors, UC Farm Advisors, and all interested persons with information concerning potential returns and line item cultural costs. Actual cost will vary from farm to farm and from grower to grower, due to different soil types, operational size, types of equipment used, rotational patterns, salaries and wages, water costs, etc. Provided with each study is a blank column for growers to insert their own cost for each item. The cost estimates provided represent only annual cash cost for each crop. Provided, but not included, in the total cash cost per acre is an estimate of the non-cash cost encouraged in the farming enterprise.

The authors wish to express gratitude to those growers, industry personnel, and interested individuals who assisted in providing cost information and review of this study.

PARAMETERS

Hypothetical Farm Operation

Crop	Acres
Canning Tomatoes	500
Wheat	500
Sugar Beets	500
Corn	500
Alfalfa	300

TOTAL	2300

Alternate or Double Crops

Safflower	300
Grain Sorghum	300
Pink Beans	300

EQUIPMENT -- \$750,000 investment in new equipment depreciated in 10 years. Interest rate at 12%.

PRODUCTION LOANS -- \$750,000 at 14% with annual payback, three times per year.

LABOR -- Cultural labor at \$5/hr., Irrigation Labor at \$4/hr.

BUILDINGS -- 2 metal type including shop, 5 grain storage bins, 1 pole type, 1 employee house, misc. storage (chemicals, etc.). Estimated value at \$186,000, \$165,000 loan at 12% for 30 years.

REPAIRS AND MAINTENANCE -- Based on total farm operation with each crop being charged a proportionate share.

IRRIGATION -- Amounts are based on the average amount of water applied to each crop. Valued at \$12.00/acre foot.

SHARE RENTS -- For the purpose of this study it is assumed that all crops are grown on leased ground. The following table represents the average share rent percentages for each crop.

<u>CROP</u>	<u>% SHARE RENT</u>
Canning Tomatoes	18
Wheat	33
Sugar Beets	20
Corn	25
Alfalfa	25
Safflower	25
Grain Sorghum	25
Pink Beans	20

INTEREST RATES -- Based on average rates charged by loan institutions as of August 1984. Included are variable rate loans that would change at pay-off time.

MANAGEMENT SALARY -- Owner/management income is calculated at \$50,000/year plus \$20,000 in benefits.

NOTE: This cost study was computed on a modification of the Crop Management System program supplied by PD, Inc., Fairfield, Ca.

1984 COST OF PRODUCTION STUDY FOR ALFLAFA HAY

SOIL REQUIRMENTS - Deep, well-drained soils. Avoid hardpans and claypans or soils with a high or fluctuating water table. (Some success has been observed on marginal soils where alfalfa is planted on raised 60 inch beds).

PLANTING DATES - Fall planting in September to early October is preferred. Spring plantings between February and April will produce good stands; however, weed control can be more difficult and expensive.

HARVEST DATES - 6 - 7 cuttings per season. First cutting is usually in April. Cut at 1/10 bloom or when crown regrowth is 12 inches tall.

VARIETIES - Semi-dormant varieties have been the best producers in this region. Public and private varieties resistant to the spotted alfalfa aphid and tolerance to the pea aphid, leaf spot, downy mildew and phytophthora root rot are suggested. On heavy, poorly drained soils phytophthora root rot becomes very important.

SEEDING RATES - On good seedbeds 20 to 25 lbs/ac broadcast and ringrolled. 15 to 20 lbs/ac drilled. Inoculate seed before planting, or plant pelleted, inoculated seeds.

FERTILIZER - Starter fertilizer at planting time providing 10 to 20 lbs N, 30 to 35 lbs. P and 30 to 35 lbs. K/acre. Soil and tissue analysis can be used to determine fertilizer needs of established stands and soil tests can be used to determine preplant fertilizer needs.

IRRIGATION - One to two irrigations per cutting depending on soil type.

ROTATION - Usually in rotation with row crops. Three to four years alfalfa then 4 to 6 years of annual crops.

YIELDS - Six to nine tons per acre; average 7 tons/ac/yr for a four year stand life.

INSECT PROBLEMS - Alfalfa weevil (Feb.-Mar.), armyworm, alfalfa caterpillar, pea aphid, root knot nematodes. Spotted alfalfa aphid on nonresistant varieties.

DISEASE PROBLEMS - Phytophthora root rot, mildew, and leaf spot.

WEED PROBLEMS - Grasses and some broadleaf weeds. Common groundsel and fiddleneck are poisonous to livestock and should be controlled. 2,4-DB, Dow Selective for post-emergence broadleaf weeds. IPC, Kerb post-emergence for seedling stands and grassey weeds. IPC, CIPC, Kerb for established stands and grassey weeds. Sencor, Karmex, weed oil and Dow General for established stands, both broadleaf and grassey weeds. Karmex and Sencor may not control Groundsel or Fiddleneck. See your local PCA or UC Farm Advisor for current or other recommendations.

SAMPLE COST TO ESTABLISH ALFALFA (FIRST YEAR)

TYPE OF CROP.....= ALFALFA, TO EST	NUMBER OF ACRES.....= 300
YIELD PER ACRE....= 7 TONS	MARKET VALUE PER TONS..= 110
GROSS INCOME.....= 231,000.00	GROSS INCOME/ACRE.....= 770.00

EXPENSES

TYPE	PER ACRE	TOTAL	CHANGES
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CULTURAL FUEL COSTS			

Stubble Chop	0.57	171.00	-----
Disc 2x	2.20	660.00	-----
Plow	2.75	825.00	-----
Disc 1x	1.10	330.00	-----
Level Plane 2x	2.72	816.00	-----
Disc Herbicides 2x	2.20	660.00	-----
Shape Borders	2.20	660.00	-----
Harrow/Ringroll	0.75	225.00	-----
Float/Ringroll	0.75	225.00	-----
Plant/air	5.00	1,500.00	-----
Harrow/Ringroll	0.75	225.00	-----
Seed (25 lbs./ac)	59.00	17,700.00	-----
Fertilize/air	6.00	1,800.00	-----
	-----	-----	
TOTAL ***	85.99	25,797.00	-----
IRRIGATION			

Sprinkle-Up 3x	22.50	6,750.00	-----
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TOTAL ***	22.50	6,750.00	-----
CHEMICALS			

Balan	14.00	4,200.00	-----
Fert. 11-48-0 100#	23.33	6,999.00	-----
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TOTAL ***	37.33	11,199.00	-----
LABOR			

Cultural (\$5/hr)	11.70	3,510.00	-----
Irrigation (\$4/hr)	6.24	1,872.00	-----
Exp. Benefits (30%)	5.38	1,614.00	-----

GRAPH OF CROP EXPENSES



