

## 1984 COST OF PRODUCTION STUDY FOR ALFLAFA HAY

**SOIL REQUIREMENTS** - 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 non-resistant 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
-----	-----	-----	-----
<b>CULTURAL FUEL COSTS</b>			
-----			
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	-----
	-----	-----	-----
TOTAL ***	22.50	6,750.00	-----

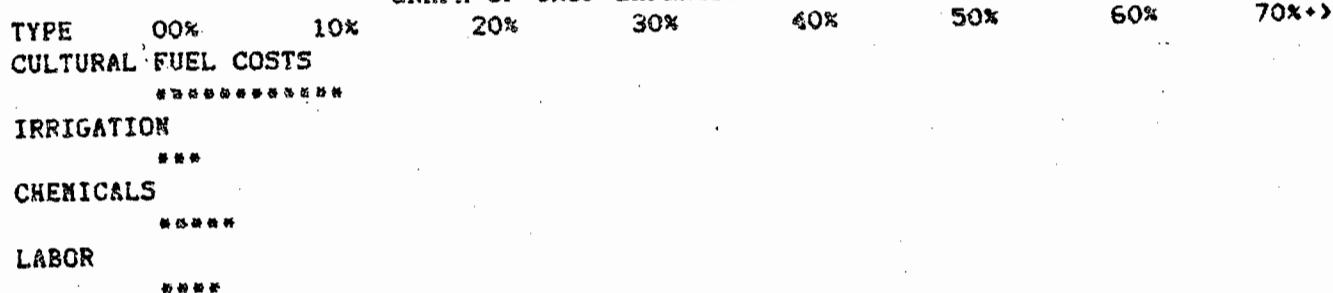
### CHEMICALS

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

### LABOR

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

### GRAPH OF CROP EXPENSES



SAMPLE COSTS TO PRODUCE ALFALFA (YEARS 2-5)

TYPE OF CROP.....=	ALFALFA, PROD	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
-----	-----	-----	-----
<b>CULTURAL FUEL COSTS</b>			
Stand Estb/5yr amo	28.52	8,556.00	-----
TOTAL ***	28.52	8,556.00	-----
<b>IRRIGATION</b>			
Irrigation 5x	60.00	18,000.00	-----
Ditch Maintenance	4.00	1,200.00	-----
TOTAL ***	64.00	19,200.00	-----
<b>CHEMICALS</b>			
Furadan/2pts/air	20.84	6,252.00	-----
Treflan 10G/2#/air	26.00	7,800.00	-----
Potash/ground	19.88	5,964.00	-----
Paraquat/1 qt/air	16.00	4,800.00	-----
Poast/1 qt/air	40.75	12,225.00	-----
TOTAL ***	123.47	37,041.00	-----
<b>HARVEST</b>			
Custom (#24/T)	168.00	50,400.00	-----
TOTAL ***	168.00	50,400.00	-----
<b>LABOR</b>			
Irrigation (\$4/hr)	20.00	6,000.00	-----
Shop Mechanic	10.00	3,000.00	-----
TOTAL ***	30.00	9,000.00	-----
<b>DEBT SERVICE</b>			
Interest on Loan	19.65	5,895.00	-----
Interest on Equip.	9.00	2,700.00	-----
TOTAL ***	28.65	8,595.00	-----

EXPENSES CONTINUED ALFALFA PRODUCTION

TYPE	PER ACRE	TOTAL	CHANGES
<b>CASH OVERHEAD</b>			
Share Rent (25%)	192.50	57,750.00	-----
Office/Mgmt. Exp.	15.00	4,500.00	-----
Repairs/Maint.	27.25	8,175.00	-----
Taxes on Equip.	2.57	771.00	-----
Emp. Benifits (30%)	9.00	2,700.00	-----
Mgmt. Sal/Benifits	35.00	10,500.00	-----
<b>TOTAL ***</b>	<b>281.32</b>	<b>84,396.00</b>	<b>-----</b>

TOTAL CASH EXPENSES \$ 723.96 \$ 217,188.00  
 NET INCOME @ 7 TONS\$ 46.04 \$ 13,812.00

**NON-CASH COSTS**

Interest on Bldgs.	10.67	3,201.00	-----
Bldg. Depreciation	4.44	1,332.00	-----
Equip Deprec.	18.75	5,625.00	-----
<b>TOTAL NON-CASH COSTS \$</b>	<b>33.86</b>	<b>\$ 10,158.00</b>	<b>-----</b>

GRAPH OF CROP EXPENSES

TYPE	00%	10%	20%	30%	40%	50%	60%	70%+>
CULTURAL FUEL COSTS								
****								
IRRIGATION								
*****								
CHEMICALS								
*****								
HARVEST								
*****								
LASOR								
****								
DEBT SERVICE								
****								
CASH OVERHEAD								
*****								
NON-CASH COSTS								
****								