

State Cooperative Soil - Vegetation Survey

CALIFORNIA DIVISION OF FORESTRY
Department of Conservation, The Resources Agency

PACIFIC SOUTHWEST FOREST AND RANGE EXPERIMENT STATION
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SOIL FERTILITY STUDIES: NO. 11 - Churn 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. Division of Forestry, Sacramento, 15 pp.

GREENHOUSE POT TESTS

Sample A (FA61-45-118)
Shasta County, Quad 23C-4
Center of NW $\frac{1}{4}$ Sec. 25, T31N, R4W,
MDMB
Nearly level; 500 feet
Grassland
Collected 18 April 1961
Tested September-November 1961

Sample B (FA61-45-121)
Shasta County, Quad 32B-1
East $\frac{1}{4}$ corner Sec. 12, T29N, R5W,
MDMB
Nearly level; 475 feet
Grassland
Collected 18 April 1961
Tested September-November 1961

Treatment	Yield
None	5.8 a
S	9.0 abc
P	13.2 cd
PS	11.0 bcd
N	7.5 ab
NS	15.5 de
NP	19.0 ef
NPS	23.2 f

Treatment	Yield
None	4.6 a
S	4.6 a
P	4.2 a
PS	4.0 a
N	21.2 b
NS	20.6 b
NP	19.0 b
NPS	21.8 b

(N = 200, P = 88, S = 100 lb/A)
(Yield, decigrams per pot, oven-dry)

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COMMENTS:

Sample A: A mild primary response to phosphorus; an interaction response to nitrogen and sulfur; a secondary response to nitrogen after phosphorus is supplied; all three elements operating in the complicated response pattern of this soil sample.

Sample B: Response only to nitrogen application.

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This leaflet is part of the Soil-Vegetation Survey, is one of a series giving results of soil tests and field fertilizer trials on soils generally, and is not intended for publication. The data indicate fertilizer status with regard to nitrogen, phosphorus, and sulfur. Field trials also give preliminary data on percent dry weight organic matter and species changes resulting from fertilizer treatments. Methods are detailed in: Powell, W. Robert, 1954. Procedures used in soil fertility studies. State Cooperative Soil-Vegetation Survey, Leaflet, Division of Forestry, Sacramento, 12 pp.

WATERHOUSE POT TESTS

Sample	Location	Soil Type	Depth	Collected	Tested	Treatment	Yield
Sample A (FA51-45-121)	Shasta County, Quad 32B-1	Basal & corner Sec. 22, T29N, R29W	475 feet	18 April 1961	October-November 1961	None	1.8 a
						F	4.8 a
						P	4.2 a
						F+P	4.0 a
						S	21.2 d
						F+S	20.8 d
						F+S	19.0 d
						F+S	21.8 d