

ESTABLISHING A STAND OF ALFALFA FOR HAY
IN FRESNO COUNTY

Cost Analysis Worksheet - 1985

Costs are based on field labor at \$6.00 per hour and equipment operator \$7.00 per hour total cost to the grower. Tractors are a rented 160 h.p. crawler and an owned medium wheel diesel, with cash costs per hour \$12.40, depreciation \$2.80 and interest \$2.10.

Annual investment costs and real estate taxes are charged to the hay production, so are not included in the stand development costs.

Alkaline soil will require the addition of sulfur or gypsum to improve water penetration. These costs are not included in this example.

	Sample Costs Per Acre	My Costs Per Acre
Cash Costs:		
Shred previous crop residue: .25 hr. labor and wheel tractor	\$ 4.85	
Disc 2x: .25 hr. labor and wheel tractor	4.85	
Chisel: .40 hr. rented crawler tractor and chisel	24.80	
Plane: .20 hr. labor and wheel tractor	3.88	
Border preparation: .50 hr. labor and wheel tractor	9.70	
Plane between borders: .20 hr. labor and wheel tractor	3.88	
Fertilize: 100 lb P ₂ O ₅	25.00	
Application: custom bulk spreading (200 lb/A)	4.20	
Pre-irrigate: power for 1 acre ft. water at \$25.00	25.00	
Labor: 1 hour	6.00	
Disc or springtooth for seedbed preparation .15 hour labor and wheel tractor	2.91	
Re-shape borders: .10 hr. labor and wheel tractor	1.94	
Weed control - custom applied	18.00	
Plant: seed, 20 lbs. at \$2.10	42.00	
plant by airplane	4.00	
Cover seed: .10 hr. labor and wheel tractor	1.94	
Repairs to equipment except tractor	6.00	
Office and business costs	9.45	
TOTAL CASH COSTS	198.40	
Depreciation:		
Wheel tractor 1.75 hrs. at \$3.00	4.90	
Equipment except tractor	10.00	
DEPRECIATION CHARGED TO STAND ESTABLISHMENT	14.90	
Interest on Investment at 14%:		
Wheel tractor: 1.75 hrs. at \$2.10	3.68	
Equipment except tractor	7.00	
INTEREST ON INVESTMENT CHARGED TO STAND ESTABLISHMENT	10.68	
TOTAL COST TO ESTABLISH ALFALFA STAND	\$223.98	

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ESTABLISHING A STAND OF ALFALFA IN FRESNO COUNTY

This worksheet was developed to show sample costs for establishing a good stand of alfalfa hay. It includes all costs involved from land preparation through seeding. Included also is the cost of fertilization for the first year's production. It does not include any other production figures.

In order to obtain high yields of good quality hay, certain factors should be considered before seeding. Some of these factors are outlined below.

Alfalfa gives maximum yields on deep loam soils. It can be grown on most soil types. Alfalfa does poorly on land that contains hardpan or an impervious layer closer to the surface than four feet. It is moderately tolerant to alkali and does poorly in high water table areas without subsurface drainage.

Ripping -- Soil compacted by equipment in growing previous crops, especially cotton, develops compacted layers which restrict root growth and increases the incidence of phytophthora root rot. Ripping is needed for good production on compacted soils. Generally 30" deep is adequate to break up soils compacted by equipment traffic. Ripper shanks normally should be 20" apart in sandy loam or sandy soils.

Land Grading -- Most alfalfa fields require a 0.2' slope per 100 feet of run for border irrigation. Newly leveled land should be pre-irrigated so that low and high area can be eliminated before planting. Water should not run in the checks over eight hours. Bed planting may be advisable to establish alfalfa in heavy clay and clay loam soils by sub-irrigation.

Fertilization -- Most soils in Fresno County require the addition of phosphorus for optimum alfalfa hay production. A three-year supply can be applied and lightly disced into the soil during seedbed preparation, or annual applications can be made. Some local soils also require additional sulfur for alfalfa production.

Time of Seeding -- October and February are usually the best months to seed alfalfa. Fall plantings usually produce a higher yield the first year. If weeds are a serious problem, irrigating to germinate weed seed, and a light discing along with a spring seeding may be beneficial. Pre-emergence herbicides should be used if weeds are anticipated, which is in most situations.

Method of Seeding -- Alfalfa should be uniformly covered (no deeper than 1/2"). After seeding, the field should be rolled or cultipaked to prevent moisture loss and provide protection against low temperatures. Drilled or broadcast seedings should be rolled or cultipaked. Seeding of small grain companion crops with alfalfa is not recommended unless required for protection from high winds in very sandy soils.

Rate of Seeding -- Twenty pounds of seed per acre is recommended for normal seeding on well-prepared seedbeds.

Varieties -- Non-dormant varieties make up the largest acreage of alfalfa hay in Fresno County. There are many new private and public varieties on the market today which look promising. Data concerning the dormancy classification of many of these varieties is available at the Farm and Home Advisors Office.

Weed Control and First Harvest -- Effective pre-emergence and post-emergence herbicides are available for use in alfalfa hay fields. Clipping for weed control or first harvest should not be done until the roots of the alfalfa plants reach a 14" depth in sandy or sandy loam soils.