

1957 URRUTIA RANGE FERTILIZATION TEST - MADERA COUNTY

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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 carry-over effects. The other 40-acre field fertilized in 1955 but not in 1956 was re-fertilized 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 carry-over 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 per acre without fertilization and increased up to 203 pounds by fertilization. The carry-over effect in terms of beef produced was about 50 per cent 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 \$12.52 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 carry-over effects of the ammonium sulfate applied in this test are important in evaluating the results. Below is shown a summary of the three years' beef production in this test, together with the extra beef the year of fertilization and the carry-over 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 carry-over year. When these carry-over 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.	
			First Year	2nd Yr. Carry-over	Total 2 Years	1-Yr. Basis	2-Yr. Basis
1955	\$11.71	44.3	163.0 lbs.	70.7 lbs.	233.7 lbs.	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	(N ₈₀ in 1956) Carry-over	N ₈₀
Materials/Ac.	-		380 Am. Sulfate
Field Size	120 A.	40 A.	40 A.

II. STOCKING AND GRAZING

Acres/animal			
Feb. 15 - June 14	3.0	1.33	1.0
Av. In Wt./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

Av. Daily Gains	1.67 lbs.	1.52 lbs.	1.73 lbs.
Av. gain/animal	197.8	179.6	203.5
Beef produced/A	65.9	134.5	203.5
Gain from fertilization		68.6	137.6

IV. EVALUATION

Gross grazing income/A. beef @ 19¢	\$12.52	\$25.56	\$38.66
Less fertilizer cost			
Material			11.20
Application			<u>.74</u>
Net Grazing Income/A.	\$12.52	\$25.56	\$26.72
Net Profit From Fertilization		\$13.04	\$14.20

V. FERTILIZER COST

Per pound extra beef/A.		8.67¢/lb. (for 1957)
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