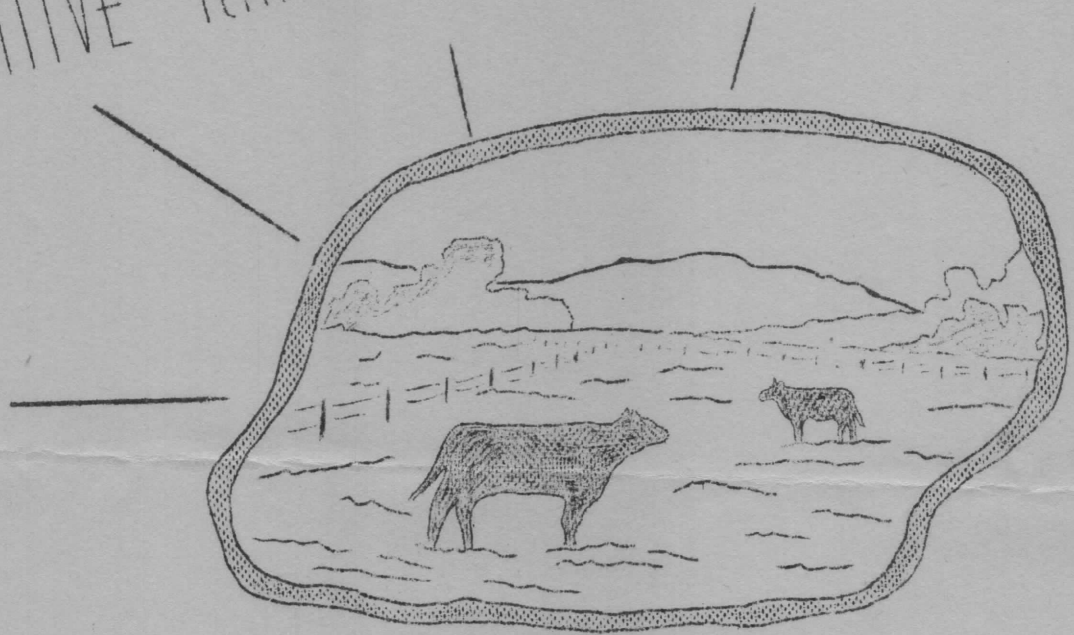


DOES IT PAY TO FERTILIZE
NATIVE RANGELAND?



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DOES IT PAY TO FERTILIZE NATIVE RANGELAND?

By

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This report covers the results of a 29 acre test conducted on Ed LeVesconte's "Skyway Ranch". The native pasture, consisting of ryegrass, filaree, bur clover, and foxtail was selected as being quite typical of San Mateo County rangeland. The field was divided into four equal areas of $7\frac{1}{4}$ acres in each plot. In early November, Ed LeVesconte, in cooperation with the DuPont Chemical Company and the Agricultural Extension Service, University of California, fertilized three of the pastures with different rates of nitrogen and phosphorus, leaving one of the pastures unfertilized as a check.

Livestock was turned in February 2 with each pasture receiving the number of animals it would carry. Two animals

were turned into the check plot; three animals in the plot where only nitrogen was used, N144; six animals in the plot with the heaviest application of nitrogen and phosphorus, N144-P64; and five animals in the lighter application, N72-P64. As the weather warmed up and the amount of feed increased, extra animals were added to fully utilize the feed. Animals used in this test were Holstein heifers averaging about 500 pounds each at the beginning of the test. All animals were removed June 29 as the feed was drying up.

The following chart shows the gain per acre for each pasture, cost of fertilizer per acre for each treatment, and other data.

Fertilizer Treatment	Check	N 144	N144-P64	N72-P64
Grazing Days Per Acre	47.2	74.0	137.4	116.4
Average Daily Gain	2.69	2.35	2.88	3.17
Gain Per Acre (pounds)	126.9	175.7	395.4	368.9
Fertilizer Gain /acre (lbs.)	--	48.8	268.5	242.0
Value per 20¢ lb.	--	\$ 9.76	\$53.70	\$48.40
Fertilizer cost per acre	--	\$21.60	\$28.00	\$17.20
Gross Profit from Fertilizer /Acre	--	\$11.84	\$25.70	\$31.20
Application Cost per acre	--	\$ 1.00	\$ 1.00	\$ 1.00
NET PROFIT FROM FERTILIZER PER ACRE		-\$12.84	\$24.70	\$30.20

DOES IT PAY TO FERTILIZE NATIVE PASTURELANDS?

BY

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were turned into the check plot; three animals in the plot where only nitrogen was used, H144; six animals in the plot with the heaviest application of nitrogen and phosphorus, H144-P64; and five animals in the lighter application, W15-P64. As the weather warmed up and the amount of feed increased, extra animals were added so fully utilize the feed. Animals used in this test were Holstein heifers averaging about 500 pounds each at the beginning of the test. All animals were removed June 29 as the feed was drying up.

The following chart shows the gain per acre for each pasture, cost of fertilizer per acre for each treatment, and other data.

This report covers the results of a 29 acre test conducted on Dr. LeVassault's "Stony Ranch," the native pasture, consisting of ryegrass, timothy, clover, and fescue, was selected as being the typical of San Mateo County pastureland. The field was divided into four equal areas of 7 1/2 acres in each plot. In early November, Dr. LeVassault, in cooperation with the Department of Extension, University of California, fertilized three of the pastures with different rates of nitrogen and phosphorus, leaving one of the pastures unfertilized as a check.

The test was started in February 2 with each pasture receiving the number of animals it would carry. Two animals

W15-P64	H144-P64	H 144	Check	Fertilizer Treatment
116.4	137.4	74.0	47.2	Growing Days per Acre
3.17	2.88	2.32	2.89	Average Daily Gain
368.9	392.4	172.7	126.9	Gain per Acre (pounds)
242.0	268.2	48.8	--	Fertilizer Gain (lbs.)
\$48.40	\$23.70	\$ 9.76	--	Value per 204 lb.
\$17.20	\$28.00	\$21.60	--	Fertilizer cost per acre
\$31.20	\$22.70	\$11.84	--	Gross Profit from Fertilizer / Acre
\$ 1.00	\$ 1.00	\$ 1.00	--	Application Cost per acre
\$30.20	\$24.70	-\$12.84	--	NET PROFIT FROM FERTILIZER PER ACRE

Net profit per acre was obtained by subtracting the pounds of gain on the unfertilized pasture and the cost of the fertilizer from the gain on the fertilized pastures. Nitrogen alone did not return sufficient gain to offset the cost of the fertilizer and application. The combination of nitrogen and phosphorus gave much better returns.

This test showed:

1. Fertilizer grew earlier feed.
2. The fertilized area carried more animals per acre.
3. More meat per acre was produced by using fertilizer.
4. A dollars and cents profit was made over costs.

Additional benefits from earlier pastures would include a reduction in the amount of hay necessary for winter feed. More cattle can be concentrated on a fertilized pasture in the early spring months while unfertilized pastures are developing.

Points to keep in mind when selecting a pasture for fertilization is to select a field that is well drained, usually a sloping hillside. For best results, the fertilizer should be applied before the fall rains start.

Suggested rates to use, based on this and previous tests, should be about 72 pounds actual nitrogen and 64 pounds actual phosphorus per acre. Lower rates of phosphorus may be used if the soil is in an area of high phosphorus content.

