

# THE Lariat



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LIVESTOCK INFORMATION  
Wm. B. Hight, Farm Advisors

FEBRUARY 1978

Dear Rancher:

Many of you are still interested in irrigated pasture. All of you are well aware of the rising costs associated with farming and ranching practices. These increased costs make it mandatory that you obtain high levels of production just to meet cash costs.

Last year I ran a trial with Curly Thurber and Ortho Chemical Co. on a piece of 20-25 year old irrigated pasture. I think you will find the results interesting and in some instances I believe some of you can profit from a similar management scheme.

Trial on following pages.

Sincerely,

*Bill*

Bill Hight  
Acting County Director  
and Farm Advisor

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# IRRIGATED PASTURE MANAGEMENT TRIAL (PROGRESS REPORT)

Prepared by Bill Hight, Farm Advisor, Madera County

I. T. "Curly" Thurber Ranch, Chowchilla, CA

Effective date: February 15, 1977 - Present (November 9, 1977)

Cooperators: I. T. "Curly" Thurber  
Chevron Chemical Company  
University of California, Cooperative Extension Service,  
Madera County

## Purpose of trial:

Determine maximum amount of beef per acre that can be produced on irrigated perennial pasture forages under conditions of optimum management.

## THE PASTURE AND ITS MANAGEMENT

Site: The field selected for the trial was 36 acres of a 25 year old stand of Alta Fescue, Dallis Grass and Ladino Clover with some Bermuda Grass. Sour Dock is the main weed infestation in the field and not much of it. A point step check of the pasture on March 3, 1977 revealed mostly Alta Fescue and Ladino clover at a 50-50 ratio with less than 10% population of other pasture species, annual grasses and bermuda. By mid-season the Dallis Grass became quite evident in the field as did an increase in the bermuda grass. At the present time, November 77, the predominating species is Dallis Grass, Ladino clover and Bermuda grass.

The field is level and well drained. Soil types in the field are predominantly Madera fine sandy loam with about 10 acres of Fresno, El Pico and Lewis series located in the SW corner.

## Fertilizer Program

400#/acre	27-12-0	applied 2-10-77	
200#/acre	27-12-0	applied 5-16-77	Applied by ground rig
200#/acre	27-12-0	applied 6-27-77	
200#/acre	27-12-0	applied 8-15-77	

## Irrigation Schedule

1ST IRRIGATION was applied right after application of fertilizer in February. Irrigations were so timed to prevent wilting of forage species throughout the season. This meant an 8-day interval was pretty well maintained throughout the summer season. A 10 to 14 day schedule on the early and late end of the season. This resulted in about 6 acre feet of water application per acre.

## Special Management Practices

A spike tooth harrow was run over the pastures in February just prior to stocking to break up the accumulated cattle droppings. The pastures did not require clipping during the entire season. The stocking rate was maintained such that fairly even plant growth was maintained on the field. The field was strip fenced with an electric fence so as to provide 3 fields in which to rotate the cattle. This system was maintained until August and at that time the strip fences were removed allowing access to the entire field.



### Cattle Management

Cattle were identified by ear tags and individually weighed into and out of the trial. Since weigh in and weigh out conditions were quite similar no pencil shrink was applied to any of the weighing conditions. Cattle used were steers of good quality with crossbreds predominating. Cattle size and performance will be noted on the tables that follow in this report.

Standard ranch practices were used in treating sick cattle. All ingoing cattle were wormed and administered Ralgro. Cattle were sprayed for flies several times during the trial. A few head were treated for pneumonia like symptoms, one head died and four head were unaccounted for at final weigh dates.

### Supplemental Feed

Only a very little supplemental feed was used in the trial and is accounted for in the cost data sheet in the following tables. About 2400 pounds of liquid supplement containing a low phenothiazine dosage was in the field during the first three weeks of the trial. This was not replaced when used up.

During the last 19 days in September and October the cattle received 6# per head per day of a low quality alfalfa hay-barley straw mix with 1# of liquid supplement sprayed over it. The amount of calculated gain obtained from this supplemental feeding was deducted from the pasture gains so the gains reflected in the pasture gain per acre are just that.

The tables that follow outline the results of the trial. A word or two on these tables is in order at this point.

- TABLE 1. Shows the purchase and sales data on the cattle. It not only shows how the pastures were stocked and when but it shows the weight of the cattle in and out. In addition, it vividly demonstrates the major weakness of running a stocker operation on irrigated pasture. That is, historically you buy high and sell low. The purchase and sale prices on these cattle were set by an order buyer at the time they were weighed in and out of the field.
- TABLE 2. Shows the carrying capacity of the field throughout the trial period.
- TABLE 3. Shows the average daily gain of the cattle during various periods of the season and the total cumulative gain from the field.
- TABLE 4. Is the bottom line. The cost data (cash) for the pasture broken down to a per acre basis and the income above cash costs on the particular stocker operation.

TABLE 1. CATTLE PURCHASE & SALES

<u>Date</u>	<u>No. Hd.</u>	<u>Avg. Wt.</u>	<u>Price/Lb.</u>		<u>\$ Cost</u>	<u>\$ Income</u>
			<u>Purchase</u>	<u>Sales</u>		
3/ 9/77	81	396	\$ .44	\$	14,113.44	
3/29/77	26	527	.44		6,028.88	
5/ 3/77	50	538	.44		11,836.00	
6/28/77	7	572.3		.40		1,602.44
7/ 5/77	24	691.5		.40		6,638.40
7/ 5/77	16	706.6		.40		4,518.40
7/ 5/77	14	686.8		.40		3,846.08
8/18/77	91	638.2		.40		23,811.24
8/26/77	109	549	.42		25,133.22	
10/17/77	109	612.5		.42		28,040.25
no date	4	unaccounted for				860.00
TOTAL					\$57,111.54	\$69,316.81
NET OVER PURCHASE						\$12,205.27
PER ACRE						\$ 339.04

\* Note: 4 head unaccounted for at final weigh dates.  
Sold them out at average purchase value.

TABLE 2. CARRYING CAPACITY OF THE 36 ACRES

<u>DATES</u>	<u>TOTAL HEAD</u>	<u>HEAD PER ACRE</u>
3/ 9 - 3/29	77	2.14
3/29 - 5/ 3	102	2.83
5/ 3 - 7/ 5	148	4.11
7/ 5 - 8/18	91	2.53
8/18 - 8/26	0	
8/26 - 10/17	109	3.03

TABLE 3. AVERAGE DAILY GAIN OF CATTLE AND TOTAL GAINS  
FROM THE 36 ACRES FOR THE PERIOD 3/9 - 10/17

	<u>1st period</u>		<u>2nd period</u>		<u>Total Gain</u>
<u>Group 1</u>	<u>3/9/77 - 7/5/77</u>		<u>7/5/77 - 8/18/77</u>		
No. Hd.	77	25 out	50		
# gain	15,950	5,490	3,135		19,085
No. days	118	118	44		
A.D.G.	1.75	1.86	1.43		
<u>Group 2</u>	<u>3/29/77-7/5/77</u>		<u>7/5/77-8/18/77</u>		
No. Hd.	25	16 out	9		
# gain	3,470	2,345	640		4,110
No. days	98	98	44		
A.D.G.	1.42	1.50	1.62		
<u>Group 3</u>	<u>5/3/77 - 7/5/77</u>		<u>7/5/77-8/18/77</u>		
No. Hd.	46	14 out	32		
# gain	3,670	1,280	1,985		5,655
No. days	63	63	44		
A.D.G.	1.27	1.45	1.41		
<u>Group 4</u>	<u>2 hd eartagged, weighed in 7/5/77-out 8/18/77</u>				
No. Hd.			2		
# gain			105		105
No. days			44		
A.D.G.			1.19		
<u>Group 5</u>	<u>7 steers unaccounted @ 7/5 and 8/18 weighouts</u>				
	<u>escaped 6/25</u>				
	3 head from Group 1 - 108 days X 1.75 # gain or 567# gain				567
	4 head from Group 3 - 53 days X 1.27 # gain or 269# gain				269
<u>Group 6</u>	<u>8/26/77 - 9/28/77</u>				
No. Hd.	109				
# gain	4,150				4,150
No. days	33				
A.D.G.	1.15				
<u>Group 7</u>	<u>(Supplemental feed 6#/hd/day of 49% TDN feed) 9/28/10/17</u>				
No. head	109	109			
# gain	2,761	pasture gain 1760# from NE Tables			1,760#
# days	19	19			
A.D.G.	1.33#	.85#			
Total pasture gain					35,701
Gain/acre @ 36 acres					992



TABLE 4. CASH COSTS & RECAP

	Per Acre Cost
IRRIGATION WATER	
POWER COSTS PER ACRE (ABOUT 6' / ACRE)	\$ 81.00
FERTILIZER	
1000# 27-12-0 @ \$170/ton	85.00
Application cost \$1.50/acre 4X	6.00
INTEREST	
Cattle @ 7½% = \$1,280.66	35.57
Fertilizer 7½%/6 months	3.18
TAXES	15.00
NET COSTS	
Worming, fly spray, implants = \$545	15.00
LABOR	
Cattle and irrigating	8.75
SUPPLEMENTAL FEED	
2400# liquid supplement \$144/Ton	4.00
Hay plus liquid supplement 6¢/hd/day @ \$50/ton	
109 hd for 19 days = \$311	8.63
TOTAL CASH COST/ACRE	\$ 262.13
RECAP	
Income over purchase on cattle/acre	\$ 339.04
Cash costs of pasture operation/acre	<u>262.13</u>
BALANCE	\$ 76.91