

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. 12 - Perkins 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 (FA61-45-123)
Shasta County
Plot 9 of Quad 32A-2
NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 27, T30N, R3W, MDMB
Nearly level; 425 feet
Woodland-grass
Collected 18 April 1961
Tested 21 Nov 1961 - 16 Jan 1962

Sample B (FA61-45-122)
Shasta County, Quad 32B-1
NE corner Sec. 7, T29N, R4W, MDMB
Nearly level; 510 feet
Grassland (scattered woodland)
Collected 18 April 1961
Tested September-November 1961

<u>Treatment</u>	<u>Yield</u>
None	7.0 a
S	10.0 ab
P	12.8 b
PS	10.6 b
N	10.0 ab
NS	12.6 b
NP	18.0 c
NPS	25.6 d

<u>Treatment</u>	<u>Yield</u>
None	4.8 a
S	6.0 ab
P	7.2 ab
PS	6.2 ab
N	11.4 bc
NS	23.6 e
NP	16.4 cd
NPS	18.8 de

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

COMMENTS:

Sample A: A mild primary response to phosphorus; a mild interaction response to nitrogen and sulfur; secondary response to nitrogen with phosphorus; strong third order response to sulfur.

Sample B: A mild primary response to nitrogen; a strong second order response to sulfur.

This table is a product of the Soil-Vegetation Survey, is one of a series giving results of phosphorus and tests on field fertilizer trials on soils primarily associated with some forest. The data indicate fertility status with regard to nitrogen, phosphorus, and sulfur. Field trials also give preliminary data on soil fertility, and species changes resulting from fertilizer treatments. Methods are detailed in: Powell, W. Robert, 1954. Procedures used in range land soil fertility studies. State Cooper-ative Soil-Vegetation Survey, California Division of Forestry, Sacramento, 12 pp.

GREENHOUSE POT TESTS

Sample B (FASL-45-122)		Sample A (FASL-45-121)	
Treatment	Yield	Treatment	Yield
None	4.8 a	None	7.0 a
P	6.0 ab	P	10.0 ab
P2	7.2 ab	P2	12.0 b
P3	8.3 ab	P3	14.0 b
N	11.4 bc	N	19.0 ab
N2	13.6 c	N2	21.0 b
N3	16.4 cd	N3	23.0 b
NP	18.8 de	NP	25.0 b
NP2		NP2	
NP3		NP3	

(N = 200, P = 50, S = 100 mg/l)
(Yield, dry weight per pot, oven-dry)