

1978
Red Bluff?

PHOSPHORUS RATE AND FREQUENCY BY LIME TRIAL

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Objective: To define forage yield and quality response to different phosphorus rate and frequency regimes as effected by lime for the purpose of making economic decisions regarding fertilizer and lime application.

Experimental Design and Application

of Treatments: Randomized complete block with three replications. Individual plot size = 10' x 15'. Lime was broadcast and incorporated with Kubota tractor and 4 foot wide rototiller to depth of 2-3". Surface broadcast lime, phosphorus, gypsum and seed were applied prior to rolling so as to provide a firm seedbed. The following clover seed mixture was seeded at 25 lbs seed/A utilizing the PELINOC inoculation system with the PELGEL sticker.

<u>Clover</u>	<u>Percent by Weight</u>
Woogenellup-sub	20
Geraldton-sub	20
Dinninup-sub	15
Daliak-sub	10
Howard-sub	10
Hykon-rose	15
Kondinin-rose	10

Evaluations: Forage

- 1) Dry matter yields - cut with lawn mower (19 to 20" wide by ~ 13.5' by 1 1/2" high).
- 2) Total N, Total P, Total S on above samples.

Soils

- 1) Initial samples from control plots. 2" increments to 6" depth: SP, pHs, ECe, Ca + Mg, HCO₃-P, Bray #1-P, K, SO₄-S.
- 2) All plots in spring of 1980, 1982 and 1984: HCO₃-P, Bray #1-P and SO₄-S.

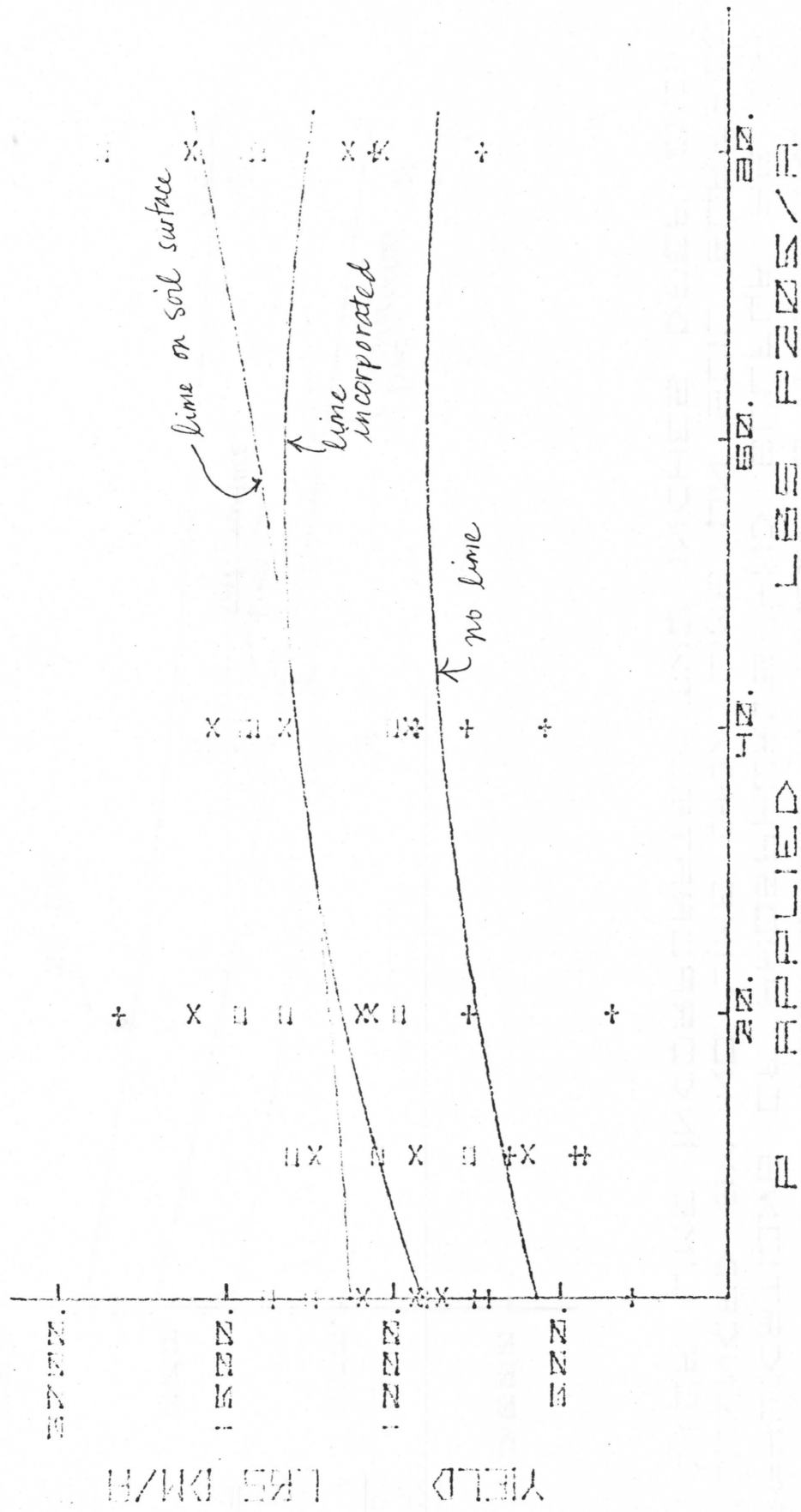
Treatments: Application rates indicated are
 lbs. P₂O₅/A as treble superphosphate (0-45-0)

Treat- ment #	Fall 1978		Fall 1979	Fall 1980	Fall 1981	Fall 1982	Fall 1983	Total
	lbs. P ₂ O ₅ /A	Lime Trt ¹						
1.	0	1						0
2.	30	2						30
3.	60	2						60
4.	120	2						120
5.	240	2						240
6.	5	2	5	5	5	5	5	30
7.	10	2	10	10	10	10	10	60
8.	20	2	20	20	20	20	20	120
9.	40	2	40	40	40	40	40	240
10.	10	2		10		10		30
11.	20	2		20		20		60
12.	40	2		40		40		120
13.	80	2		80		80		240
14.	15	2			15			30
15.	30	2			30			60
16.	60	2			60			120
17.	120	2			120			240
18.	20	2	0	5	0	5	0	30
19.	40	2	0	10	0	10	0	60
20.	80	2	0	20	0	20	0	120
21.	160	2	0	40	0	40	0	240
22.	30	2	6	6	6	6	6	60
23.	60	2	6	6	6	6	6	90
24.	60	2	12	12	12	12	12	120
25.	60	2	24	24	24	24	24	180
26.	120	2	24	24	24	24	24	240
27.	60	2	0	15	0	15	0	90
28.	60	2	0	30	0	30	0	120
29.	60	2	0	60	0	60	0	180
30.	0	2						0
31.	10+10*	2	10+10	10+10	10+10	10+10	10+10	60+60
32.	20+20*	2	20+20	20+20	20+20	20+20	20+20	120+120
33.	40+40*	2	40+40	40+40	40+40	40+40	40+40	240+240
34.	5	1	5	5	5	5	5	30
35.	10	1	10	10	10	10	10	60
36.	20	1	20	20	20	20	20	120
37.	40	1	40	40	40	40	40	240
38.	20+20*	1	20+20	20+20	20+20	20+20	20+20	120+120
39.	40+40*	1	40+40	40+40	40+40	40+40	40+40	240+240
40.	0	3						0
41.	5	3	5	5	5	5	5	30
42.	10	3	10	10	10	10	10	60
43.	20	3	20	20	20	20	20	120
44.	40	3	40	40	40	40	40	240
45.	20+20*	3	20+20	20+20	20+20	20+20	20+20	120+120
46.	40+40*	3	40+40	40+40	40+40	40+40	40+40	240+240
47.	0	1						0
48.	0	1						0

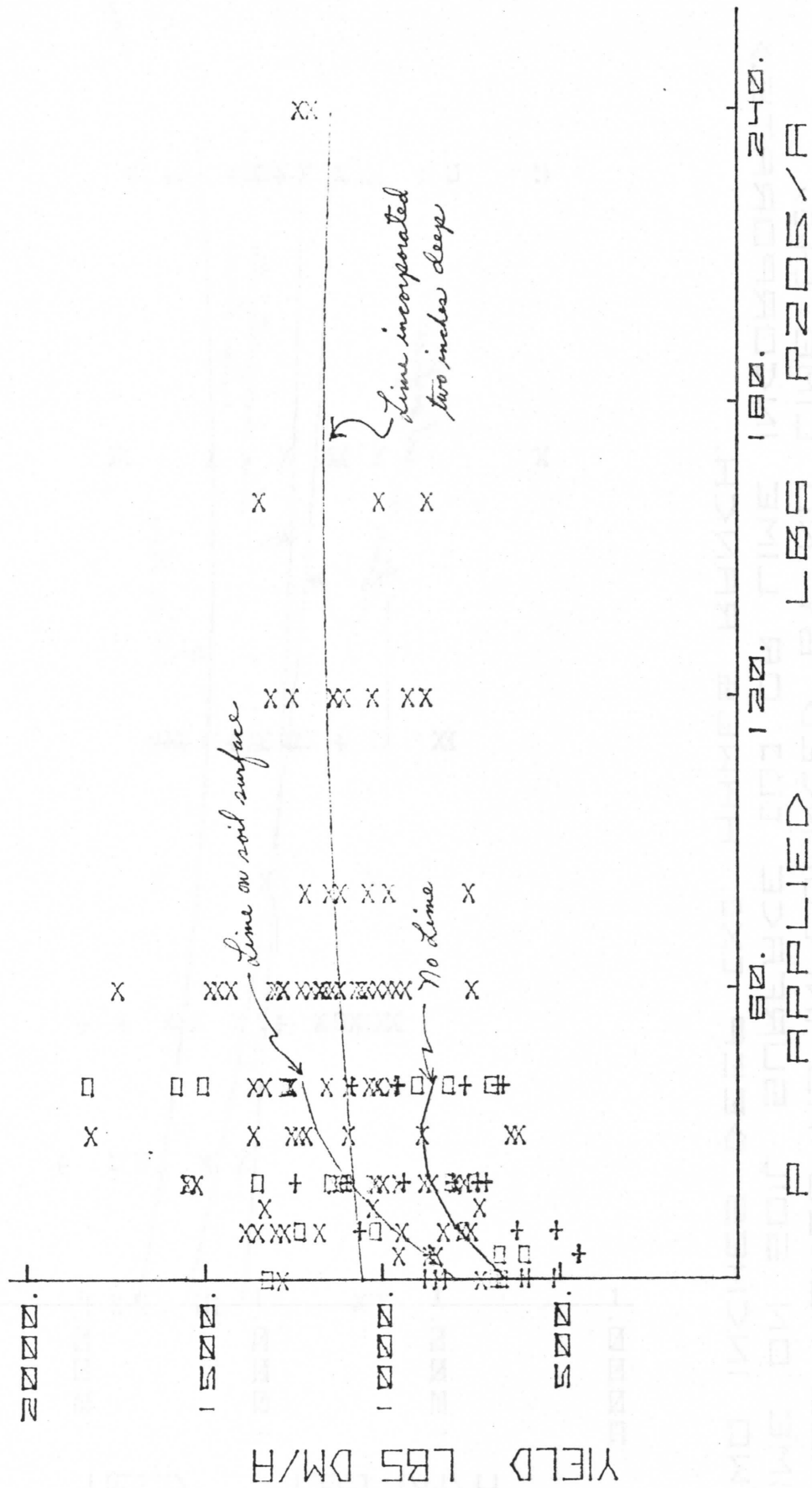
* lbs S/A as gypsum

¹/Lime Treatments: 1= none
 2= 2 tons/A incorporated 2" deep
 3= 2 tons/A broadcast on soil surface

1. 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920
 2. 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941
 3. 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962
 4. 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983
 5. 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004



PROBABLE YIELD RESPONSE IN 1978 TO APPLIED
 PRIMARY AS FERTILIZER BY LIME C+D,
 LIME ON SOIL SURFACE OR LIME INCORPORATED
 INTO INVERTED TRENCH.



COUNTY Shasta

FARMADV Johnson, W / Edie

COOP Hawes

INVEST Meyer

LOCATION _____

ELEV:FT _____

SERIES Red Bluff

VEGBEFORE Annual Grass Chaparral
Oak-grass Irr. Past. Sagebrush
Pinon-Junper Perennial Grass

AVPPT:IN _____

WEATHERSTA _____

TRIALTYPE Fertilize Seeding Budget
Monitoring Tree removal Weed control
Brush Control

ANNLEG T F

PERGRASS T F

TREATMENTS Prate and frequency with line

CROP Range Irr. Past. Hay Beef Lamb
Trees

PLANTDATA Prod. Spp. Comp. Stand
Vigor

PLNTTISSUE _____

ANIMNUTR _____

ANIMALDATA A.D.G. Stk. Rate Prod.

SOILANAL _____

PPT:IN _____

DATESTART 1978

DATEEND continuing

FILE:NO 263

NOTES _____

COUNTY _____

FARMADV _____

COOP _____

INVEST _____

LOCATION _____

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SERIES _____

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