

## URRUTIA TEST - MADERA COUNTY

Walter Emrick - Farm Advisor

This test was a continuation of the grazing trial carried out the two previous seasons at the same location. It was located approximately 5 miles west of Friant Dam in brush-free open range on soil mapped as Vista fine sandy loam. Forage was composed of native grass, considerable filaree and native clovers. The 40-acre field fertilized the previous year was left to measure the carryover effects. The other 40-acre field fertilized in 1955 but not in 1956 was refertilized with 380 pounds of ammonium sulfate. An adjacent 120-acre field not previously in the test was used as control.

Fertilizers were applied by Ezy-Flo ground rig in October of 1956. Rains came late and stocking was not attempted until February 15. There were good spring rains and green feed persisted into June, with the animals being weighed out of the fields on June 14. As in the past the fields were stocked with yearling Hereford steers; three acres per animal on the control field and one acre per animal on the currently fertilized field. One and a third acres per animal was allowed on the carryover field. This rate was perhaps a little excessive in the early part of the season, with the result that animals on this field gained at a slightly lesser rate than did animals on the control or on the field fertilized for the 1957 season.

Beef produced per acre was 66 pounds without fertilization and increased up to 203 pounds by fertilization. The carryover effect in terms of beef produced was about 50 percent of the increased beef production resulting from currently applied fertilizer.

The results of this test have been evaluated, using beef at 19 cents a pound. On this basis the grazing income per acre was increased from \$12.62 up to \$26.72 after deducting cost of fertilizer, or a profit of \$14.20 per acre. The fertilizer cost of the extra beef produced per acre in the field fertilized in 1957 was 8.7 cents per pound.

The carryover effects of the ammonium sulfate applied in this test are important in evaluating the results. On the following page is shown a summary of the three years' beef production in this test, together with the extra beef the year of fertilization and the carryover effects of the first year's application. In 1955, 163 extra pounds of beef were produced on the fertilized field. The following year 70.7 pounds additional increase was measured. The results of the 1956 fertilization are similar; 176.5 pounds were produced the first year, with an additional 68.6 pounds the carryover year. When the carryover effects are figured in, fertilizer cost of the extra beef produced per acre is reduced from about 7 cents per pound on a one-year basis to about 5 cents per pound when the results are evaluated for a two-year period.

Season Ferti- lized	Fertilizer Cost/A.	Beef/A. on Check	EXTRA BEEF/ACRE FROM FERTILIZATION			Fert. Cost/lb. Extra Beef/A.	
			1st Year Lbs.	2nd Yr. Carryover Lbs.	Total 2 Years Lbs.	1-Yr. Basis	2-Yr. Basis
1955	\$11.71	44.3	163.0	70.7	233.7	7.2¢	5.0¢
1956	12.00	79.4	176.5	68.6	245.1	6.8	4.9
1957	11.94	65.9	137.6	--	--	8.7	--

URRUTIA TEST - MADERA COUNTY

February 15 - June 14, 1957 - 118 Days

I. TREATMENT

Nutrients	None	(N80 in 1956) Carryover)	N80
Materials/Acre	--	--	380 Am. Sulfate
Field Size	120 Ac.	40 Ac.	40 Ac.

II. STOCKING AND GRAZING

Acres/animal Feb. 15 - June 14	3.0	1.33	1.0
Average in weight/animal	351.7	360.0	355.2
Grazing days/acre	39.3	88.5	118.0
Increase from fertilization	--	49.2	78.7

III. BEEF PRODUCTION

Average Daily Gains (in pounds)	1.67 <sup>#</sup>	1.52 <sup>#</sup>	1.73 <sup>#</sup>
Average gain/animal	197.8	179.6	203.5
Beef produced/Acre	65.9	134.5	203.5
Gain from fertilization	--	68.6	137.6

IV. EVALUATION

Gross grazing income/Acre beef @19¢	\$12.52	\$25.56	\$38.66
Less fertilizer cost			
Material	--	--	11.20
Application	--	--	.74
Net grazing income/Acre	12.52	\$25.56	\$26.72
Net profit from fertilization	--	\$13.04	\$14.20

V. FERTILIZER COST

Per pound extra beef/Acre	--	--	8.67¢ (for 1957)
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Item 5

## A PROFITABLE CLOVER PASTURE ON MARGINAL GRAIN LAND

Many dryland grain farmers in recent years have suffered from a "cost-price squeeze." Grain yields have fallen sharply, production costs have risen and low income per acre has resulted. The farm advisor has worked out a program by which this marginal grain land can be converted in one year to a very profitable clover pasture. This, in an average year, will produce at least 200 pounds of beef per acre.

The farm advisor's program for accomplishing this is as follows:

### First Year

1. In fall of year apply 300 pounds of single superphosphate per acre on grain stubble. Don't disk.
2. Broadcast a mixture of 10 pounds of annual clovers per acre.
3. Cover seed by running over field twice with a culti-packer.
4. Cattle can be turned into the field any time after the clover seed is mature.

### Second Year

1. Before the first rain, apply 200 pounds of ammonium sulfate per acre.
2. Broadcast mixture of  
3 pounds annual Ryegrass  
2 pounds Blando Brome  
per acre.
3. Cover seed by running over field twice with a culti-packer.
4. Don't overgraze.

### Third Year

1. Apply 200 pounds of ammonium sulfate and 300 pounds of single superphosphate per acre.
2. Graze moderately.



A low yielding dryland grain field, on Jack McCoon's ranch on Avenue 15, was converted in one year to a highly profitable dryland clover pasture by a method developed by the farm advisor's research program.



A Madera County farm advisor and a class of Fresno State College range management students standing "knee deep in clover" in a 100 acre field that was planted in the fall of 1957.

File: Madera Co.

University of California  
Agricultural Extension Service  
Madera County

FERTILIZED ANNUAL CLOVER DRYLAND PASTURE TRIAL ON CONVERTED GRAIN LAND

Jack McCoon Ranch  
Madera County

In on February 10, 1961  
Out on April 10, 1961  
On pasture 58 days

EAR TAGS		2/10	4/10	GAIN	EAR TAGS		2/10	4/10	GAIN
R.E.	L.E.	WEIGHT	WEIGHT	LBS.	R.E.	L.E.	WEIGHT	WEIGHT	LBS.
		LBS.	LBS.				LBS.	LBS.	
1	2	400	580	180	41	42	495	705	210
3	4	420	605	185	43	44	435	590	155
5	6	390	550	160	45	46	390	565	175
7	8	360	575	215	47	48	415	620	205
9	10	465	655	190	49	50	435	610	175
11	12	495	680	185	51	52	415	615	200
13	14	410	575	165	53	54	430	615	185
15	16	450	610	160	55	56	380	560	180
17	18	385	560	175	57	58	395	575	180
19	20	410	580	170	59	60	410	605	195
21	22	395	570	175	61	62	430	610	180
23	24	465	665	200	63	64	410	610	200
25	26	360	590	230	65	66	420	610	190
27	28	380	590	210	67	68	410	590	180
29	30	395	585	190	69	70	420	590	170
31	32	430	660	230	71	72	425	615	190
33	34	455	635	180	73	74	415	610	195
35	36	380	585	205	75	76	435	525	90
8807	39	400	570	170	77	78	470	650	180
37	40	400	585	185	79	80	395	570	175

Field Size 39.5 Acres  
Total Grazing 58 Days  
Total Animals 40 Head  
Average Acres 0.988 Per Head

Average In Weight 416.9 Pounds  
Average Out Weight 601.1 Pounds  
Gain Per Head 184.2 Pounds  
Average Daily Gain 3.18 Pounds  
Heifer Prod. Per Acre 186.4 Pounds



FERTILIZED ANNUAL CLOVER DRYLAND PASTURE TRIAL ON CONVERTED GRAIN LAND  
Jack McCoon Ranch - Madera County

In on February 6, 1962  
Out on April 26, 1962  
On pasture 79 days

In on February 28, 1962  
Out on April 26, 1962  
On pasture 57 days

EAR TAG L.E.	IN WEIGHT	OUT WEIGHT		EAR TAG L.E.	IN WEIGHT	OUT WEIGHT	
445	320	460	140	75	285	420	135
409	325	420	95	74	405	570	165
126	355	500	145	532	330	445	115
127	310	460	150	73	315	440	125
128	330	445	115	72	390	525	135
501	325	470	145	385	355	475	120
495	285	400	115	483	315	430	115
490	310	450	140	71	305	430	125
479	295	380	85	70	310	405	95
130	325	435	110	69	385	535	150
131	280	385	105	68	300	360	60
132	305	475	170	67	305	445	140
133	250	350	100	66	405	540	135
134	350	485	135	65	380	515	135
477	330	445	115	64	335	460	125
135	300	430	130	63	320	425	105
136	325	445	120	62	285	385	100
137	320	430	110	61	310	465	155
530	295	430	135	--	295	410	115
506	335	455	120	59	325	405	80
138	280	390	110	484	310	415	105
				457	360	460	100

TOTAL	6550	9140	2590	TOTAL	7325	9960	2635
NO. HEAD	21	21	21	NO. HEAD	22	22	22
AVERAGE	312	435	123	AVERAGE	333	453	120
NO. DAYS			79	NO. DAYS			57
AVERAGE DAILY GAIN			1.56	AVERAGE DAILY GAIN			2.11

TOTAL POUNDS HEIFER GAIN 5225 - TOTAL ACRES 39 - HEIFER PRODUCED PER ACRE 134 POUNDS