

**PROJECT TITLE:** Statewide Spring Wheat Variety Performance - 2001

**PROJECT LEADER:**

L. Talbert, Spring Wheat breeder, Bozeman

**PROJECT PERSONNEL:**

S. Lanning, PSPP, Bozeman

D.M. Wichman, CARC, Moccasin

J.L.A. Eckhoff, EARC, Sidney

G.R. Carlson, NARC, Havre

R.N. Stougaard, NWARC Kalispell

K.D. Kephart, SARC, Huntley

G.D. Kushnak, WTARC, Conrad

**OBJECTIVE:** To evaluate new and existing varieties and experimental lines of spring wheat under various growing conditions and environments in Montana.

**RESULTS:** The 2001 Advanced Spring Wheat yield trial was grown at three irrigated and seven rainfed sites across Montana. Irrigated sites were at Sidney, Huntley, and Bozeman. Kalispell is considered high-rainfall site. Replicated multiple-row plots were established at all locations using standard research techniques. Summaries of yield, test weight, protein content, plant height at maturity, and heading date are shown in Tables 1, 2, 3, 4, and 5, respectively.

**SUMMARY:** Highest yielding lines on a statewide basis were MT9806, MT9874, Reeder, and MT0008. Highest yielding varieties at individual sites were MT9874 at **Havre**, MTHW0001 at **Sidney dryland**, GM40019 at **Sidney irrigated**, MT0008 at **Moccasin**, MT0039 at **Conrad**, MT0053 at **Huntley dryland**, MT0009 at **Huntley irrigated**, MT9806 at **Kalispell** (high rainfall), Hi-Line at **Bozeman dryland**, and MT0009 at **Bozeman irrigated**.

**FUTURE PLANS:** New and existing varieties and experimental lines will continue to be evaluated at Bozeman and the Research Centers in Montana, so that breeders can release improved varieties and producers can have information on varieties best adapted to conditions in their areas.

Table 1. 2001 yield (bu/ac) summary for the advanced spring wheat nursery grown across Montana.

| ID       | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Kalispell<br>Hi-rainfall | Bozeman<br>Dry | Bozeman<br>Irr | Ave  | Rank | BYX  | RSQ  |
|----------|--------------|---------------|---------------|-----------------|---------------|----------------|----------------|--------------------------|----------------|----------------|------|------|------|------|
| BZ991019 | 19.1         | 39.8          | 63.4          | 41.6            | 12.2          | 23.2           | 115.6          | 117.1                    | 71.6           | 88.7           | 59.2 | 38   | 0.99 | 0.98 |
| BZ991210 | 17.5         | 48.4          | 48.1          | 38.0            | 14.0          | 24.1           | 109.5          | 120.3                    | 74.4           | 79.7           | 57.5 | 54   | 0.97 | 1.00 |
| Hank     | 20.5         | 44.9          | 59.2          | 45.6            | 13.7          | 26.2           | 107.0          | 135.5                    | 77.9           | 93.5           | 62.5 | 13   | 1.03 | 0.98 |
| Conan    | 20.4         | 44.4          | 56.7          | 40.3            | 15.1          | 26.3           | 101.5          | 104.3                    | 73.6           | 80.1           | 56.3 | 59   | 0.83 | 0.97 |
| BZ996434 | 20.0         | 42.4          | 48.9          | 37.3            | 12.1          | 27.1           | 100.7          | 116.9                    | 73.2           | 80.5           | 55.8 | 60   | 0.92 | 1.00 |
| BZ996472 | 18.6         | 40.7          | 67.6          | 42.4            | 16.1          | 18.5           | 107.0          | 125.2                    | 72.7           | 87.9           | 59.7 | 33   | 0.99 | 0.96 |
| Thatcher | 18.4         | 51.0          | 41.4          | 35.0            | 14.4          | 35.4           | 106.8          | 115.6                    | 60.9           | 64.4           | 54.3 | 62   | 0.87 | 0.97 |
| Fortuna  | 16.7         | 40.1          | 28.2          | 40.4            | 14.1          | 25.4           | 99.2           | 106.8                    | 69.0           | 73.5           | 51.2 | 64   | 0.87 | 0.98 |
| Lew      | 17.9         | 44.0          | 42.2          | 36.8            | 16.1          | 33.9           | 99.3           | 116.4                    | 69.1           | 73.2           | 54.8 | 61   | 0.87 | 0.99 |
| Newana   | 21.5         | 53.0          | 48.6          | 38.7            | 15.1          | 35.0           | 112.4          | 130.0                    | 72.9           | 87.6           | 61.5 | 20   | 1.00 | 1.00 |
| GM40002  | 16.1         | 45.3          | 55.3          | 41.2            | 11.9          | 27.3           | 106.0          | 128.0                    | 72.4           | 85.0           | 58.9 | 45   | 1.00 | 0.99 |
| GM40003  | 19.2         | 45.2          | 60.1          | 42.8            | 11.4          | 23.3           | 117.1          | 128.5                    | 79.5           | 94.6           | 62.2 | 15   | 1.07 | 0.99 |
| GM40004  | 19.0         | 50.0          | 62.8          | 40.1            | 13.8          | 29.9           | 116.9          | 136.8                    | 65.9           | 85.9           | 62.2 | 18   | 1.05 | 0.98 |
| GM40019  | 19.8         | 49.2          | 72.7          | 36.5            | 11.8          | 24.5           | 113.4          | 129.0                    | 79.2           | 92.7           | 62.9 | 9    | 1.04 | 0.97 |
| GM40020  | 16.0         | 35.8          | 71.8          | 40.5            | 9.9           | 24.5           | 106.7          | 122.0                    | 72.9           | 93.3           | 59.2 | 37   | 1.00 | 0.94 |
| MT 0007  | 19.8         | 48.9          | 50.6          | 41.4            | 14.0          | 32.4           | 121.1          | 121.7                    | 73.4           | 77.1           | 60.0 | 31   | 0.98 | 0.98 |
| MT 0008  | 18.4         | 48.4          | 40.9          | 47.5            | 15.4          | 36.1           | 120.8          | 106.5                    | 72.8           | 81.6           | 58.8 | 46   | 0.90 | 0.95 |
| MT 0009  | 21.3         | 45.3          | 56.5          | 46.4            | 14.6          | 29.7           | 126.9          | 138.0                    | 80.6           | 95.7           | 65.6 | 4    | 1.12 | 1.00 |
| MT 0012  | 17.3         | 44.9          | 59.5          | 42.5            | 16.8          | 28.2           | 119.6          | 139.7                    | 77.6           | 92.9           | 63.9 | 8    | 1.10 | 0.99 |
| MT 0013  | 18.4         | 44.9          | 59.4          | 44.9            | 15.1          | 32.3           | 110.0          | 121.4                    | 75.8           | 86.6           | 60.9 | 25   | 0.95 | 0.99 |
| MT 0018  | 18.1         | 47.6          | 62.9          | 42.3            | 16.2          | 34.3           | 112.3          | 115.7                    | 71.0           | 80.4           | 60.1 | 29   | 0.91 | 0.98 |
| MT 0021  | 19.9         | 50.5          | 36.7          | 36.8            | 15.9          | 34.7           | 121.6          | 120.8                    | 70.0           | 83.4           | 59.0 | 41   | 0.99 | 0.97 |
| MT 0031  | 19.7         | 48.0          | 41.7          | 38.1            | 13.7          | 32.5           | 117.5          | 135.8                    | 71.3           | 86.7           | 60.5 | 27   | 1.07 | 0.99 |
| MT 0032  | 17.4         | 39.8          | 36.2          | 39.4            | 14.7          | 35.4           | 120.0          | 117.1                    | 73.1           | 81.9           | 57.6 | 53   | 0.98 | 0.97 |
| MT 0037  | 16.1         | 40.3          | 52.1          | 41.3            | 12.1          | 29.5           | 107.2          | 113.3                    | 71.6           | 81.4           | 56.5 | 58   | 0.93 | 1.00 |
| MT 0039  | 18.8         | 53.5          | 53.2          | 38.3            | 17.3          | 33.8           | 106.3          | 143.6                    | 65.3           | 66.0           | 59.7 | 35   | 0.99 | 0.94 |
| MT 0042  | 17.5         | 44.8          | 40.5          | 42.2            | 14.9          | 31.2           | 117.6          | 128.0                    | 72.8           | 86.6           | 59.6 | 36   | 1.03 | 0.99 |
| MT 0050  | 18.3         | 41.1          | 38.3          | 36.6            | 16.8          | 31.0           | 116.1          | 123.7                    | 70.5           | 88.0           | 58.0 | 49   | 1.01 | 0.98 |
| MT 0053  | 18.2         | 46.8          | 32.8          | 43.0            | 14.5          | 29.5           | 117.3          | 125.9                    | 71.3           | 83.7           | 59.7 | 47   | 0.99 | 0.96 |
| MT 0054  | 17.9         | 40.1          | 34.2          | 40.3            | 12.6          | 30.6           | 118.9          | 126.0                    | 73.1           | 86.3           | 58.0 | 50   | 1.05 | 0.98 |
| MT 0063  | 22.2         | 47.7          | 65.8          | 42.2            | 14.1          | 35.4           | 120.8          | 127.6                    | 79.1           | 88.5           | 64.3 | 5    | 1.01 | 0.98 |
| MT 0064  | 20.2         | 42.4          | 54.2          | 42.6            | 14.6          | 34.1           | 113.4          | 121.1                    | 74.2           | 80.6           | 59.7 | 34   | 0.95 | 0.99 |
| MT 0066  | 17.9         | 41.7          | 49.0          | 38.7            | 14.4          | 30.8           | 108.0          | 131.8                    | 70.5           | 76.2           | 57.8 | 51   | 1.00 | 0.99 |

(continued)

Table 1. 2001 yield (bu/ac) summary for the advanced spring wheat nursery grown across Montana (continued).

| ID                  | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Kalispell<br>Hi-rainfall | Bozeman<br>Dry | Bozeman<br>Irr | Ave   | Rank | BYX  | RSQ  |
|---------------------|--------------|---------------|---------------|-----------------|---------------|----------------|----------------|--------------------------|----------------|----------------|-------|------|------|------|
| MT 0069             | 17.1         | 45.6          | 54.1          | 38.9            | 15.3          | 31.9           | 115.2          | 129.0                    | 75.5           | 79.0           | 60.2  | 28   | 1.01 | 0.99 |
| MT 0076             | 17.8         | 47.4          | 39.7          | 41.9            | 13.4          | 28.1           | 110.0          | 131.8                    | 76.3           | 92.5           | 60.0  | 32   | 1.05 | 0.99 |
| MT 9755             | 21.1         | 41.7          | 36.7          | 42.4            | 14.5          | 33.6           | 106.4          | 109.2                    | 75.3           | 89.6           | 57.1  | 56   | 0.90 | 0.97 |
| MT 9806             | 20.0         | 57.5          | 71.2          | 42.0            | 13.5          | 30.8           | 121.5          | 149.7                    | 76.2           | 88.3           | 67.1  | 1    | 1.13 | 0.97 |
| MT 9874             | 22.9         | 54.8          | 66.9          | 42.3            | 15.2          | 29.3           | 117.0          | 142.5                    | 80.2           | 92.7           | 66.4  | 2    | 1.08 | 0.98 |
| MT 9905             | 21.4         | 49.6          | 43.3          | 39.3            | 15.4          | 34.8           | 125.0          | 132.3                    | 78.1           | 86.2           | 62.5  | 12   | 1.07 | 0.99 |
| MT 9918             | 17.7         | 53.9          | 42.0          | 37.7            | 15.9          | 33.7           | 121.4          | 134.1                    | 72.4           | 91.6           | 62.0  | 19   | 1.08 | 0.99 |
| MT 9923             | 18.1         | 50.5          | 46.0          | 40.9            | 16.0          | 33.1           | 118.4          | 132.3                    | 80.7           | 87.7           | 62.4  | 14   | 1.05 | 0.99 |
| MT 9929             | 19.3         | 55.4          | 55.0          | 38.3            | 14.2          | 28.1           | 114.9          | 113.8                    | 78.2           | 92.8           | 61.0  | 24   | 0.96 | 0.98 |
| MT 9931             | 21.1         | 49.5          | 47.6          | 41.9            | 15.4          | 29.9           | 115.1          | 113.8                    | 81.7           | 90.6           | 60.7  | 26   | 0.95 | 0.98 |
| MT 9955             | 19.8         | 53.4          | 68.1          | 45.9            | 10.9          | 36.0           | 109.8          | 130.2                    | 74.9           | 92.4           | 64.1  | 6    | 0.99 | 0.98 |
| MT 9960             | 17.9         | 52.2          | 31.2          | 38.5            | 13.5          | 30.8           | 105.5          | 128.8                    | 71.3           | 83.2           | 57.4  | 55   | 0.99 | 0.97 |
| MTHW0001            | 19.0         | 57.8          | 52.4          | 40.1            | 14.3          | 32.7           | 122.9          | 133.0                    | 77.1           | 91.6           | 64.1  | 7    | 1.07 | 0.99 |
| MTHW0002            | 18.3         | 51.5          | 45.9          | 40.8            | 12.1          | 24.7           | 123.4          | 131.9                    | 74.3           | 90.4           | 61.3  | 21   | 1.10 | 0.99 |
| MTHW0005            | 16.9         | 53.8          | 44.0          | 38.1            | 13.3          | 28.2           | 112.7          | 113.7                    | 73.8           | 94.6           | 59.0  | 43   | 0.97 | 0.98 |
| MTHW9420            | 16.4         | 51.7          | 44.6          | 39.2            | 11.6          | 27.4           | 121.0          | 130.0                    | 79.1           | 80.0           | 60.1  | 30   | 1.07 | 0.99 |
| MTHW9716            | 18.0         | 45.5          | 46.4          | 41.4            | 9.3           | 21.5           | 105.7          | 121.2                    | 73.3           | 88.0           | 56.9  | 57   | 1.00 | 0.99 |
| MTHW9901            | 19.1         | 45.9          | 35.6          | 41.6            | 15.3          | 32.3           | 110.1          | 120.2                    | 78.0           | 92.4           | 58.9  | 39   | 0.98 | 0.98 |
| MTHW9904            | 19.5         | 46.6          | 46.1          | 38.4            | 16.8          | 28.4           | 112.8          | 144.6                    | 77.9           | 81.0           | 61.2  | 23   | 1.09 | 0.99 |
| MTHW9905            | 19.6         | 47.2          | 47.8          | 35.1            | 13.7          | 35.1           | 114.7          | 148.0                    | 73.6           | 87.0           | 62.2  | 16   | 1.12 | 0.98 |
| MTHW9908            | 18.8         | 47.6          | 44.2          | 42.2            | 14.4          | 29.2           | 120.4          | 107.3                    | 77.3           | 89.7           | 59.2  | 40   | 0.95 | 0.97 |
| Reeder              | 22.5         | 54.3          | 66.8          | 43.6            | 17.1          | 32.7           | 116.0          | 138.0                    | 80.1           | 90.5           | 66.2  | 3    | 1.04 | 0.99 |
| Klasic              | 16.8         | 30.3          | 62.4          | 38.9            | 8.9           | 26.2           | 102.7          | 138.1                    | 70.2           | 88.2           | 58.3  | 48   | 1.06 | 0.95 |
| Amidon              | 22.2         | 50.8          | 45.0          | 43.4            | 16.1          | 34.5           | 123.9          | 125.5                    | 75.1           | 76.1           | 61.3  | 22   | 0.99 | 0.98 |
| Hi-Line             | 19.7         | 39.0          | 46.5          | 38.0            | 12.7          | 29.0           | 107.2          | 116.6                    | 82.3           | 85.6           | 57.7  | 52   | 0.96 | 0.99 |
| McNeal              | 18.9         | 48.2          | 62.6          | 47.5            | 13.4          | 35.6           | 110.6          | 121.5                    | 78.2           | 92.0           | 62.8  | 10   | 0.96 | 0.99 |
| Ernest              | 19.6         | 51.1          | 45.2          | 34.3            | 16.6          | 30.9           | 114.8          | 120.4                    | 77.3           | 78.5           | 58.9  | 44   | 0.97 | 0.99 |
| Scholar             | 21.0         | 51.6          | 45.1          | 39.9            | 16.5          | 32.4           | 121.1          | 138.6                    | 74.9           | 81.1           | 62.3  | 17   | 1.07 | 0.99 |
| Explorer            | 19.8         | 43.1          | 32.7          | 40.0            | 13.3          | 21.5           | 91.0           | 115.7                    | 67.2           | 72.7           | 51.7  | 63   | 0.87 | 0.98 |
| SLW97606            | 18.3         | 53.2          | 70.5          | 40.7            | 12.1          | 34.1           | 111.1          | 128.4                    | 74.3           | 83.1           | 62.6  | 11   | 0.98 | 0.97 |
| WB 926              | 18.7         | 46.3          | 52.4          | 38.1            | 13.0          | 22.9           | 103.6          | 142.1                    | 72.9           | 80.2           | 59.0  | 42   | 1.05 | 0.97 |
| Site mean           | 19.00        | 47.15         | 50.46         | 40.51           | 14.11         | 30.1           | 113.12         | 126.13                   | 74.32          | 85.21          | 60.01 |      | 1.00 | 1.00 |
| CV (s/mean)         | 9.20         | 7.13          | 10.54         | 7.63            | 9.05          | 8.24           | 4.02           |                          | 5.59           | 5.33           | 10.01 |      |      |      |
| LSD <sub>0.05</sub> | 2.93         | 5.73          | 8.94          | 5.27            | 2.17          | 4.23           | 7.76           |                          | 7.06           | 7.65           | 5.28  |      |      |      |



Table 2. 2001 test weight (lb/bu) summary for the advanced spring wheat nursery grown across Montana.

| ID       | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Kalispell<br>Hi-rainfall | Bozeman<br>Dry | Bozeman<br>Irr | Ave  | Rank | BYX  | RSQ  |
|----------|--------------|---------------|---------------|-----------------|---------------|----------------|----------------|--------------------------|----------------|----------------|------|------|------|------|
| BZ991019 | 57.9         | 60.1          | 59.3          | 57.4            | 63.3          | 60.3           | 64.0           | 62.7                     | 60.8           | 61.2           | 60.7 | 24   | 1.05 | 0.86 |
| BZ991210 | 59.2         | 59.6          | 57.5          | 57.1            | 62.6          | 60.9           | 62.7           | 62.0                     | 59.6           | 61.1           | 60.2 | 38   | 0.92 | 0.80 |
| Hank     | 57.7         | 58.5          | 55.7          | 56.6            | 61.9          | 59.5           | 60.7           | 60.0                     | 57.0           | 60.3           | 58.8 | 64   | 0.85 | 0.68 |
| Conan    | 59.5         | 60.7          | 59.9          | 58.6            | 62.5          | 60.4           | 62.3           | 62.5                     | 60.3           | 61.3           | 60.8 | 22   | 0.65 | 0.88 |
| BZ996434 | 57.4         | 60.1          | 57.9          | 56.0            | 61.9          | 60.1           | 62.8           | 62.9                     | 61.7           | 62.1           | 60.3 | 34   | 1.21 | 0.93 |
| BZ996472 | 60.0         | 61.7          | 61.5          | 58.8            | 64.2          | 59.6           | 63.6           | 64.0                     | 63.9           | 64.1           | 62.1 | 3    | 0.88 | 0.67 |
| Thatcher | 55.5         | 59.0          | 57.2          | 59.6            | 58.7          | 60.0           | 62.5           | 62.0                     | 58.2           | 61.0           | 59.4 | 59   | 0.86 | 0.60 |
| Fortuna  | 57.2         | 58.5          | 52.4          | 58.6            | 60.6          | 58.9           | 61.9           | 64.3                     | 61.7           | 63.6           | 59.8 | 50   | 1.48 | 0.68 |
| Lew      | 58.1         | 60.7          | 58.6          | 58.7            | 60.9          | 61.2           | 63.3           | 64.0                     | 61.8           | 62.3           | 60.9 | 19   | 0.98 | 0.90 |
| Newana   | 59.6         | 60.3          | 57.2          | 55.0            | 62.7          | 60.9           | 62.2           | 61.8                     | 57.8           | 59.7           | 59.7 | 52   | 0.95 | 0.57 |
| GM40002  | 55.1         | 59.1          | 56.4          | 56.9            | 61.6          | 59.7           | 61.7           | 64.8                     | 61.7           | 62.7           | 60.0 | 45   | 1.53 | 0.91 |
| GM40003  | 58.3         | 61.1          | 57.7          | 57.6            | 62.9          | 60.3           | 62.5           | 64.8                     | 62.6           | 62.5           | 61.0 | 12   | 1.22 | 0.91 |
| GM40004  | 57.8         | 60.3          | 57.4          | 57.9            | 61.6          | 59.9           | 62.1           | 64.0                     | 60.6           | 61.9           | 60.4 | 31   | 1.09 | 0.97 |
| GM40019  | 57.9         | 59.3          | 60.4          | 56.9            | 62.9          | 58.6           | 61.9           | 63.4                     | 59.8           | 60.4           | 60.2 | 39   | 0.90 | 0.69 |
| GM40020  | 58.9         | 60.6          | 60.4          | 56.5            | 63.2          | 58.8           | 63.1           | 64.2                     | 61.3           | 64.4           | 61.1 | 10   | 1.18 | 0.77 |
| MT 0007  | 57.3         | 60.1          | 58.9          | 59.5            | 61.2          | 59.5           | 62.1           | 63.4                     | 60.7           | 61.9           | 60.5 | 29   | 0.85 | 0.86 |
| MT 0008  | 57.2         | 60.3          | 59.3          | 60.2            | 60.8          | 59.8           | 62.3           | 58.7                     | 60.4           | 61.4           | 60.0 | 46   | 0.38 | 0.27 |
| MT 0009  | 58.4         | 60.7          | 58.1          | 60.0            | 62.6          | 59.9           | 63.8           | 61.9                     | 61.3           | 63.4           | 61.0 | 13   | 0.89 | 0.78 |
| MT 0012  | 55.9         | 60.0          | 57.6          | 56.9            | 60.9          | 58.3           | 60.6           | 63.5                     | 59.7           | 62.2           | 59.6 | 53   | 1.18 | 0.90 |
| MT 0013  | 55.4         | 59.4          | 57.3          | 57.4            | 60.6          | 57.9           | 59.8           | 62.4                     | 59.3           | 60.6           | 59.0 | 63   | 0.97 | 0.86 |
| MT 0018  | 58.5         | 61.0          | 61.2          | 59.3            | 61.1          | 60.3           | 62.8           | 64.2                     | 61.2           | 62.9           | 61.2 | 9    | 0.77 | 0.77 |
| MT 0021  | 58.2         | 62.0          | 59.4          | 57.4            | 62.6          | 61.2           | 63.2           | 64.4                     | 59.9           | 61.3           | 61.0 | 14   | 1.07 | 0.87 |
| MT 0031  | 57.6         | 61.5          | 58.3          | 58.1            | 62.0          | 59.9           | 61.9           | 63.3                     | 61.1           | 62.9           | 60.7 | 25   | 1.03 | 0.93 |
| MT 0032  | 56.4         | 60.1          | 57.6          | 59.4            | 61.5          | 60.0           | 63.2           | 63.6                     | 60.0           | 61.3           | 60.3 | 35   | 1.08 | 0.87 |
| MT 0037  | 56.8         | 61.2          | 59.4          | 58.6            | 61.8          | 59.4           | 62.6           | 64.6                     | 61.9           | 63.8           | 61.0 | 15   | 1.16 | 0.85 |
| MT 0039  | 59.7         | 60.9          | 59.8          | 56.8            | 61.9          | 61.7           | 62.4           | 63.0                     | 59.8           | 61.1           | 60.7 | 26   | 0.77 | 0.69 |
| MT 0042  | 58.7         | 61.1          | 59.2          | 59.1            | 61.9          | 60.3           | 61.7           | 63.5                     | 61.6           | 62.8           | 61.0 | 16   | 0.80 | 0.91 |
| MT 0050  | 58.0         | 61.6          | 59.7          | 56.0            | 63.0          | 61.3           | 62.4           | 64.0                     | 60.8           | 62.9           | 61.0 | 17   | 1.18 | 0.86 |
| MT 0053  | 57.1         | 60.4          | 56.3          | 58.6            | 61.3          | 60.4           | 63.1           | 62.6                     | 60.1           | 61.6           | 60.2 | 40   | 1.08 | 0.88 |
| MT 0054  | 58.5         | 61.1          | 58.7          | 57.2            | 62.5          | 60.5           | 62.4           | 63.7                     | 61.5           | 62.8           | 60.9 | 20   | 1.08 | 0.95 |
| MT 0063  | 56.6         | 59.4          | 59.0          | 56.4            | 60.6          | 59.4           | 61.5           | 63.0                     | 59.0           | 60.2           | 59.5 | 58   | 0.96 | 0.86 |
| MT 0064  | 60.6         | 62.1          | 62.1          | 60.5            | 63.6          | 61.8           | 63.8           | 65.2                     | 63.2           | 63.7           | 62.7 | 1    | 0.72 | 0.87 |
| MT 0066  | 57.5         | 60.3          | 58.5          | 56.8            | 61.5          | 59.7           | 63.3           | 63.4                     | 60.7           | 62.0           | 60.4 | 32   | 1.15 | 0.96 |

(continued)

Table 2. 2001 test weight (lb/bu) summary for the advanced spring wheat nursery grown across Montana (continued).

| ID                  | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Kalispell<br>Hi-rainfall | Bozeman<br>Dry | Bozeman<br>Irr | Ave   | Rank | BYX  | RSQ  |
|---------------------|--------------|---------------|---------------|-----------------|---------------|----------------|----------------|--------------------------|----------------|----------------|-------|------|------|------|
| MT 0069             | 57.3         | 60.7          | 58.6          | 57.3            | 60.9          | 59.5           | 62.0           | 63.5                     | 60.2           | 63.1           | 60.3  | 36   | 1.08 | 0.92 |
| MT 0076             | 57.4         | 60.0          | 57.0          | 60.4            | 61.5          | 59.1           | 61.4           | 63.7                     | 60.0           | 61.5           | 60.2  | 41   | 0.89 | 0.73 |
| MT 9755             | 57.5         | 58.3          | 54.2          | 57.4            | 61.9          | 59.2           | 60.2           | 63.4                     | 59.6           | 61.5           | 59.3  | 61   | 1.20 | 0.78 |
| MT 9806             | 57.4         | 61.0          | 60.1          | 57.7            | 61.8          | 60.7           | 63.0           | 62.4                     | 59.7           | 62.3           | 60.6  | 28   | 0.91 | 0.83 |
| MT 9874             | 56.9         | 59.8          | 57.8          | 56.6            | 60.8          | 60.3           | 61.9           | 61.9                     | 59.2           | 60.6           | 59.6  | 54   | 0.95 | 0.93 |
| MT 9905             | 59.9         | 62.2          | 59.1          | 63.4            | 62.2          | 61.7           | 63.9           | 63.2                     | 60.9           | 62.9           | 61.9  | 4    | 0.51 | 0.40 |
| MT 9918             | 56.2         | 60.4          | 56.3          | 56.2            | 60.6          | 59.3           | 61.0           | 62.7                     | 59.7           | 61.3           | 59.4  | 60   | 1.19 | 0.95 |
| MT 9923             | 59.1         | 61.4          | 60.6          | 58.4            | 63.0          | 61.5           | 63.8           | 63.3                     | 62.4           | 63.8           | 61.7  | 6    | 0.92 | 0.89 |
| MT 9929             | 57.0         | 60.6          | 59.2          | 57.2            | 61.8          | 59.7           | 63.6           | 62.9                     | 60.4           | 63.1           | 60.5  | 30   | 1.16 | 0.91 |
| MT 9931             | 59.2         | 61.5          | 59.3          | 57.7            | 62.9          | 61.3           | 63.8           | 64.0                     | 60.8           | 63.7           | 61.4  | 8    | 1.10 | 0.94 |
| MT 9955             | 56.3         | 60.3          | 59.7          | 57.1            | 61.2          | 59.5           | 62.4           | 63.5                     | 59.9           | 61.4           | 60.1  | 43   | 1.06 | 0.86 |
| MT 9960             | 60.7         | 61.6          | 59.6          | 58.0            | 62.6          | 61.6           | 63.3           | 64.9                     | 61.8           | 63.5           | 61.8  | 5    | 0.96 | 0.86 |
| MTHW0001            | 59.3         | 62.4          | 59.2          | 55.4            | 63.0          | 62.5           | 63.8           | 64.1                     | 58.2           | 63.0           | 61.1  | 11   | 1.24 | 0.70 |
| MTHW0002            | 56.7         | 60.7          | 56.7          | 58.0            | 61.2          | 60.4           | 61.7           | 62.3                     | 59.0           | 59.0           | 59.6  | 55   | 0.90 | 0.76 |
| MTHW0005            | 56.3         | 59.8          | 57.2          | 56.5            | 61.9          | 60.2           | 62.7           | 63.0                     | 59.4           | 61.3           | 59.8  | 51   | 1.27 | 0.98 |
| MTHW9420            | 57.0         | 59.8          | 56.6          | 56.1            | 61.8          | 60.5           | 62.4           | 62.0                     | 58.9           | 60.4           | 59.6  | 56   | 1.13 | 0.90 |
| MTHW9716            | 57.8         | 58.9          | 57.5          | 58.7            | 61.6          | 59.8           | 61.7           | 63.2                     | 60.7           | 62.4           | 60.2  | 42   | 0.97 | 0.90 |
| MTHW9901            | 58.3         | 60.1          | 55.8          | 57.9            | 62.9          | 61.6           | 62.5           | 64.1                     | 61.4           | 62.8           | 60.7  | 27   | 1.28 | 0.87 |
| MTHW9904            | 59.9         | 60.9          | 59.7          | 57.8            | 63.3          | 61.6           | 63.7           | 64.9                     | 62.6           | 62.9           | 61.7  | 7    | 1.06 | 0.90 |
| MTHW9905            | 57.3         | 59.3          | 57.5          | 58.7            | 61.2          | 60.1           | 62.2           | 62.2                     | 60.0           | 62.6           | 60.1  | 44   | 0.95 | 0.90 |
| MTHW9908            | 58.3         | 60.2          | 57.7          | 57.7            | 61.5          | 60.6           | 62.3           | 62.1                     | 59.3           | 60.2           | 60.0  | 47   | 0.83 | 0.87 |
| Reeder              | 58.2         | 60.9          | 59.4          | 57.7            | 62.5          | 60.9           | 63.5           | 61.7                     | 60.7           | 62.7           | 60.8  | 23   | 0.92 | 0.86 |
| Klasic              | 56.2         | 59.3          | 56.8          | 59.7            | 62.3          | 58.6           | 60.9           | 64.6                     | 61.4           | 63.7           | 60.4  | 33   | 1.23 | 0.74 |
| Amidon              | 57.7         | 60.0          | 57.8          | 58.7            | 61.3          | 60.1           | 62.5           | 62.9                     | 60.0           | 61.7           | 60.3  | 37   | 0.93 | 0.96 |
| Hi-Line             | 56.4         | 60.4          | 55.6          | 58.1            | 60.9          | 59.9           | 61.8           | 63.4                     | 61.1           | 62.3           | 60.0  | 48   | 1.23 | 0.87 |
| McNeal              | 57.7         | 60.0          | 58.1          | 58.3            | 60.2          | 59.6           | 61.9           | 62.5                     | 59.3           | 61.7           | 59.9  | 49   | 0.82 | 0.92 |
| Ernest              | 58.0         | 60.6          | 59.0          | 58.6            | 62.3          | 60.5           | 63.1           | 64.2                     | 61.1           | 62.6           | 61.0  | 18   | 1.06 | 0.99 |
| Scholar             | 59.4         | 61.3          | 59.3          | 58.4            | 62.3          | 60.9           | 63.2           | 61.6                     | 60.6           | 62.1           | 60.9  | 21   | 0.71 | 0.83 |
| Explorer            | 58.0         | 59.3          | 54.2          | 58.0            | 62.0          | 59.3           | 60.7           | 61.9                     | 59.8           | 59.6           | 59.3  | 62   | 0.96 | 0.67 |
| SLW97606            | 59.5         | 62.6          | 63.5          | 59.5            | 63.6          | 62.7           | 65.0           | 65.3                     | 62.0           | 63.3           | 62.7  | 2    | 0.84 | 0.69 |
| WB 926              | 58.3         | 58.4          | 56.6          | 58.1            | 62.3          | 59.8           | 62.0           | 62.6                     | 58.9           | 59.0           | 59.6  | 57   | 0.88 | 0.70 |
| Site mean           | 57.86        | 60.40         | 58.27         | 57.96           | 61.91         | 60.21          | 62.46          | 63.18                    | 60.47          | 62.02          | 60.50 |      | 1.00 | 1.00 |
| CV (s/mean)         | 0.96         | 0.89          | 1.67          | 3.35            | 1 REP         | 0.75           | 1.22           | 1 REP                    | 1 REP          | 1 REP          | 1.63  |      |      |      |
| LSD <sub>0.05</sub> | 0.95         | 0.90          | 1.60          | 3.15            |               | 0.76           | 1.23           |                          |                |                | 0.87  |      |      |      |



Table 3. 2001 protein content (percent) summary for the advanced spring wheat nursery grown across Montana.

| ID       | Havre<br>Dry | Sidney<br>Dry    | Sidney<br>Irr    | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Bozeman<br>Dry | Bozeman<br>Irr | Ave  | Rank | BYX  | RSQ  |
|----------|--------------|------------------|------------------|-----------------|---------------|----------------|----------------|----------------|----------------|------|------|------|------|
| BZ991019 | 18.6         | 14.9             | 16.2             | 19.0            | 16.5          | 17.6           | 14.4           | 15.1           | 15.0           | 16.4 | 3    | 1.40 | 0.93 |
| BZ991210 | 17.7         | 15.1             | 0.0 <sup>1</sup> | 17.6            | 15.5          | 16.8           | 14.7           | 15.0           | 14.8           | 15.9 | 18   | 0.00 | 0.00 |
| Hank     | 17.1         | 14.2             | 16.4             | 16.4            | 15.1          | 16.2           | 14.3           | 15.7           | 15.0           | 15.6 | 30   | 0.72 | 0.69 |
| Conan    | 17.1         | 15.2             | 15.4             | 16.8            | 15.3          | 17.0           | 14.9           | 14.8           | 14.6           | 15.7 | 26   | 0.75 | 0.76 |
| BZ996434 | 18.0         | 15.4             | 15.6             | 17.6            | 17.4          | 16.3           | 15.1           | 13.5           | 13.9           | 15.9 | 19   | 1.13 | 0.68 |
| BZ996472 | 16.7         | 14.4             | 13.2             | 15.5            | 14.1          | 17.8           | 13.9           | 12.3           | 12.6           | 14.5 | 60   | 1.02 | 0.42 |
| Thatcher | 17.8         | 14.2             | 17.0             | 17.2            | 13.9          | 14.9           | 14.9           | 15.7           | 15.3           | 15.7 | 27   | 0.86 | 0.53 |
| Fortuna  | 16.6         | 15.1             | 16.8             | 16.4            | 15.3          | 15.1           | 14.8           | 14.3           | 14.7           | 15.5 | 33   | 0.65 | 0.69 |
| Lew      | 17.3         | 14.4             | 16.7             | 18.3            | 14.6          | 13.6           | 13.9           | 14.8           | 15.0           | 15.4 | 36   | 1.13 | 0.66 |
| Newana   | 16.3         | 0.0 <sup>1</sup> | 14.8             | 16.2            | 14.7          | 15.4           | 12.8           | 14.6           | 14.1           | 13.2 | 64   | 0.00 | 0.00 |
| GM40002  | 17.7         | 14.4             | 15.3             | 17.9            | 16.9          | 14.6           | 12.9           | 14.2           | 13.6           | 15.3 | 41   | 1.40 | 0.82 |
| GM40003  | 16.0         | 13.5             | 13.7             | 15.4            | 15.8          | 14.8           | 12.7           | 11.9           | 12.2           | 14.0 | 63   | 1.09 | 0.67 |
| GM40004  | 17.5         | 13.7             | 14.0             | 15.9            | 14.6          | 15.5           | 13.5           | 12.3           | 12.6           | 14.4 | 62   | 1.28 | 0.81 |
| GM40019  | 17.3         | 13.9             | 13.9             | 17.3            | 15.3          | 15.9           | 12.1           | 13.3           | 13.1           | 14.7 | 56   | 1.50 | 0.89 |
| GM40020  | 15.3         | 14.1             | 14.0             | 17.5            | 14.8          | 15.1           | 14.5           | 13.2           | 13.6           | 14.7 | 57   | 0.84 | 0.60 |
| MT 0007  | 17.9         | 15.4             | 16.7             | 17.7            | 16.1          | 16.1           | 15.3           | 16.1           | 16.5           | 16.4 | 4    | 0.69 | 0.80 |
| MT 0008  | 17.4         | 14.7             | 16.1             | 16.8            | 16.2          | 15.2           | 14.5           | 15.3           | 15.8           | 15.8 | 21   | 0.70 | 0.74 |
| MT 0009  | 17.4         | 15.3             | 15.7             | 16.6            | 15.4          | 17.1           | 13.6           | 15.1           | 14.8           | 15.7 | 28   | 0.89 | 0.76 |
| MT 0012  | 18.2         | 15.9             | 16.5             | 17.1            | 15.8          | 17.6           | 14.5           | 14.8           | 15.9           | 16.3 | 6    | 0.92 | 0.77 |
| MT 0013  | 16.9         | 15.8             | 16.2             | 16.7            | 15.3          | 16.3           | 14.8           | 15.3           | 14.7           | 15.8 | 22   | 0.62 | 0.82 |
| MT 0018  | 18.2         | 15.8             | 15.8             | 18.2            | 15.4          | 16.3           | 14.4           | 14.9           | 15.6           | 16.1 | 11   | 1.09 | 0.92 |
| MT 0021  | 17.6         | 14.6             | 16.2             | 17.4            | 14.8          | 14.8           | 13.3           | 15.0           | 15.1           | 15.4 | 37   | 1.09 | 0.84 |
| MT 0031  | 17.6         | 15.6             | 16.7             | 17.6            | 15.9          | 16.4           | 15.1           | 15.5           | 15.7           | 16.2 | 7    | 0.77 | 0.98 |
| MT 0032  | 17.6         | 14.7             | 16.0             | 17.1            | 15.4          | 15.2           | 14.0           | 15.2           | 14.9           | 15.6 | 31   | 0.94 | 0.91 |
| MT 0037  | 18.3         | 16.4             | 16.7             | 17.2            | 17.2          | 17.0           | 15.2           | 14.9           | 15.6           | 16.5 | 2    | 0.82 | 0.77 |
| MT 0039  | 17.1         | 15.1             | 16.3             | 17.1            | 14.1          | 13.7           | 13.9           | 15.3           | 15.2           | 15.3 | 42   | 0.80 | 0.52 |
| MT 0042  | 16.5         | 15.1             | 15.8             | 16.9            | 15.2          | 15.9           | 14.5           | 14.4           | 14.2           | 15.4 | 38   | 0.78 | 0.91 |
| MT 0050  | 17.6         | 14.7             | 16.0             | 17.4            | 14.8          | 16.7           | 14.8           | 14.7           | 14.8           | 15.7 | 29   | 0.98 | 0.87 |
| MT 0053  | 18.6         | 15.6             | 16.9             | 18.0            | 15.7          | 13.8           | 15.0           | 15.0           | 15.7           | 16.0 | 15   | 1.01 | 0.59 |
| MT 0054  | 17.8         | 15.4             | 16.3             | 17.7            | 16.3          | 16.3           | 15.4           | 14.9           | 15.3           | 16.2 | 8    | 0.86 | 0.94 |
| MT 0063  | 17.2         | 15.1             | 15.9             | 15.3            | 14.8          | 14.8           | 13.8           | 14.5           | 14.6           | 15.1 | 46   | 0.67 | 0.65 |
| MT 0064  | 17.3         | 16.4             | 16.8             | 18.4            | 16.2          | 16.1           | 15.1           | 15.3           | 15.8           | 16.4 | 5    | 0.80 | 0.84 |
| MT 0066  | 17.6         | 15.3             | 17.2             | 16.6            | 15.5          | 16.0           | 15.7           | 15.3           | 15.3           | 16.1 | 12   | 0.60 | 0.64 |

(continued)

Table 3. 2001 protein content (percent) summary for the advanced spring wheat nursery grown across Montana (continued).

| ID                  | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr    | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Bozeman<br>Dry | Bozeman<br>Irr | Ave  | Rank | BYX  | RSQ  |
|---------------------|--------------|---------------|------------------|-----------------|---------------|----------------|----------------|----------------|----------------|------|------|------|------|
| MT 0069             | 17.2         | 15.1          | 17.2             | 18.0            | 15.6          | 15.3           | 14.9           | 15.7           | 15.8           | 16.1 | 13   | 0.78 | 0.70 |
| MT 0076             | 18.5         | 15.3          | 16.7             | 16.7            | 16.1          | 16.7           | 13.9           | 16.0           | 15.5           | 16.2 | 9    | 0.92 | 0.73 |
| MT 9755             | 16.3         | 14.7          | 15.5             | 18.1            | 15.0          | 17.1           | 13.6           | 14.4           | 14.4           | 15.5 | 34   | 1.08 | 0.76 |
| MT 9806             | 19.0         | 14.9          | 15.5             | 18.6            | 17.1          | 15.9           | 13.4           | 16.0           | 15.6           | 16.2 | 10   | 1.34 | 0.79 |
| MT 9874             | 16.7         | 15.2          | 15.5             | 16.9            | 14.8          | 13.7           | 13.8           | 14.6           | 15.1           | 15.1 | 47   | 0.75 | 0.62 |
| MT 9905             | 16.7         | 13.9          | 16.0             | 18.1            | 14.5          | 13.5           | 13.7           | 14.2           | 15.5           | 15.1 | 48   | 1.05 | 0.61 |
| MT 9918             | 17.4         | 14.0          | 15.6             | 16.4            | 14.8          | 16.2           | 14.1           | 13.9           | 14.3           | 15.2 | 44   | 1.01 | 0.88 |
| MT 9923             | 18.0         | 14.8          | 16.2             | 18.4            | 14.6          | 16.0           | 13.6           | 15.1           | 15.3           | 15.8 | 23   | 1.27 | 0.89 |
| MT 9929             | 18.2         | 14.9          | 15.9             | 17.3            | 16.4          | 17.4           | 13.3           | 14.7           | 14.8           | 15.9 | 20   | 1.24 | 0.84 |
| MT 9931             | 17.0         | 13.9          | 15.8             | 17.1            | 15.3          | 16.0           | 14.3           | 14.4           | 15.1           | 15.4 | 39   | 0.92 | 0.88 |
| MT 9955             | 17.0         | 14.9          | 15.8             | 17.7            | 14.4          | 14.7           | 13.6           | 13.9           | 14.4           | 15.2 | 45   | 1.13 | 0.89 |
| MT 9960             | 16.8         | 13.7          | 15.7             | 15.9            | 14.5          | 13.9           | 14.4           | 14.8           | 15.0           | 15.0 | 52   | 0.62 | 0.52 |
| MTHW0001            | 17.7         | 13.7          | 14.5             | 18.3            | 15.4          | 13.8           | 13.1           | 13.4           | 13.7           | 14.8 | 55   | 1.52 | 0.86 |
| MTHW0002            | 16.5         | 14.8          | 15.0             | 16.5            | 14.5          | 14.6           | 12.7           | 12.8           | 12.8           | 14.5 | 61   | 1.18 | 0.88 |
| MTHW0005            | 17.0         | 13.0          | 14.9             | 16.6            | 15.6          | 14.1           | 13.3           | 13.5           | 13.1           | 14.6 | 58   | 1.20 | 0.84 |
| MTHW9420            | 17.2         | 13.8          | 0.0 <sup>1</sup> | 17.1            | 15.5          | 17.1           | 13.4           | 13.2           | 13.4           | 15.1 | 49   | 0.00 | 0.00 |
| MTHW9716            | 18.0         | 14.9          | 15.2             | 17.3            | 16.7          | 17.4           | 13.9           | 13.6           | 13.2           | 15.6 | 32   | 1.34 | 0.75 |
| MTHW9901            | 17.2         | 14.5          | 15.8             | 16.9            | 14.8          | 16.3           | 13.7           | 13.0           | 13.5           | 15.1 | 50   | 1.23 | 0.88 |
| MTHW9904            | 16.8         | 14.6          | 15.2             | 17.6            | 14.8          | 15.6           | 13.9           | 13.0           | 13.7           | 15.0 | 53   | 1.20 | 0.90 |
| MTHW9905            | 16.1         | 15.0          | 15.7             | 16.6            | 14.7          | 16.4           | 13.6           | 13.6           | 13.2           | 15.0 | 54   | 0.95 | 0.74 |
| MTHW9908            | 16.8         | 14.8          | 14.7             | 16.8            | 15.0          | 14.6           | 12.4           | 13.5           | 13.1           | 14.6 | 59   | 1.22 | 0.90 |
| Reeder              | 17.0         | 15.6          | 16.4             | 17.0            | 14.3          | 17.2           | 13.8           | 15.3           | 16.0           | 15.8 | 24   | 0.76 | 0.54 |
| Klasic              | 16.9         | 14.7          | 14.1             | 16.7            | 16.7          | 16.6           | 14.7           | 14.0           | 11.7           | 15.1 | 51   | 1.01 | 0.45 |
| Amidon              | 16.6         | 14.3          | 15.6             | 17.7            | 15.2          | 15.7           | 14.4           | 14.6           | 14.8           | 15.4 | 40   | 0.91 | 0.89 |
| Hi-Line             | 17.8         | 14.8          | 15.9             | 18.4            | 16.5          | 17.0           | 14.9           | 14.7           | 14.3           | 16.0 | 16   | 1.18 | 0.87 |
| McNeal              | 17.0         | 14.7          | 16.1             | 16.2            | 14.8          | 14.9           | 13.5           | 14.7           | 15.6           | 15.3 | 43   | 0.75 | 0.70 |
| Ernest              | 18.5         | 15.8          | 16.4             | 18.0            | 15.2          | 16.0           | 13.8           | 15.2           | 15.7           | 16.1 | 14   | 1.16 | 0.88 |
| Scholar             | 17.8         | 15.1          | 16.4             | 19.3            | 15.1          | 15.7           | 14.0           | 15.4           | 15.4           | 16.0 | 17   | 1.27 | 0.85 |
| Explorer            | 17.1         | 15.1          | 14.9             | 17.7            | 15.9          | 15.6           | 14.9           | 14.3           | 14.1           | 15.5 | 35   | 0.94 | 0.81 |
| SLW97606            | 19.3         | 15.9          | 16.6             | 19.4            | 16.2          | 15.9           | 14.7           | 16.8           | 16.3           | 16.8 | 1    | 1.19 | 0.79 |
| WB 926              | 17.1         | 14.8          | 16.6             | 18.1            | 15.4          | 15.9           | 14.8           | 14.6           | 15.3           | 15.8 | 25   | 0.96 | 0.88 |
| Site mean           | 17.4         | 14.8          | 15.8             | 17.3            | 15.4          | 15.8           | 14.1           | 14.5           | 14.6           | 15.5 |      | 1.00 | 1.00 |
| CV (s/mean)         | 1 REP        | 1 REP         | 1 REP            | 1 REP           | 1 REP         | 1 REP          | 1 REP          | 1 REP          | 1 REP          | 4.61 |      |      |      |
| LSD <sub>0.05</sub> |              |               |                  |                 |               |                |                |                |                | 0.53 |      |      |      |

<sup>1</sup> Protein samples were lost

<sup>2</sup> Protein samples were not run for Kalispell nursery

Table 4. 2001 height (inches) summary for the advanced spring wheat nursery grown across Montana.

| ID       | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Kalispell<br>Hi-rainfall | Bozeman<br>Dry | Bozeman<br>Irr | Ave  | Rank | BYX  | RSQ  |
|----------|--------------|---------------|---------------|-----------------|---------------|----------------|----------------|--------------------------|----------------|----------------|------|------|------|------|
| BZ991019 | 17.7         | 22.4          | 23.0          | 28.8            | 19.0          | 19.4           | 29.5           | 31.9                     | 28.4           | 28.4           | 24.9 | 59   | 0.81 | 0.94 |
| BZ991210 | 20.2         | 25.8          | 26.8          | 29.5            | 19.0          | 20.4           | 33.6           | 33.3                     | 31.8           | 32.2           | 27.2 | 38   | 0.93 | 0.98 |
| Hank     | 18.3         | 23.4          | 26.7          | 30.3            | 21.0          | 18.9           | 32.7           | 30.5                     | 29.3           | 30.5           | 26.1 | 51   | 0.85 | 0.95 |
| Conan    | 17.5         | 23.9          | 26.0          | 33.4            | 20.0          | 19.7           | 31.5           | 31.8                     | 30.3           | 31.9           | 26.6 | 44   | 0.95 | 0.94 |
| BZ996434 | 19.5         | 25.9          | 27.0          | 29.3            | 20.0          | 20.0           | 33.5           | 31.6                     | 31.6           | 32.1           | 27.0 | 39   | 0.89 | 0.98 |
| BZ996472 | 19.2         | 24.7          | 26.9          | 29.0            | 21.0          | 21.2           | 30.7           | 30.7                     | 29.2           | 30.4           | 26.3 | 49   | 0.73 | 1.00 |
| Thatcher | 20.0         | 35.8          | 32.0          | 35.5            | 26.0          | 31.1           | 41.6           | 39.4                     | 41.3           | 43.8           | 34.6 | 1    | 1.15 | 0.87 |
| Fortuna  | 19.4         | 30.5          | 31.9          | 34.0            | 23.0          | 25.8           | 41.9           | 38.5                     | 37.5           | 38.3           | 32.1 | 6    | 1.20 | 0.97 |
| Lew      | 20.3         | 32.5          | 31.8          | 36.4            | 21.0          | 28.1           | 40.2           | 41.1                     | 38.5           | 41.3           | 33.1 | 3    | 1.27 | 0.96 |
| Newana   | 19.5         | 26.8          | 25.7          | 29.9            | 19.0          | 24.5           | 33.6           | 30.6                     | 31.0           | 32.8           | 27.3 | 37   | 0.82 | 0.93 |
| GM40002  | 17.3         | 23.3          | 26.3          | 30.6            | 21.0          | 21.6           | 31.6           | 32.0                     | 30.1           | 31.4           | 26.5 | 46   | 0.86 | 0.96 |
| GM40003  | 17.5         | 23.8          | 27.2          | 29.0            | 19.0          | 19.8           | 31.6           | 32.2                     | 30.8           | 30.1           | 26.1 | 52   | 0.91 | 0.97 |
| GM40004  | 18.1         | 25.0          | 26.6          | 29.1            | 21.0          | 22.4           | 31.4           | 31.3                     | 29.1           | 30.6           | 26.5 | 47   | 0.76 | 0.98 |
| GM40019  | 17.4         | 22.4          | 23.8          | 27.0            | 18.0          | 17.2           | 26.6           | 28.3                     | 27.0           | 28.0           | 23.6 | 62   | 0.73 | 0.96 |
| GM40020  | 17.1         | 19.9          | 27.0          | 29.4            | 20.0          | 17.9           | 27.6           | 30.2                     | 26.9           | 27.3           | 24.3 | 60   | 0.75 | 0.83 |
| MT 0007  | 19.9         | 27.8          | 31.3          | 34.7            | 22.0          | 20.6           | 35.8           | 36.3                     | 34.4           | 37.5           | 30.0 | 15   | 1.12 | 0.98 |
| MT 0008  | 19.8         | 28.2          | 28.6          | 35.2            | 22.0          | 21.2           | 35.7           | 34.1                     | 34.8           | 35.7           | 29.5 | 22   | 1.05 | 0.97 |
| MT 0009  | 18.6         | 25.2          | 26.2          | 30.3            | 19.0          | 19.1           | 32.8           | 30.6                     | 30.9           | 31.7           | 26.4 | 48   | 0.93 | 0.98 |
| MT 0012  | 16.9         | 24.6          | 25.0          | 30.0            | 19.0          | 17.6           | 32.6           | 32.5                     | 30.1           | 32.0           | 26.0 | 54   | 1.03 | 0.99 |
| MT 0013  | 17.2         | 22.0          | 22.0          | 27.7            | 18.0          | 18.9           | 30.7           | 29.1                     | 28.6           | 28.6           | 24.3 | 61   | 0.83 | 0.96 |
| MT 0018  | 20.0         | 29.2          | 31.1          | 34.7            | 23.0          | 23.9           | 35.2           | 36.5                     | 35.8           | 37.3           | 30.7 | 9    | 1.03 | 0.98 |
| MT 0021  | 18.9         | 30.2          | 30.0          | 34.4            | 22.0          | 22.6           | 37.3           | 36.3                     | 35.0           | 36.9           | 30.4 | 11   | 1.12 | 0.99 |
| MT 0031  | 19.1         | 30.1          | 31.7          | 30.3            | 21.0          | 21.2           | 36.9           | 38.1                     | 34.1           | 38.3           | 30.1 | 14   | 1.17 | 0.95 |
| MT 0032  | 18.6         | 28.0          | 27.3          | 34.6            | 21.0          | 23.5           | 37.0           | 36.8                     | 34.3           | 35.9           | 29.7 | 19   | 1.13 | 0.98 |
| MT 0037  | 17.5         | 21.0          | 24.1          | 26.3            | 18.0          | 16.4           | 28.9           | 29.4                     | 27.5           | 27.0           | 23.6 | 63   | 0.79 | 0.94 |
| MT 0039  | 20.5         | 33.8          | 32.0          | 37.0            | 22.0          | 25.1           | 40.8           | 41.4                     | 39.2           | 43.6           | 33.5 | 2    | 1.37 | 0.98 |
| MT 0042  | 18.7         | 29.4          | 29.8          | 34.0            | 22.0          | 19.6           | 34.7           | 36.5                     | 33.2           | 37.2           | 29.5 | 23   | 1.13 | 0.97 |
| MT 0050  | 20.1         | 28.2          | 32.3          | 29.4            | 21.0          | 20.3           | 36.5           | 36.7                     | 33.9           | 37.7           | 29.6 | 21   | 1.10 | 0.92 |
| MT 0053  | 19.7         | 27.6          | 29.3          | 34.5            | 21.0          | 20.0           | 36.0           | 37.8                     | 34.3           | 37.3           | 29.7 | 20   | 1.19 | 0.98 |
| MT 0054  | 18.5         | 28.3          | 27.2          | 34.1            | 21.0          | 19.7           | 37.0           | 35.2                     | 33.7           | 38.0           | 29.3 | 24   | 1.20 | 0.97 |
| MT 0063  | 19.1         | 29.0          | 27.4          | 33.7            | 20.0          | 21.3           | 34.4           | 35.6                     | 32.9           | 35.7           | 28.9 | 28   | 1.08 | 0.98 |
| MT 0064  | 20.8         | 30.8          | 32.3          | 35.4            | 21.0          | 23.8           | 39.1           | 37.2                     | 36.2           | 38.6           | 31.5 | 7    | 1.17 | 0.99 |
| MT 0066  | 19.5         | 29.4          | 31.6          | 35.8            | 23.0          | 22.8           | 37.0           | 38.5                     | 36.0           | 35.9           | 30.9 | 8    | 1.12 | 0.98 |

(continued)

Table 4. 2001 height (inches) summary for the advanced spring wheat nursery grown across Montana (continued).

| ID                  | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Kalispell<br>Hi-rainfall | Bozeman<br>Dry | Bozeman<br>Irr | Ave  | Rank | BYX  | RSQ  |
|---------------------|--------------|---------------|---------------|-----------------|---------------|----------------|----------------|--------------------------|----------------|----------------|------|------|------|------|
| MT 0069             | 18.9         | 27.3          | 26.8          | 35.3            | 21.0          | 21.9           | 37.0           | 37.2                     | 34.7           | 37.9           | 29.8 | 17   | 1.21 | 0.98 |
| MT 0076             | 17.8         | 27.3          | 29.8          | 33.4            | 22.0          | 20.8           | 36.4           | 33.8                     | 33.5           | 36.6           | 29.1 | 25   | 1.11 | 0.98 |
| MT 9755             | 18.2         | 24.3          | 25.7          | 28.7            | 18.0          | 21.0           | 33.2           | 30.4                     | 29.7           | 30.2           | 25.9 | 56   | 0.87 | 0.97 |
| MT 9806             | 19.6         | 26.9          | 27.4          | 30.4            | 21.0          | 24.4           | 30.8           | 32.8                     | 31.7           | 33.8           | 27.9 | 33   | 0.79 | 0.95 |
| MT 9874             | 19.3         | 28.0          | 27.5          | 30.6            | 22.0          | 25.8           | 36.1           | 33.7                     | 32.2           | 35.9           | 29.1 | 26   | 0.90 | 0.94 |
| MT 9905             | 17.9         | 29.2          | 30.2          | 31.7            | 21.0          | 21.9           | 35.2           | 34.6                     | 33.7           | 35.5           | 29.1 | 27   | 1.06 | 0.99 |
| MT 9918             | 19.5         | 28.8          | 29.0          | 32.6            | 22.0          | 22.1           | 36.6           | 35.5                     | 34.3           | 37.4           | 29.8 | 18   | 1.08 | 0.99 |
| MT 9923             | 19.3         | 29.5          | 31.0          | 32.4            | 21.0          | 23.4           | 36.9           | 34.7                     | 34.3           | 36.7           | 29.9 | 16   | 1.05 | 0.98 |
| MT 9929             | 17.4         | 25.5          | 25.1          | 29.3            | 19.0          | 19.5           | 34.1           | 30.6                     | 30.5           | 31.6           | 26.3 | 50   | 0.96 | 0.98 |
| MT 9931             | 18.8         | 27.0          | 26.7          | 31.6            | 19.0          | 20.7           | 34.5           | 32.0                     | 31.7           | 32.5           | 27.4 | 36   | 0.97 | 0.98 |
| MT 9955             | 17.4         | 26.0          | 24.6          | 31.1            | 20.0          | 22.3           | 31.8           | 31.6                     | 32.3           | 32.0           | 26.9 | 40   | 0.90 | 0.96 |
| MT 9960             | 16.6         | 28.3          | 29.4          | 33.3            | 20.0          | 21.9           | 33.7           | 35.7                     | 34.0           | 36.6           | 28.9 | 29   | 1.15 | 0.98 |
| MTHW0001            | 19.3         | 27.3          | 27.4          | 32.6            | 21.0          | 23.2           | 36.0           | 34.6                     | 32.0           | 34.0           | 28.7 | 30   | 0.98 | 0.99 |
| MTHW0002            | 18.1         | 26.0          | 26.8          | 28.0            | 20.0          | 19.9           | 33.9           | 31.8                     | 30.3           | 31.1           | 26.6 | 45   | 0.90 | 0.98 |
| MTHW0005            | 16.2         | 26.4          | 27.7          | 28.0            | 19.0          | 20.7           | 33.6           | 33.0                     | 30.7           | 32.2           | 26.7 | 43   | 1.00 | 0.98 |
| MTHW9420            | 16.7         | 24.3          | 26.0          | 27.7            | 19.0          | 20.0           | 33.5           | 31.3                     | 31.3           | 30.2           | 26.0 | 55   | 0.94 | 0.97 |
| MTHW9716            | 17.4         | 26.6          | 26.8          | 29.8            | 21.0          | 19.1           | 31.5           | 33.7                     | 30.8           | 31.3           | 26.8 | 41   | 0.92 | 0.96 |
| MTHW9901            | 18.2         | 27.4          | 31.5          | 34.7            | 23.0          | 22.3           | 36.1           | 37.9                     | 35.6           | 37.4           | 30.4 | 12   | 1.16 | 0.97 |
| MTHW9904            | 19.2         | 28.8          | 29.7          | 37.1            | 23.0          | 21.3           | 37.3           | 35.8                     | 34.4           | 36.6           | 30.3 | 13   | 1.13 | 0.97 |
| MTHW9905            | 18.2         | 26.2          | 26.9          | 30.3            | 22.0          | 22.7           | 34.8           | 33.2                     | 31.4           | 33.4           | 27.9 | 34   | 0.91 | 0.98 |
| MTHW9908            | 19.5         | 26.0          | 25.6          | 31.4            | 19.0          | 21.2           | 32.6           | 30.0                     | 31.3           | 31.5           | 26.8 | 42   | 0.85 | 0.96 |
| Reeder              | 19.1         | 26.7          | 28.5          | 30.8            | 20.0          | 20.8           | 35.6           | 35.5                     | 31.6           | 34.7           | 28.3 | 31   | 1.05 | 0.98 |
| Klasic              | 16.5         | 18.3          | 21.0          | 24.2            | 17.0          | 15.3           | 26.3           | 28.6                     | 24.8           | 24.1           | 21.6 | 64   | 0.71 | 0.88 |
| Amidon              | 19.1         | 31.5          | 34.3          | 34.6            | 22.0          | 24.1           | 40.8           | 39.4                     | 37.6           | 40.2           | 32.4 | 4    | 1.29 | 0.98 |
| Hi-Line             | 18.1         | 25.5          | 24.5          | 30.3            | 19.0          | 21.1           | 32.4           | 31.6                     | 28.9           | 29.9           | 26.1 | 53   | 0.85 | 0.96 |
| McNeal              | 18.2         | 27.9          | 26.5          | 31.3            | 21.0          | 22.9           | 34.4           | 33.4                     | 33.2           | 34.5           | 28.3 | 32   | 0.97 | 0.98 |
| Ernest              | 20.1         | 31.3          | 32.0          | 33.2            | 22.0          | 26.1           | 40.8           | 38.2                     | 36.9           | 41.2           | 32.2 | 5    | 1.20 | 0.96 |
| Scholar             | 19.1         | 31.5          | 30.0          | 31.9            | 21.0          | 24.6           | 38.6           | 35.6                     | 36.4           | 38.1           | 30.7 | 10   | 1.12 | 0.95 |
| Explorer            | 17.3         | 25.0          | 24.0          | 29.3            | 18.0          | 19.7           | 32.0           | 32.1                     | 29.9           | 28.8           | 25.6 | 58   | 0.92 | 0.97 |
| SLW97606            | 18.0         | 26.9          | 26.4          | 32.5            | 20.0          | 21.6           | 32.3           | 33.1                     | 31.0           | 33.4           | 27.5 | 35   | 0.95 | 0.98 |
| WB 926              | 18.2         | 22.8          | 26.0          | 28.0            | 20.0          | 19.1           | 32.2           | 32.0                     | 30.0           | 30.6           | 25.9 | 57   | 0.88 | 0.97 |
| Site mean           | 18.6         | 26.9          | 27.9          | 31.6            | 20.6          | 21.5           | 34.5           | 34.0                     | 32.5           | 34.1           | 28.2 |      | 1.00 | 1.00 |
| CV (s/mean)         | 7.07         | 4.67          | 8.02          | 8.04            | 1 REP         | 6.94           | 3.71           | 5.55                     | 2.96           | 2.53           | 5.28 |      |      |      |
| LSD <sub>0.05</sub> | 2.20         | 2.13          | 3.62          | 4.14            |               | 2.54           | 2.06           | 3.12                     | 1.56           | 1.45           | 1.31 |      |      |      |



Table 5. 2001 heading date (Julian days) summary for the advanced spring wheat nursery grown across Montana.

| ID       | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Kalispell<br>Hi-rainfall | Bozeman<br>Dry | Bozeman<br>Irr | Ave   | Rank | BYX  | RSQ  |
|----------|--------------|---------------|---------------|-----------------|---------------|----------------|----------------|--------------------------|----------------|----------------|-------|------|------|------|
| BZ991019 | 170          | 169           | 176           | 176             | 171           | 154            | 160            | 170                      | 169            | 169            | 168.5 | 1    | 1.11 | 0.96 |
| BZ991210 | 174          | 173           | 181           | 178             | 174           | 159            | 166            | 172                      | 173            | 176            | 172.6 | 40   | 1.01 | 0.98 |
| Hank     | 172          | 170           | 179           | 176             | 174           | 159            | 164            | 173                      | 172            | 173            | 171.2 | 21   | 0.98 | 0.98 |
| Conan    | 175          | 173           | 181           | 178             | 174           | 159            | 165            | 175                      | 173            | 175            | 172.7 | 42   | 1.05 | 0.99 |
| BZ996434 | 172          | 170           | 177           | 175             | 173           | 157            | 160            | 172                      | 171            | 172            | 170.0 | 9    | 1.05 | 0.97 |
| BZ996472 | 172          | 170           | 179           | 177             | 173           | 158            | 161            | 171                      | 171            | 173            | 170.6 | 14   | 1.06 | 0.98 |
| Thatcher | 177          | 176           | 184           | 181             | 178           | 163            | 168            | 176                      | 178            | 179            | 176.0 | 63   | 1.01 | 0.98 |
| Fortuna  | 173          | 173           | 181           | 175             | 174           | 160            | 168            | 175                      | 174            | 176            | 173.1 | 46   | 0.90 | 0.97 |
| Lew      | 175          | 176           | 184           | 180             | 175           | 163            | 170            | 177                      | 176            | 179            | 175.4 | 60   | 0.93 | 0.95 |
| Newana   | 175          | 176           | 184           | 180             | 176           | 163            | 170            | 176                      | 178            | 179            | 175.7 | 61   | 0.97 | 0.97 |
| GM40002  | 171          | 170           | 176           | 175             | 173           | 153            | 160            | 169                      | 170            | 171            | 168.9 | 2    | 1.17 | 0.96 |
| GM40003  | 171          | 169           | 176           | 176             | 170           | 155            | 160            | 170                      | 171            | 172            | 168.9 | 3    | 1.09 | 0.98 |
| GM40004  | 174          | 174           | 179           | 178             | 174           | 159            | 167            | 173                      | 174            | 175            | 172.7 | 43   | 0.95 | 0.97 |
| GM40019  | 174          | 175           | 185           | 177             | 173           | 159            | 164            | 174                      | 175            | 177            | 173.3 | 49   | 1.20 | 0.96 |
| GM40020  | 171          | 169           | 176           | 177             | 170           | 157            | 162            | 170                      | 171            | 172            | 169.5 | 7    | 0.96 | 0.95 |
| MT 0007  | 173          | 172           | 179           | 175             | 173           | 159            | 164            | 173                      | 173            | 175            | 171.6 | 26   | 0.96 | 0.99 |
| MT 0008  | 172          | 171           | 179           | 175             | 174           | 160            | 166            | 173                      | 173            | 175            | 171.9 | 30   | 0.88 | 0.99 |
| MT 0009  | 173          | 171           | 180           | 177             | 173           | 158            | 162            | 173                      | 173            | 175            | 171.5 | 24   | 1.11 | 0.99 |
| MT 0012  | 172          | 170           | 179           | 175             | 173           | 158            | 162            | 172                      | 172            | 174            | 170.8 | 18   | 1.05 | 0.99 |
| MT 0013  | 173          | 171           | 179           | 177             | 173           | 158            | 163            | 173                      | 173            | 175            | 171.5 | 25   | 1.06 | 0.99 |
| MT 0018  | 173          | 173           | 180           | 176             | 175           | 160            | 164            | 174                      | 173            | 177            | 172.5 | 39   | 0.99 | 0.98 |
| MT 0021  | 173          | 172           | 179           | 176             | 173           | 159            | 162            | 174                      | 172            | 173            | 171.3 | 22   | 1.01 | 0.98 |
| MT 0031  | 171          | 171           | 179           | 174             | 173           | 159            | 161            | 174                      | 172            | 173            | 170.6 | 15   | 1.01 | 0.96 |
| MT 0032  | 172          | 171           | 178           | 174             | 172           | 158            | 162            | 174                      | 172            | 174            | 170.8 | 19   | 1.02 | 0.98 |
| MT 0037  | 172          | 169           | 177           | 176             | 171           | 155            | 160            | 171                      | 172            | 171            | 169.4 | 5    | 1.14 | 0.98 |
| MT 0039  | 176          | 176           | 184           | 181             | 177           | 165            | 172            | 181                      | 179            | 180            | 177.1 | 64   | 0.89 | 0.95 |
| MT 0042  | 172          | 170           | 176           | 174             | 173           | 155            | 160            | 172                      | 170            | 172            | 169.4 | 6    | 1.11 | 0.98 |
| MT 0050  | 172          | 170           | 179           | 174             | 174           | 157            | 162            | 173                      | 172            | 172            | 170.5 | 13   | 1.03 | 0.97 |
| MT 0053  | 171          | 171           | 179           | 174             | 173           | 158            | 161            | 174                      | 172            | 172            | 170.6 | 16   | 1.04 | 0.97 |
| MT 0054  | 171          | 170           | 176           | 174             | 170           | 154            | 161            | 171                      | 170            | 172            | 168.9 | 4    | 1.09 | 0.99 |
| MT 0063  | 173          | 172           | 179           | 177             | 173           | 159            | 164            | 174                      | 172            | 175            | 171.8 | 29   | 0.99 | 0.99 |
| MT 0064  | 173          | 172           | 180           | 174             | 173           | 159            | 165            | 173                      | 172            | 173            | 171.4 | 23   | 0.91 | 0.98 |
| MT 0066  | 172          | 170           | 178           | 174             | 172           | 158            | 162            | 174                      | 171            | 173            | 170.4 | 12   | 1.00 | 0.99 |

(continued)

Table 5. 2001 heading date (Julian days) summary for the advanced spring wheat nursery grown across Montana (continued).

| ID                  | Havre<br>Dry | Sidney<br>Dry | Sidney<br>Irr | Moccasin<br>Dry | Conrad<br>Dry | Huntley<br>Dry | Huntley<br>Irr | Kalispell<br>Hi-rainfall | Bozeman<br>Dry | Bozeman<br>Irr | Ave   | Rank | BYX  | RSQ  |
|---------------------|--------------|---------------|---------------|-----------------|---------------|----------------|----------------|--------------------------|----------------|----------------|-------|------|------|------|
| MT 0069             | 173          | 172           | 179           | 175             | 174           | 159            | 166            | 173                      | 173            | 176            | 172.0 | 32   | 0.97 | 0.98 |
| MT 0076             | 172          | 170           | 179           | 175             | 174           | 158            | 162            | 172                      | 172            | 173            | 170.9 | 20   | 1.04 | 0.98 |
| MT 9755             | 174          | 171           | 180           | 177             | 174           | 159            | 165            | 173                      | 173            | 175            | 172.2 | 36   | 1.01 | 0.99 |
| MT 9806             | 174          | 174           | 180           | 178             | 175           | 160            | 167            | 176                      | 173            | 177            | 173.5 | 50   | 0.98 | 0.99 |
| MT 9874             | 174          | 175           | 182           | 180             | 176           | 162            | 168            | 179                      | 177            | 180            | 175.3 | 59   | 0.99 | 0.96 |
| MT 9905             | 176          | 176           | 184           | 179             | 177           | 163            | 170            | 178                      | 176            | 179            | 175.8 | 62   | 0.96 | 0.98 |
| MT 9918             | 173          | 173           | 179           | 175             | 174           | 158            | 165            | 173                      | 173            | 175            | 171.9 | 31   | 0.99 | 0.98 |
| MT 9923             | 174          | 175           | 181           | 177             | 176           | 162            | 168            | 176                      | 176            | 177            | 174.2 | 54   | 0.90 | 0.98 |
| MT 9929             | 174          | 173           | 181           | 177             | 174           | 160            | 167            | 175                      | 173            | 177            | 173.1 | 47   | 0.98 | 0.99 |
| MT 9931             | 175          | 174           | 181           | 178             | 175           | 160            | 168            | 175                      | 175            | 177            | 173.8 | 52   | 0.99 | 0.99 |
| MT 9955             | 174          | 174           | 182           | 178             | 174           | 162            | 168            | 173                      | 176            | 178            | 173.8 | 53   | 0.91 | 0.95 |
| MT 9960             | 175          | 176           | 182           | 180             | 176           | 162            | 168            | 177                      | 176            | 177            | 175.0 | 57   | 0.96 | 0.99 |
| MTHW0001            | 173          | 172           | 179           | 176             | 173           | 159            | 166            | 174                      | 172            | 175            | 172.0 | 33   | 0.93 | 0.99 |
| MTHW0002            | 172          | 172           | 179           | 176             | 173           | 159            | 166            | 173                      | 173            | 173            | 171.7 | 27   | 0.91 | 0.98 |
| MTHW0005            | 173          | 173           | 180           | 178             | 173           | 160            | 166            | 174                      | 173            | 176            | 172.6 | 41   | 0.95 | 0.99 |
| MTHW9420            | 173          | 171           | 180           | 176             | 173           | 160            | 165            | 173                      | 173            | 174            | 171.7 | 28   | 0.94 | 0.99 |
| MTHW9716            | 172          | 170           | 178           | 175             | 171           | 157            | 161            | 172                      | 171            | 172            | 170.0 | 10   | 1.04 | 0.99 |
| MTHW9901            | 173          | 173           | 181           | 176             | 175           | 160            | 168            | 175                      | 173            | 175            | 173.0 | 44   | 0.93 | 0.98 |
| MTHW9904            | 173          | 173           | 180           | 177             | 174           | 160            | 165            | 173                      | 173            | 175            | 172.3 | 38   | 0.96 | 1.00 |
| MTHW9905            | 173          | 171           | 180           | 176             | 174           | 159            | 166            | 174                      | 175            | 175            | 172.2 | 37   | 0.98 | 0.98 |
| MTHW9908            | 175          | 173           | 181           | 178             | 174           | 160            | 166            | 174                      | 173            | 175            | 173.0 | 45   | 0.99 | 0.98 |
| Reeder              | 173          | 174           | 180           | 176             | 174           | 159            | 163            | 174                      | 174            | 175            | 172.1 | 35   | 1.02 | 0.99 |
| Klasic              | 171          | 169           | 175           | 178             | 171           | 157            | 162            | 170                      | 170            | 172            | 169.5 | 8    | 1.02 | 0.94 |
| Amidon              | 175          | 175           | 181           | 177             | 175           | 160            | 167            | 176                      | 175            | 175            | 173.6 | 51   | 0.96 | 0.98 |
| Hi-Line             | 173          | 172           | 180           | 177             | 173           | 158            | 165            | 174                      | 172            | 175            | 172.0 | 34   | 1.03 | 1.00 |
| McNeal              | 175          | 175           | 182           | 179             | 176           | 162            | 169            | 177                      | 176            | 178            | 175.0 | 58   | 0.94 | 0.98 |
| Ernest              | 174          | 173           | 180           | 177             | 175           | 161            | 167            | 175                      | 175            | 175            | 173.2 | 48   | 0.91 | 0.99 |
| Scholar             | 176          | 175           | 183           | 179             | 176           | 161            | 167            | 176                      | 175            | 177            | 174.6 | 55   | 1.04 | 1.00 |
| Explorer            | 173          | 170           | 179           | 175             | 173           | 157            | 162            | 172                      | 171            | 172            | 170.3 | 11   | 1.05 | 0.99 |
| SLW97606            | 174          | 175           | 182           | 179             | 175           | 162            | 169            | 177                      | 175            | 178            | 174.7 | 56   | 0.94 | 0.98 |
| WB 926              | 172          | 170           | 178           | 176             | 173           | 157            | 162            | 173                      | 172            | 173            | 170.7 | 17   | 1.05 | 0.99 |
| Site mean           | 173          | 172           | 180           | 177             | 174           | 159            | 165            | 174                      | 173            | 175            | 172.1 |      | 1.00 | 1.00 |
| CV (s/mean)         | 0.41         | 0.31          | 0.32          | 0.48            | 1 REP         | 0.52           | 0.69           | 0.76                     | 1 REP          | 1 REP          | 0.56  |      |      |      |
| LSD <sub>0.05</sub> | 1.17         | 0.90          | 0.98          | 1.40            |               | 1.34           | 1.86           | 2.17                     |                |                | 0.85  |      |      |      |

