



San Juan County

WASHINGTON STATE UNIVERSITY
EXTENSION

Barn Owl Wheat Amendment and Seeding Rate Trial 2020

Table 1. Wheat, Weeds, and Soil Response to Amendment. Mean \pm standard deviation (SD) from the mean for each treatment

Observation	Control	Compost	Fertilizer	p^1
Agronomic				
Grain Yield (lbs./acre)	704 \pm 551	533 \pm 404	748 \pm 621	0.279932
Height (cm)	33.2 \pm 3.7	34.9 \pm 2.8	36.7 \pm 3.8	0.114001
Percent Cover and Biomass				
7-14 Stand Count	19.1 \pm 9.8	20.2 \pm 6.7	20.3 \pm 10.4	0.915131
7-14 Wheat % Cover	28.5 \pm 22.7	24.4 \pm 15.9	30.4 \pm 27.6	0.538847
7-14 Weeds % Cover	60.3 \pm 24.5	67.8 \pm 16.7	76.4 \pm 23.9	0.301480
8-5 Wheat % Cover	29.3 \pm 30.4	26.3 \pm 25.8	29.1 \pm 29.8	0.920534
8-5 Weeds % Cover	51.1 \pm 35.2	59.4 \pm 30.4	64.2 \pm 29.1	0.296428
8-5 Wheat Biomass (g)	53.2 \pm 50.6	44.8 \pm 49.1	63.5 \pm 61.1	NA
8-5 Weeds Biomass (g)	28.6 \pm 27.4	43.8 \pm 26.5	73.9 \pm 63.2	0.084498
Soil Characteristics				
Infiltration T2 (sec).	122.7 \pm 37.8	283 \pm 123	209 \pm 137	0.271

¹The probability value associated with the treatment in the analysis of variance. For observations where a significant treatment effect ($p \leq 0.05$) was indicated, values are highlighted in bold. Values that are not available are indicated as NA.



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Table 2. Wheat and Weeds Response to Seeding Rate (lbs./ acre). Mean \pm standard deviation (SD) from the mean for each treatment

Observation	Low - 60	Med. - 120	High - 180	p^1
Agronomic				
Grain Yield (lbs./acre)	595 \pm 475	703 \pm 547	687 \pm 592	0.612666
Height (cm)	33.2 \pm 1.5	36.7 \pm 4.8	34.9 \pm 4.0	0.695552
Percent Cover and Biomass				
7-14 Stand Count	14.4 \pm 8.1^a	23.4 \pm 8.0^b	21.7 \pm 8.3^{ab}	0.017775
7-14 Wheat % Cover	19.3 \pm 16.8	30.3 \pm 22.3	33.7 \pm 25.4	0.040794
7-14 Weeds % Cover	73.3 \pm 19.8	70.3 \pm 21.4	60.8 \pm 25.6	0.131018
8-5 Wheat % Cover	25.6 \pm 25.6	29.9 \pm 31.5	29.3 \pm 28.8	0.848815
8-5 Weeds % Cover	25.6 \pm 25.6	29.9 \pm 31.5	29.3 \pm 28.8	0.874792
8-5 Wheat Biomass (g)	48.9 \pm 48.6	61.2 \pm 59.8	51.4 \pm 53.6	NA
8-5 Weeds Biomass (g)	43.9 \pm 50.2	48.2 \pm 47.2	54.2 \pm 42.7	0.866793

¹The probability value associated with the treatment in the analysis of variance. For observations where a significant treatment effect ($p \leq 0.05$) was indicated, values are highlighted in bold. Pairwise statistically significant differences calculated using Tukey's Honestly Significant Difference (Tukey's HSD) test are indicated by different letter superscripts. Values that are not available are indicated as NA.

Trial Methods

5/10/19 1000 Kernel count, germination test

5/11/20 Initial soil sample

5/11/20 Planting

7/14/20 Stand count, percent cover estimate

8/5/20 Percent cover estimate, biomass collection, stripe rust estimate

9/11/20 Harvest, height, no lodging recorded

9/21/20 Biomass weighed and recorded after being air-dried

9/30/20 Soil infiltration, post-harvest soil sample

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