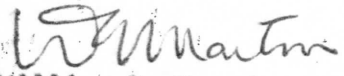


UNIVERSITY OF CALIFORNIA
AGRICULTURAL EXTENSION SERVICE

Date: September 15, 1967
To: W. James Clawson, Farm Advisor, San Luis Obispo County

DAVIS, CALIFORNIA

From:  William E. Martin and Lester J. Berry
Title: Extension Soils Specialist Extension Range Specialist
Re:

Some time ago W. E. Martin gave you a preliminary summary on the data from the Righetti plot. Les Berry also gave you a typewritten summary of the total yields. We are now enclosing the final summary of the yield data, including the yields of clover and grass separately, which were obtained by hand separation of the grab samples we used for moisture. The results have been calculated as fresh weight per acre, the percent dry material listed for each treatment, and finally, the yield of dry material per acre, along with the yields of clover and grass for each treatment. We will attempt to summarize this data with the help of analyses of variance and co-variance and other hocus-pocus by the Riverside computer and Tom Little, Extension Biometrician.

- (A) The yields of fresh material per acre as cut were significantly increased by phosphorus but with no measurable effect of sulfur, either early or late, elemental sulfur or sulfate. The late applied P tended to yield more fresh material than the early. This difference was not quite statistically significant.
- (B) The percent dry material in the fresh forage was reduced by phosphate treatments. This type of thing we have seen in all tests through the state since the stimulated clovers were more succulent than the resident grasses. Again, there was a tendency for the late applied P to be more succulent than the early, since there probably was a little more clover.
- (C) Yield of dry forage per acre again was significantly affected by P. The trends noted above with respect to time of application in the fresh weight and %DM almost exactly cancelled each other, with the results that there was no difference in DM per acre produced from early or late applied P. As noted in (A) above, there was no measurable effect of S alone or with P. Early versus late showed no differences nor did elemental S as compared to sulfate.

In the last three columns on the summary sheet we have shown the results of species separations. Here you will see that the yields of the grass fraction were a little erratic but none differ significantly from any other. The effects of P were entirely to P response of clovers. We are a little unhappy about the results of the species separation. The data are pretty erratic, implying that the grab samples taken were not adequate to measure the stand. Perhaps the stand was too variable to begin with to get real good data.

We were surprised that we were unable to demonstrate any yield effects due to the nutrient S. We certainly thought we saw differences during the winter season. We will wish to observe this plot for carryover effects next year.

We are also enclosing a summary of the entire series of plots carried out throughout the state last year. We hope these will be of interest to you in comparison to those obtained on your plot. We hope at the end of next year we specialists can prepare a statewide publication summarizing the results of the entire series.

You will be getting results of chemical analysis of separate species from the lab soon if you don't have them already. We haven't yet gone over these enough to talk intelligently about them.

Encs.

cc: J. E. Street

1. TSP + Li. S	S ₁	18830	20.55	3912	100
2. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
3. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
4. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
5. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
6. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
7. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
8. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
9. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
10. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
11. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
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16. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
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19. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
20. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
21. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
22. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
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74. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
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93. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
94. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
95. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
96. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
97. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
98. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
99. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100
100. TSP + Li. S	P ₁ S ₁	18830	20.55	3912	100

TIME & SOURCE OF P & S: FIRST SEASON RESULTS

County: San Luis Obispo

Date applied: E 11/28/66 L 2/14/67

Cooperator: Righetti

Date harvested: 4/17/67

Material & Rate	Material & Time Applied	Yield Fresh Wt. Lbs./Ac.	Percent Dry Matter	Yield Dry Wt. Lbs./Ac.	Yield as Percent of Untreated
1. None	--	17106	22.30	3815	100
2. 187 lbs. TSP	P _E	24266	18.65	4530	119
3. TSP	P _L	25015	18.55	4655	122
4. 300 lbs. Gypsum	SO _{4E}	18413	22.30	4080	107
5. 500 lbs. SSP (0-21-0-12 SO ₄ S)	P _E SO _{4E}	24701	19.90	4882	128
6. Gypsum + TSP	P _L SO _{4E}	26548	17.50	4528	119
7. 50 lbs. Elemental S	S _E	17333	21.35	3681	91
8. 250 lbs. TSPS (0-40-0-20 S)	P _E S _E	24266	19.25	4653	122
9. El. S + TSP	P _L S _E	26322	18.15	4758	125
10. Gypsum	SO _{4L}	18831	20.55	3872	101
11. TSP + Gypsum	P _E SO _{4L}	25067	17.65	4432	116
12. SSP	P _L SO _{4L}	26705	17.25	4611	121
13. El. S	S _L	18308	21.85	3933	103
14. TSP + El. S	P _E S _L	22942	18.45	4238	111
15. TSPS	P _L S _L	26060	17.45	4550	119
16. TSPS + Mo	P _E S _E Mo	24109	20.50	4816	126
L.S.D. (between individual treatments)		5156	3.28	708	[†] 18
Coefficient of Variation		10.5%	7.9 %	7.7%	
Major Response		P	P	P	