

## Barn Owl Wheat Amendment and Seeding Rate Trial 2019

**Table 1. Amendment for 2019.** Mean  $\pm$  standard deviations (SD) for treatments

Observation	Control	Compost	Fertilizer	$p^1$
<b>Agronomic</b>				
Grain Yield (lbs./ acre)	<b>1806 <math>\pm</math> 337<sup>a</sup></b>	<b>2182 <math>\pm</math> 283<sup>b</sup></b>	<b>1878 <math>\pm</math> 381<sup>a</sup></b>	<b>0.025</b>
Height (cm)	109.6 $\pm$ 5.1	112.4 $\pm$ 3.1	110.4 $\pm$ 4.9	0.360
Lodging	2.6 $\pm$ 1.8	2.78 $\pm$ 2	6.4 $\pm$ 8.1	NA
<b>Percent cover and biomass</b>				
6-18 Stand Count	42.3 $\pm$ 20.8	42.7 $\pm$ 19.1	36 $\pm$ 18.6	0.712
6-18 Wheat % Cover	61.1 $\pm$ 14.6	63.1 $\pm$ 19.8	57.7 $\pm$ 15.7	0.796
6-18 Weeds % Cover	22.9 $\pm$ 12.5	28.9 $\pm$ 12.1	32.5 $\pm$ 13.1	NA
7-23 Wheat % Cover	55 $\pm$ 17	55.6 $\pm$ 10.1	55 $\pm$ 18.2	0.996
7-23 Weeds % Cover	29.4 $\pm$ 12.7	32.8 $\pm$ 14.6	36.1 $\pm$ 16.7	0.645
7-23 Wheat Biomass (g)	189 $\pm$ 53.1	195.3 $\pm$ 48.2	172.8 $\pm$ 49.7	0.641
7-23 Weeds Biomass (g)	24.1 $\pm$ 21.4	41.6 $\pm$ 32.8	52.7 $\pm$ 27.3	0.115
7-23 Nightshade Biomass (g)	17.9 $\pm$ 21.5	30.2 $\pm$ 28.6	36.3 $\pm$ 24.9	0.288
<b>Soil characteristics</b>				
Infiltration T2 (sec.)	269 $\pm$ 281.1	284.3 $\pm$ 255.9	186.4 $\pm$ 169	0.622
Soil organic matter (%)	6.57 $\pm$ 0.35	5.93 $\pm$ 0.77	6.87 $\pm$ 1.01	0.425
pH	5.93 $\pm$ 0.12	6 $\pm$ 0.1	5.87 $\pm$ 0.15	0.051
NO <sub>3</sub>	<b>13.97 <math>\pm</math> 4.25<sup>ab</sup></b>	<b>10.4 <math>\pm</math> 2.02<sup>a</sup></b>	<b>15.17 <math>\pm</math> 2.63<sup>b</sup></b>	<b>0.026</b>
NH <sub>4</sub>	5.93 $\pm$ 0.80	6.3 $\pm$ 0.89	7.43 $\pm$ 2.24	0.249

<sup>1</sup>The 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.

<sup>a, b, c</sup>Differences between letters following mean treatment and standard deviation values represent statistically significant post-hoc differences between treatments using Tukey's HSD (honestly significant difference) test.

**Table 2. Seeding rate for 2019 (lbs./ acre).** Mean  $\pm$  standard deviations (SD) for treatments

Observation	Low — 60	Medium — 120	High — 180	$p^1$
<b>Agronomic</b>				
Grain Yield (lbs./ acre)	<b>1747 <math>\pm</math> 280<sup>a</sup></b>	<b>2007 <math>\pm</math> 412<sup>ab</sup></b>	<b>2113 <math>\pm</math> 315<sup>b</sup></b>	<b>0.040</b>
Height (cm)	110.7 $\pm$ 6.3	111 $\pm$ 4.1	110.8 $\pm$ 4.1	0.987
Lodging	3.7 $\pm$ 4.6	5.44 $\pm$ 7.5	2.67 $\pm$ 1.6	NA
<b>Percent cover and biomass</b>				
6-18 Stand Count	20.4 $\pm$ 2.3	41.7 $\pm$ 13.2	58.9 $\pm$ 12.7	NA
6-18 Wheat % Cover	<b>43.3 <math>\pm</math> 11.9<sup>a</sup></b>	<b>64.7 <math>\pm</math> 10.4<sup>b</sup></b>	<b>73.9 <math>\pm</math> 8.5<sup>b</sup></b>	<b>0.001</b>
6-18 Weeds % Cover	34.2 $\pm$ 15.7	27.5 $\pm$ 12.7	22.7 $\pm$ 6.6	0.105
7-23 Wheat % Cover	<b>43.3 <math>\pm</math> 8.3<sup>a</sup></b>	<b>57.8 <math>\pm</math> 13.0<sup>b</sup></b>	<b>64.4 <math>\pm</math> 14.9<sup>b</sup></b>	<b>0.001</b>
7-23 Weeds % Cover	<b>43.9 <math>\pm</math> 14.7<sup>a</sup></b>	<b>28.9 <math>\pm</math> 8.9<sup>b</sup></b>	<b>25.6 <math>\pm</math> 13.1<sup>b</sup></b>	<b>0.011</b>
7-23 Wheat Biomass (g)	<b>141.7 <math>\pm</math> 30.5<sup>a</sup></b>	<b>202.7 <math>\pm</math> 31.4<sup>b</sup></b>	<b>212.8 <math>\pm</math> 51.6<sup>b</sup></b>	<b>0.002</b>
7-23 Weeds Biomass (g)	<b>60.7 <math>\pm</math> 33.7<sup>a</sup></b>	<b>29.8 <math>\pm</math> 15.6<sup>b</sup></b>	<b>27.9 <math>\pm</math> 24.6<sup>b</sup></b>	<b>0.022</b>
7-23 Nightshade Biomass (g)	<b>47.9 <math>\pm</math> 30.3<sup>a</sup></b>	<b>16.6 <math>\pm</math> 15.2<sup>b</sup></b>	<b>20 <math>\pm</math> 17.0<sup>b</sup></b>	<b>0.008</b>

<sup>1</sup>The 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.

<sup>a, b, c</sup>Differences between letters following mean treatment and standard deviation values represent statistically significant post-hoc differences between treatments using Tukey's HSD (honestly significant difference) test.