



High Plains Ag Lab, Sidney

2023 Spring Cover Crop Variety Trial (Rainfed)

UNIVERSITY of NEBRASKA
LINCOLN

| Type | Species | Variety | Stand count (2ft ²) | Std err | GC (%) | Std err | Height (inches) | Std err | Biomass (kg ha ⁻¹) | Std err | C:N ratio | Std err | CP (%) | Std err | RFQ (%) | Std err |
|--------------------------|------------------------|----------------------|------------------------------------|------------|-----------|------------|--------------------|------------|-----------------------------------|------------|--------------|------------|-----------|------------|------------|------------|
| Grasses | | | | | | | | | | | | | | | | |
| 1 | Spring forage barley | Lavina | 46 | 4 | 47.8 | 5.4 | 10.2 | 0.3 | 965 | 277 | 9 | 0.4 | 27 | 1.9 | 109 | 18 |
| 2 | Spring barley | Robust | 53 | 3 | 41.6 | 5.9 | 11.5 | 0.7 | 936 | 242 | 11 | 0.6 | 24 | 2.0 | 124 | 16 |
| 3 | Winter barley | P919 | 53 | 2 | 37.6 | 4.5 | 8.7 | 0.7 | 666 | 111 | 9 | 0.2 | 27 | 0.4 | 112 | 3 |
| 4 | Spring oats | Goliath | 42 | 6 | 37.3 | 3.9 | 12.6 | 0.5 | 908 | 274 | 11 | 0.8 | 24 | 1.8 | 146 | 15 |
| 5 | Spring oats | Hayden | 54 | 3 | 36.3 | 3.6 | 11.4 | 0.2 | 882 | 98 | 12 | 0.2 | 22 | 0.9 | 144 | 2 |
| 6 | Spring oats | Jerry | 60 | 1 | 39.5 | 6.3 | 12.3 | 0.8 | 1574 | 644 | 13 | 0.6 | 20 | 1.0 | 165 | 10 |
| 7 | Spring triticale | Surge | 43 | 5 | 38.0 | 5.6 | 9.8 | 0.6 | 577 | 55 | 11 | 0.3 | 22 | 0.8 | 130 | 2 |
| Legumes | | | | | | | | | | | | | | | | |
| 8 | Spring pea | Pea4010 | 18 | 1 | 13.1 | 2.3 | 7.6 | 0.6 | 366 | 73 | 12 | 0.8 | - | - | - | - |
| 9 | Winter pea | Survivor | 28 | 2 | 17.5 | 2.0 | 4.9 | 0.1 | 339 | 71 | 12 | 1.0 | - | - | - | - |
| 10 | Winter pea | WyoWinter | 30 | 2 | 13.2 | 1.8 | 5.1 | 0.3 | 322 | 47 | 12 | 0.6 | - | - | - | - |
| 11 | Faba bean | Petite | 14 | 2 | 8.7 | 1.3 | 6.3 | 0.5 | 254 | 33 | 13 | 0.3 | - | - | - | - |
| Brassicas | | | | | | | | | | | | | | | | |
| 12 | Rapeseed | Bonar | 33 | 8 | 11.2 | 4.9 | 3.6 | 0.3 | 265 | 113 | 10 | 0.7 | - | - | - | - |
| 13 | Rapeseed | Barsica | 33 | 12 | 11.6 | 3.4 | 3.9 | 0.5 | 277 | 90 | 9 | 0.7 | - | - | - | - |
| 14 | Collard | Impact | 39 | 1 | 8.4 | 1.9 | 3.2 | 0.2 | 202 | 28 | 9 | 0.4 | - | - | - | - |
| Two-way mixture | | | | | | | | | | | | | | | | |
| 15 | Oat+Pea | Goliath+4010 | 38 | 3 | 24.8 | 3.9 | - | - | 684 | 177 | 12 | 0.1 | - | - | - | - |
| 16 | Oat+Pea | Hayden+4010 | 34 | 3 | 29.0 | 6.3 | - | - | 814 | 233 | 13 | 0.1 | - | - | - | - |
| 17 | Triticale+Pea | Surge+4010 | 46 | 3 | 38.2 | 2.6 | - | - | 908 | 73 | 12 | 0.5 | - | - | - | - |
| Three-way mixture | | | | | | | | | | | | | | | | |
| 18 | Barley+Pea+Rapeseed | Lavina+4010+Barsica | 38 | 2 | 38.1 | 2.2 | - | - | 906 | 55 | 11 | 0.7 | - | - | - | - |
| 19 | Oat+Pea+Rapeseed | Goliath+4010+Barsica | 37 | 3 | 24.9 | 4.1 | - | - | 558 | 137 | 12 | 0.5 | - | - | - | - |
| 20 | Triticale+Pea+Rapeseed | Surge+4010+Barsica | 38 | 3 | 19.2 | 3.7 | - | - | 425 | 104 | 12 | 0.5 | - | - | - | - |

†Std err: Standard error; GC: Ground Cover; C:N: Carbon:Nitrogen; CP: Crude Protein; RFQ: Relative Forage Quality. The standard error value (n=4) is for each corresponding parameter on the left column.

Management details

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|--|---|
| Cooperator/site: | HPAL/Cheyenne County |
| Soil type: | Keith silt loam |
| Planting date: | April 03, 2023 |
| Seeding depth: | 0.5-1" |
| Soil moisture at planting: | Adequate moisture, had coulter plugging issues, raised coulters 2/3 way through |
| Implement/tools: | DCS research drill |
| Rows/plot: | 6 |
| Row spacing: | 10" |
| Plot length: | 30' |
| Alley width: | 3' |
| Tillage: | No-till |
| Previous crop: | Corn |
| Pre-plant herbicide: | None |
| Fertilizer at planting: | None |
| Irrigation: | Non-irrigated |
| Total precipitation during growing period: | 8.3" |
| Termination date: | June 01, 2023 |