

2021 Parndana Small Plot Fertiliser Trial

Background

The BioAg fertiliser trial was established in 2019. The trial has 6 treatments with 4 replications and compares various BioAg products and rates against an annual application of single super. In 2021, the site received the annual and biennial applications of fertiliser.

The site is located on M & M Tremaine's at the big bend on the Playford Highway east of Parndana. The pasture is an annual regenerating pasture. In 2019, the composition was 70:30 clover:capeweed. The site was burnt in January 2020 and it is likely that this influenced capeweed to dominate the sward with the ratio tending 10:90 clover:capeweed in 2020. In 2021, the composition of the sward was beginning to be more inclusive of grasses with approximately 20% grass and 80% capeweed.

What was done

The biomass was measured by mowing with a push behind mower and weighing the catchings. The site was not grazed.

Unfortunately, an application of single super fertilizer was spread across the site by a contractor at the beginning of 2021. The site was mown to try and 'suck up' the fertilizer granules but wasn't really successful. Below is a summary from the site from the past 3 years. In 2021, only one cut was taken in November.

Results

There was no significant difference on a dry matter basis between all fertilizer products during the 2021 season, nor was there an effect of the cumulative amount over the three years.

The site is an unresponsive P site.

Treatments	Product & Rate	P	S
A	CONTROL	0	0
B	275kg/ha BioAg Superb (8.6P, 6.9S) - biennial	23.65	18.975
C	200kg/ha BioAgPhos S10 (11.7P, 10S) - biennial	23.4	20
D	125kg/ha Single (8.8P, 11S) - annual	11	13.75
E	135kg/ha BioAg Superb (8.6P, 6.9S) - annual	11.61	9.315
F	275kg/ha Superb (8.6P, 6.9S) + 2t lime +TE - biennial	23.65	18.975

Table 1: Treatments and kgs of P and S applied at time of application



Photo taken November 2021.

Funding & Sponsorship

- BioAg
- M & M Tremaine

Further Information

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Treatment	2019	2020	2021	Mean
Control (A)	12029	9998	3871	8708
275kg Superb – biennial (B)	12023	9797	4146	8570
200kg PhosS10 – biennial (C)	11734	10373	3927	8749
125kg Single – annual (D)	12112	9930	3683	8540
135kg Superb – annual (E)	11596	9881	4177	8640
275kg Superb+lime+Trace Elements –biennial (F)	11911	10029	4296	8745
P val	0.964	0.893	0.638	0.969
SE	844	751	499	478
CV	8%	6%	14%	5%
P val (rb)	0.965	0.861	0.757	0.975

Table 2: Means and standard errors of each treatment at each harvest time. Units are kg/ha

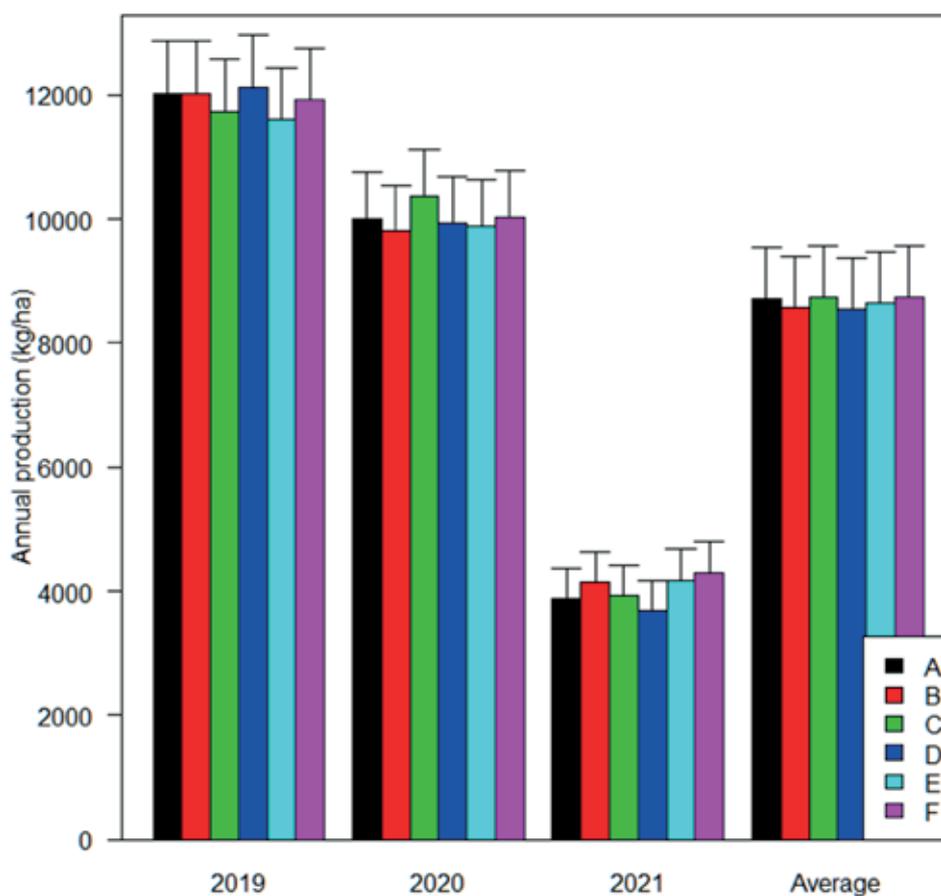


Figure 1: Bar plot of averages across treatments of cuts at each date for Parndana trial. Error bars are standard errors. Refer to codes in Table 1 to identify treatments. Data analysed by Rho Environmetrics Pty Ltd.

