

San Luis Obispo

VELDTGRASS FERTILIZER TRIAL

Andrew Mehlschau Ranch, Nipomo Mesa
San Luis Obispo County

Even in a dry year fertilizer makes a big difference. During this past growing season, nitrogen increased veldtgrass yield on a two year old stand by better than 200 per cent over the non-fertilized; this with only slightly over half of normal rainfall. The response was not only in total growth over the season, but in initial growth following the first rains.

These yields were taken from a fertilizer trial on some of Andrew Mehlschau's veldtgrass on the Nipomo Mesa. The fertilizer was applied late last November. Phosphorus, potash, sulphur, and nitrogen were used, each alone and in all combinations. The only growth response was from nitrogen alone or any combination that contained nitrogen. In other words, the sandy mesa soil had phosphorus, potash and sulphur adequate for maximum grass growth this past season.

The first rain, slightly over two inches, fell on this plot during the first part of January, six weeks after the fertilizer was applied. One month later, on February 5th, the first clipping was made. At this time the only grass that had made use of this limited amount of moisture was that which had been fertilized with at least 46 pounds of actual nitrogen per acre. This amount gave a 57 per cent increase over the check, and 92 pounds of nitrogen per acre - from 200 pounds of urea - gave an increase of 132 per cent over the non-fertilized. (Table 1)

TABLE I

Andrew Mehlschau Ranch, Nipomo Mesa
1958-59

Response to Nitrogen Fertilizer Rates
Air Dry Weights of First Cutting Veldtgrass February 5, 1959

Treatment Lbs. N Per Acre ¹	Yield in Lbs. Per Acre ²	Pounds Increase Over Check	Per Cent Increase Over Check
Check	290.4		
23	302.2	11.8	4.1
46	456.5	166.1	57.1
92	674.3	383.9	132.1
184	938.4	648.0	223.1
✓ 276	540.9 ✓	250.5 ✓	86.2 ✓

1) All nitrogen from urea

2) All weights of air dry forage

This 92 pound rate gave the most economical increase, \$17.90 per ton, over the entire growing season. With the limited amount of moisture, higher rates of nitrogen were not satisfactory. (Table 2)

TABLE 2

Veldtgrass Fertilizer Trial
Andrew Mehlschau Ranch, Nipomo Mesa
1958-59
Response to Nitrogen Fertilizer Rates Expressed as
Air Dry Yield of Mature Veldtgrass. Harvested May 28, 1959

Treatment Pounds ¹ N Per Acre	Yield Pounds ² Per Acre	Pounds Increase Over Check	Per Cent Increase Over Check	Fert. Cost Per ³ Acre	Fert. Cost Per Ton Increase
Check	726.00				
23	876.75	150.75	20.76	\$ 3.25	\$ 43.00
46	1361.25	635.25	87.50	6.50	20.46
92	2178.00	1452.00	200.00	13.00	17.90
184	2359.50	1633.50	225.00	26.00	31.80
276	1905.75	1179.75	162.50	39.00	66.10

- 1) All nitrogen from urea
- 2) All weights of air dry forage
- 3) Urea cost \$130 per ton

Rainfall in this area averages just over 15 inches a year. This year's total was slightly over 10, with only 8.4 coming after the fertilizer was applied.

Table 2 shows that total growth after the first clipping, between February 5 and May 28, showed responses to nitrogen rates up to 184 pounds per acre.

Total yield of air dry forage ranged from 726 pounds per acre without fertilizer to a maximum of 2359.5 from 184 pounds nitrogen per acre. This was a 225 per cent increase over the check. (Table 2). This amount of fertilizer, however, increased the cost to \$31.80 for each extra ton of forage.

Prepared by

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San Luis Obispo County August, 1959