

Table 1. Performance of 25 winter wheat cultivars tested under no-till, dryland conditions near Cut Bank, Montana, 2019 (Exp. 3864).

| Entry # | Cultivar | Grain Yield Bu/acre | Test Weight Lb/bu | Plant Height Inches | Protein % |
|--------------------|-------------------|------------------------|----------------------|------------------------|--------------------|
| 18 | LCS Jet | 74.4 | 57.8 | 26.7 | 12.2 |
| 14 | MTS1588 (Bobcat) | 73.7 | 59.4 | 28.7 | 13.5 |
| 10 | SY Monument | 72.3 | 59.2 | 30.0 | 12.5 |
| 13 | Ray | 71.7 | 60.3 | 36.0 | 12.0 |
| 8 | Northern | 71.5 | 60.0 | 30.3 | 12.7 |
| 9 | Loma | 70.9 | 60.1 | 29.7 | 13.2 |
| 21 | AAC Wildfire | 70.2 | 59.5 | 31.7 | 12.7 |
| 6 | Keldin | 70.1 | 60.3 | 29.7 | 12.9 |
| 1 | Yellowstone | 70.1 | 60.0 | 32.0 | 12.7 |
| 19 | MT1683 | 70.1 | 58.1 | 31.3 | 13.0 |
| 7 | SY Clearstone | 69.6 | 59.6 | 34.3 | 12.1 |
| 17 | MT1642 | 68.8 | 59.3 | 31.7 | 13.0 |
| 11 | fourOsix | 68.6 | 60.3 | 29.7 | 12.8 |
| 25 | MT1782 | 68.1 | <u>61.3</u> | 27.3 | 13.4 |
| 16 | MTCS1601 | 67.9 | 60.2 | 29.0 | 13.1 |
| 24 | MT1750 | 67.6 | 60.7 | 27.3 | 12.7 |
| 20 | Byrd CLP | 67.5 | 59.5 | 29.7 | 12.1 |
| 23 | MT1747 | 67.0 | 60.6 | 29.0 | 13.1 |
| 15 | MT1564 (Flathead) | 66.4 | 60.5 | 29.3 | 13.2 |
| 2 | Judee | 64.9 | 61.0 | 28.7 | 14.1 |
| 5 | Decade | 64.1 | 59.7 | 31.3 | 14.1 |
| 4 | Brawl CLP | 63.9 | 61.2 | 27.7 | <u>14.6</u> |
| 12 | MTW1491 | 62.1 | 60.5 | 30.0 | 12.1 |
| 22 | MTCL1732 | 61.8 | 57.8 | 28.7 | 13.0 |
| 3 | Warhorse | 60.9 | 58.2 | 30.0 | 14.0 |
| Average | | 68.2 | 59.8 | 30.0 | 13.0 |
| LSD(0.05) | | ns | 1.3 | 1.8 | 1.0 |
| C.V.(%) | | 8.6 | 1.4 | 3.6 | 4.5 |
| Analysis as | | LAT | RCB | RCB | RCB |
| Lattice efficiency | | 122% | 100% | 103% | 102% |

Underscore = indicates greatest value within a column

Bold = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD at p=0.05.

LAT = lattice design, RCB = randomized complete block design

Table 2. Performance of 25 winter wheat cultivars tested under no-till, dryland conditions near Shelby/Devon, Montana, 2019 (Exp. 3865).

| Entry # | Cultivar | Grain Yield Bu/acre | Test Weight Lb/bu | Plant Height Inches | Sawfly Cutting % | Protein % |
|--------------------|-------------------|------------------------|-------------------------|---------------------------|------------------------|--------------------|
| 14 | MTS1588 (Bobcat) | <u>64.8</u> | 61.5 | 26.3 | <u>12</u> | 12.7 |
| 8 | Northern | 59.1 | 61.9 | 29.0 | 60 | 12.7 |
| 5 | Decade | 58.1 | 60.8 | 26.7 | 50 | 13.0 |
| 17 | MT1642 | 55.0 | 61.5 | 26.3 | 59 | 12.9 |
| 3 | Warhorse | 54.6 | 61.8 | 24.7 | 17 | 13.2 |
| 1 | Yellowstone | 53.7 | 59.8 | 27.3 | 85 | 12.8 |
| 9 | Loma | 52.9 | 61.9 | 26.0 | 47 | 13.2 |
| 16 | MTCS1601 | 52.8 | 62.5 | 27.7 | 50 | 12.5 |
| 22 | MTCL1732 | 52.5 | 60.2 | 25.7 | 23 | 12.4 |
| 13 | Ray | 49.8 | 59.9 | 31.3 | 70 | 12.4 |
| 24 | MT1750 | 49.7 | 62.5 | 23.3 | 30 | 12.3 |
| 23 | MT1747 | 48.7 | 62.2 | 24.7 | 72 | 12.2 |
| 19 | MT1683 | 48.0 | 60.7 | 29.3 | 80 | 13.0 |
| 20 | Byrd CLP | 47.9 | 61.7 | 27.0 | 70 | 11.7 |
| 21 | AAC Wildfire | 46.7 | 60.7 | 27.0 | 70 | 12.8 |
| 11 | fourOsix | 46.0 | 60.8 | 24.0 | 92 | 12.7 |
| 6 | Keldin | 45.9 | 61.1 | 25.0 | 67 | 12.5 |
| 12 | MTW1491 | 45.8 | 61.7 | 28.0 | 72 | 12.6 |
| 7 | SY Clearstone | 44.7 | 60.1 | 27.3 | 88 | 13.1 |
| 2 | Judee | 43.9 | 62.3 | 26.3 | 73 | <u>13.7</u> |
| 10 | SY Monument | 42.2 | 59.7 | 24.0 | 76 | 11.9 |
| 4 | Brawl CLP | 42.1 | <u>63.1</u> | 24.0 | 70 | 12.6 |
| 25 | MT1782 | 40.7 | 61.7 | 23.0 | 40 | 13.0 |
| 15 | MT1564 (Flathead) | 38.9 | 61.6 | 26.3 | 83 | 12.9 |
| 18 | LCS Jet | 37.9 | 58.4 | 22.3 | 92 | 12.4 |
| Average | | 48.9 | 61.2 | 26.1 | 61.9 | 12.7 |
| LSD(0.05) | | 11.8 | 1.3 | 2.8 | 32.3 | 0.5 |
| C.V.(%) | | 13.9 | 1.3 | 6.5 | 31.8 | 2.3 |
| Analysis | | LAT | RCB | RCB | RCB | LAT |
| Lattice efficiency | | 105% | 101% | 99% | 99% | 115% |

Underscore = indicates greatest value within a column

Bold = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD at p=0.05.

LAT = lattice design, RCB = randomized complete block design

Table 3. Performance of 25 winter wheat cultivars tested under no-till, dryland conditions near Choteau, Montana, 2019 (Exp. 3866).

| Entry # | Cultivar | Grain Yield | Test Weight | Plant Height | Sawfly Cutting | Protein |
|--------------------|-------------------|--------------------|-------------|--------------|----------------|-------------|
| | | Bu/acre | Lb/bu | Inches | % | % |
| 9 | Loma | <u>88.5</u> | 62.1 | 31.7 | 43 | 13.8 |
| 6 | Keldin | 88.5 | 62.8 | 32.7 | 53 | 13.4 |
| 12 | MTW1491 | 88.5 | 62.3 | 36.7 | 83 | 13.1 |
| 21 | AAC Wildfire | 88.0 | 62.5 | 38.3 | 37 | 13.2 |
| 14 | MTS1588 (Bobcat) | 86.9 | 62.6 | 31.0 | 27 | 13.3 |
| 20 | Byrd CLP | 86.8 | 62.8 | 35.0 | 45 | 12.1 |
| 17 | MT1642 | 86.2 | 61.9 | 32.7 | 37 | 12.9 |
| 1 | Yellowstone | 81.8 | 61.2 | 35.0 | 79 | 13.1 |
| 22 | MTCL1732 | 81.2 | 62.2 | 32.7 | 43 | 12.9 |
| 23 | MT1747 | 81.2 | 64.2 | 30.7 | 30 | 12.7 |
| 24 | MT1750 | 80.6 | 64.6 | 30.0 | 20 | 12.9 |
| 16 | MTCS1601 | 79.0 | 63.4 | 34.0 | 25 | 13.2 |
| 25 | MT1782 | 78.5 | 64.0 | 32.7 | 53 | 13.7 |
| 8 | Northern | 77.7 | 62.2 | 31.0 | 63 | 13.3 |
| 11 | fourOsix | 77.6 | 62.5 | 31.7 | 67 | 13.1 |
| 13 | Ray | 76.8 | 60.6 | 36.0 | 70 | 13.0 |
| 3 | Warhorse | 75.8 | 61.8 | 32.0 | 33 | 13.9 |
| 19 | MT1683 | 75.0 | 61.6 | 35.3 | 82 | 13.4 |
| 18 | LCS Jet | 74.8 | 60.3 | 28.0 | 80 | 13.3 |
| 7 | SY Clearstone | 73.9 | 61.5 | 34.0 | 73 | 13.3 |
| 2 | Judee | 73.3 | 63.8 | 33.0 | 60 | 13.9 |
| 10 | SY Monument | 73.1 | 61.9 | 31.0 | 57 | 12.7 |
| 4 | Brawl CLP | 69.7 | 63.8 | 30.7 | 33 | 14.1 |
| 15 | MT1564 (Flathead) | 69.6 | 62.6 | 32.7 | 53 | 13.2 |
| 5 | Decade | 67.7 | 62.2 | 33.3 | 40 | 13.8 |
| Average | | 79.2 | 62.4 | 32.9 | 51.5 | 13.3 |
| LSD(0.05) | | 12.1 | 0.9 | 2.9 | 32.9 | 0.4 |
| C.V.(%) | | 8.7 | 0.9 | 5.5 | 38.9 | 1.6 |
| Analysis by | | LAT | LAT | RCB | RCB | LAT |
| Lattice efficiency | | 110% | 109% | 101% | 86% | 107% |

Underscore = indicates greatest value within a column

Bold = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD at p=0.05.

LAT = lattice design, RCB = randomized complete block design