

RESULTS FROM TRIALS WITH UNTESTED SOIL AMENDMENTS

by

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During 1975, trials were conducted at the Irrigated Agriculture Research and Extension Center on three soil amendment products.

Planters II -- An inorganic dry product of U.S. Soil, Inc., Salida, California

Bio-Chem F -- A water suspension of algae, a product of American Bioculture, Inc., Phoenix, Arizona

ProCal -- An inorganic dry product of Western Soils Co., Waterloo, Iowa

A trial involving Planters II was conducted in the greenhouse where Sudan grass was the test crop. A field trial involving Planters II was conducted with Alta fescue as the test crop. Another field trial involving all three products was conducted on silage corn. In addition, a demonstration trial was conducted involving Bio-Chem F on potatoes in Franklin County. This last trial was under the supervision of Area Extension Agent, Gus Hokanson.

Results are shown in the tables. The statistical analysis of the data from the trials at Prosser (not shown) indicated distinct yield responses to fertilizer, but not to any of the three products under test. Differences in soil physical properties, water infiltration, etc., could not be detected visually in any of the trials. Plant analysis data will be available at a later date.

It is concluded that none of the three materials tested had a significant effect on yield under the conditions that the trials were conducted.

New products should be evaluated on the basis of (1) theory and (2) evidence.

1. Is there a theoretical reason, based on our knowledge of soil science, that the product in question should be effective? This question is especially appropriate where very small amounts per acre of material are recommended, whether they are microbial inoculants, products in solution, or any organic or inorganic products.
2. Is there actual experimental evidence from replicated field trials? Examples of "evidence" not considered valid are:

testimonials
comparing observations between two fields
comparing observations between two seasons

The only really valid criteria are results of carefully controlled, replicated, randomized, field trials.

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1975
Prosser

SUDAN GRASS - GREENHOUSE

Treatment ^{1/}	Green Weight - g/pot	
	With Planters II	Without Planters II
N P	196.9	206.1
N	53.8	65.5
P	21.7	20.7

^{1/} All pots received Zn and S.

1975
Prosser

ALTA FESCUE

Treatment ^{1/}	Dry Matter - lb/A		Total
	Cutting 1	Cutting 2	
N + Planters II	4,847	5,001	9,848
N	5,085	6,083	11,168
Planters II	1,216	948	2,164
Check	1,187	1,183	2,370

^{1/} All plots received S.

1975
Prosser
CORN SILAGE

<u>Treatment</u> ^{1/}	<u>Dry Matter T/A</u>
Check (no treatment)	4.85
Planters II alone	4.80
N alone	5.79
N + Planters II	6.01
N + Bio-Chem F	5.74
N + ProCal	5.57

^{1/} P, Zn, and S applied to all plots.

1975
Franklin County
POTATOES, T/A

<u>Treatment</u>		<u>Average</u>
Check	24.4	24.2
Check	23.9	
Bio-Chem F	25.1	24.0
Bio-Chem F	22.9	