AF-SI-92-1

ALFALFA
IMPERIAL
COUNTY
1991-1992

UNIVERSITY OF CALIFORNIA
COOPERATIVE EXTENSION

UC COOPERATIVE EXTENSION

Imperial

ALFALFA
PROJECTED PRODUCTION COSTS
1991-1992

Mechanical operations at custom rates. Hand labor at $5.75 per hour ($4.50 plus Social Security, unemployment insurance and fringe benefits).

Yield--8.0 tons per acre.

OPERATION	CUSTOM RATE	MATERIALS Type	MATERIALS Cost	HAND LABOR Hours	HAND LABOR Dollars	COSTS Per Acre
LAND PREPARATION						
Plow or Subsoil	24.75					24.75
Disc 2x	9.50					19.00
Fertilize	8.00	260# 11-52-0 .15/#	39.00			47.00
Build & Break borders	15.00					15.00
Flood		1/2 ac ft	5.75	1	5.75	11.50
Disc 2x	9.50					19.00
Landplane 2x	10.00					20.00
Border, dump	13.00					13.00
Float	8.25					8.25
TOTAL LAND PREPARATION COSTS						177.50
COST OF ESTABLISHMENT						
Weed Control	8.75	Herbicide	13.00			21.75
Planting	10.50	20# seed @ 1.45/lb	29.00			39.50
Irrigate 2x		1 ac/ft	11.50	2	11.50	23.00
Insect Control 1x	4.90	Insecticide	7.00			11.90
COST OF ESTABLISHMENT						96.15
TOTAL COST OF STAND ESTABLISHMENT						273.65
Annual Costs of Hay Production--3 Year Life						
Weed Control	4.90	Herbicide	24.00			28.90
Irrigate 16x		6.5 ac ft	74.75	9	51.75	126.50
Fertilize	6.00	90# P2O5 @ .12/lb	10.80			16.80
Insect Control 4x	4.90	Insecticide	46.00			65.60
TOTAL ANNUAL CULTURAL COSTS						237.80
Land Rent (net acres)						190.00
Amortization--		33% of total cost of stand establishment				90.30
Cash Overhead--		12% of annual costs, land rent and amortization				62.17
TOTAL PREHARVEST COSTS						580.28
HARVEST COSTS						
Swather 7x	7.50	7 times				52.50
Rake 9x	4.50	9 times				40.50
Bale	10.50/ton	8 tons				84.00
Haul & Stack	.25/bale	16 bales/ton				32.00
TOTAL HARVEST COSTS						209.00
TOTAL ALL COSTS						789.28

PROJECTED INCOME ABOVE COSTS (PER ACRE)

		price/ton 70	80	90	100	110	120	130	Breakeven $/ton
	7	-285	-215	-145	-75	-5	65	135	111
Tons	8	-229	-149	-69	11	91	171	251	99
per	9	-174	-84	6	96	186	276	366	89
acre	10	-118	-18	82	182	282	382	482	82
	11	-63	47	157	267	377	487	597	76

ALFALFA CULTURE

1991-1992

YEAR	ACRES	YIELD/ACRE (TONS)	VALUE/TON
1989	170,339	9.8	$100
1988	189,008	8.8	85
1987	186,627	8.7	79
1986	176,900	8	65
1985	156,200	9	85

SOIL PREPARATION: A uniform seed bed is a prerequisite to a good stand. High and low spots in the field cause uneven irrigation, resulting in poor stands. A well-drained field is also necessary to lessen the likelihood of salinity, scald, and root rot problems. Most growers will plow and others will subsoil for preplant soil preparation. Planting alfalfa on 40 inch beds is now common practice on heavy soils where drainage is a problem.

PLANTING RATES: One pound of seed per acre will provide 4 to 5 seeds per square foot. At 15 pounds per acre 60 to 75 seeds per square foot are sown. Growers use 15 to 30 pounds seed depending on condition of their field, cost of seed, method of planting and time of planting.

PLANTING DATES: Late September through November is the preferred time for planting. Later plantings often result in poor germination and heavy weed infestations. Spring plantings, if necessary, are suggested in February and March.

VARIETIES: Select public or commercial proprietary varieties which have resistance to the spotted alfalfa aphid, the blue alfalfa aphid, and superior yielding ability for the soil type on which you are planting.

FERTILIZATION: Approximately 100 pounds of phosphate is taken from the soil by each 7-8 tons of alfalfa. This must be replaced to maintain maximum hay production. A preliminary application of at least 100-150 pounds of phosphate per acre is recommended prior to planting. On soil low in nitrogen, 20-30 pounds of nitrogen stimulates seedling growth. A deficiency in nitrogen may occur on virgin soils recently brought into production. Additional annual applications of 100 pounds of phosphate are recommended.

IRRIGATION: One to 3 irrigations per cutting are necessary depending on the type of soil and time of year.

PEST CONTROL: The spotted alfalfa aphid can cause damage on nonresistant alfalfa. Control is sometimes necessary for the Egyptian alfalfa weevil and for the pea aphid in February and March. The blue aphid may require additional insecticide costs on alfalfa hay. Alfalfa caterpillar and beet armyworm usually require control in mid to late summer. Occasionally, cutworm outbreaks occur in fall and spring months. Root rots caused by Rhizoctonia and Phytophthora spp. can be severe problems. Consult pest control farm advisors for most efficient procedures. Alfalfa planted on beds are more susceptible to cutworm damage than flat planted alfalfa.

HARVESTING: Alfalfa is normally baled from March until October. During winter months both pasturing and green chopping are practiced. Both pasturing and green chop may return from $45 to $65 per acre for the winter months. In 1989, 134,500 acres were pastured.

GUIDELINES TO PRODUCTION COSTS AND PRACTICES
Imperial County Crops, Circular 104F
1991-1992

CUSTOM RATE CHARGES

	PRICE/ACRE
HEAVY TRACTOR WORK	
Plow	$ 24.75
Subsoil 2nd Gear	29.25
Disc, Regular	9.50
Disc, Stubble	18.25
Float	8.25
Triplane	8.75
List, Regular	11.50
Landplane	10.00
Chisel	20.75
PLANTING AND CULTIVATING	
Plant and Shape Sugar Beet 40" Beds	15.50
Precision Plant 40" Beds	14.50
Plant	13.75
Cultivate 4-Row 30", 40" Beds	10.75
Spike and Furrow Out (2 row)	10.50
Lilliston	9.50
Furrow out alone	8.00
INCORPORATING, BORDER AND BED WORK	
Power Incorporate	20.25
Scraper Borders	12.75
Border, Cross checks and Break Borders	15.00
Roll Beds	5.00
FERTILIZER APPLICATION	
Broadcast Fertilizer	6.00
Inject Fertilizer (Flat)	10.00
Fertilize and Furrow Out 30", 40" Beds	10.50
IRRIGATION	
Custom Sprinkle	$130.00-140.00
HARVEST	
Swather	7.50
Rake	4.00
MISCELLANEOUS	
Motor Grader/Hour	42.75
Chop Stalks, Etc.	11.00
Cultipacker	6.00
Power Incorporate Herbicides	20.25
Ground Spray Pesticides (4 Row)	7.50
Aerial Spray 5 Gal. (Insecticide)	4.75
Aerial Spray 10 Gal. (Fungicides)	5.00