

State Cooperative Soil - Vegetation Survey

CALIFORNIA DIVISION OF FORESTRY
Department of Conservation, The Resources Agency

PACIFIC SOUTHWEST FOREST AND RANGE EXPERIMENT STATION
Forest Service, U. S. Department of Agriculture

DIVISION OF AGRICULTURAL SCIENCES
University of California

April

1964

SOIL FERTILITY STUDIES: NO. 3 - Guenoc series

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This leaflet, a product of the Soil-Vegetation Survey, is one of a series giving results of greenhouse pot tests and field fertilizer trials on soils primarily associated with range lands. The data indicate fertility status with regard to nitrogen, phosphorus, and sulfur. Field trials also give preliminary data on potential range forage production and species changes resulting from fertilizer treatments. Methods are detailed in: Powell, W. Robert. 1964. Procedures used in range land soil fertility studies. State Cooperative Soil-Vegetation Survey, Calif. Div. of Forestry, Sacramento, 15pp.

GREENHOUSE POT TESTS

Sample No. FA59-52-2
Tehama County, Quad 33B-3
SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 36, T30N, R1W, MDMB
West - 10%; 1600 feet
Woodland - Brush - Grass
Collected 3 July 1959
Tested 28 July - 9 Sept. 1959

Sample No. FA59-52-3
Tehama County, Quad 33B-2
SW corner Sec. 31, T30N, R1E, MDMB
West - 5%; 1620 feet
Woodland - Grass
Collected 3 July 1959
Tested 28 July - 9 Sept. 1959

Treatment ^{1/}	Yield ^{2/}
Check	3.2 a
S	3.0 a
P	6.0 b
PS	6.8 b
N	3.4 a
NS	3.4 a
NP	28.0 c
NPS	30.0 d

Treatment	Yield ^{3/}
Check	2.8 a
S	3.8 a
P	11.2 b
PS	11.8 b
N	4.0 a
NS	4.8 a
NP	28.2 c
NPS	28.4 c

^{1/} N = 200, P = 88, S = 100 lb/A

4/

Sample No. FA61-45-103
 Shasta County
 Plot No. 9 of Quad 32A-1
 NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 17, T30N, R2W, MDMB
 South - 2%; 870 feet
 Grassland
 Collected 15 Sept. 1961
 Tested 20 Jan. - 18 March 1962
 (Site Field Trial No. 45-3)

Treatment	Yield
Check	10.2 a
S	13.2 a b
P	10.8 a
PS	13.0 a b
N	18.8 b
NS	11.8 a
NP	26.5 c
NPS	44.2 d

5/

Sample No. FA61-45-104
 Shasta County
 Plot No. 10 of Quad 32A-1
 NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 17, T30N, R2W, MDMB
 Southwest - 3%; 875 feet
 Woodland - grass
 Collected 15 Sept. 1961
 Tested 20 Jan. - 18 March 1962
 (Site Field Trial No. 45-4)

Treatment	Yield
Check	8.0 a
S	8.5 a b
P	10.2 a b c
PS	11.0 a b c
N	12.8 b c
NS	14.5 c
NP	32.2 d
NPS	39.8 e

COMMENTS:

2/ Phosphorus acutely deficient. Strong second order response to nitrogen. Indication of mild third order response to sulfur.

3/ Similar to 2/ except no response to sulfur is indicated.

4/, 5/ Strong response to nitrogen with phosphorus. Strong third order response to sulfur. Might expect moderate response to nitrogen alone.