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1970 Results of Field Experiments

T O. Albertson

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DEPARTMENT OF AGRICULTURE

PLANT RESEARCH DIVISION

1970 RESULTS OF FIELD EXPERIMENTS

T.O. Albertsen

A. PASTURE TRIALS.

Title.

Maintenance P and S for pastures in the low rainfall areas - 1923 Ex.

Aim.

To determine the best rates of gypsum and a phosphate fertiliser required to maintain optimum pasture growth on old land.

1970 Progress

Eight of the 15 unreplicated trials were cropped without fertiliser. Seven were harvested (severe weed infestation ruined 66KA7). Three trials left under pasture responded to the fertiliser treatments and were cut for dry matter production.

The remaining four trials left under pasture grew badly, became weed dominant and were not rated for growth differences between treatments or cut for dry matter production.

The replicated trials at Avondale and Newdegate were also cropped, without fertiliser.

The replicated trials at Wongan Hills Research Station and Chapman did not visually respond to treatments and were not cut. 69WH15 succumbed to capeweed despite spraying, grazing and mowing. 65C5 remained unfenced since the beginning of 1969, the year it was cropped and consequently individual plot grazing was impossible. Furthermore the 1970 fertiliser treatments were not applied since the plot boundaries could not clearly be delineated.

Seed yields were obtained from all the pastured trials.

Results.

See Tables 1, 2 and 3.

Discussion.

Pasture.

In both 66Mo6 and the adjacent 67 MO1 trials, visual growth ratings indicated a P response to 6.0 lbs P/ac. (Tr. 3) and to 9.0 lbs P/ac. (Tr. 4) respectively. In contrast no clear P or S response was evident in the pasture cuts (4 x 5 l. x 2 l.). However, the plots were individually grazed in the interim (4 weeks) and if the sheep differed appreciably in the quantity of pasture they consumed then any former pasture response could be negated. Certainly pasture cutting prior to grazing was necessary but unfortunately not possible.

In 68NO5 two pasture cuts during the growing season (2 and 3 x 5 l. x 2 l.) indicated the pasture response to S to be 15 and 10 per cent. respectively greater than the P response, from a super equivalent basis. Small (4 l. x 4 l.) spot trials involving +/- P and S will be conducted on each plot in 1971.

Crop.

With a few minor exceptions there appears to be no response in crop yield to the residual P and S treatments in the unreplicated trials.

In 67NO5 Tr. 4 (90 lb super + 21 lb gypsum/ac. x 3 yrs) outyielded Tr. 1 (85 lb gypsum/ac. x 3 yrs) by 3.8 bus/ac.

In 66N08 Tr. 5 (120 lb super/ac. x 4 yrs) outyielded Tr. 1 by 2.4 bus/ac. Similarly in 69N09 Tr. 5 outyielded Tr. 1 by 1.1 bus/ac.

Overall, though, Tr. 1 which receives no P is not appreciably outyielded by Tr. 2 - 5 which do receive P (as super) in the pasture years, here ranging from 2 - 4 years.

In 67N05 Tr. 7 (60 lbs double super + 15 lbs gypsum/ac. x 3 yrs) outyielded Tr. 6 (60 double super/ac. x 3 years) by 5.7 bus/ac.

In 66N09, Tr. 10 (60 lb double super + 75 lb gypsum x 4 years) outyielded Tr. 6 by 1.7 bus/ac.

In 67N05 and 67TS1 Tr. 9 (60 lb double super + 55 lb gypsum/ac. x 3 years) outyielded Tr. 6 by 1.4 and 1.1 bus/ac. respectively.

Overall, then, apart from the residual gypsum response in 67N04, no appreciable response to increasing levels of residual gypsum is evident.

The low yields of 66N08 and 67N05 are due mainly to poor seed bed preparation and sowing.

The 65A1 trial showed no clear response to increasing residual P, but a residual S response up to 35 lb gypsum/ac. (viz. Tr. 8), equivalent to 69 lb super/ac. is evident. Here Tr. 8 has received an additional $35 \times 5 = 175$ lb gypsum/ac. than Tr. 6 since 1965. Tr. 6 - Tr. 10 have received identical P (300 lb double super/ac.) since 1965.

In 65N5 there appears to be a response to both residual P and S; the P response to 90 lb super/ac. equivalent, the S response to 69 lb super/ac. equivalent. The low yield is attributed to late sowing and old seed.

Title.

Sulphur status in high rainfall areas - 2684 Ex.

Aim.

To define qualitatively the soil types in the high rainfall areas that require S and P for pasture growth. Also to determine if S (as gypsum) is required in addition to superphosphate S, and to compare autumn to spring gypsum application.

1970 Progress

Eighteen of the 25 trials were growth rated and/or cut for pasture yield in September-October.

Results

The trials were categorised into four major soil types, largely on the soil profile to 18 in.

Since 200 lb super/ac. (Tr. 4) was used as a standard, the pasture yields from these plots were scored as 100 per cent. The remaining treatments were expressed as a per cent. relative to 200 lb super/ac. All pasture yield results from any one soil category were meaned and tabulated in Table 4.

Discussion.

In both 1969 and 1970 a slight trend exists across the four soil types. The grey over white sand responds the most to S (at 24 lbs P/ac.) + 29 per cent. in 1969 and 1970, and also responds the most to the autumn and spring gypsum applications (in 1969 -5 and + 38 per cent. respectively, in 1970 +9 and +15 per cent. respectively).

The reduced response in 1970 could be attributable to a residual effect, or a seasonal effect.

The second soil type differs in having clay or gravel in the profile but below 18 in. Here the S response at 24 lbs P/ac. is 34 per cent. in 1969 which is reduced to 22 per cent. in 1970. The response to autumn and spring gypsum is also slightly less, being 5 and 20 per cent. respectively in 1969 and 8 and 11 per cent. respectively in 1970.

The S response is progressively reduced in the third and fourth soil types, both soils of which contain clay or sesquioxide fractions. The ion exchange capacity of these soil fractions undoubtedly reduces the leaching of S down the profile, hence making the applied fertiliser S more available to the pasture.

At 24 lbs S/ac. the P response is small in the first two soil groupings (7 per cent.) but more appreciable in the latter two soil types (up to 19 per cent.)

It appears then that the S responding soil types are not as responsive to P and vice versa. All the trials were sited on old land.

B. CROPPING TRIALS.

Title.

Continuous cropping with N.P.S. - 2245 Ex.

Aim.

To determine the number of continuous croppings on different soil types using N, P and S fertilisers.

1970 Progress.

Two of the original five trials were sown and harvested as scheduled. The 69TS1 trial was sown at two different times, the second sowing being a result of heavy rain interrupting the original attempt. However, germination from the second sowing was extremely poor and shriveled up shortly thereafter. The first sowing produced a crop which was harvested.

69NA1 succumbed to a very heavy rye grass infestation triggered off by the summer rains. An unco-operative farmer prevented 69KA1 from continuing.

Results.

See Table 5, 6 and 7.

Discussion.

69N01

The yields of the N.P. only and N.P.S. treatments are very similar. At increasing N.P. levels the largest difference is 4.2, 4.6 and 1.6 bus/ac. in favour of the 28:14 compound over super + urea. At the two highest N.P. levels the order of yield is compound + mineral S (C + S), straight compound (C), compound + gypsum (C + G) and super + urea (Sp + U).

The 1969 crop unfortunately could not be harvested and consequently time trends cannot be studied with this trial this year.

69ME1

At increasing N.P. levels the straight compound outyielded the N.P.S. treatment sources by 3.2, 1.6 and 0.8 bus/ac. The 1969 crop yielded similar trends, the difference being only 0.9, 1.2 and 0.7 bus/ac. respectively. In contrast to 69N01, the S + U outyielded the C + S and C + G but only by 0.6, 0.8 and 0.5 bus/ac. In 1969 the S + U treatment source was outyielded by C + S and C + G.

69TS1

At the lowest N.P. level straight compound outyielded C + G by 1.8 bus/ac: this situation, however, is reversed at the highest N.P. level where C + G outyields C by 1.4 bus/ac. Again the differences are marginal.

It is interesting to note that in this trial the absolute control is not appreciably different to the lowest N.P. treatment, and only 7.8 bus/ac (20 per cent.) below the highest yield of 39.2 bus/ac; a situation similar to the 1969 crop yields.

Overall in this the second successive crop no appreciable S requirement is apparant. The main response being to N + P.

The 1969 crop yields gave a slight indication for a S requirement together with the N and P requirement, but this was not confirmed in 1970. Accordingly the present results are contrary to the hypothesis that N + P compounds will induce a S deficiency in a continuously cropped trial.

The trials are scheduled to be cropped in 1971, their third successive year.

C. STOCKING RATE TRIALS.

Title.

Sulphur study - 69AL19/2639 Ex. F. Ford, Woogenellup.

Aim.

To test the hypothesis that by maintaining a narrow N/S ratio by keeping plant S levels high and supplementing sheep with S over the summer period, better feed utilisation is realised and greater wool growth results.

1970 Progress.

During the 1970 the trial went according to schedule. Super and gypsum were topdressed on to the pasture, sheep weighed and the pasture's N and S analysis monitored.

Results.

See Tables 8, 9 and 10.

Discussion.

No differences in the mean sheep body weights are apparent, despite a significantly lower dry matter pasture yield on the + gypsum paddocks.

Pasture N/S ratios throughout the year favour the + gypsum paddocks, this being a consequence of three 50 lb/ac. gypsum applications on 12.6, 6.8 and 21.10.70. A Na_2SO_4 solution was also sprayed onto the

+ gypsum paddocks to maintain the low N:S ratio through the summer. However, due to heavy rain that day no increase in the pasture's total or sulphate S was measured. The spraying was repeated on 16.2.71.

The main parameter of 69AL19 is the fleece quality, final results of which will be measured after shearing in March 1971.

Title.

Stocking rate and rate of super on cyprus barrel medic pasture - 66M30/1749 Ex.

Aim.

To determine if topdressing annual medic pastures on heavy wheatbelt land increases carrying capacity or animal production per head. Also to determine the relationship between super rate and animal production.

1970 Progress.

Pasture yield was measured three times during the year. Sheep were weighed monthly. The original flock were replaced in October by a flock of young wethers from Esperance. The western plots were sown to wheat and harvested for yield.

Results.

See Tables 11 - 15.

Discussion.

At the lowest S.R. of 1.03 sheep/ac. pasture yield responded linearly with increasing super. At 1.28 sheep/ac. an appreciable pasture yield response was obtained between 0 and 150 lb super/ac. at the 14.7.70 cutting on both the 1st and 2nd year pasture stands. An appreciable pasture yield response was also obtained between 0-60 lbs super/ac. in the 2.9.70 cutting but only on the 1st year pasture.

Overall the pasture responded up to 150 lb super/ac. for the first half of the growing season and subsequently only to 60 lb/ac.

With increasing S.R. the mean pasture yield decreased, this decrease being more appreciable at the 150 lb super/ac. rate and less at the 0 lb super/ac.

Residual treatment effects of rates of super and stocking are apparent in the crop yields although the crop was sown with 50 lb super/ac. Crop yields appeared to decrease with increasing residual super and increase with increasing S.R.

Sheep body weights since 1967 are currently being analysed. However, it appears that increasing super rates decrease the body weight by up to 10 lbs. The greasy and clean wool weights since 1967 are also being analysed.

3rd March, 1971.
TOA:LMM.

..6.

TABLE 1.

1970 Pasture Yields (lbs/ac) - 1923 Ex

Experiment No.			66M06		67M01		68N05	
Soil Type			R.Br. clay loam				R.Br. sandy clay loam	
Parameter			Growth rating 9.7.70	Pasture yield 6.8.70 lbs/ac	Growth rating 9.7.70	Pasture yield 6.8.70 lbs/ac	Pasture yield lbs/ac.	
Treat.	P (lbs/ac)	S (lbs/ac)					13.7.70	10.9.70
1	0	14.4	1	520	2	1,010	430	1,215
2	3.0	14.4	2	705	3	795	490	1,415
3	6.0	14.4	3	580	2	1,315	685*	1,495
4	9.0	14.4	3	1,135	4	1,265	640	1,780*
5	12.0	14.4	3	1,780	4	1,530	535	1,305
6	12.0	2.4	3	1,355	4	1,375	440	1,070
7	12.0	4.9	3	1,040	3	1,440	665	1,445
8	12.0	8.3	3	1,405	4	1,775	815*	1,340
9	12.0	11.7	3	1,040	4	1,450	770	1,550*
10	12.0	15.1	3	1,010	5	1,640	760	1,495

Growth rating : 1 (lo) - 5 (hi). G. Palmer. ungrazed.
 Pasture yield : Dry matter (lbs/ac) grazed.

68N05	P response (lbs/ac)	Super equiv. (lbs/ac)	S response (lbs/ac)	Super equiv. (lbs/ac)
13.7.70	6.0	60	8.3	69
10.9.70	9.0	90	11.7	100

TABLE 2.

1970 Crop Yields (bus/ac) - 1923 Ex

Experiment No.			66LG1	68LG1	66N08	66N09	67N04	67N05	67TS1	Mean
Tr.	Soil type P* S* (lbs/ac)		3-6 in. sand over clay	R.Br. clay loam	Sand over 8" gravel	Br. clay loam	Sand over gravel	Sandy loam		
1	0	14.4	23.5	25.2	12.4	29.9	12.4	24.0	21.2	21.2
2	3.0	14.4	22.9	25.1	11.9	30.7	10.5	27.1	15.1	20.5
3	6.0	14.4	22.9	24.2	11.9	28.6	12.4	-	19.3	19.9
4	9.0	14.4	22.2	24.1	11.4	30.5	11.9	27.8	21.2	21.3
5	12.0	14.4	23.5	25.7	14.8	31.0	12.4	25.4	18.9	21.7
6	12.0	2.4	24.2	24.7	15.2	31.7	8.1	24.7	18.6	21.0
7	12.0	4.9	20.1	23.1	11.0	31.1	13.8	25.7	17.8	17.5
8	12.0	8.3	22.2	24.3	15.2	31.6	13.8	25.1	16.6	21.3
9	12.0	11.7	24.3	25.5	15.2	29.7	14.3	26.1	19.7	22.1
10	12.0	15.1	24.2	25.5	12.4	33.4	12.4	24.5	19.3	21.7
Mean			23.0	24.7	13.1	30.8	12.2	25.6	18.8	

* These P and S quantities refer to the pasture application rates.
 In 1970 no fertiliser whatsoever was applied to the crop.

TABLE 3.

1970 Crop Yields (bus/ac) - 1923 Ex

Experiment No.			65A1				65N5			
Soil Type			Red brown earth				0-6 in. sand over gravel			
Tr.	P*	S*	Rep 1	Rep 2	Rep 3	Mean	Rep 1	Rep 2	Rep 3	Mean
	(lbs/ac)									
1	0	14.4	39.0	40.3	33.2	37.5	10.3	19.0	12.2	13.8
2	3.0	14.4	38.5	36.0	36.2	36.9	13.5	13.9	16.5	14.6
3	6.0	14.4	39.5	38.5	37.0	38.3	17.4	15.4	17.6	16.8
4	9.0	14.4	31.5	37.3	34.3	34.4	19.7	20.6	17.3	19.2
5	12.0	14.4	40.5	38.2	35.0	37.9	17.4	17.8	18.4	17.9
6	12.0	2.4	29.3	36.2	40.3	35.3	17.8	19.0	17.6	18.1
7	12.0	4.9	40.8	40.8	34.2	38.6	16.1	16.5	20.6	17.8
8	12.0	8.3	40.5	44.0	37.0	40.5	22.3	21.0	18.4	20.6
9	12.0	11.7	44.5	34.5	38.7	39.2	22.1	16.7	21.4	20.1
10	12.0	15.1	39.0	37.5	39.2	38.6	15.4	18.4	22.1	18.6
MEAN			38.3	38.3	36.5	37.7	17.2	17.8	18.2	17.8

* These P and S quantities refer to the pasture application rates.
In 1970 no fertiliser whatsoever was applied to the crop.

TABLE 4.

1969, 1970 Pasture Yields Expressed as a
Percentage Relative to 200 lb Super/ac (Tr. 4) 2684 Ex

Soil Type	Grey over white sand to depth		Grey over white sand with clay and/or gravel below 18 in.		Grey over white sand with clay and/or gravel within 18 in.		Grey-brown over deep yellow sands	
	1969	1970	1969	1970	1969	1970	1969	1970
Experiment No.	69D3 69MR3	69D2 69BU2 69MN1 69MR2	69BY5 69MR1	69BY5 69MR1 69BY3 69BU6 69BR3	69MN3 69BU5	69BU5 69AR5 69D4 69MR4 70HA2	69BY2 69BU4	69BU4 69BY2 69BU1 69BR5
Absolute control	78	79	80	88	72	90	94	80
Response to -								
0	71	80	71	86	78	93	99	93
12	87	106	97	95	101	94	95	83
24	100	100	100	100	100	100	100	100
48 lbs S/ac at 20 lbs P/ac	95	109	105	108	93	98	99	100
Response to -								
0	96	93	94	94	83	94	85	82
10	96	96	100	98	81	96	97	97
20 lbs P/ac at 24 lbs S/ac	100	100	100	100	100	100	100	100
Response to -								
Autumn gypsum *	95	109	105	108	93	98	99	100
Spring gypsum *	138	115	120	111	105	102	100	102

* 24 lbs S/ac in addition to 200 lb autumn super/ac (24 lb S/ac)

TABLE 5.

1970 Crop Yields (bus/ac) 2245 Ex

69N01 - North Quelagetting.

Soil type - 6-12 in. sand over gravel.

N	P	S	Nil or Mineral S	Compound (C)	Super + Urea	C + Gypsum	C + Min S	Mean
lbs/ac								
0	0	0	22.7					22.7
11.5	2.5	0		29.4				29.4
23.0	5.0	0		32.7				32.7
34.5	7.5	0		33.2				33.2
11.5	2.5	3.1			25.2	28.6	28.4	27.4
23.0	5.0	6.3			28.1	32.5	33.0	31.2
34.5	7.5	9.4			31.6	32.8	35.2	33.2
0	0	9.4	22.7					22.7
Mean			22.7	31.8	28.3	31.3	32.2	29.2

TABLE 6.

1970 Crop Yields (bus/ac) 2245 Ex

69ME1 - Westonia

Soil type - Grey brown coarse sandy loam over yellow sandy loam.

N	P	S	Nil or Mineral S	Compound (C)	Super + Urea	C + Gypsum	C + Min S	Mean	1969 Mean
lbs/ac									
0	0	0	16.3					16.3	6.2
11.5	2.5	0		24.6				24.6	8.8
23.0	5.0	0		25.9				25.9	9.8
34.5	7.5	0		27.2				27.2	9.8
11.5	2.5	3.1			21.7	21.1	21.3	21.4	7.9
23.0	5.0	6.3			24.8	24.2	24.0	24.3	8.6
34.5	7.5	9.4			27.1	25.5	26.6	26.4	9.1
0	0	9.4	15.6					15.6	6.2
Mean			15.9	25.9	24.5	23.6	23.8	22.7	
1969 Mean			6.2	9.5	8.2	8.6	8.9		8.3

TABLE 7.

1970 Crop Yields (bus/ac) 2245 Ex

69TS1 - Three Springs.

Soil type - Red brown clay loam.

N	P	S	Nil	Compound	Compound + Gypsum	Mean	1969 Mean
lbs/ac							
0	0	0	31.2			31.2	14.9
11.5	2.5	3.1		32.9	31.1	32.0	14.4
23.0	5.0	6.3		35.7	35.8	35.7	16.2
34.5	7.5	9.4		37.6	39.0	38.3	15.4
Mean			31.2	35.4	35.3	34.2	
1969 Mean			14.9	15.0	15.9		15.2

TABLE 8.

1970 Mean Sheep Body Weights (lbs) 2639 Ex

Date	19.1.70	19.2.70	26.3.70	23.4.70	15.6.70	10.8.70	5.10.70	7.1.71
Day No.	159	190	225	253	306	362	418	511
Control	90.0	87.8	91.0	80.1	84.1	100.5	121.6	130.1
+ Gypsum	93.7	89.8	91.6	79.3	82.7	98.8	118.4	130.2

TABLE 9.

Mean Pasture Yield (lbs/ac) 2639 Ex

Cut 15.9.70 10 x 8 in. x 35 in. quadrats/paddock

Reps.	Control	+ Gypsum
1	1,958	1,723
2	1,656	1,497
3	2,008	1,738
4	2,002	1,872
Mean	1,909	1,614

A.o.V.

Variance due to	d.f.	V.R.
Replications	3	40.14 * *
Treatments	1	80.74 * *
Error	3	
Total	7	
Within plot error	71	
TOTAL	78	

TABLE 10.

Mean Pasture Analysis 2639 Ex

Date	Day No.	Control				+ Gypsum			
		N	S (%)	SO ₄	N/S	N	S (%)	SO ₄	N/S
19. 1.70	159	1.17	0.11	0.01	10.6	1.38	0.11	0.02	12.2
19. 2.70	190	1.53	0.11	0.01	13.5	1.57	0.12	0.01	13.4
26. 3.70	225	1.53	0.10	0.03	16.3	1.64	0.12	0.04	14.2
23. 4.70	253	1.52	0.10	0.04	15.2	1.52	0.12	0.07	15.3
10. 6.70	301	3.66	0.28	0.08	13.6	3.96	0.25	0.07	14.0
1. 7.70	322*								
6. 8.70	358*								
15. 9.70	398*								
3.12.70	476 G	1.79	0.10		17.9	1.85	0.12		15.7
	C	3.07	0.13		22.9	3.20	0.17		19.2
	P				20.2				16.6
7. 1.71	511 G	1.28	0.10	0.02	13.1	1.30	0.12	0.03	11.0
	C	1.88	0.12	0.03	15.4	1.97	0.15	0.04	13.1
	P	2.27	0.14	0.03	16.4	2.42	0.19	0.04	12.8

* Not returned from Government Chemical Laboratories.

G = Grass

C = Clover

P = Paddock (bulk sample)

TABLE 11.

Mean Pasture Dry Matter Yield (Kgm/ha) - cut 14.7.70 1749 Ex

Super R.	1st Year Pasture				2nd Year Pasture			
	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean
1.03	650	880	1,300	945	785	1,000	1,450	1,080
1.28	470	435	735	545	670	700	880	750
1.53	435	620	615	555	665	820	665	715
1.62	660	555	490	570	485	730	465	580
1.89	575	400	560	510	555	500	540	535
Mean	560	575	740	625	630	750	800	730

Variance due to	d.f.	V.R.	d.f.	V.R.
Treatments			14	21.60 ***
Super (P)	2	1.71 n.s.	2	13.79 ***
S.R.	4	3.34 n.s.	4	53.58 ***
P x S.R.	8			
Error	149		344	

TABLE 12.

Mean Pasture Dry Matter Yield (Kgm/ha) - 2.9.70 1749 Ex
(Pasture Meter $r = 0.945$ ***)

Super S.R.	1st Year Pasture				2nd Year Pasture			
	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean
1.03	1,355	1,775	2,740	1,955	1,390	1,830	2,325	1,850
1.28	1,200	1,510	1,495	1,400	1,600	1,435	1,400	1,480
1.53	1,020	1,350	1,470	1,280	1,140	1,635	1,190	1,320
1.69	1,135	1,540	1,270	1,315	1,120	1,370	900	1,130
1.89	1,195	1,020	1,325	1,180	1,300	1,040	1,215	1,185
Mean	1,180	1,440	1,660	1,425	1,310	1,460	1,405	1,390

A.o.V.

Variance due to	d.f.	V.R.	d.f.	V.R.
Super (P)	2	3.12 n.s.	2	< 1 n.s.
S.R.	4	3.08 n.s.	4	2.85 n.s.
P x S.R.	8			

TABLE 13.

Mean Pasture Dry Matter Yield (Kgm/ha) - cut 18.11.70 1749 Ex

Super S.R.	1st Year Pasture				2nd Year Pasture			
	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean
1.03	2,025	2,040	1,690	1,920	1,815	1,970	2,235	2,010
1.28	1,465	1,785	1,825	1,690	1,315	1,960	2,020	1,765
1.53	1,620	1,925	1,295	1,615	1,710	2,000	1,640	1,785
1.69	1,710	2,030	1,690	1,810	1,660	2,295	1,445	1,800
1.89	1,575	1,335	1,610	1,505	1,820	1,435	1,480	1,580
Mean	1,680	1,825	1,620	1,710	1,665	1,930	1,765	1,785

TABLE 14.

Seed Weight (Kg/ha) 1749 Ex

Super S.R.	1st Year Pasture				2nd Year Pasture			
	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean
1.03	315	340	280	310	265	280	355	300
1.28	290	285	280	285	270	335	235	280
1.53	215	365	245	275	255	300	195	250
1.69	250	300	230	260	280	260	235	260
1.89	280	240	315	280	200	245	250	230
Mean	270	305	270	280	255	285	255	260

TABLE 15.

Crop Yield (Bus/ac)* 1749 Ex

Super S.R.	0 lbs/ac	60 lbs/ac	150 lbs/ac	Mean
1.03	18.6	16.0	17.2	17.3
1.28	15.7	20.7	15.7	17.4
1.53	21.7	18.5	15.1	18.0
1.69	20.4	18.7	18.2	19.1
1.89	20.7	18.2	20.5	19.8
Mean	19.3	18.4	17.3	

* Crop sown with 50 lb super/ac.