
U.C. COOPERATIVE EXTENSION

SAMPLE COST TO ESTABLISH AND PRODUCE

RYEGRASS



PASTURE CULTURE

IMPERIAL COUNTY – 2000

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For an explanation of calculations used for the study refer to the attached General Assumptions or call the author, Keith S. Mayberry , at the Imperial County Cooperative Extension office, (619)352-9474 or e-mail at ksmayberry@ucdavis.edu.

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FOREWORD

We wish to thank growers, pest control advisors, seed companies, transplant producers, contract harvesters, fertilizer dealers, and equipment companies for providing us with the data necessary to compile this circular. Without them we could not have achieved the accuracy needed for evaluating the dynamic and important vegetable industry in Imperial County.

The information presented herein allows one to get a "ballpark" idea of field crops production costs and practices in the Imperial County. They do not reflect the exact values or practices of any grower or shipper, but are rather an amalgamation of countywide prevailing costs and practices. Exact costs incurred by individual growers depend upon many variables such as weather, land rent, seed, choice of agrichemicals, location, etc. No exact comparison with individual grower practice is possible or intended. The budgets do reflect, however, the prevailing industry trends within the region.

Overhead usually includes secretarial and office expenses, supplies, donations, utilities, transportation, accountants, insurance, safety training, permits, etc. The amount of overhead charged depends upon the crop and the size of the labor crew, payroll, supplies, and supervision needed for culture.

Since all of the inputs used to figure production costs are impossible to document in a single page, we have included extra expense in man-hours or overhead to account for such items as pipe setting, motor grader, water truck, shovel work, etc. Whenever possible we have given the costs of these operations per hour.

Not included in these production costs are expenses resulting from loans, supervision, or return on investments. If these items were taken into account, the budget may need to be increased by 7-15%.

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**2000-2001 FIELD CROPS PREVAILING RATES
IMPERIAL COUNTY**

**HEAVY TRACTOR WORK & LAND
PREPARATION**

<u>OPERATION</u>	<u>\$/ACRE</u>
Plow.....	27.75
Subsoil, 2 nd gear.....	38.75
Subsoil, 3 rd gear.....	32.75
Landplane.....	12.00
Triplane.....	11.00
Chisel ∇ 15".....	24.75
Wil-Rich chisel.....	14.75
Big Ox.....	21.25
Slip plow.....	39.00
Pull/disc borders.....	6.00
Make cross checks (taps).....	6.00
Break border.....	5.75
Disc, stubble.....	21.75
Disc, regular.....	11.50
List 40" beds.....	13.50
Float.....	10.00
Disc, borders.....	11.25
Laser (acre).....	34.00-38.00
Dump (scraper) borders.....	14.00

PREVAILING RATES BY THE HOUR

	<u>\$/HR</u>
Motor grader.....	50.00
Backhoe.....	42.50
Water truck.....	39.00
Wheel tractor.....	32.00
Scraper.....	27.00
Versatile.....	53.00
D-6.....	46.50
D-8.....	65.00
Burn ditches.....	28.00
Buck ends of field.....	30.00
Pipe setting (2 men).....	33.00
Laser.....	70.00
Work ends.....	40.00

**PLANTING, CULTIVATING & LIGHT
TRACTOR WORK**

Power mulch dry.....	23.00
Power mulch with herbicide.....	27.00
Shape 40" beds.....	9.50
Precision plant 40" beds.....	17.50
Plant and shape sugar beet beds.....	14.50
Mulch plant wheat.....	11.25

Plant alfalfa (corrugated)..... 16.00

**PLANTING, CULTIVATING & LIGHT
TRACTOR WORK (continued)**

<u>OPERATION</u>	<u>\$/ACRE</u>
Plant bermudagrass (flat).....	12.00
Plant sudangrass.....	10.50
Cultivate 4-row 40" beds.....	13.00
Spike 40" beds.....	9.75
Spike and furrow 4-rows 40-42" beds.....	10.25
Furrow out 40-42" beds.....	9.75
Lilliston 40" beds.....	10.75
Lilliston 40" beds with/herbicides.....	14.50
Inject fertilizer and furrow out 40" beds.....	13.50
Fertilize dry and furrow out 40" beds.....	13.50
Broadcast dry fertilizer >300lb/a.....	7.00
Broadcast dry fertilizer <300lb/a.....	6.00
Ground spray 4-row.....	10.00
Ground spray 8-row.....	9.00
Layby herbicide.....	22.00
Drill with cultipacker.....	15.00
Chop cotton stalks.....	12.00

HARVEST COSTS

	<u>BY UNIT</u>
Combine alfalfa seed.....	40.00/acre
Windrow alfalfa seed.....	15.00/acre
Rake bermudagrass (heavy).....	7.00/acre
Rake bermudagrass (light).....	4.00/acre
Swath bermudagrass (heavy).....	15.00/acre
Swath bermudagrass (light).....	10.00/acre
Swath sudangrass.....	10.00/acre
Rake sudangrass.....	5.00/acre
Crimp sudangrass.....	8.00/acre
Swath alfalfa.....	7.75/acre
Rake alfalfa.....	3.75/acre
Bale (all types of hay).....	0.63/bale
Haul & stack hay.....	0.24/bale
Dig sugar beets.....	2.50/clean ton
Haul sugar beets.....	2.45/clean ton
Combine wheat.....	15/ton + 0.55/cwt over 1 ton
Haul wheat.....	5/ton

IRRIGATION

Sprinkler irrigate flat crops.....	\$125-160.00/acre
Flood irrigate flat crops.....	variable
Irrigate bed-planted crops.....	variable
1ac-ft water.....	14.56

IMPERIAL COUNTY RYEGRASS PASTURE CULTURE 2000-2001

Annual acreage, yield, and value of ryegrass pasture in
Imperial County, CA for five consecutive years

<u>Year</u>	<u>Acres</u>	<u>Value/Acre</u>
1999	NA**	NA**
1998	NA**	NA**
1997	3,680	\$296*
1996	3,469	\$296
1995	4,817	\$189

* Based upon pasturing 5 times; (Source: I.C. Agricultural Commissioner's Reports).

**NA= Not available. No longer listed separately.

SOIL PREPARATION A uniform seedbed is prerequisite to a good stand. High or low spots in the field causes uneven irrigation, resulting in poor stands.

PLANTING RATES, DATES & VARIETIES Plant 20 to 40 pounds of annual ryegrass seed per acre. Heavier rates may be needed on saline soils. Ryegrass may be planted from mid-September through November. Early plantings in September are excellent if weather has cooled down. "Common" is normally a good yielding variety in the Imperial Valley. However, most annual ryegrass varieties can be grown if desired.

FERTILIZERS Ryegrass needs approximately 200 pounds of total nitrogen for optimum growth. Fifty to 100 pounds are applied preplant as ammonia, however, nitrogen carryover from previous crops will reduce early season requirements. Fifty pounds of nitrogen, as ammonium nitrate or ammonia, should be applied after pasturing or as petiole analysis dictates.

Excess nitrogen can cause nitrate poisoning in livestock, and is most likely to occur in rapidly growing plants, under cloudy, and cold weather. Regular tissue analysis can keep growers aware of nitrate levels, thus avoiding nitrate poisoning.

Phosphate residues from previous crops are generally sufficient for proper ryegrass production.

IRRIGATION Ryegrass usually thrives under moist soil conditions. Quick applications of irrigation water are sufficient unless leaching of salts is intended. Ryegrass needs about eleven irrigations during the growing period (September through April).

WEED CONTROL Weeds do not generally cause serious problems in ryegrass pasture if it is planted at the appropriate time of the year and the crop emerges and grows vigorously. Very few herbicides are registered for this crop. Consult your pest control advisor or Weed Science Farm Advisor for current recommendations.

PASTURING Approximately 75 days are required under good conditions from planting to first pasturing of ryegrass. Fields are normally pastured on a 28 to 40 day cycle. Four fields may be used to provide a continuous feed cycle where cattle stay on a field for 7-10 days. Stocking rate will range from 3 to 5 head per actual acre planted based upon total gross acres.

IMPERIAL COUNTY ANNUAL RYEGRASS PASTURE PRODUCTION COSTS 2000-2001

Mechanical operations at prevailing rates. Labor at \$7.75 /hr. (\$5.75 plus Social Security, unemployment, and fringe benefits).

OPERATION	Prevailing Rate	MATERIALS		HAND LABOR		COST Per Acre
		Type/Amount	Cost	Hours	Dollars	
<i>LAND PREPARATION</i>						
Disc 2x	11.50					23.00
Inject fertilizer	10.00	100 lb NH3 @ .165/lb	16.50			26.50
Disc borders	11.25					11.25
Float 2x	10.00					20.00
TOTAL LAND PREPARATION						80.75
<i>GROWING PERIOD</i>						
Plant	8.50	40 lb seed @0.35/lb	14.00			22.50
Irrigate 11x		3.5 ac-ft	50.96	4	31.00	81.96
Fertilize (water run)		250 lb NH3 @ 0.165/lb	41.25			41.25
Work ends (minimal)	2.00					2.00
TOTAL GROWING PERIOD						147.71
GROWING PERIOD & LAND PREPARATION COSTS						228.46
Land rent (net acres)						100.00
Cash overhead--	12 % of growing period, land preparation & land rent					39.42
TOTAL ALL COSTS						367.88