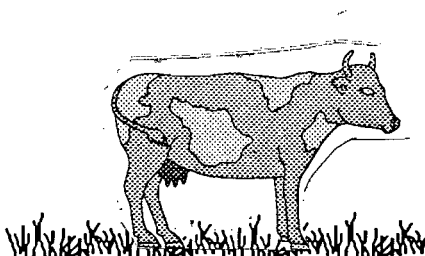


PA-SI-92

Annual Ryegrass Pasture Projected Production Costs

Imperial County 1991-1992



UNIVERSITY OF
CALIFORNIA
COOPERATIVE EXTENSION

UC COOPERATIVE EXTENSION

ANNUAL RYEGRASS PASTURE
PROJECTED PRODUCTION COSTS
1991-1992

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mechanical operations at custom rates. Labor at \$5.75 per hour (\$4.50 plus Social Security, employment insurance and fringe benefits).

| OPERATION | CUSTOM RATE | MATERIALS | | HAND LABOR | | COSTS Per Acre | |
|--|-------------|--|-------|------------|---------|----------------|-------|
| | | Type | Cost | Hours | Dollars | | |
| LAND PREPARATION | | | | | | | |
| Disc 2x | 9.50 | | | | | 19.00 | |
| Fertilize | 8.50 | 100 # NH3 @ .15/lb | 15.00 | | | 23.50 | |
| Border | 8.50 | | | | | 8.50 | |
| Float 2x | 8.25 | | | | | 16.50 | |
| TOTAL LAND PREPARATION | | | | | | 67.50 | |
| GROWING PERIOD | | | | | | | |
| Plant | 8.50 | 40# seed @ .20/lb | 8.00 | | | 16.50 | |
| Irrigate 1lx | | 3.5 ac/ft | 40.25 | 4 | 23.00 | 63.25 | |
| Fertilize (water run) | | 250# NH3 @ .15/lb | 37.50 | | | 37.50 | |
| TOTAL GROWING PERIOD | | | | | | 117.25 | |
| GROWING PERIOD & LAND PREPARATION COSTS | | | | | | 184.75 | |
| Land Rent (net acres) | | | | | | 100.00 | |
| Overhead-- | | 12% of growing, land preparation & land rent | | | | | 34.17 |
| TOTAL COSTS | | | | | | 318.92 | |

COST PER CWT OF GAIN

Calculations below show the cost per cwt. of gain at various stocking rates and rates of gain, assuming a grazing period of 150 days.

| | | Stocking Rate (steers per acre) | | | | | | cwt. gain for 150 days | |
|---------|------|-----------------------------------|-----|----|-----|----|-----|------------------------------|------|
| | | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | | |
| | | ----- | | | | | | | |
| | 1.00 | 106 | 85 | 71 | 61 | 53 | 47 | 43 | 1.5 |
| | 1.10 | 97 | 77 | 64 | 55 | 48 | 43 | 39 | 1.65 |
| | 1.20 | 89 | 71 | 59 | 51 | 44 | 39 | 35 | 1.8 |
| | 1.30 | 82 | 65 | 55 | 47 | 41 | 36 | 33 | 1.95 |
| Average | 1.40 | 76 | 61 | 51 | 43 | 38 | 34 | 30 | 2.1 |
| daily | 1.50 | 71 | 57 | 47 | 40 | 35 | 31 | 28 | 2.25 |
| gain | 1.60 | 66 | 53 | 44 | 38 | 33 | 30 | 27 | 2.4 |
| | 1.70 | 63 | 50 | 42 | 36 | 31 | 28 | 25 | 2.55 |
| | 1.80 | 59 | 47 | 39 | 34 | 30 | 26 | 24 | 2.7 |
| | 1.90 | 56 | 45 | 37 | 32 | 28 | 25 | 22 | 2.85 |
| | 2.00 | 53 | 43 | 35 | 30 | 27 | 24 | 21 | 3 |

RYEGRASS PASTURE CULTURE

1991-1992

| <u>YEAR</u> | <u>ACRES</u> | <u>VALUE/UNIT^{A/}</u> |
|-------------|--------------|--------------------------------|
| 1989 | 8,205 | \$175 |
| 1988 | 7,369 | 225 |
| 1987 | 5,727 | 200 |
| 1986 | 3,200 | 200 |
| 1985 | 3,300 | 200 |

A/ Pastured five times

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

PLANTING RATES, DATES & VARIETIES: Plant from 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. When in doubt, consult you local farm advisor.

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.

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).

PEST CONTROL: Weed control is not normally necessary in ryegrass pasture; 2,4-D gives excellent control of broadleaf plants if weed control measures are needed.

PASTURING: It takes about 75 days under good conditions from planting to first pasturing of ryegrass.

Ryegrass is normally pastured on a 28 to 40 day cycle. Four fields are pastured on a 7 to 10 day schedule. Stocking rate on the overall acreage will range from 3 to 5 head per actual acre planted.

If only 1/4 of the overall acreage is pastured at one time, the stocking rate for that area would be 4 x 3-5 cattle per acre or 12-20 cattle per acre.

GUIDELINES TO PRODUCTION COSTS AND PRACTICES

Imperial County Crops, Circular 104F

1991-1992

CUSTOM RATE CHARGES

HEAVY TRACTOR WORK

PRICE/ACRE

| | |
|------------------|----------|
| 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 |