

2015 MONTANA WINTER WHEAT INTRASTATE TEST TABLE OF CONTENTS

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2015 Montana Intrastate Winter Wheat Test: List of Varieties and Lines

| Variety | Experimental Designation | Origin | Release Year | Pedigree |
|-------------------------|--------------------------|-----------------------|--------------|---|
| Public Varieties | | | | |
| Bearpaw | MTS0721 | Montana | 2011 | selection from a composite of 5 crosses: 99X96, DMS/Rampart// Pronghorn/3/2*Rampart; 99X97, DMS/Rampart//Pronghorn/3/ Rampart/4/(MTW9806, Redwin/Rio Blanco//NuWest) ; 99X98, DMS/Rampart//Pronghorn/3/Rampart/4/NuPlains; 99X99, DMS/Rampart//Pronghorn/3/Rampart/4/(MT9513, NuWest/5/(TAM W-103/Froid/4/Yogo//Turkey Red/3/Centurk, MT8030)); and 99X100, DMS/Rampart//Pronghorn/3/Rampart/6/(MT98113, Judith/5/ (MT8764, Crest/(VT1230, French male sterile line)/4/((P1178383/ Cheyenne//3*Tendoy, ID5011)/3/(ID5006, Norin 10/Staring// 2*Cheyenne), ID745101))) |
| Brawl CL Plus | CO06052 | Colorado | 2011 | Teal 11A/Above//(CO99314, TX91V4931/ Halt) |
| Byrd | CO06424 | Colorado | 2011 | TAM 112//(CO970547-7, Ike/Halt) |
| Colter | MT08172 | Montana | 2013 | (Yellowstone sib, MT9982)*2/(BZ9W96-895, ped. unknown from male sterile pop.) |
| Cowboy | CO050322 | Colorado, Wyoming | 2012 | (Yuma/T-57/4/(CO850034, NS14/NS603// Newton /3/Probrand 835)/5/ 4*Yuma /6/(NEWS12, KS91H174/RBL// KS91HW29/3/ N87V106), CO980829)/7/ TAM 111 |
| Decade | MT0552 | Montana; North Dakota | 2010 | selection from composite of 3 crosses:((Sumner sib, KS831936-3, (Plainsman V/Odesskaya 51)//(NE86501, Colt/Cody), N95L159, Wesley sib)/3/ CDC Clair, N95L159//(MT9602, NuWest/Tiber) and N95L159/4/ (MT9609, Froid/SD1287// Redwin/3/NuWest) |
| Denali | CO050303-2 | Colorado | 2011 | (Yuma/T-57/4/(CO850034, NS14/NS603// Newton /3/Probrand 835)/5/ 4*Yuma /6/(NEWS12, KS91H174/RBL// KS91HW29/3/ N87V106), CO980829)/7/ TAM 111 |
| Freeman | NE06545 | Nebraska | 2013 | (ABI86*3414/Jagalene//Karl 92, KS92-946-B-15-1)/3/ Alliance |
| Genou | MTS0031 | Montana | 2004 | (Lew/Tiber//Redwin, MTS92015)/3/Vanguard/ Norstar |
| Jerry | ND9257 | North Dakota | 2001 | Roughrider//(ND7571, Winoka/NB66425)/3/ Arapahoe |
| Judee | MTS0713 | Montana | 2011 | (Vanguard/Norstar//Judith dwf, 93X312E14)/3/ NuHorizon |
| Northern | MT0978 | Montana | 2015 | selection from a composite of 2 crosses: 00X248, (Yellowstone sib, MT9982)/4/(MT8709, Erhardt sib)/NuWest//Erhardt, MTW0072)/3/ (NW97S151, KSSB0192-3/NE89529) and 00X249, (Judith/(PI262605, Karagach, RWA resis.)/3/(S86-740, Norstar/Plainsman V //Ulianovka) ,MTW0047)/4/MTW0072/NW97S151 |
| Rampart | MTS92042 | Montana | 1996 | Lew/Tiber//Redwin |
| Warhorse | MTS0808 | Montana | 2013 | selection from a composite of 3 crosses: 00X182, ((Froid/Winoka/7/ ((Sinvalcho/Wichita// Hope/Cheyenne /3/Wichita/4/Seu Seun 27, TX55-391-56-D8)/5/Westmont, MT6928)/6/ Trader, MT85200)/8/ Redwin, MT9908)/9/ Nuplains/6/(MTS9862, (NuWest/ Lovrin 24 /4/((Rego/Cheyenne, Sel. 39-18-7)// Winalta, MT7431)/3/(MT7115, Yogo/T. polonicum-70-5), MT91366)/5/ (MTS92137, Lew/Tiber//Redwin)); 00X183, Nuplains/MTS9862/4/ (MTW0047, Judith/(PI262605, Karagach, RWA resis.)/3/(S86-740, Norstar/ Plainsman V //Ulianovka)); and 00X184, Nuplains/MTS9862/5/(MTS0028, Vanguard/4/(Lew/Tiber//Redwin, MTSF1570)/3/ Norstar) |
| Yellowstone | MT00159 | Montana | 2005 | F ₂ composite of Promontory/Judith and Judith-dwarf/Promontory |

Private Varieties

| | | | | |
|-------------------|-------------------|---|-------------|--|
| Broadview | LE1911 | Alberta; Meridian Seeds LLC | 2009 | KS92WGRC15/CDC Kestrel//CDC Falcon |
| CDC Falcon | S94-4 | Western Plant Breeders/Saskatchewan | 1999 | Norstar*2/Vona//Abilene |
| Keldin | ACS55017 | Peter Franck: Seed-Link Inc.; Ontario, Canada, Westbred LLC | 2011 | Barenburg 235/Carlisle//TRX-A16-3-2 |
| LCS Mint | CO050175-1 | Limagrain LLC | 2012 | Overley/7/CO980829, Yuma/T-57/4/(CO850034, NS14/NS603// Newton/3/Probrand 835)/5/ 4*Yuma/6/NEWS12) |

2015 Montana Intrastate Winter Wheat Test: List of Varieties and Lines

| Variety | Experimental Designation | Origin | Release Year | Pedigree |
|--------------------------|--------------------------|---|--------------|--|
| Ledger | BZ9W96-788-d | WestBred LLC | 2004 | (Hatten/SS-14, BZ9W92-709)/3/(MTSF1142, Lew/Tiber//Redwin) |
| SY Clearstone 2CL | MTCL1077 | Syngenta, Montana | 2012 | Yellowstone*4/3/MTCL01158/CDC Teal 11A//Jagalene |
| SY Monument | 04BC574-2 | Syngenta | 2014 | (KS89180B-2-1-1/CM75113, F1//X920750-A-11-2, BC991149-11)/3/(00x0090-4, W95091/W98-183 |
| SY Sunrise | 06BC796#68 | Syngenta Seeds | 2015 | ((X920709B-5-2/KS90WGRC10//Ogallala, BC98337-10-53)/3/CDC Falcon, 06BC308)/4/ (NE03458, (McVey 78015/NE88521, NE95544)//W91-348/3/Millennium) |
| SY Wolf | BC01007-7 | AgriPro, Syngenta | 2010 | ((TAM-108/Veery sib, SWM1524)//TX84V2029, TX91V3308)/3/(W93-359, WI88-052/W96-180), W99-331)/4/(97x0906-8, (Mesa/W89-328, W96-180)//(W95-188, Karl 92/W98-232)) |
| T158 | T158 | Trio Research, Inc., Limagrain LLC | 2009 | KS93U206//2*(T81, TAM 107/T213 sib) |
| WB3768 | MTW08168 | Montana, licensed to: WestBred LLC (Monsanto) | 2013 | selection from a composite of 2 crosses: 01X225, (Judith/(PI262605, Karagach, RWA resis.)/3/(S86-740, Norstar/ Plainsman V //Ulianovka), MTW0047)/4/ 2*(MT9982, Yellowstone sib.) and 01X226, MTW0047/MT9982//((MT9989, Judith/Arapahoe) |
| WB4059CLP | BZ9WM07-1516 | WestBred-Monsanto: | 2013 | CDC Teal-11A/3/Pryor*2//((SWP 965-001, Grandin*2/(SF-4, imi Fidel)) |
| WB4614 | BZ9W07-2034 | WestBred-Monsanto: | 2013 | ? |
| WB4623CLP | BZ9WM09-1663 | WestBred-Monsanto: | 2014 | ? |
| WB-Quake | BZ9W05-2043 | WestBred LLC (Monsanto) | 2011 | Rampart/Kestrel |

Public Elite Lines

| | | | | |
|--|-------------------|--|--|---|
| | MTS0826-63 | | | selection from a composite of 2 crosses: 99X195, (NuWest/Tiber, MT9524)/(G15048, CG18063/ CG60725) /3/Rampart; and 99X196, (NuWest/ Tiber, MT9524)/(G15048, CG18063/ CG60725) /3/(MTS9869, Vanguard*2/ Norstar) |
| | MT1078 | | | (Karl 92/10/(UT000190 (SRW?), Hansel// "wheat"/Ag. podperae/5/ Najah/4/Delmar/3/ Delmar/ PI173438// Columbia/6/Hansel, UT1802)/9/ (UT1812, Weston/6/Delmar/3/ Delmar/ PI173438/4/ Colorow/5/ Warrior/ CI13837/7/"wheat"/Ag. podperae/8/ PI166921 /Hansel/3/ Delmar/Columbia //CI13837), MT02113)*4/11/(MTS0359, Rampart/Mironovskaya 61) |
| | MT1117 | | | Yellowstone*3//((KS96WGRC40,KS93U69*2/TA 2397 (wcm resis) (Lr41)) |
| | MTCL1131 | | | Yellowstone*4/4/(Fidel/Tiber (IMI), MTCL01158)//CDC Teal 11A/3/Jagalene |
| | MT1138 | | | (059E//Jagger/Pecos, W99-194)/3/ 2*Yellowstone |
| | MTCS1204 | | | (Rampart*3/Fidel/6/(MTS9720, Nuwest/4/(MT88001, Sawmont/Tendoy /3/Yogo//Norin 10/Brevor)/5/(MT7863, Froid/Winoka/Centurk)) ,MTCL0510)/8/Paul/6/(Tiber*2//((IMMIBC303-17, Tam 110 sib*4/(FS2, mutagenized Fidel)), 98X96C16cl)/3/CDC Teal 11A/5/(MTCL0322, Rampart*2/IMI Fidel)/7/(MTS0531, L'Govskaya 167/Rampart/6/(MT9409, Tiber/5/ (MT8030, TAM W-103/Froid /4/Yogo//Turkey Red /Oro/3/Centurk)) |
| | MTS1224 | | | Yellowstone/5//((Lew/Tiber//Redwin, MTS92045)/3/2*Erhardt, MTS0112)/4/(MTS0125, selection from a composite of 4 crosses) |

2015 Montana Intrastate Winter Wheat Test: List of Varieties and Lines

| Variety | Experimental Designation | Origin | Release Year | Pedigree |
|---------|--------------------------|--------|--------------|--|
| | MTF1232 | | | selection from a composite of 5 crosses: 06X272, Yellowstone/(MT0684, a composite - see pedigree); 06X276, Yellowstone/(MT06102, , a composite - see pedigree); 06X278, Yellowstone/7/(MT06110, (Arapahoe/3/Brule//Hiplains/Newton, SD93528)/6/(MT9409, Tiber/5/(TAM W-103/Froid/4/Yogo//Turkey Red/Oro/3/Centurk, MT8030)); 06X282, Yellowstone/3/(MT06123, '2174'/(MT9440, BigSky sib)//BigSky); and 06X285, Yellowstone/7/(98X168E1, (Nuwest/4/(MT88001, Sawmont/Tendoy /3/Yogo//Norin 10/Brevor) /5/(MT7863, Froid/Winoka/Centurk), MTS9720)/6/(PI 191303, Alba = Belgian variety)/Elkhorn); |
| | MT1257 | | | selection from a composite of 2 crosses: 03X351, Yellowstone/ Krichauff and 03X352, Krichauff/7/(MTS04114, L'Govskaya 167/Rampart/6/(MT9409, Tiber/5/ (MT8030, TAM W-103/Froid /4/Yogo//Turkey Red /Oro/3/Centurk)) |
| | MT1265 | | | <u>Yellowstone*4//((KS96WGRC40, KS93U69*2/TA 2397) (Lr41, wcm)</u> |
| | MT1286 | | | <u>Yellowstone*2/3/(NE99445, Rawhide/Tomahawk//Karl 92)</u> |
| | MTS1305 | | | selection from a composite of 2 crosses: 05X161, (selection from a composite of 2 crosses - see pedigree, MTS0525/10/ (Jerry/Rampart, 97X253E54)/9/(MT03108, (NuWest/Tiber, MT9524)/8/ ((Carstens V/Ae. intermedium (TA25)//Lathrop, Cltr13092)/3/T. speltoides/4/ Fletcher/5/ 5*Centurk, Cltr17884)*4/6/Karl, KS93WGRC27)/7/Judith) and 05X162, 97X253E54/MT03108//((MTS0527, selection from a composite of 2 crosses - see pedigree) |
| | MTCL1329 (CL2) | | | Yellowstone/6/Jagalene/5/(selection from a composite of 3 crosses - see pedigree, 98X78cC82cl)/3/(MT0097, Erhardt//Judith/ CDC Kestrel)/4/Jerry/CDC Teal11A |
| | MT1332 | | | selection from a composite of 3 crosses: 07X37, Yellowstone/4/(00X52E99, (Judith/SWM12099, 92X103E3)/3/ (MTR99101, Vanguard//Cltr2401/2*Judith)) /5/ Yellowstone(340,233 = solid-stem markers), 07X38, Yellowstone*2/ 00X52E99, and 07X39, Yellowstone/ 00X52E99//((MT0686, (BigSky sib, MT9523)/(NE94653, Wahoo sib)) |
| | MT1348 | | | selection from a composite of 2 crosses: 04X494, (PI572290 = STARS-9303W = (Bobwhite/PI 149898), rwa2)//BigSky and 4X495, (Yellowstone sib, MT9982)/PI572290 |
| | MT1354 | | | (Yellowstone low PPO plant seln., MT08188)//(Yellowstone low PPO plant seln., MT08188)/(MT08175, Colter sib) |
| | MT1356 | | | (Yellowstone low PPO plant seln., MT08184)//(Yellowstone low PPO plant seln., MT08185)/(MT08177, Colter sib) |
| | MT1361 | | | (Yellowstone loppo plant seln, MT08189) /8/ (Yellowstone loppo plant seln, MT08188)/7/ (MT0419-1, Erhardt/5/ (KS92H21-4, (Plainsman IV/ Cheney// Odessa/2*Eagle/3/Pawnee /DURM, KS82H238-1)/4/HF5761/TAM 105//Bounty 203)/6/Pronghorn)) |

Private Elite Lines

| | | | | |
|--|------------------|---------------|--|-----------------------------|
| | LCH 10-13 | Limagrain LLC | | Limagrain experimental line |
|--|------------------|---------------|--|-----------------------------|

Table 1. 2015 Intrastate Winter Wheat Test : Statewide Summary

| Cultivar/Line | Pedigree | Yield bu/ac | Test weight lb/bu | Heading date Julian | Plant height in | Stem solidness (5-25) | Protein % |
|--------------------------|-----------------------------------|----------------|-------------------------|---------------------------|-----------------------|-----------------------------|---------------|
| Locations | | 6 | 6 | 6 | 6 | 4 | 6 |
| Bearpaw | Montana, 2011 | 58.5 | 58.3 | 156.8 | 32.4 | 20.5 | 13.2* |
| #+ Brawl CL Plus | Colorado, 2011 (CO Wheat Res. F | 62.6 | 61.1* | 152.0 | 32.1 | | 13.2* |
| Broadview | Alberta, 2009 (Meridian Seeds) | 61.9 | 57.8 | 157.5 | 33.5 | | 12.7 |
| #+ Byrd | Colorado, 2011 (CO Wheat Res. F | 66.5 | 59.1 | 153.8 | 32.5 | | 11.9 |
| CDC Falcon | Sask/WestBred, 1999 | 67.0 | 58.7 | 156.7 | 30.2 | 6.3 | 12.6 |
| Colter | Montana, 2013 | 81.5* | 60.1 | 158.6 | 35.2 | | 12.7 |
| Cowboy | Wyoming/Colorado, 2012 | 65.8 | 59.2 | 155.8 | 33.3 | | 11.9 |
| Decade | Montana/North Dakota, 2010 | 58.6 | 58.8 | 156.4 | 32.1 | | 13.1* |
| d #+ Denali | Colorado, 2011 (CO Wheat Res. F | 69.0 | 60.6* | 156.1 | 34.3 | | 11.6 |
| Freeman | Nebraska, 2013 | 75.2* | 58.2 | 151.7 | 32.7 | | 12.3 |
| d Genou | Montana, 2004 | 54.0 | 59.7 | 157.0 | 36.8 | 16.1 | 13.1* |
| Jerry | North Dakota, 2001 | 57.8 | 58.0 | 157.5 | 37.4 | | 12.6 |
| Judee | Montana, 2011 | 63.9 | 60.1 | 157.0 | 33.1 | | 12.9 |
| # Keldin | WestBred, 2011 | 74.7* | 60.4* | 157.6 | 32.7 | 19.2 | 12.8 |
| d #+ LCH 10-13 | Limagrains Cereals experimental | 61.5 | 61.2* | 153.0 | 34.5 | | 13.0* |
| d # LCS Mint | Limagrains Cereals, 2012 | 73.3* | 61.6* | 153.8 | 34.1 | | 12.3 |
| d Ledger | WestBred, 2004 | 64.8 | 60.4* | 156.9 | 33.0 | | 12.3 |
| d MT1078 | MT02113*4/MTS0359 | 77.8* | 58.3 | 158.2 | 33.5 | 8.4 | 12.0 |
| d MT1117 | Yellowstone*3/KS96WGRC40 | 76.9* | 60.2 | 158.3 | 35.4 | | 12.7 |
| MT1138 | W99-194/2*Yellowstone | 82.4* | 60.0 | 157.8 | 35.6 | | 12.1 |
| MT1257 | Yellowstone/Krichauff | 83.0* | 59.9 | 157.5 | 35.0 | | 12.1 |
| MT1265 | Yellowstone*4/KS96WGRC40 (Lr4 | 77.7* | 59.3 | 158.6 | 35.7 | | 12.3 |
| d MT1286 | Yellowstone*2/NE99445 | 75.7* | 60.6* | 157.9 | 35.1 | | 12.2 |
| + MT1332 | Yellowstone/00X52E99//Yellowsto | 83.9** | 60.3* | 158.0 | 35.7 | | 11.9 |
| + MT1348 | PI572290/BigSky | 79.5* | 60.3* | 156.5 | 33.5 | | 12.1 |
| + MT1354 | MT08184//MT08188/MT08175 | 80.7* | 60.1 | 158.3 | 35.4 | | 12.6 |
| + MT1356 | MT08184//MT08185/MT08177 | 82.2* | 60.1 | 158.2 | 35.2 | | 12.3 |
| d + MT1361 | MT08189//MT08188/MT0419-1 (Sr | 78.5* | 59.6 | 159.8 | 32.4 | | 12.4 |
| MTCL1131 | Yellowstone*4/3/MTCL01158/CDC | 81.7* | 60.4* | 158.7 | 35.4 | | 11.9 |
| d + MTCL1329 | Yellowstone/4/Jagalene/3/98X78cc | 75.8* | 61.3* | 155.8 | 32.8 | | 12.1 |
| d MTCS1204 | MTCL0510/4/Paul/3/98X96C16cl/C | 67.2 | 60.1 | 157.5 | 34.1 | 14.2 | 12.6 |
| d MTF1232 | Yellowstone/MT0684 | 60.8 | 59.4 | 160.3 | 43.7 | | 13.8** |
| d MTS0826-63 | MT9524/G15048//Rampart | 68.8 | 59.9 | 159.9 | 35.7 | 20.8 | 13.7* |
| MTS1224 | Yellowstone//MTS0112/MTS0125 | 79.5* | 59.8 | 158.6 | 31.4 | 17.2 | 12.3 |
| d + MTS1305 | MTS0525//97X253E54/MT03108 | 63.6 | 60.3* | 156.7 | 31.3 | 22.3** | 12.3 |
| Northern | Montana, 2015 (MT0978) | 79.6* | 60.1 | 158.8 | 34.2 | | 12.6 |
| Rampart | Montana, 1996 | 58.7 | 59.8 | 158.0 | 36.6 | 19.7 | 13.6* |
| SY Clearstone 2CL | Montana/Syngenta, 2012 | 76.4* | 59.3 | 157.9 | 35.4 | | 12.3 |
| #+ SY Monument | Syngenta (AgriPro), 2014 | 76.3* | 58.9 | 155.8 | 32.5 | | 12.0 |
| #+ SY Sunrise | Syngenta, 2015 (06BC796#68) | 72.4* | 61.2* | 154.4 | 29.0 | | 12.9 |
| # SY Wolf | Syngenta (AgriPro), 2010 | 71.3* | 61.0* | 156.0 | 31.3 | | 12.5 |
| # T158 | Trio Research/Limagrains Cereals, | 74.0* | 61.6** | 151.5 | 31.2 | | 12.3 |
| Warhorse | Montana, 2013 | 68.9 | 59.3 | 158.5 | 32.5 | 22.0* | 13.0* |
| WB3768 | Montana/WestBred, 2013 | 77.6* | 60.7* | 160.9 | 37.3 | | 12.5 |
| # WB4059CLP | WestBred, 2013 | 50.3 | 60.0 | 153.1 | 28.9 | | 13.6* |
| # WB4614 | WestBred, 2013 | 67.6 | 60.6* | 157.2 | 31.8 | | 12.4 |
| #+ WB4623CLP | WestBred, 2014 | 62.1 | 60.2 | 158.3 | 30.7 | | 13.5* |
| WB-Quake | WestBred, 2011 | 66.3 | 59.8 | 158.1 | 33.0 | 19.1 | 12.8 |
| Yellowstone | Montana 2005 | 82.8* | 60.1 | 157.8 | 35.1 | | 11.7 |
| Average | | 70.9 | 59.9 | 156.9 | 33.8 | 18.4 | 12.6 |
| LSD (0.05) | | 14.0 | 1.4 | 1.0 | 1.4 | 1.4 | 0.8 |
| C. V. (%) | | 17.3 | 2.0 | 0.6 | 3.8 | 9.2 | 5.8 |

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 2. 2015 Intrastate Winter Wheat Test (Exp. 3501): Bozeman

| Entry | Cultivar/Line | Pedigree | Yield bu/ac | Test weight lb/bu | Heading date Julian | Plant height in | Stripe Rust % | | Powdery mildew 0-4 | Protein % |
|----------------------------|-------------------|------------------------------------|------------------|-------------------------|---------------------------|-----------------------|------------------|------------------|--------------------------|--------------|
| | | | | | | | 8-Jun | 16-Jun | 8-Jun | bulk |
| | | | LAT | LAT | LAT | LAT | 123% | 144% | 101% | |
| | | lattice efficiency relative to RCB | 161% | 201% | 109% | 102% | | | | |
| 25 | #+ SY Sunrise | Syngenta, 2015 (06BC796#68) | 96.5** | 56.3 | 158.9 | 34.9 | 3 | 0 | 1.5 | 16.2 |
| 31 | # T158 | Trio Research/Limagrain Cereals, : | 95.3* | 58.9 | 155.2 | 36.9 | 5 | 0 | 0.0 | 16.4 |
| 47 | + MT1348 | PI572290/BigSky | 89.9* | 55.7 | 161.4 | 40.9 | 4 | 5 | 0.2 | 16.2 |
| 35 | MTS1224 | Yellowstone//MTS0112/MTS0125 | 89.9* | 58.3 | 163.6 | 36.5 | 4 | 5 | 0.8 | 15.5 |
| 46 | + MT1332 | Yellowstone/00X52E99//Yellowstor | 88.6* | 57.3 | 162.4 | 40.6 | 3 | 2 | 1.1 | 16.1 |
| 36 | MT1257 | Yellowstone/Krichauff | 87.7* | 57.0 | 162.0 | 39.4 | 3 | 5 | 1.1 | 16.3 |
| 13 | Colter | Montana, 2013 | 87.0* | 57.4 | 163.5 | 39.0 | 4 | 3 | 0.6 | 17.2 |
| 19 | MT1138 | W99-194/2*Yellowstone | 87.0* | 56.4 | 163.0 | 39.7 | 2 | 7 | 0.9 | 16.3 |
| 24 | #+ SY Monument | Syngenta (AgriPro), 2014 | 85.9* | 53.3 | 160.4 | 36.3 | 1 | 0 | 1.5 | 16.7 |
| 40 | + MT1356 | MT08184//MT08185/MT08177 | 85.7* | 57.0 | 162.7 | 40.8 | 2 | 4 | 1.7 | 16.5 |
| 20 | MTCL1131 | Yellowstone*4/3/MTCL01158/CDC | 85.1 | 58.0 | 163.2 | 40.4 | 3 | 8 | 0.8 | 16.0 |
| 28 | # Keldin | WestBred, 2011 | 85.1 | 54.8 | 161.7 | 37.0 | 0 | 5 | 0.1 | 18.2 |
| 1 | Yellowstone | Montana 2005 | 84.4 | 56.9 | 162.5 | 39.1 | 2 | 6 | 0.8 | 13.5 |
| 26 | Freeman | Nebraska, 2013 | 83.8 | 52.5 | 156.3 | 39.4 | 5 | 1 | 0.0 | 16.2 |
| 16 | d MT1078 | MT02113*4/MTS0359 | 83.7 | 54.5 | 162.6 | 36.7 | 6 | 9 | 0.0 | 17.1 |
| 32 | d # LCS Mint | Limagrains Cereals, 2012 | 83.5 | 57.1 | 158.1 | 38.9 | 0 | 4 | 0.1 | 16.9 |
| 23 | # SY Wolf | Syngenta (AgriPro), 2010 | 83.2 | 57.2 | 161.0 | 37.0 | 1 | 3 | 0.0 | 16.9 |
| 15 | Northern | Montana, 2015 (MT0978) | 83.1 | 57.3 | 163.0 | 38.5 | 4 | 3 | 0.4 | 16.7 |
| 48 | + MT1354 | MT08184//MT08188/MT08175 | 82.6 | 57.9 | 163.3 | 39.9 | 2 | 6 | 1.4 | 16.1 |
| 18 | d MT1117 | Yellowstone*3/KS96WGRC40 | 82.6 | 57.3 | 163.0 | 37.7 | 0 | 4 | 0.7 | 16.4 |
| 14 | SY Clearstone 2CL | Montana/Syngenta, 2012 | 82.6 | 54.9 | 162.7 | 39.7 | 2 | 8 | 0.4 | 16.7 |
| 37 | MT1265 | Yellowstone*4/KS96WGRC40 (Lr4 | 82.1 | 56.6 | 163.6 | 40.1 | 0 | 0 | 1.0 | 16.0 |
| 45 | d + MTCL1329 | Yellowstone/4/Jagalene/3/98X78cC | 79.8 | 58.6 | 160.8 | 37.8 | 8 | 10 | 1.1 | 16.1 |
| 12 | WB3768 | Montana/WestBred, 2013 | 79.3 | 58.8 | 165.9 | 40.5 | 3 | 1 | 0.4 | 16.4 |
| 38 | d MT1286 | Yellowstone*2/NE99445 | 77.6 | 58.0 | 162.3 | 40.0 | 1 | 20 | 0.5 | 16.9 |
| 49 | d + MT1361 | MT08189//MT08188/MT0419-1 (Sr | 75.8 | 55.1 | 164.1 | 37.9 | 3 | 5 | 0.5 | 16.1 |
| 33 | d + # LCH 10-13 | Limagrains Cereals experimental | 73.4 | 57.4 | 157.1 | 39.4 | 9 | 39 | 0.1 | 17.1 |
| 30 | #+ WB4623CLP | WestBred, 2014 | 72.7 | 58.9 | 162.0 | 37.3 | 3 | 6 | 0.8 | 17.8 |
| 41 | #+ Brawl CL Plus | Colorado, 2011 (CO Wheat Res. F | 71.3 | 56.4 | 156.6 | 36.6 | 26 | 43 | 0.0 | 17.4 |
| 17 | d MTS0826-63 | MT9524/G15048//Rampart | 70.7 | 61.1** | 165.6 | 41.4 | 3 | 12 | 0.4 | 18.3 |
| 11 | Warhorse | Montana, 2013 | 69.8 | 55.2 | 163.1 | 37.9 | 1 | 3 | 0.1 | 18.4 |
| 9 | WB-Quake | WestBred, 2011 | 64.9 | 56.7 | 162.9 | 37.9 | 15 | 14 | 1.7 | 16.5 |
| 2 | Judee | Montana, 2011 | 64.6 | 56.2 | 162.0 | 37.7 | 9 | 3 | 1.7 | 14.3 |
| 44 | d + MTS1305 | MTS0525//97X253E54/MT03108 | 63.4 | 55.7 | 161.4 | 36.2 | 2 | 6 | 0.1 | 17.3 |
| 27 | # WB4614 | WestBred, 2013 | 62.0 | 57.6 | 161.9 | 37.1 | 6 | 9 | 1.2 | 17.2 |
| 34 | d MTCS1204 | MTCL0510/4/Paul/3/98X96C16c/C | 59.2 | 56.2 | 162.2 | 38.2 | 18 | 32 | 0.4 | 17.1 |
| 43 | #+ Byrd | Colorado, 2011 (CO Wheat Res. F | 57.2 | 53.6 | 158.7 | 36.5 | 8 | 44 | 0.2 | 15.9 |
| 21 | Cowboy | Wyoming/Colorado, 2012 | 56.4 | 54.1 | 159.5 | 37.2 | 20 | 59 | 1.3 | 16.8 |
| 29 | # WB4059CLP | WestBred, 2013 | 56.2 | 55.6 | 157.7 | 33.5 | 8 | 35 | 0.3 | 18.6 |
| 5 | CDC Falcon | Sask/WestBred, 1999 | 55.4 | 51.4 | 162.0 | 34.4 | 3 | 11 | 0.0 | 18.8 |
| 39 | d MTF1232 | Yellowstone/MT0684 | 55.3 | 57.7 | 166.4 | 45.3 | 0 | 29 | 0.8 | 19.6 |
| 6 | Rampart | Montana, 1996 | 53.6 | 57.2 | 163.6 | 40.4 | 2 | 8 | 0.5 | 19.5 |
| 42 | d #+ Denali | Colorado, 2011 (CO Wheat Res. F | 50.2 | 56.0 | 160.1 | 38.1 | 26 | 56 | 1.1 | 16.2 |
| 8 | d Ledger | WestBred, 2004 | 49.5 | 56.1 | 162.1 | 37.6 | 3 | 13 | 0.2 | 16.9 |
| 4 | Decade | Montana/North Dakota, 2010 | 46.6 | 52.5 | 161.9 | 35.4 | 5 | 39 | 3.3 | 18.4 |
| 22 | Broadview | Alberta, 2009 (Meridian Seeds) | 42.9 | 51.9 | 162.9 | 38.3 | 9 | 28 | 0.3 | 18.6 |
| 7 | Jerry | North Dakota, 2001 | 42.1 | 53.9 | 163.3 | 40.3 | 7 | 57 | 0.7 | 17.9 |
| 10 | Bearpaw | Montana, 2011 | 42.0 | 53.2 | 161.9 | 36.4 | 14 | 50 | 0.6 | 18.3 |
| 3 | d Genou | Montana, 2004 | 40.9 | 56.6 | 162.7 | 40.1 | 4 | 21 | 1.7 | 19.4 |
| Average | | | 72.0 | 56.2 | 161.7 | 38.3 | 5.5 | 15.0 | 0.7 | 17.0 |
| LSD (0.05) | | | 11.0 | 1.4 | 0.8 | 2.8 | 10.3 | 13.9 | 0.9 | |
| C. V. (%) | | | 8.7 | 1.4 | 0.3 | 4.4 | 107.9 | 52.7 | 76.4 | |
| P-value (Varieties) | | | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | |

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 3. 2015 Intrastate Winter Wheat Test (Exp. 3502): Havre

| Entry | Cultivar/Line | Pedigree | Yield bu/ac | Test weight lb/bu | Stand % | Heading date Julian | Plant height in | Sawfly cutting % | Protein % |
|-------|---------------------|------------------------------------|------------------|-------------------------|--------------|---------------------------|-----------------------|------------------------|------------------|
| | | | LAT | LAT | RCB | LAT | LAT | RCB | LAT |
| | | lattice efficiency relative to RCB | 175% | 233% | | 136% | 101% | | 204% |
| 42 | d #+ Denali | Colorado, 2011 (CO Wheat Res. F | 72.1** | 62.6 | 89.9 | 150.1 | 31.4 | 2 | 11.0 |
| 21 | Cowboy | Wyoming/Colorado, 2012 | 71.7* | 61.8 | 91.8 | 149.2 | 32.8 | 4 | 11.2 |
| 43 | #+ Byrd | Colorado, 2011 (CO Wheat Res. F | 70.5* | 62.1 | 96.2 | 147.4 | 29.7 | 2 | 11.4 |
| 22 | Broadview | Alberta, 2009 (Meridian Seeds) | 69.5* | 60.0 | 95.0 | 151.6 | 31.9 | 2 | 12.2 |
| 47 | + MT1348 | PI572290/BigSky | 67.4* | 61.4 | 94.0 | 150.8 | 30.2 | 1 | 12.5 |
| 46 | + MT1332 | Yellowstone/00X52E99//Yellowsto | 66.4* | 61.1 | 91.0 | 152.2 | 33.2 | 5 | 12.7 |
| 5 | CDC Falcon | Sask/WestBred, 1999 | 66.3 | 60.4 | 95.0 | 150.9 | 29.0 | 7 | 12.2 |
| 16 | d MT1078 | MT02113*4/MTS0359 | 65.9 | 60.1 | 98.0 | 153.0 | 31.8 | 5 | 11.7 |
| 24 | #+ SY Monument | Syngenta (AgriPro), 2014 | 65.9 | 61.0 | 93.9 | 150.2 | 30.9 | 4 | 11.2 |
| 48 | + MT1354 | MT08184/MT08188/MT08175 | 65.7 | 61.4 | 93.2 | 152.8 | 32.8 | 8 | 12.6 |
| 19 | MT1138 | W99-194/2*Yellowstone | 65.4 | 61.2 | 95.7 | 151.7 | 32.6 | 7 | 12.3 |
| 1 | Yellowstone | Montana 2005 | 65.2 | 60.9 | 96.3 | 152.2 | 33.4 | 2 | 12.3 |
| 13 | Colter | Montana, 2013 | 65.1 | 60.9 | 94.8 | 153.3 | 32.4 | 8 | 13.0 |
| 44 | d + MTS1305 | MTS0525//97X253E54/MT03108 | 65.0 | 61.3 | 92.9 | 151.0 | 30.1 | 1 | 12.2 |
| 49 | d + MT1361 | MT08189//MT08188/MT0419-1 (Si | 64.2 | 60.6 | 88.8 | 153.9 | 30.1 | 2 | 13.1 |
| 36 | MT1257 | Yellowstone/Krichauff | 64.2 | 60.5 | 96.1 | 152.1 | 32.1 | 7 | 12.4 |
| 25 | #+ SY Sunrise | Syngenta, 2015 (06BC796#68) | 64.1 | 61.8 | 88.8 | 149.1 | 26.9 | 4 | 12.9 |
| 8 | d Ledger | WestBred, 2004 | 63.7 | 61.7 | 98.3 | 151.9 | 30.4 | 7 | 12.3 |
| 40 | + MT1356 | MT08184//MT08185/MT08177 | 63.3 | 60.7 | 88.0 | 152.5 | 32.7 | 4 | 13.1 |
| 12 | WB3768 | Montana/WestBred, 2013 | 63.0 | 60.6 | 97.0 | 155.0 | 33.2 | 13 | 12.8 |
| 45 | d + MTCL1329 | Yellowstone/4/Jagalene/3/98X78c | 62.9 | 62.1 | 96.9 | 149.3 | 30.7 | 7 | 11.9 |
| 34 | d MTCS1204 | MTCL0510/4/Paul/3/98X96C16cl/C | 61.7 | 61.1 | 93.5 | 152.3 | 31.6 | 10 | 12.2 |
| 38 | d MT1286 | Yellowstone*2/NE99445 | 61.5 | 61.1 | 93.4 | 151.3 | 31.3 | 10 | 12.3 |
| 28 | # Keldin | WestBred, 2011 | 61.4 | 61.3 | 95.5 | 152.6 | 30.4 | 15 | 12.3 |
| 15 | Northern | Montana, 2015 (MT0978) | 61.2 | 60.6 | 89.6 | 152.6 | 31.5 | 2 | 13.0 |
| 18 | d MT1117 | Yellowstone*3/KS96WGRC40 | 60.5 | 60.9 | 96.7 | 152.9 | 34.4 | 5 | 12.9 |
| 2 | Judee | Montana, 2011 | 60.5 | 61.8 | 92.7 | 151.2 | 30.6 | 1 | 12.8 |
| 11 | Warhorse | Montana, 2013 | 60.3 | 60.8 | 97.4 | 152.6 | 29.5 | 2 | 12.7 |
| 10 | Bearpaw | Montana, 2011 | 60.1 | 60.5 | 98.4 | 150.9 | 28.0 | 2 | 12.7 |
| 6 | Rampart | Montana, 1996 | 60.1 | 59.7 | 94.0 | 151.5 | 31.7 | 1 | 13.3* |
| 23 | # SY Wolf | Syngenta (AgriPro), 2010 | 59.9 | 62.5 | 96.0 | 149.6 | 29.4 | 8 | 12.3 |
| 27 | # WB4614 | WestBred, 2013 | 59.9 | 61.4 | 93.3 | 152.3 | 30.2 | 4 | 12.6 |
| 4 | Decade | Montana/North Dakota, 2010 | 59.5 | 61.3 | 96.3 | 151.3 | 29.3 | 13 | 13.1 |
| 7 | Jerry | North Dakota, 2001 | 58.9 | 60.0 | 91.1 | 152.0 | 34.2 | 4 | 12.5 |
| 3 | d Genou | Montana, 2004 | 58.4 | 60.7 | 95.9 | 150.0 | 33.2 | 1 | 12.8 |
| 37 | MT1265 | Yellowstone*4/KS96WGRC40 (Lr4 | 58.3 | 60.7 | 94.2 | 152.7 | 33.7 | 7 | 12.7 |
| 14 | SY Clearstone 2CL | Montana/Syngenta, 2012 | 58.0 | 60.7 | 95.7 | 151.9 | 34.2 | 12 | 12.5 |
| 17 | d MTS0826-63 | MT9524/G15048//Rampart | 57.7 | 58.8 | 98.3 | 153.9 | 31.1 | 1 | 13.6* |
| 20 | MTCL1131 | Yellowstone*4/3/MTCL01158/CDC | 57.6 | 61.8 | 94.4 | 152.9 | 31.2 | 10 | 12.4 |
| 26 | Freeman | Nebraska, 2013 | 57.4 | 60.3 | 87.7 | 145.4 | 28.8 | 5 | 12.6 |
| 9 | WB-Quake | WestBred, 2011 | 57.1 | 60.7 | 90.7 | 153.2 | 29.9 | 1 | 12.8 |
| 39 | d MTF1232 | Yellowstone/MT0684 | 56.6 | 59.8 | 96.6 | 154.2 | 37.5 | 12 | 12.9 |
| 31 | # T158 | Trio Research/Limagrain Cereals, | 55.7 | 61.8 | 93.3 | 145.0 | 28.1 | 5 | 12.5 |
| 32 | d # LCS Mint | Limagrains Cereals, 2012 | 55.5 | 63.1** | 98.0 | 146.9 | 30.7 | 12 | 12.3 |
| 35 | MTS1224 | Yellowstone//MTS0112/MTS0125 | 55.5 | 60.7 | 97.1 | 153.9 | 27.5 | 2 | 13.3 |
| 30 | #+ WB4623CLP | WestBred, 2014 | 55.0 | 60.7 | 96.2 | 152.6 | 26.3 | 10 | 13.5* |
| 33 | d +# LCH 10-13 | Limagrains Cereals experimental | 53.2 | 62.2 | 97.1 | 145.2 | 30.6 | 2 | 13.9** |
| 41 | #+ Brawl CL Plus | Colorado, 2011 (CO Wheat Res. F | 52.3 | 61.9 | 93.8 | 145.4 | 31.6 | 1 | 13.5* |
| 29 | # WB4059CLP | WestBred, 2013 | 48.3 | 61.8 | 94.4 | 146.6 | 26.4 | 1 | 13.4* |
| | Average | | 61.4 | 61.1 | 94.3 | 151.1 | 31.0 | 5.3 | 12.6 |
| | LSD (0.05) | | 5.7 | 0.5 | ns | 1.2 | 2.9 | 5.1 | 0.5 |
| | C. V. (%) | | 5.3 | 0.4 | 5.5 | 0.4 | 5.6 | 59 | 2.5 |
| | P-value (Varieties) | | <.0001 | <.0001 | 0.649 | <.0001 | <.0001 | <.0001 | <.0001 |

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 4. 2015 Intrastate Winter Wheat Test (Exp. 3503): Sidney

| Entry | Cultivar/Line | Pedigree | *** Severe winter-kill, no harvest*** | | | | | |
|-------|----------------------------|---|---------------------------------------|-------------------------|------------------------------------|---------------------------|-----------------------|--------------|
| | | | Yield bu/ac | Test weight lb/bu | Winter Surv. % 20-May LAT | Heading date Julian | Plant height in | Protein % |
| | | lattice efficiency relative to RCB | | | 100% | | | |
| 7 | Jerry | North Dakota, 2001 | | | 43.2** | | | |
| 22 | Broadview | Alberta, 2009 (Meridian Seeds) | | | 18.4 | | | |
| 15 | Northern | Montana, 2015 (MT0978) | | | 9.4 | | | |
| 48 | + MT1354 | MT08184//MT08188//MT08175 | | | 7.4 | | | |
| 35 | MTS1224 | Yellowstone//MTS0112//MTS0125 | | | 7.2 | | | |
| 38 | d MT1286 | Yellowstone*2//NE99445 | | | 6.5 | | | |
| 19 | MT1138 | W99-194/2*Yellowstone | | | 5.6 | | | |
| 46 | + MT1332 | Yellowstone/00X52E99//Yellowstone(340,233) | | | 4.5 | | | |
| 12 | WB3768 | Montana/WestBred, 2013 | | | 3.8 | | | |
| 4 | Decade | Montana/North Dakota, 2010 | | | 3.7 | | | |
| 27 | # WB4614 | WestBred, 2013 | | | 3.7 | | | |
| 24 | #+ SY Monument | Syngenta (AgriPro), 2014 | | | 3.5 | | | |
| 36 | MT1257 | Yellowstone/Krichauff | | | 2.7 | | | |
| 18 | d MT1117 | Yellowstone*3//KS96WGRC40 | | | 2.5 | | | |
| 10 | Bearpaw | Montana, 2011 | | | 2.4 | | | |
| 34 | d MTCS1204 | MTCL0510/4//Paul/3/98X96C16cl/CDC Teal 11A//M | | | 2.4 | | | |
| 31 | # T158 | Trio Research/Limagrain Cereals, 2009 | | | 2.2 | | | |
| 1 | Yellowstone | Montana 2005 | | | 2.1 | | | |
| 8 | d Ledger | WestBred, 2004 | | | 1.9 | | | |
| 5 | CDC Falcon | Sask/WestBred, 1999 | | | 1.8 | | | |
| 28 | # Keldin | WestBred, 2011 | | | 1.7 | | | |
| 40 | + MT1356 | MT08184//MT08185//MT08177 | | | 1.6 | | | |
| 13 | Colter | Montana, 2013 | | | 1.1 | | | |
| 20 | MTCL1131 | Yellowstone*4/3//MTCL01158/CDC Teal 11A//Jagale | | | 1.1 | | | |
| 42 | d #+ Denali | Colorado, 2011 (CO Wheat Res. Fdn.) | | | 1.1 | | | |
| 44 | d + MTS1305 | MTS0525//97X253E54//MT03108 | | | 1.0 | | | |
| 37 | MT1265 | Yellowstone*4//KS96WGRC40 (Lr41, wcm) | | | 1.0 | | | |
| 6 | Rampart | Montana, 1996 | | | 0.9 | | | |
| 33 | d #+ LCH 10-13 | Limagrain Cereals experimental | | | 0.9 | | | |
| 21 | Cowboy | Wyoming/Colorado, 2012 | | | 0.8 | | | |
| 49 | d + MT1361 | MT08189//MT08188//MT0419-1 (Sr2+36) | | | 0.8 | | | |
| 11 | Warhorse | Montana, 2013 | | | 0.7 | | | |
| 14 | SY Clearstone 2CL | Montana/Syngenta, 2012 | | | 0.7 | | | |
| 43 | #+ Byrd | Colorado, 2011 (CO Wheat Res. Fdn.) | | | 0.7 | | | |
| 26 | Freeman | Nebraska, 2013 | | | 0.7 | | | |
| 2 | Judee | Montana, 2011 | | | 0.6 | | | |
| 3 | d Genou | Montana, 2004 | | | 0.6 | | | |
| 17 | d MTS0826-63 | MT9524//G15048//Rampart | | | 0.6 | | | |
| 45 | d + MTCL1329 | Yellowstone/4//Jagalene/3/98X78cC82cl//MT0097//Jc | | | 0.6 | | | |
| 47 | + MT1348 | PI572290//BigSky | | | 0.6 | | | |
| 32 | d # LCS Mint | Limagrain Cereals, 2012 | | | 0.5 | | | |
| 23 | # SY Wolf | Syngenta (AgriPro), 2010 | | | 0.4 | | | |
| 30 | #+ WB4623CLP | WestBred, 2014 | | | 0.3 | | | |
| 41 | #+ Brawl CL Plus | Colorado, 2011 (CO Wheat Res. Fdn.) | | | 0.3 | | | |
| 39 | d MTF1232 | Yellowstone//MT0684 | | | 0.2 | | | |
| 16 | d MT1078 | MT02113*4//MTS0359 | | | 0.2 | | | |
| 9 | WB-Quake | WestBred, 2011 | | | 0.1 | | | |
| 29 | # WB4059CLP | WestBred, 2013 | | | 0.1 | | | |
| 25 | #+ SY Sunrise | Syngenta, 2015 (06BC796#68) | | | 0.0 | | | |
| | Average | | | | 2.3 | | | |
| | LSD (0.05) | | | | 7.7 | | | |
| | C. V. (%) | | | | 149.8 | | | |
| | P-value (Varieties) | | | | <.0001 | | | |

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p=0.05)

Table 5. 2015 Intrastate Winter Wheat Test (Exp. 3504): Williston, ND

| Entry | Cultivar/Line | Pedigree | Yield bu/ac | Test weight lb/bu | Winter surv. % 20-May | Winter surv. % WREC | Heading date Julian | Plant height in | Protein % |
|---|--------------------------|----------------------------------|------------------|-------------------------|-----------------------------|---------------------------|---------------------------|-----------------------|--------------|
| | | | RCB | RCB | RCB | RCB | RCB | RCB | bulk |
| d = cultivars/lines dropped for 2016 test + = new for 2015, # = paid entry | | | | | | | | | |
| lattice efficiency relative to RCB | | | | | | | | | |
| 1 | Yellowstone | Montana 2005 | 64.2** | 60.7 | 45 | 93* | 158.5 | 28.3 | 12.5 |
| 22 | Broadview | Alberta, 2009 (Meridian Seeds) | 58.1* | 60.6 | 50 | 95* | 157.5 | 27.2 | 11.4 |
| 46 | + MT1332 | Yellowstone/00X52E99//Yellowsto | 57.3* | 60.7 | 35 | 90* | 160.0 | 30.1 | 12.1 |
| 20 | MTCL1131 | Yellowstone*4/3/MTCL01158/CDC | 55.4* | 60.7 | 35 | 80* | 160.5 | 28.5 | 11.3 |
| 17 | d MTS0826-63 | MT9524/G15048//Rampart | 54.9* | 61.4 | 38 | 90* | 160.5 | 29.5 | 13.4 |
| 5 | CDC Falcon | Sask/WestBred, 1999 | 54.8* | 60.9 | 35 | 94* | 157.5 | 25.0 | 12.5 |
| 38 | d MT1286 | Yellowstone*2/NE99445 | 54.3* | 60.4 | 25 | 88* | 159.5 | 29.5 | 13.0 |
| 12 | WB3768 | Montana/WestBred, 2013 | 53.2* | 61.5 | 35 | 90* | 161.5 | 32.9 | 12.1 |
| 19 | MT1138 | W99-194/2*Yellowstone | 52.4* | 60.8 | 40 | 90* | 159.5 | 29.3 | 11.4 |
| 7 | Jerry | North Dakota, 2001 | 52.3* | 59.6 | 70** | 98** | 156.5 | 29.1 | 12.9 |
| 48 | + MT1354 | MT08184//MT08188/MT08175 | 52.1* | 60.4 | 35 | 90* | 160.0 | 30.3 | 13.3 |
| 35 | MTS1224 | Yellowstone//MTS0112/MTS0125 | 52.1* | 61.1 | 35 | 95* | 159.0 | 24.4 | 12.8 |
| 36 | MT1257 | Yellowstone/Krichauff | 51.5* | 60.4 | 35 | 85* | 159.0 | 28.9 | 11.5 |
| 49 | d + MT1361 | MT08189//MT08188/MT0419-1 (S) | 51.0* | 61.0 | 40 | 93* | 160.0 | 26.8 | 12.8 |
| 40 | + MT1356 | MT08184//MT08185/MT08177 | 50.6* | 60.1 | 35 | 78* | 159.5 | 28.1 | 12.6 |
| 15 | Northern | Montana, 2015 (MT0978) | 50.5 | 60.9 | 30 | 85* | 161.0 | 27.0 | 11.7 |
| 43 | ## Byrd | Colorado, 2011 (CO Wheat Res. F | 49.3 | 61.2 | 33 | 88* | 157.0 | 26.4 | 13.3 |
| 34 | d MTCS1204 | MTCL0510/4/Paul/3/98X96C16cl/C | 48.7 | 61.4 | 33 | 88* | 159.0 | 28.9 | 11.9 |
| 13 | Colter | Montana, 2013 | 48.4 | 61.4 | 16 | 90* | 160.0 | 29.1 | 12.8 |
| 37 | MT1265 | Yellowstone*4/KS96WGRC40 (Lr | 48.4 | 60.2 | 35 | 88* | 160.5 | 28.5 | 12.3 |
| 4 | Decade | Montana/North Dakota, 2010 | 47.7 | 61.5 | 45 | 78* | 157.5 | 27.6 | 14.7 |
| 3 | d Genou | Montana, 2004 | 47.6 | 61.6 | 35 | 83* | 159.0 | 29.7 | 12.9 |
| 9 | WB-Quake | WestBred, 2011 | 47.3 | 61.1 | 30 | 75 | 160.0 | 27.2 | 13.5 |
| 18 | d MT1117 | Yellowstone*3/KS96WGRC40 | 46.5 | 61.1 | 35 | 90* | 159.5 | 29.5 | 13.1 |
| 45 | d + MTCL1329 | Yellowstone/4/Jagalene/3/98X78cl | 46.2 | 60.9 | 20 | 69 | 158.5 | 28.1 | 12.7 |
| 14 | SY Clearstone 2CL | Montana/Syngenta, 2012 | 45.7 | 61.2 | 30 | 73 | 160.0 | 29.7 | 12.1 |
| 8 | d Ledger | WestBred, 2004 | 45.5 | 61.3 | 30 | 73 | 160.0 | 27.0 | 12.6 |
| 26 | Freeman | Nebraska, 2013 | 45.0 | 58.4 | 30 | 73 | 157.0 | 25.6 | 14.0 |
| 27 | # WB4614 | WestBred, 2013 | 43.9 | 61.6 | 25 | 78* | 159.5 | 26.0 | 12.4 |
| 10 | Bearpaw | Montana, 2011 | 42.9 | 60.6 | 28 | 73 | 159.0 | 26.4 | 13.5 |
| 16 | d MT1078 | MT02113*4/MTS0359 | 42.8 | 60.2 | 15 | 58 | 160.5 | 28.9 | 12.2 |
| 24 | ## SY Monument | Syngenta (AgriPro), 2014 | 40.8 | 60.0 | 33 | 75 | 157.5 | 24.4 | 13.2 |
| 11 | Warhorse | Montana, 2013 | 40.8 | 59.9 | 23 | 78* | 160.5 | 26.0 | 12.0 |
| 42 | d ## Denali | Colorado, 2011 (CO Wheat Res. F | 39.8 | 61.3 | 23 | 75 | 159.0 | 28.5 | 11.9 |
| 47 | + MT1348 | PI572290/BigSky | 38.4 | 60.1 | 20 | 53 | 159.5 | 26.2 | 12.5 |
| 23 | # SY Wolf | Syngenta (AgriPro), 2010 | 35.9 | 61.4 | 20 | 55 | 159.5 | 27.0 | 13.4 |
| 31 | # T158 | Trio Research/Limagrain Cereals, | 35.6 | 60.8 | 23 | 60 | 156.0 | 25.0 | 12.8 |
| 33 | d ## LCH 10-13 | Limagrain Cereals experimental | 33.0 | 61.6 | 18 | 60 | 156.5 | 28.7 | 12.8 |
| 6 | Rampart | Montana, 1996 | 33.0 | 61.0 | 18 | 70 | 160.5 | 32.1 | 13.9 |
| 39 | d MTF1232 | Yellowstone/MT0684 | 31.2 | 58.9 | 20 | 63 | 162.5 | 38.4 | 14.8 |
| 32 | d # LCS Mint | Limagrain Cereals, 2012 | 29.9 | 63.0** | 15 | 29 | 158.0 | 28.7 | 12.6 |
| 21 | Cowboy | Wyoming/Colorado, 2012 | 28.7 | 61.2 | 13 | 28 | 159.5 | 28.5 | 12.0 |
| 28 | # Keldin | WestBred, 2011 | 28.1 | 61.3 | 13 | 28 | 161.0 | 26.8 | 15.0 |
| 2 | Judee | Montana, 2011 | 27.9 | 60.6 | 13 | 40 | 160.5 | 28.3 | 15.7 |
| 44 | d + MTS1305 | MTS0525//97X253E54/MT03108 | 27.1 | 60.5 | 13 | 50 | 160.5 | 24.6 | 12.4 |
| 41 | ## Brawl CL Plus | Colorado, 2011 (CO Wheat Res. F | 25.5 | 62.0* | 23 | 53 | 156.5 | 24.8 | 14.3 |
| 25 | ## SY Sunrise | Syngenta, 2015 (06BC796#68) | 24.2 | 62.1* | 8 | 36 | 157.5 | 22.4 | 14.9 |
| 29 | # WB4059CLP | WestBred, 2013 | 21.6 | 60.1 | 8 | 30 | 157.5 | 23.6 | 14.5 |
| 30 | ## WB4623CLP | WestBred, 2014 | 14.4 | 57.7 | 18 | 16 | 163.5 | 23.2 | 15.4 |
| Average | | | 43.2 | 60.8 | 28.0 | 71.4 | 159.2 | 27.8 | 13.0 |
| LSD (0.05) | | | 13.7 | 1.3 | 15.7 | 21.8 | 2.0 | 1.7 | |
| C. V. (%) | | | 15.8 | 1.1 | 28.0 | 15.2 | 0.6 | 3.1 | |
| P-value (Varieties) | | | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | |

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 6. 2015 Intrastate Winter Wheat Test (Exp. 3505): Kalispell

| Entry | Cultivar/Line | Pedigree | Yield bu/ac | Test weight lb/bu bulk | Heading date Julian LAT | Plant height in LAT | Stripe Rust % | | | Protein % bulk |
|----------------------------|-------------------|------------------------------------|------------------|---------------------------------|----------------------------------|------------------------------|------------------|------------------|------------------|----------------------|
| | | | | | | | 7-Jun RCB | 25-Jun RCB | 29-Jul LAT | |
| | | lattice efficiency relative to RCB | 187% | | 144% | 112% | | | 104% | |
| 48 | + MT1354 | MT08184//MT08188/MT08175 | 154.6** | 63.6 | 153.9 | 40.1 | 3 | 5 | 16* | 9.9 |
| 13 | Colter | Montana, 2013 | 151.2* | 63.0 | 155.4 | 41.6 | 5 | 4 | 20* | 9.9 |
| 40 | + MT1356 | MT08184//MT08185/MT08177 | 149.7* | 62.8 | 154.9 | 41.2 | 10 | 8 | 27 | 10.1 |
| 46 | + MT1332 | Yellowstone/00X52E99//Yellowstc | 144.8* | 62.4 | 153.8 | 39.4 | 3 | 3 | 12* | 9.0 |
| 35 | MTS1224 | Yellowstone//MTS0112/MTS0125 | 144.7* | 62.9 | 154.5 | 36.9 | 3 | 2 | 7* | 9.6 |
| 36 | MT1257 | Yellowstone/Krichauff | 144.3* | 62.3 | 153.1 | 39.9 | 5 | 6 | 23* | 10.0 |
| 19 | MT1138 | W99-194/2*Yellowstone | 143.5* | 62.8 | 154.3 | 40.6 | 3 | 5 | 24 | 9.5 |
| 20 | MTCL1131 | Yellowstone*4/3/MTCL01158/CD | 140.6 | 62.9 | 155.4 | 42.1 | 8 | 5 | 20* | 10.2 |
| 1 | Yellowstone | Montana 2005 | 140.5 | 62.4 | 153.2 | 40.7 | 3 | 8 | 23 | 9.6 |
| 37 | MT1265 | Yellowstone*4/KS96WGRC40 (Lr. | 139.8 | 61.8 | 155.2 | 41.5 | 3 | 5 | 21* | 9.3 |
| 16 | d MT1078 | MT02113*4/MTS0359 | 139.0 | 61.9 | 153.4 | 37.8 | 10 | 11 | 31 | 9.2 |
| 18 | d MT1117 | Yellowstone*3/KS96WGRC40 | 138.7 | 63.1 | 154.3 | 40.3 | 0** | 4 | 19* | 9.8 |
| 12 | WB3768 | Montana/WestBred, 2013 | 135.8 | 63.1 | 156.7 | 43.5 | 3 | 7 | 17* | 9.6 |
| 47 | + MT1348 | PI572290/BigSky | 132.9 | 63.9 | 152.2 | 36.1 | 0** | 4 | 15* | 9.7 |
| 11 | Warhorse | Montana, 2013 | 132.4 | 62.9 | 154.4 | 38.7 | 5 | 7 | 6* | 11.0 |
| 14 | SY Clearstone 2CL | Montana/Syngenta, 2012 | 132.0 | 62.7 | 153.7 | 40.2 | 1 | 5 | 17* | 10.4 |
| 15 | Northern | Montana, 2015 (MT0978) | 130.8 | 62.7 | 154.4 | 38.9 | 5 | 1** | 5** | 10.5 |
| 9 | WB-Quake | WestBred, 2011 | 127.5 | 63.6 | 153.1 | 37.7 | 5 | 9 | 9* | 9.6 |
| 45 | d + MTCL1329 | Yellowstone/4/Jagalene/3/98X78c | 126.4 | 63.5 | 151.6 | 36.3 | 5 | 17 | 32 | 10.0 |
| 17 | d MTS0826-63 | MT9524/G15048//Rampart | 126.1 | 63.8 | 155.3 | 41.5 | 0** | 6 | 15* | 10.1 |
| 2 | Judee | Montana, 2011 | 125.4 | 63.7 | 153.0 | 37.8 | 1 | 2 | 10* | 9.9 |
| 49 | d + MT1361 | MT08189//MT08188/MT0419-1 (S | 123.7 | 62.7 | 154.7 | 34.5 | 3 | 5 | 17* | 9.8 |
| 28 | # Keldin | WestBred, 2011 | 122.3 | 63.8 | 152.5 | 35.6 | 5 | 11 | 35 | 9.8 |
| 24 | #+ SY Monument | Syngenta (AgriPro), 2014 | 121.5 | 62.2 | 150.8 | 37.0 | 1 | 3 | 21* | 9.1 |
| 26 | Freeman | Nebraska, 2013 | 120.3 | 61.8 | 146.9 | 38.4 | 10 | 10 | 50 | 9.4 |
| 32 | d # LCS Mint | Limagrain Cereals, 2012 | 119.4 | 64.6 | 149.5 | 38.2 | 4 | 16 | 23 | 9.7 |
| 31 | # T158 | Trio Research/Limagrain Cereals, | 119.0 | 64.0 | 147.5 | 35.2 | 3 | 2 | 20* | 10.1 |
| 30 | #+ WB4623CLP | WestBred, 2014 | 115.9 | 63.8 | 152.8 | 35.4 | 0** | 4 | 12* | 10.9 |
| 38 | d MT1286 | Yellowstone*2/NE99445 | 113.5 | 62.4 | 154.7 | 39.2 | 18 | 38 | 80 | 9.0 |
| 25 | #+ SY Sunrise | Syngenta, 2015 (06BC796#68) | 111.3 | 64.0 | 150.5 | 31.8 | 2 | 12 | 32 | 9.8 |
| 39 | d MTF1232 | Yellowstone/MT0684 | 109.4 | 63.5 | 155.9 | 50.6 | 15 | 22 | 53 | 10.1 |
| 34 | d MTCS1204 | MTCL0510/4/Paul/3/98X96C16cl/ | 108.3 | 63.3 | 154.8 | 38.6 | 20 | 31 | 48 | 10.4 |
| 27 | # WB4614 | WestBred, 2013 | 106.9 | 63.3 | 152.9 | 33.2 | 28 | 23 | 44 | 9.8 |
| 23 | # SY Wolf | Syngenta (AgriPro), 2010 | 105.7 | 63.1 | 150.7 | 32.7 | 5 | 6 | 22* | 9.5 |
| 8 | d Ledger | WestBred, 2004 | 104.6 | 63.6 | 152.7 | 36.0 | 10 | 15 | 66 | 9.9 |
| 6 | Rampart | Montana, 1996 | 101.0 | 63.1 | 153.2 | 41.8 | 15 | 12 | 62 | 10.8 |
| 44 | d + MTS1305 | MTS0525//97X253E54/MT03108 | 100.7 | 63.5 | 152.0 | 34.0 | 5 | 12 | 33 | 9.5 |
| 42 | d #+ Denali | Colorado, 2011 (CO Wheat Res. I | 94.1 | 61.4 | 151.8 | 38.9 | 65 | 89 | 81 | 10.1 |
| 21 | Cowboy | Wyoming/Colorado, 2012 | 91.7 | 60.1 | 151.7 | 35.2 | 95 | 93 | 89 | 10.1 |
| 41 | #+ Brawl CL Plus | Colorado, 2011 (CO Wheat Res. I | 90.5 | 61.3 | 147.9 | 35.6 | 60 | 50 | 75 | 11.4 |
| 5 | CDC Falcon | Sask/WestBred, 1999 | 89.2 | 62.0 | 152.8 | 32.1 | 75 | 83 | 60 | 9.9 |
| 43 | #+ Byrd | Colorado, 2011 (CO Wheat Res. I | 85.9 | 60.3 | 149.7 | 36.6 | 45 | 78 | 87 | 9.1 |
| 10 | Bearpaw | Montana, 2011 | 81.3 | 59.2 | 152.7 | 37.4 | 43 | 70 | 74 | 10.4 |
| 33 | d +# LCH 10-13 | Limagrain Cereals experimental | 76.7 | 62.1 | 150.7 | 39.9 | 70 | 92 | 92 | 10.4 |
| 4 | Decade | Montana/North Dakota, 2010 | 69.3 | 59.0 | 152.2 | 36.1 | 50 | 69 | 92 | 9.5 |
| 22 | Broadview | Alberta, 2009 (Meridian Seeds) | 67.3 | 57.1 | 153.7 | 36.4 | 75 | 90 | 85 | 11.2 |
| 3 | d Genou | Montana, 2004 | 64.9 | 61.3 | 153.8 | 43.1 | 45 | 83 | 90 | 10.1 |
| 29 | # WB4059CLP | WestBred, 2013 | 61.6 | 61.0 | 148.1 | 28.8 | 80 | 85 | 98 | 10.8 |
| 7 | Jerry | North Dakota, 2001 | 59.5 | 57.7 | 154.2 | 44.8 | 70 | 92 | 90 | 9.5 |
| Average | | | 115.0 | 62.4 | 152.8 | 38.2 | 20.2 | 26.9 | 40.8 | 9.9 |
| LSD (0.05) | | | 12.6 | | 1.5 | 3.1 | 17.9 | 9.1 | 17.8 | |
| C. V. (%) | | | 6.2 | | 0.6 | 4.9 | 44 | 21 | 26 | |
| P-value (Varieties) | | | <.0001 | | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | |

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

*

Table 7. 2015 Intrastate Winter Wheat Test (Exp. 3507): Moccasin

| Entry | Cultivar/Line | Pedigree | Yield bu/ac | Test weight lb/bu | Heading date Julian | Plant height in | Disease Rating | | Protein % |
|---|-------------------|---|----------------|-------------------------|---------------------------|-----------------------|-----------------------------|---------------------------|--------------|
| | | | | | | | Powdery mildew 21-May | leaf yellows 16-Jun | |
| d = cultivars/lines dropped for 2016 test + = new for 2015, # = paid entry | | | LAT | RCB | LAT | LAT | | | bulk |
| | | lattice efficiency relative to RCB | 199% | | 109% | 113% | 102% | 101% | |
| 19 | MT1138 | W99-194/2*Yellowstone | 69.0** | 59.9 | 161.3 | 36.3 | 1.3 | 2.9 | 9.6 |
| 36 | MT1257 | Yellowstone/Krichauff | 68.0* | 59.5 | 161.0 | 34.8 | 1.1 | 2.4 | 9.6 |
| 49 d + | MT1361 | MT08189//MT08188/MT0419-1 (S | 66.5* | 59.2 | 166.9 | 32.4 | 1.0 | 2.0 | 9.7 |
| 45 d + | MTCL1329 | Yellowstone/4/Jagalene/3/98X78cl | 65.4* | 60.8* | 159.5 | 32.9 | 1.7 | 3.1 | 9.4 |
| 15 | Northern | Montana, 2015 (MT0978) | 64.2* | 59.9 | 163.6 | 34.1 | 1.3 | 1.8 | 11.0 |
| 21 | Cowboy | Wyoming/Colorado, 2012 | 62.6* | 58.6 | 159.9 | 33.4 | 3.0 | 2.0 | 8.8 |
| 20 | MTCL1131 | Yellowstone*4/3/MTCL01158/CDC | 62.6* | 60.5* | 161.4 | 34.9 | 1.7 | 2.4 | 9.3 |
| 42 d #+ | Denali | Colorado, 2011 (CO Wheat Res. F | 62.0* | 60.7* | 160.3 | 33.1 | 1.3 | 1.3 | 8.6 |
| 28 | # Keldin | WestBred, 2011 | 61.5* | 60.9* | 160.6 | 33.1 | 1.7 | 1.4 | 8.1 |
| 43 | #+ Byrd | Colorado, 2011 (CO Wheat Res. F | 61.4* | 58.5 | 156.6 | 32.3 | 2.4 | 1.3 | 9.1 |
| 18 d | MT1117 | Yellowstone*3/KS96WGRC40 | 61.0* | 60.3* | 161.2 | 35.5 | 0.9 | 1.9 | 9.3 |
| 16 d | MT1078 | MT02113*4/MTS0359 | 60.1* | 57.5 | 161.2 | 32.2 | 6.1 | 3.7 | 8.9 |
| 24 | #+ SY Monument | Syngenta (AgriPro), 2014 | 59.8* | 58.1 | 159.9 | 32.6 | 3.4 | 1.8 | 9.0 |
| 47 | + MT1348 | PI572290/BigSky | 59.6* | 61.3* | 159.7 | 32.8 | 2.4 | 2.3 | 9.0 |
| 12 | WB3768 | Montana/WestBred, 2013 | 59.5* | 60.5* | 166.3 | 37.9 | 1.6 | 1.3 | 10.0 |
| 1 | Yellowstone | Montana 2005 | 59.2* | 59.6 | 161.5 | 34.7 | 2.0 | 2.4 | 9.8 |
| 7 | Jerry | North Dakota, 2001 | 59.1* | 58.4 | 161.1 | 37.6 | 2.7 | 2.0 | 9.6 |
| 46 | + MT1332 | Yellowstone/00X52E99//Yellowsto | 58.8* | 60.3* | 160.9 | 34.5 | 1.6 | 2.7 | 8.8 |
| 38 d | MT1286 | Yellowstone*2/NE99445 | 58.2 | 60.4* | 161.3 | 34.6 | 2.3 | 3.7 | 9.2 |
| 13 | Colter | Montana, 2013 | 57.9 | 59.7 | 160.6 | 34.8 | 2.0 | 2.6 | 9.8 |
| 10 | Bearpaw | Montana, 2011 | 57.9 | 57.5 | 160.5 | 34.2 | 1.0 | 2.0 | 10.7 |
| 27 | # WB4614 | WestBred, 2013 | 57.4 | 59.2 | 160.1 | 32.0 | 2.0 | 1.3 | 8.9 |
| 37 | MT1265 | Yellowstone*4/KS96WGRC40 (Lr ^z | 56.9 | 57.5 | 161.6 | 33.9 | 1.9 | 2.3 | 10.3 |
| 14 | SY Clearstone 2CL | Montana/Syngenta, 2012 | 56.9 | 59.1 | 161.2 | 34.6 | 3.0 | 4.0 | 9.4 |
| 40 | + MT1356 | MT08184//MT08185/MT08177 | 56.7 | 60.2* | 160.8 | 33.5 | 1.4 | 2.3 | 8.9 |
| 32 d | # LCS Mint | Limagrain Cereals, 2012 | 56.5 | 59.5 | 157.2 | 33.5 | 2.7 | 1.3 | 10.1 |
| 48 | + MT1354 | MT08184//MT08188/MT08175 | 56.3 | 59.2 | 161.1 | 34.5 | 2.3 | 2.6 | 9.9 |
| 22 | Broadview | Alberta, 2009 (Meridian Seeds) | 55.9 | 58.6 | 161.2 | 33.5 | 5.0 | 2.3 | 9.0 |
| 25 | #+ SY Sunrise | Syngenta, 2015 (06BC796#68) | 55.8 | 60.2* | 157.4 | 27.5 | 5.1 | 1.7 | 10.1 |
| 4 | Decade | Montana/North Dakota, 2010 | 55.3 | 58.9 | 159.8 | 31.0 | 2.3 | 2.0 | 9.6 |
| 26 | Freeman | Nebraska, 2013 | 55.3 | 56.3 | 153.9 | 30.6 | 5.4 | 2.3 | 8.9 |
| 31 | # T158 | Trio Research/Limagrain Cereals, | 54.9 | 61.5* | 155.1 | 29.7 | 2.6 | 1.7 | 8.6 |
| 5 | CDC Falcon | Sask/WestBred, 1999 | 54.4 | 58.4 | 160.6 | 29.9 | 5.0 | 2.0 | 9.0 |
| 35 | MTS1224 | Yellowstone//MTS0112/MTS0125 | 54.3 | 58.1 | 161.2 | 31.7 | 2.0 | 1.0 | 9.5 |
| 34 d | MTCS1204 | MTCL0510/4/Paul/3/98X96C16cl/(| 52.7 | 58.2 | 160.7 | 34.0 | 3.1 | 1.0 | 11.0 |
| 23 | # SY Wolf | Syngenta (AgriPro), 2010 | 52.5 | 60.1* | 160.4 | 29.6 | 3.0 | 1.3 | 9.8 |
| 11 | Warhorse | Montana, 2013 | 51.9 | 59.3 | 162.8 | 31.6 | 2.1 | 2.6 | 9.8 |
| 33 d #+ | LCH 10-13 | Limagrain Cereals experimental | 50.6 | 60.7* | 157.1 | 32.4 | 3.7 | 2.0 | 9.8 |
| 44 d + | MTS1305 | MTS0525//97X253E54/MT03108 | 50.4 | 60.4* | 159.6 | 30.7 | 2.4 | 2.7 | 9.0 |
| 41 | #+ Brawl CL Plus | Colorado, 2011 (CO Wheat Res. F | 50.1 | 61.9** | 154.9 | 30.0 | 2.6 | 2.0 | 9.0 |
| 29 | # WB4059CLP | WestBred, 2013 | 48.9 | 60.0* | 155.9 | 29.1 | 1.4 | 1.3 | 10.2 |
| 8 d | Ledger | WestBred, 2004 | 48.2 | 58.3 | 159.8 | 32.9 | 2.0 | 1.4 | 9.7 |
| 30 | #+ WB4623CLP | WestBred, 2014 | 47.7 | 60.0* | 161.7 | 31.1 | 1.6 | 3.6 | 9.3 |
| 9 | WB-Quake | WestBred, 2011 | 46.5 | 57.8 | 161.0 | 32.8 | 1.7 | 1.7 | 10.1 |
| 6 | Rampart | Montana, 1996 | 45.1 | 58.3 | 161.4 | 37.3 | 1.9 | 2.6 | 9.6 |
| 3 d | Genou | Montana, 2004 | 44.8 | 58.2 | 159.9 | 36.1 | 3.0 | 1.1 | 9.4 |
| 39 d | MTF1232 | Yellowstone/MT0684 | 44.1 | 58.2 | 163.5 | 46.5 | 3.1 | 1.1 | 10.7 |
| 2 | Judee | Montana, 2011 | 42.1 | 59.7 | 160.0 | 30.6 | 2.4 | 1.4 | 10.4 |
| 17 d | MTS0826-63 | MT9524/G15048//Rampart | 38.8 | 56.6 | 164.4 | 36.0 | 2.7 | 6.3 | 11.9 |
| Average | | | 55.8 | 59.3 | 160.4 | 33.4 | 2.4 | 2.2 | 9.6 |
| LSD (0.05) | | | 10.8 | 1.9 | 1.7 | 2.7 | 1.1 | 1.1 | |
| C. V. (%) | | | 10.9 | 1.6 | 0.6 | 4.6 | 27.5 | 31.5 | |
| P-value (Varieties) | | | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | |

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 8. 2014 Intrastate Winter Wheat Test (Exp. 3518): Conrad

| Entry | Cultivar/Line | Pedigree | Yield bu/ac | Test weight lb/bu | Heading date Julian | Plant height in | Protein % |
|-------|---------------------|------------------------------------|------------------|-------------------------|---------------------------|-----------------------|------------------|
| | | | LAT | LAT | LAT | LAT | LAT |
| | | lattice efficiency relative to RCB | 137% | 151% | 125% | 101% | 136% |
| 42 | d #+ Denali | Colorado, 2011 (CO Wheat Res. F | 95.9** | 61.5* | 155.2 | 36.0 | 11.9 |
| 32 | d # LCS Mint | Limagrain Cereals, 2012 | 95.2* | 62.0* | 153.0 | 34.4 | 12.4 |
| 23 | # SY Wolf | Syngenta (AgriPro), 2010 | 90.8* | 61.8* | 154.7 | 32.0 | 12.9 |
| 47 | + MT1348 | PI572290/BigSky | 89.9* | 59.6 | 155.4 | 34.7 | 12.7 |
| 28 | # Keldin | WestBred, 2011 | 89.8* | 60.3 | 157.1 | 33.1 | 13.5 |
| 49 | d + MT1361 | MT08189//MT08188/MT0419-1 (S | 89.5* | 59.2 | 158.9 | 32.9 | 12.7 |
| 26 | Freeman | Nebraska, 2013 | 89.3* | 59.6 | 150.7 | 33.5 | 12.6 |
| 38 | d MT1286 | Yellowstone*2/NE99445 | 89.0* | 61.2 | 158.1 | 35.8 | 12.9 |
| 20 | MTCL1131 | Yellowstone*4/3/MTCL01158/CDC | 89.0* | 58.5 | 158.5 | 35.1 | 12.4 |
| 15 | Northern | Montana, 2015 (MT0978) | 87.9* | 59.3 | 158.1 | 35.0 | 12.9 |
| 46 | + MT1332 | Yellowstone/00X52E99//Yellowsto | 87.3* | 59.9 | 158.6 | 36.6 | 12.5 |
| 40 | + MT1356 | MT08184//MT08185/MT08177 | 87.2* | 59.6 | 158.7 | 34.9 | 12.8 |
| 41 | #+ Brawl CL Plus | Colorado, 2011 (CO Wheat Res. F | 85.7* | 62.9* | 150.5 | 34.1 | 13.4 |
| 24 | #+ SY Monument | Syngenta (AgriPro), 2014 | 83.9* | 58.5 | 155.7 | 33.8 | 12.7 |
| 21 | Cowboy | Wyoming/Colorado, 2012 | 83.6* | 59.5 | 154.9 | 32.5 | 12.3 |
| 31 | # T158 | Trio Research/Limagrain Cereals, | 83.4* | 62.6* | 150.3 | 32.2 | 13.2 |
| 1 | Yellowstone | Montana 2005 | 83.1* | 60.0 | 158.6 | 34.4 | 12.7 |
| 14 | SY Clearstone 2CL | Montana/Syngenta, 2012 | 83.0* | 57.2 | 158.1 | 34.2 | 12.6 |
| 25 | #+ SY Sunrise | Syngenta, 2015 (06BC796#68) | 82.4* | 62.6* | 152.8 | 30.7 | 13.3 |
| 36 | MT1257 | Yellowstone/Krichauff | 82.3* | 59.9 | 157.9 | 34.7 | 12.7 |
| 5 | CDC Falcon | Sask/WestBred, 1999 | 81.8* | 59.3 | 156.4 | 30.8 | 13.2 |
| 33 | d #+ LCH 10-13 | Limagrain Cereals experimental | 81.8* | 63.3** | 151.3 | 35.8 | 13.9* |
| 35 | MTS1224 | Yellowstone//MTS0112/MTS0125 | 80.7* | 57.5 | 159.4 | 31.3 | 13.3 |
| 37 | MT1265 | Yellowstone*4/KS96WGRC40 (Lr | 80.4* | 58.7 | 158.2 | 36.3 | 13.4 |
| 13 | Colter | Montana, 2013 | 79.6* | 58.2 | 158.5 | 34.1 | 13.5 |
| 22 | Broadview | Alberta, 2009 (Meridian Seeds) | 77.5 | 58.8 | 158.0 | 33.4 | 13.5 |
| 8 | d Ledger | WestBred, 2004 | 77.4 | 61.3 | 155.1 | 34.0 | 12.6 |
| 19 | MT1138 | W99-194/2*Yellowstone | 76.8 | 58.7 | 157.1 | 34.8 | 13.3 |
| 27 | # WB4614 | WestBred, 2013 | 75.5 | 60.5 | 156.4 | 32.3 | 13.6 |
| 16 | d MT1078 | MT02113*4/MTS0359 | 75.2 | 55.3 | 158.2 | 33.4 | 13.1 |
| 12 | WB3768 | Montana/WestBred, 2013 | 74.9 | 59.6 | 159.8 | 35.7 | 13.8* |
| 44 | d + MTS1305 | MTS0525//97X253E54/MT03108 | 74.8 | 60.6 | 155.5 | 32.3 | 13.1 |
| 7 | Jerry | North Dakota, 2001 | 74.6 | 58.5 | 157.8 | 38.4 | 13.0 |
| 43 | #+ Byrd | Colorado, 2011 (CO Wheat Res. F | 74.4 | 58.7 | 153.4 | 33.7 | 12.4 |
| 45 | d + MTCL1329 | Yellowstone/4/Jagalene/3/98X78c | 73.9 | 62.1* | 155.2 | 31.2 | 12.7 |
| 4 | Decade | Montana/North Dakota, 2010 | 72.9 | 59.8 | 155.8 | 32.9 | 13.5 |
| 34 | d MTCS1204 | MTCL0510/4/Paul/3/98X96C16cl/t | 72.7 | 60.3 | 155.8 | 33.3 | 13.2 |
| 48 | + MT1354 | MT08184//MT08188/MT08175 | 72.6 | 57.9 | 158.5 | 35.0 | 13.7 |
| 18 | d MT1117 | Yellowstone*3/KS96WGRC40 | 72.2 | 58.4 | 158.6 | 35.0 | 14.4* |
| 39 | d MTF1232 | Yellowstone/MT0684 | 68.4 | 58.4 | 159.4 | 43.8 | 14.5* |
| 3 | d Genou | Montana, 2004 | 67.4 | 59.8 | 156.8 | 38.6 | 14.0* |
| 30 | #+ WB4623CLP | WestBred, 2014 | 67.1 | 59.9 | 157.3 | 30.7 | 14.0* |
| 10 | Bearpaw | Montana, 2011 | 66.9 | 58.9 | 155.6 | 31.9 | 13.7 |
| 29 | # WB4059CLP | WestBred, 2013 | 65.4 | 61.7* | 152.5 | 32.0 | 13.9* |
| 17 | d MTS0826-63 | MT9524/G15048//Rampart | 64.8 | 57.9 | 159.9 | 34.7 | 14.9** |
| 2 | Judee | Montana, 2011 | 63.1 | 58.6 | 155.2 | 33.7 | 14.4* |
| 6 | Rampart | Montana, 1996 | 59.5 | 59.7 | 157.8 | 36.2 | 14.5* |
| 11 | Warhorse | Montana, 2013 | 58.2 | 57.4 | 157.8 | 31.4 | 14.0* |
| 9 | WB-Quake | WestBred, 2011 | 54.3 | 58.6 | 158.4 | 32.2 | 14.0* |
| | Average | | 78.2 | 59.7 | 156.4 | 34.1 | 13.3 |
| | LSD (0.05) | | 16.6 | 1.9 | 1.5 | 2.2 | 1.1 |
| | C. V. (%) | | 12.2 | 1.8 | 0.5 | 4.0 | 4.9 |
| | P-value (Varieties) | | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 |

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p = 0.05)

Table 9. 2015 Intrastate Winter Wheat Test (Exp. 35): Multi-Location Yield (bu/a)

| Cultivar/Line | Bozeman LAT | Havre LAT | Sidney winter- killed | Williston RCB | Kalispell LAT | Moccasin LAT | Huntley not planted | Conrad LAT | 6 Loc Avg. |
|---------------------|----------------|--------------|-----------------------------|------------------|------------------|-----------------|---------------------------|---------------|---------------|
| lattice efficiency | 161% | 175% | | | 187% | 199% | | 137% | |
| + MT1332 | 88.6* | 66.4* | | 57.3* | 144.8* | 58.8* | | 87.3* | 83.9** |
| MT1257 | 87.7* | 64.2 | | 51.5* | 144.3* | 68.0* | | 82.3* | 83.0* |
| Yellowstone | 84.4 | 65.2 | | 64.2** | 140.5 | 59.2* | | 83.1* | 82.8* |
| MT1138 | 87.0* | 65.4 | | 52.4* | 143.5* | 69.0** | | 76.8 | 82.4* |
| + MT1356 | 85.7* | 63.3 | | 50.6* | 149.7* | 56.7 | | 87.2* | 82.2* |
| MTCL1131 | 85.1 | 57.6 | | 55.4* | 140.6 | 62.6* | | 89.0* | 81.7* |
| Colter | 87.0* | 65.1 | | 48.4 | 151.2* | 57.9 | | 79.6* | 81.5* |
| + MT1354 | 82.6 | 65.7 | | 52.1* | 154.6** | 56.3 | | 72.6 | 80.7* |
| Northern | 83.1 | 61.2 | | 50.5 | 130.8 | 64.2* | | 87.9* | 79.6* |
| + MT1348 | 89.9* | 67.4* | | 38.4 | 132.9 | 59.6* | | 89.9* | 79.5* |
| MTS1224 | 89.9* | 55.5 | | 52.1* | 144.7* | 54.3 | | 80.7* | 79.5* |
| + d MT1361 | 75.8 | 64.2 | | 51.0* | 123.7 | 66.5* | | 89.5* | 78.5* |
| d MT1078 | 83.7 | 65.9 | | 42.8 | 139.0 | 60.1* | | 75.2 | 77.8* |
| MT1265 | 82.1 | 58.3 | | 48.4 | 139.8 | 56.9 | | 80.4* | 77.7* |
| WB3768 | 79.3 | 63.0 | | 53.2* | 135.8 | 59.5* | | 74.9 | 77.6* |
| d MT1117 | 82.6 | 60.5 | | 46.5 | 138.7 | 61.0* | | 72.2 | 76.9* |
| SY Clearstone 2CL | 82.6 | 58.0 | | 45.7 | 132.0 | 56.9 | | 83.0* | 76.4* |
| #+ SY Monument | 85.9* | 65.9 | | 40.8 | 121.5 | 59.8* | | 83.9* | 76.3* |
| + d MTCL1329 | 79.8 | 62.9 | | 46.2 | 126.4 | 65.4* | | 73.9 | 75.8* |
| d MT1286 | 77.6 | 61.5 | | 54.3* | 113.5 | 58.2 | | 89.0* | 75.7* |
| Freeman | 83.8 | 57.4 | | 45.0 | 120.3 | 55.3 | | 89.3* | 75.2* |
| # Keldin | 85.1 | 61.4 | | 28.1 | 122.3 | 61.5* | | 89.8* | 74.7* |
| # T158 | 95.3* | 55.7 | | 35.6 | 119.0 | 54.9 | | 83.4* | 74.0* |
| # d LCS Mint | 83.5 | 55.5 | | 29.9 | 119.4 | 56.5 | | 95.2* | 73.3* |
| #+ SY Sunrise | 96.5** | 64.1 | | 24.2 | 111.3 | 55.8 | | 82.4* | 72.4* |
| # SY Wolf | 83.2 | 59.9 | | 35.9 | 105.7 | 52.5 | | 90.8* | 71.3* |
| #+ d Denali | 50.2 | 72.1** | | 39.8 | 94.1 | 62.0* | | 95.9** | 69.0 |
| Warhorse | 69.8 | 60.3 | | 40.8 | 132.4 | 51.9 | | 58.2 | 68.9 |
| d MTS0826-63 | 70.7 | 57.7 | | 54.9* | 126.1 | 38.8 | | 64.8 | 68.8 |
| # WB4614 | 62.0 | 59.9 | | 43.9 | 106.9 | 57.4 | | 75.5 | 67.6 |
| d MTCS1204 | 59.2 | 61.7 | | 48.7 | 108.3 | 52.7 | | 72.7 | 67.2 |
| CDC Falcon | 55.4 | 66.3 | | 54.8* | 89.2 | 54.4 | | 81.8* | 67.0 |
| #+ Byrd | 57.2 | 70.5* | | 49.3 | 85.9 | 61.4* | | 74.4 | 66.5 |
| WB-Quake | 64.9 | 57.1 | | 47.3 | 127.5 | 46.5 | | 54.3 | 66.3 |
| Cowboy | 56.4 | 71.7* | | 28.7 | 91.7 | 62.6* | | 83.6* | 65.8 |
| d Ledger | 49.5 | 63.7 | | 45.5 | 104.6 | 48.2 | | 77.4 | 64.8 |
| Judee | 64.6 | 60.5 | | 27.9 | 125.4 | 42.1 | | 63.1 | 63.9 |
| + d MTS1305 | 63.4 | 65.0 | | 27.1 | 100.7 | 50.4 | | 74.8 | 63.6 |
| #+ Brawl CL Plus | 71.3 | 52.3 | | 25.5 | 90.5 | 50.1 | | 85.7* | 62.6 |
| #+ WB4623CLP | 72.7 | 55.0 | | 14.4 | 115.9 | 47.7 | | 67.1 | 62.1 |
| Broadview | 42.9 | 69.5* | | 58.1* | 67.3 | 55.9 | | 77.5 | 61.9 |
| +# d LCH 10-13 | 73.4 | 53.2 | | 33.0 | 76.7 | 50.6 | | 81.8* | 61.5 |
| d MTF1232 | 55.3 | 56.6 | | 31.2 | 109.4 | 44.1 | | 68.4 | 60.8 |
| Rampart | 53.6 | 60.1 | | 33.0 | 101.0 | 45.1 | | 59.5 | 58.7 |
| Decade | 46.6 | 59.5 | | 47.7 | 69.3 | 55.3 | | 72.9 | 58.6 |
| Bearpaw | 42.0 | 60.1 | | 42.9 | 81.3 | 57.9 | | 66.9 | 58.5 |
| Jerry | 42.1 | 58.9 | | 52.3* | 59.5 | 59.1* | | 74.6 | 57.8 |
| d Genou | 40.9 | 58.4 | | 47.6 | 64.9 | 44.8 | | 67.4 | 54.0 |
| # WB4059CLP | 56.2 | 48.3 | | 21.6 | 61.6 | 48.9 | | 65.4 | 50.3 |
| Average | 72.0 | 61.4 | | 43.2 | 115.0 | 55.8 | | 78.2 | 70.9 |
| LSD (0.05) | 11.0 | 5.7 | | 13.7 | 12.6 | 10.8 | | 16.6 | 14.0 |
| C. V. (%) | 8.7 | 5.3 | | 15.8 | 6.2 | 10.9 | | 12.2 | 17.3 |
| P-value (Varieties) | <.0001 | <.0001 | | <.0001 | <.0001 | <.0001 | | <.0001 | <.0001 |

+ = new for 2015, # = paid entry

d = cultivars/lines dropped for 2016 test

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p = 0.05)

Table 10. 2015 Intrastate Winter Wheat Test (Exp. 35): Multi-Location Test Weight (lb/bu)

| Cultivar/Line | Bozeman LAT | Havre LAT | Sidney | Williston RCB | Kalispell bulk | Moccasin RCB | Huntley | Conrad LAT | 6 Loc Avg. |
|----------------------------|------------------|------------------|--------|------------------|-------------------|------------------|---------|------------------|------------------|
| lattice efficiency | 201% | 233% | | | | | | 151% | |
| # T158 | 58.9 | 61.8 | | 60.8 | 64.0 | 61.5* | | 62.6* | 61.6** |
| # d LCS Mint | 57.1 | 63.1** | | 63.0** | 64.6 | 59.5 | | 62.0* | 61.6* |
| + d MTCL1329 | 58.6 | 62.1 | | 60.9 | 63.5 | 60.8* | | 62.1* | 61.3* |
| #+ SY Sunrise | 56.3 | 61.8 | | 62.1* | 64.0 | 60.2* | | 62.6* | 61.2* |
| + # d LCH 10-13 | 57.4 | 62.2 | | 61.6 | 62.1 | 60.7* | | 63.3** | 61.2* |
| #+ Brawl CL Plus | 56.4 | 61.9 | | 62.0* | 61.3 | 61.9** | | 62.9* | 61.1* |
| # SY Wolf | 57.2 | 62.5 | | 61.4 | 63.1 | 60.1* | | 61.8* | 61.0* |
| WB3768 | 58.8 | 60.6 | | 61.5 | 63.1 | 60.5* | | 59.6 | 60.7* |
| #+ d Denali | 56.0 | 62.6 | | 61.3 | 61.4 | 60.7* | | 61.5* | 60.6* |
| d MT1286 | 58.0 | 61.1 | | 60.4 | 62.4 | 60.4* | | 61.2 | 60.6* |
| # WB4614 | 57.6 | 61.4 | | 61.6 | 63.3 | 59.2 | | 60.5 | 60.6* |
| # Keldin | 54.8 | 61.3 | | 61.3 | 63.8 | 60.9* | | 60.3 | 60.4* |
| d Ledger | 56.1 | 61.7 | | 61.3 | 63.6 | 58.3 | | 61.3 | 60.4* |
| MTCL1131 | 58.0 | 61.8 | | 60.7 | 62.9 | 60.5* | | 58.5 | 60.4* |
| + MT1332 | 57.3 | 61.1 | | 60.7 | 62.4 | 60.3* | | 59.9 | 60.3* |
| + MT1348 | 55.7 | 61.4 | | 60.1 | 63.9 | 61.3* | | 59.6 | 60.3* |
| + d MTS1305 | 55.7 | 61.3 | | 60.5 | 63.5 | 60.4* | | 60.6 | 60.3* |
| d MT1117 | 57.3 | 60.9 | | 61.1 | 63.1 | 60.3* | | 58.4 | 60.2 |
| #+ WB4623CLP | 58.9 | 60.7 | | 57.7 | 63.8 | 60.0* | | 59.9 | 60.2 |
| Colter | 57.4 | 60.9 | | 61.4 | 63.0 | 59.7 | | 58.2 | 60.1 |
| Judee | 56.2 | 61.8 | | 60.6 | 63.7 | 59.7 | | 58.6 | 60.1 |
| + MT1354 | 57.9 | 61.4 | | 60.4 | 63.6 | 59.2 | | 57.9 | 60.1 |
| + MT1356 | 57.0 | 60.7 | | 60.1 | 62.8 | 60.2* | | 59.6 | 60.1 |
| d MTCS1204 | 56.2 | 61.1 | | 61.4 | 63.3 | 58.2 | | 60.3 | 60.1 |
| Northern | 57.3 | 60.6 | | 60.9 | 62.7 | 59.9 | | 59.3 | 60.1 |
| Yellowstone | 56.9 | 60.9 | | 60.7 | 62.4 | 59.6 | | 60.0 | 60.1 |
| MT1138 | 56.4 | 61.2 | | 60.8 | 62.8 | 59.9 | | 58.7 | 60.0 |
| # WB4059CLP | 55.6 | 61.8 | | 60.1 | 61.0 | 60.0* | | 61.7* | 60.0 |
| MT1257 | 57.0 | 60.5 | | 60.4 | 62.3 | 59.5 | | 59.9 | 59.9 |
| d MTS0826-63 | 61.1** | 58.8 | | 61.4 | 63.8 | 56.6 | | 57.9 | 59.9 |
| MTS1224 | 58.3 | 60.7 | | 61.1 | 62.9 | 58.1 | | 57.5 | 59.8 |
| Rampart | 57.2 | 59.7 | | 61.0 | 63.1 | 58.3 | | 59.7 | 59.8 |
| WB-Quake | 56.7 | 60.7 | | 61.1 | 63.6 | 57.8 | | 58.6 | 59.8 |
| d Genou | 56.6 | 60.7 | | 61.6 | 61.3 | 58.2 | | 59.8 | 59.7 |
| + d MT1361 | 55.1 | 60.6 | | 61.0 | 62.7 | 59.2 | | 59.2 | 59.6 |
| d MTF1232 | 57.7 | 59.8 | | 58.9 | 63.5 | 58.2 | | 58.4 | 59.4 |
| MT1265 | 56.6 | 60.7 | | 60.2 | 61.8 | 57.5 | | 58.7 | 59.3 |
| SY Clearstone 2CL | 54.9 | 60.7 | | 61.2 | 62.7 | 59.1 | | 57.2 | 59.3 |
| Warhorse | 55.2 | 60.8 | | 59.9 | 62.9 | 59.3 | | 57.4 | 59.3 |
| Cowboy | 54.1 | 61.8 | | 61.2 | 60.1 | 58.6 | | 59.5 | 59.2 |
| #+ Byrd | 53.6 | 62.1 | | 61.2 | 60.3 | 58.5 | | 58.7 | 59.1 |
| #+ SY Monument | 53.3 | 61.0 | | 60.0 | 62.2 | 58.1 | | 58.5 | 58.9 |
| Decade | 52.5 | 61.3 | | 61.5 | 59.0 | 58.9 | | 59.8 | 58.8 |
| CDC Falcon | 51.4 | 60.4 | | 60.9 | 62.0 | 58.4 | | 59.3 | 58.7 |
| Bearpaw | 53.2 | 60.5 | | 60.6 | 59.2 | 57.5 | | 58.9 | 58.3 |
| d MT1078 | 54.5 | 60.1 | | 60.2 | 61.9 | 57.5 | | 55.3 | 58.3 |
| Freeman | 52.5 | 60.3 | | 58.4 | 61.8 | 56.3 | | 59.6 | 58.2 |
| Jerry | 53.9 | 60.0 | | 59.6 | 57.7 | 58.4 | | 58.5 | 58.0 |
| Broadview | 51.9 | 60.0 | | 60.6 | 57.1 | 58.6 | | 58.8 | 57.8 |
| Average | 56.2 | 61.1 | | 60.8 | 62.4 | 59.3 | | 59.7 | 59.9 |
| LSD (0.05) | 1.4 | 0.5 | | 1.3 | | 1.9 | | 1.9 | 1.4 |
| C. V. (%) | 1.4 | 0.4 | | 1.1 | | 1.6 | | 1.8 | 2.0 |
| P-value (Varieties) | <.0001 | <.0001 | | <.0001 | | <.0001 | | <.0001 | <.0001 |

+ = new for 2015, # = paid entry

d = cultivars/lines dropped for 2016 test

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 11. 2015 Intrastate Winter Wheat Test (Exp. 35): Multi-Location Heading Date (days from Jan. 1)

| Cultivar/Line | Bozeman LAT | Havre LAT | Sidney | Williston RCB | Kalispell LAT | Moccasin LAT | Huntley | Conrad LAT | 6 Loc Avg. |
|----------------------------|------------------|--------------|--------|------------------|------------------|------------------|---------|------------------|------------------|
| lattice efficiency | 109% | 136% | | | 144% | 109% | | 125% | |
| # T158 | 155.2 | 145.0 | | 156.0 | 147.5 | 155.1 | | 150.3 | 151.5 |
| Freeman | 156.3 | 145.4 | | 157.0 | 146.9 | 153.9 | | 150.7 | 151.7 |
| #+ Brawl CL Plus | 156.6 | 145.4 | | 156.5 | 147.9 | 154.9 | | 150.5 | 152.0 |
| +# d LCH 10-13 | 157.1 | 145.2 | | 156.5 | 150.7 | 157.1 | | 151.3 | 153.0 |
| # WB4059CLP | 157.7 | 146.6 | | 157.5 | 148.1 | 155.9 | | 152.5 | 153.1 |
| #+ Byrd | 158.7 | 147.4 | | 157.0 | 149.7 | 156.6 | | 153.4 | 153.8 |
| # d LCS Mint | 158.1 | 146.9 | | 158.0 | 149.5 | 157.2 | | 153.0 | 153.8 |
| #+ SY Sunrise | 158.9 | 149.1 | | 157.5 | 150.5 | 157.4 | | 152.8 | 154.4 |
| Cowboy | 159.5 | 149.2 | | 159.5 | 151.7 | 159.9 | | 154.9 | 155.8 |
| + d MTCL1329 | 160.8 | 149.3 | | 158.5 | 151.6 | 159.5 | | 155.2 | 155.8 |
| #+ SY Monument | 160.4 | 150.2 | | 157.5 | 150.8 | 159.9 | | 155.7 | 155.8 |
| # SY Wolf | 161.0 | 149.6 | | 159.5 | 150.7 | 160.4 | | 154.7 | 156.0 |
| #+ d Denali | 160.1 | 150.1 | | 159.0 | 151.8 | 160.3 | | 155.2 | 156.1 |
| Decade | 161.9 | 151.3 | | 157.5 | 152.2 | 159.8 | | 155.8 | 156.4 |
| + MT1348 | 161.4 | 150.8 | | 159.5 | 152.2 | 159.7 | | 155.4 | 156.5 |
| CDC Falcon | 162.0 | 150.9 | | 157.5 | 152.8 | 160.6 | | 156.4 | 156.7 |
| + d MTS1305 | 161.4 | 151.0 | | 160.5 | 152.0 | 159.6 | | 155.5 | 156.7 |
| Bearpaw | 161.9 | 150.9 | | 159.0 | 152.7 | 160.5 | | 155.6 | 156.8 |
| d Ledger | 162.1 | 151.9 | | 160.0 | 152.7 | 159.8 | | 155.1 | 156.9 |
| d Genou | 162.7 | 150.0 | | 159.0 | 153.8 | 159.9 | | 156.8 | 157.0 |
| Judee | 162.0 | 151.2 | | 160.5 | 153.0 | 160.0 | | 155.2 | 157.0 |
| # WB4614 | 161.9 | 152.3 | | 159.5 | 152.9 | 160.1 | | 156.4 | 157.2 |
| Broadview | 162.9 | 151.6 | | 157.5 | 153.7 | 161.2 | | 158.0 | 157.5 |
| Jerry | 163.3 | 152.0 | | 156.5 | 154.2 | 161.1 | | 157.8 | 157.5 |
| MT1257 | 162.0 | 152.1 | | 159.0 | 153.1 | 161.0 | | 157.9 | 157.5 |
| d MTCS1204 | 162.2 | 152.3 | | 159.0 | 154.8 | 160.7 | | 155.8 | 157.5 |
| # Keldin | 161.7 | 152.6 | | 161.0 | 152.5 | 160.6 | | 157.1 | 157.6 |
| MT1138 | 163.0 | 151.7 | | 159.5 | 154.3 | 161.3 | | 157.1 | 157.8 |
| Yellowstone | 162.5 | 152.2 | | 158.5 | 153.2 | 161.5 | | 158.6 | 157.8 |
| d MT1286 | 162.3 | 151.3 | | 159.5 | 154.7 | 161.3 | | 158.1 | 157.9 |
| SY Clearstone 2CL | 162.7 | 151.9 | | 160.0 | 153.7 | 161.2 | | 158.1 | 157.9 |
| + MT1332 | 162.4 | 152.2 | | 160.0 | 153.8 | 160.9 | | 158.6 | 158.0 |
| Rampart | 163.6 | 151.5 | | 160.5 | 153.2 | 161.4 | | 157.8 | 158.0 |
| WB-Quake | 162.9 | 153.2 | | 160.0 | 153.1 | 161.0 | | 158.4 | 158.1 |
| d MT1078 | 162.6 | 153.0 | | 160.5 | 153.4 | 161.2 | | 158.2 | 158.2 |
| + MT1356 | 162.7 | 152.5 | | 159.5 | 154.9 | 160.8 | | 158.7 | 158.2 |
| d MT1117 | 163.0 | 152.9 | | 159.5 | 154.3 | 161.2 | | 158.6 | 158.3 |
| + MT1354 | 163.3 | 152.8 | | 160.0 | 153.9 | 161.1 | | 158.5 | 158.3 |
| #+ WB4623CLP | 162.0 | 152.6 | | 163.5 | 152.8 | 161.7 | | 157.3 | 158.3 |
| Warhorse | 163.1 | 152.6 | | 160.5 | 154.4 | 162.8 | | 157.8 | 158.5 |
| Colter | 163.5 | 153.3 | | 160.0 | 155.4 | 160.6 | | 158.5 | 158.6 |
| MT1265 | 163.6 | 152.7 | | 160.5 | 155.2 | 161.6 | | 158.2 | 158.6 |
| MTS1224 | 163.6 | 153.9 | | 159.0 | 154.5 | 161.2 | | 159.4 | 158.6 |
| MTCL1131 | 163.2 | 152.9 | | 160.5 | 155.4 | 161.4 | | 158.5 | 158.7 |
| Northern | 163.0 | 152.6 | | 161.0 | 154.4 | 163.6 | | 158.1 | 158.8 |
| + d MT1361 | 164.1 | 153.9 | | 160.0 | 154.7 | 166.9 | | 158.9 | 159.8 |
| d MTS0826-63 | 165.6 | 153.9 | | 160.5 | 155.3 | 164.4 | | 159.9 | 159.9 |
| d MTF1232 | 166.4 | 154.2 | | 162.5 | 155.9 | 163.5 | | 159.4 | 160.3 |
| WB3768 | 165.9 | 155.0 | | 161.5 | 156.7 | 166.3 | | 159.8 | 160.9 |
| Average | 161.7 | 151.1 | | 159.2 | 152.8 | 160.4 | | 156.4 | 156.9 |
| LSD (0.05) | 0.8 | 1.2 | | 2.0 | 1.5 | 1.7 | | 1.5 | 1.0 |
| C. V. (%) | 0.3 | 0.4 | | 0.6 | 0.6 | 0.6 | | 0.5 | 0.6 |
| P-value (Varieties) | <.0001 | | | <.0001 | <.0001 | <.0001 | | <.0001 | <.0001 |

+ = new for 2015, # = paid entry

d = cultivars/lines dropped for 2016 test

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 12. 2015 Intrastate Winter Wheat Test (Exp. 35): Multi-Location Plant Height (in)

| Cultivar/Line | Bozeman LAT | Havre LAT | Sidney | Williston RCB | Kalispell LAT | Moccasin LAT | Huntley | Conrad LAT | 6 Loc Avg. |
|----------------------------|------------------|------------------|--------|------------------|------------------|------------------|---------|------------------|------------------|
| lattice efficiency | 102% | 101% | | | 112% | 113% | | 101% | |
| # WB4059CLP | 33.5 | 26.4 | | 23.6 | 28.8 | 29.1 | | 32.0 | 28.9 |
| #+ SY Sunrise | 34.9 | 26.9 | | 22.4 | 31.8 | 27.5 | | 30.7 | 29.0 |
| CDC Falcon | 34.4 | 29.0 | | 25.0 | 32.1 | 29.9 | | 30.8 | 30.2 |
| #+ WB4623CLP | 37.3 | 26.3 | | 23.2 | 35.4 | 31.1 | | 30.7 | 30.7 |
| # T158 | 36.9 | 28.1 | | 25.0 | 35.2 | 29.7 | | 32.2 | 31.2 |
| + d MTS1305 | 36.2 | 30.1 | | 24.6 | 34.0 | 30.7 | | 32.3 | 31.3 |
| # SY Wolf | 37.0 | 29.4 | | 27.0 | 32.7 | 29.6 | | 32.0 | 31.3 |
| MTS1224 | 36.5 | 27.5 | | 24.4 | 36.9 | 31.7 | | 31.3 | 31.4 |
| # WB4614 | 37.1 | 30.2 | | 26.0 | 33.2 | 32.0 | | 32.3 | 31.8 |
| #+ Brawl CL Plus | 36.6 | 31.6 | | 24.8 | 35.6 | 30.0 | | 34.1 | 32.1 |
| Decade | 35.4 | 29.3 | | 27.6 | 36.1 | 31.0 | | 32.9 | 32.1 |
| Bearpaw | 36.4 | 28.0 | | 26.4 | 37.4 | 34.2 | | 31.9 | 32.4 |
| + d MT1361 | 37.9 | 30.1 | | 26.8 | 34.5 | 32.4 | | 32.9 | 32.4 |
| #+ Byrd | 36.5 | 29.7 | | 26.4 | 36.6 | 32.3 | | 33.7 | 32.5 |
| #+ SY Monument | 36.3 | 30.9 | | 24.4 | 37.0 | 32.6 | | 33.8 | 32.5 |
| Warhorse | 37.9 | 29.5 | | 26.0 | 38.7 | 31.6 | | 31.4 | 32.5 |
| Freeman | 39.4 | 28.8 | | 25.6 | 38.4 | 30.6 | | 33.5 | 32.7 |
| # Keldin | 37.0 | 30.4 | | 26.8 | 35.6 | 33.1 | | 33.1 | 32.7 |
| + d MTCL1329 | 37.8 | 30.7 | | 28.1 | 36.3 | 32.9 | | 31.2 | 32.8 |
| d Ledger | 37.6 | 30.4 | | 27.0 | 36.0 | 32.9 | | 34.0 | 33.0 |
| WB-Quake | 37.9 | 29.9 | | 27.2 | 37.7 | 32.8 | | 32.2 | 33.0 |
| Judee | 37.7 | 30.6 | | 28.3 | 37.8 | 30.6 | | 33.7 | 33.1 |
| Cowboy | 37.2 | 32.8 | | 28.5 | 35.2 | 33.4 | | 32.5 | 33.3 |
| Broadview | 38.3 | 31.9 | | 27.2 | 36.4 | 33.5 | | 33.4 | 33.5 |
| d MT1078 | 36.7 | 31.8 | | 28.9 | 37.8 | 32.2 | | 33.4 | 33.5 |
| + MT1348 | 40.9 | 30.2 | | 26.2 | 36.1 | 32.8 | | 34.7 | 33.5 |
| # d LCS Mint | 38.9 | 30.7 | | 28.7 | 38.2 | 33.5 | | 34.4 | 34.1 |
| d MTCS1204 | 38.2 | 31.6 | | 28.9 | 38.6 | 34.0 | | 33.3 | 34.1 |
| Northern | 38.5 | 31.5 | | 27.0 | 38.9 | 34.1 | | 35.0 | 34.2 |
| #+ d Denali | 38.1 | 31.4 | | 28.5 | 38.9 | 33.1 | | 36.0 | 34.3 |
| + # d LCH 10-13 | 39.4 | 30.6 | | 28.7 | 39.9 | 32.4 | | 35.8 | 34.5 |
| MT1257 | 39.4 | 32.1 | | 28.9 | 39.9 | 34.8 | | 34.7 | 35.0 |
| d MT1286 | 40.0 | 31.3 | | 29.5 | 39.2 | 34.6 | | 35.8 | 35.1 |
| Yellowstone | 39.1 | 33.4 | | 28.3 | 40.7 | 34.7 | | 34.4 | 35.1 |
| Colter | 39.0 | 32.4 | | 29.1 | 41.6 | 34.8 | | 34.1 | 35.2 |
| + MT1356 | 40.8 | 32.7 | | 28.1 | 41.2 | 33.5 | | 34.9 | 35.2 |
| d MT1117 | 37.7 | 34.4 | | 29.5 | 40.3 | 35.5 | | 35.0 | 35.4 |
| + MT1354 | 39.9 | 32.8 | | 30.3 | 40.1 | 34.5 | | 35.0 | 35.4 |
| MTCL1131 | 40.4 | 31.2 | | 28.5 | 42.1 | 34.9 | | 35.1 | 35.4 |
| SY Clearstone 2CL | 39.7 | 34.2 | | 29.7 | 40.2 | 34.6 | | 34.2 | 35.4 |
| MT1138 | 39.7 | 32.6 | | 29.3 | 40.6 | 36.3 | | 34.8 | 35.6 |
| MT1265 | 40.1 | 33.7 | | 28.5 | 41.5 | 33.9 | | 36.3 | 35.7 |
| + MT1332 | 40.6 | 33.2 | | 30.1 | 39.4 | 34.5 | | 36.6 | 35.7 |
| d MTS0826-63 | 41.4 | 31.1 | | 29.5 | 41.5 | 36.0 | | 34.7 | 35.7 |
| Rampart | 40.4 | 31.7 | | 32.1 | 41.8 | 37.3 | | 36.2 | 36.6 |
| d Genou | 40.1 | 33.2 | | 29.7 | 43.1 | 36.1 | | 38.6 | 36.8 |
| WB3768 | 40.5 | 33.2 | | 32.9 | 43.5 | 37.9 | | 35.7 | 37.3 |
| Jerry | 40.3 | 34.2 | | 29.1 | 44.8 | 37.6 | | 38.4 | 37.4 |
| d MTF1232 | 45.3 | 37.5 | | 38.4 | 50.6 | 46.5 | | 43.8 | 43.7 |
| Average | 38.3 | 31.0 | | 27.8 | 38.2 | 33.4 | | 34.1 | 33.8 |
| LSD (0.05) | 2.8 | 2.9 | | 1.7 | 3.1 | 2.7 | | 2.2 | 1.4 |
| C. V. (%) | 4.4 | 5.6 | | 3.1 | 4.9 | 4.6 | | 4.0 | 3.8 |
| P-value (Varieties) | <.0001 | <.0001 | | <.0001 | <.0001 | <.0001 | | <.0001 | <.0001 |

+ = new for 2015, # = paid entry

d = cultivars/lines dropped for 2016 test

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 13. 2015 Intrastate Winter Wheat Test (Exp. 35): Multi-Location Grain Protein (%)

| Cultivar/Line | Bozeman bulk | Havre LAT | Sidney | Williston bulk | Kalispell bulk | Moccasin bulk | Huntley | Conrad LAT | 6 Loc Avg. |
|---------------------|-----------------|------------------|--------|-------------------|-------------------|------------------|---------|------------------|------------------|
| lattice efficiency | | 204% | | | | | | 136% | |
| d MTF1232 | 19.6 | 12.9 | | 14.8 | 10.1 | 10.7 | | 14.5* | 13.8** |
| d MTS0826-63 | 18.3 | 13.6* | | 13.4 | 10.1 | 11.9 | | 14.9** | 13.7* |
| # WB4059CLP | 18.6 | 13.4* | | 14.5 | 10.8 | 10.2 | | 13.9* | 13.6* |
| Rampart | 19.5 | 13.3* | | 13.9 | 10.8 | 9.6 | | 14.5* | 13.6* |
| ##+ WB4623CLP | 17.8 | 13.5* | | 15.4 | 10.9 | 9.3 | | 14.0* | 13.5* |
| ##+ Brawl CL Plus | 17.4 | 13.5* | | 14.3 | 11.4 | 9.0 | | 13.4 | 13.2* |
| Bearpaw | 18.3 | 12.7 | | 13.5 | 10.4 | 10.7 | | 13.7 | 13.2* |
| d Genou | 19.4 | 12.8 | | 12.9 | 10.1 | 9.4 | | 14.0* | 13.1* |
| Decade | 18.4 | 13.1 | | 14.7 | 9.5 | 9.6 | | 13.5 | 13.1* |
| Warhorse | 18.4 | 12.7 | | 12.0 | 11.0 | 9.8 | | 14.0* | 13.0* |
| + # d LCH 10-13 | 17.1 | 13.9** | | 12.8 | 10.4 | 9.8 | | 13.9* | 13.0* |
| ##+ SY Sunrise | 16.2 | 12.9 | | 14.9 | 9.8 | 10.1 | | 13.3 | 12.9 |
| Judee | 14.3 | 12.8 | | 15.7 | 9.9 | 10.4 | | 14.4* | 12.9 |
| WB-Quake | 16.5 | 12.8 | | 13.5 | 9.6 | 10.1 | | 14.0* | 12.8 |
| # Keldin | 18.2 | 12.3 | | 15.0 | 9.8 | 8.1 | | 13.5 | 12.8 |
| d MT1117 | 16.4 | 12.9 | | 13.1 | 9.8 | 9.3 | | 14.4* | 12.7 |
| Colter | 17.2 | 13.0 | | 12.8 | 9.9 | 9.8 | | 13.5 | 12.7 |
| Broadview | 18.6 | 12.2 | | 11.4 | 11.2 | 9.0 | | 13.5 | 12.7 |
| Northern | 16.7 | 13.0 | | 11.7 | 10.5 | 11.0 | | 12.9 | 12.6 |
| d MTCS1204 | 17.1 | 12.2 | | 11.9 | 10.4 | 11.0 | | 13.2 | 12.6 |
| + MT1354 | 16.1 | 12.6 | | 13.3 | 9.9 | 9.9 | | 13.7 | 12.6 |
| Jerry | 17.9 | 12.5 | | 12.9 | 9.5 | 9.6 | | 13.0 | 12.6 |
| CDC Falcon | 18.8 | 12.2 | | 12.5 | 9.9 | 9.0 | | 13.2 | 12.6 |
| WB3768 | 16.4 | 12.8 | | 12.1 | 9.6 | 10.0 | | 13.8* | 12.5 |
| # SY Wolf | 16.9 | 12.3 | | 13.4 | 9.5 | 9.8 | | 12.9 | 12.5 |
| # WB4614 | 17.2 | 12.6 | | 12.4 | 9.8 | 8.9 | | 13.6 | 12.4 |
| + d MT1361 | 16.1 | 13.1 | | 12.8 | 9.8 | 9.7 | | 12.7 | 12.4 |
| # T158 | 16.4 | 12.5 | | 12.8 | 10.1 | 8.6 | | 13.2 | 12.3 |
| SY Clearstone 2CL | 16.7 | 12.5 | | 12.1 | 10.4 | 9.4 | | 12.6 | 12.3 |
| + d MTS1305 | 17.3 | 12.2 | | 12.4 | 9.5 | 9.0 | | 13.1 | 12.3 |
| MTS1224 | 15.5 | 13.3 | | 12.8 | 9.6 | 9.5 | | 13.3 | 12.3 |
| + MT1356 | 16.5 | 13.1 | | 12.6 | 10.1 | 8.9 | | 12.8 | 12.3 |
| MT1265 | 16.0 | 12.7 | | 12.3 | 9.3 | 10.3 | | 13.4 | 12.3 |
| d Ledger | 16.9 | 12.3 | | 12.6 | 9.9 | 9.7 | | 12.6 | 12.3 |
| # d LCS Mint | 16.9 | 12.3 | | 12.6 | 9.7 | 10.1 | | 12.4 | 12.3 |
| Freeman | 16.2 | 12.6 | | 14.0 | 9.4 | 8.9 | | 12.6 | 12.3 |
| d MT1286 | 16.9 | 12.3 | | 13.0 | 9.0 | 9.2 | | 12.9 | 12.2 |
| + d MTCL1329 | 16.1 | 11.9 | | 12.7 | 10.0 | 9.4 | | 12.7 | 12.1 |
| + MT1348 | 16.2 | 12.5 | | 12.5 | 9.7 | 9.0 | | 12.7 | 12.1 |
| MT1257 | 16.3 | 12.4 | | 11.5 | 10.0 | 9.6 | | 12.7 | 12.1 |
| MT1138 | 16.3 | 12.3 | | 11.4 | 9.5 | 9.6 | | 13.3 | 12.1 |
| ##+ SY Monument | 16.7 | 11.2 | | 13.2 | 9.1 | 9.0 | | 12.7 | 12.0 |
| d MT1078 | 17.1 | 11.7 | | 12.2 | 9.2 | 8.9 | | 13.1 | 12.0 |
| MTCL1131 | 16.0 | 12.4 | | 11.3 | 10.2 | 9.3 | | 12.4 | 11.9 |
| + MT1332 | 16.1 | 12.7 | | 12.1 | 9.0 | 8.8 | | 12.5 | 11.9 |
| Cowboy | 16.8 | 11.2 | | 12.0 | 10.1 | 8.8 | | 12.3 | 11.9 |
| ##+ Byrd | 15.9 | 11.4 | | 13.3 | 9.1 | 9.1 | | 12.4 | 11.9 |
| Yellowstone | 13.5 | 12.3 | | 12.5 | 9.6 | 9.8 | | 12.7 | 11.7 |
| ##+ d Denali | 16.2 | 11.0 | | 11.9 | 10.1 | 8.6 | | 11.9 | 11.6 |
| Average | 17.0 | 12.6 | | 13.0 | 9.9 | 9.6 | | 13.3 | 12.6 |
| LSD (0.05) | | 0.5 | | | | | | 1.1 | 0.8 |
| C. V. (%) | | 2.5 | | | | | | 4.9 | 5.8 |
| P-value (Varieties) | | <.0001 | | | | | | <.0001 | <.0001 |

+ = new for 2015, # = paid entry

d = cultivars/lines dropped for 2016 test

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 14. 2015 Intrastate Winter Wheat Test (Exp. 35): Multi-Location Stem Solidness (5-25)

| Cultivar/Line | | Bozeman | Havre | Moccasin | Conrad | 4 Loc Avg. | |
|---------------|----------------------------|---------------------------------|------------------|------------------|------------------|------------------|------------------|
| + | MTS1305 | MTS0525//97X253E54/MT03108 | 21.7** | 24.4** | 22.5** | 20.7* | 22.3** |
| | Warhorse | Montana, 2013 | 20.8* | 23.4* | 21.5* | 22.5** | 22.0* |
| | MTS0826-63 | MT9524/G15048//Rampart | 17.1 | 22.8* | 20.8* | 22.4* | 20.8 |
| | Bearpaw | Montana, 2011 | 18.3* | 21.5 | 20.9* | 21.3* | 20.5 |
| | Rampart | Montana, 1996 | 14.7 | 22.7* | 20.5 | 20.8* | 19.7 |
| | Judee | Montana, 2011 | 16.9 | 20.3 | 19.4 | 20.1* | 19.2 |
| | WB-Quake | WestBred, 2011 | 17.1 | 19.4 | 19.9 | 19.9* | 19.1 |
| | MTCS1204 | MTCL0510/4/Paul/3/98X96C16cl/CI | 14.0 | 19.0 | 17.3 | 18.6 | 17.2 |
| | MTS1224 | Yellowstone//MTS0112/MTS0125 | 14.6 | 20.8 | 16.2 | 17.1 | 17.2 |
| | Genou | Montana, 2004 | 10.2 | 21.6 | 15.3 | 17.2 | 16.1 |
| | Ledger | WestBred, 2004 | 7.9 | 9.9 | 7.3 | 8.5 | 8.4 |
| | CDC Falcon | Sask/WestBred, 1999 | 6.1 | 6.2 | 5.9 | 7.1 | 6.3 |
| | Average | | 15.8 | 20.6 | 17.3 | 19.0 | 18.4 |
| | LSD (0.05) | | 3.6 | 2.8 | 2.1 | 2.9 | 1.4 |
| | C. V. (%) | | 13.5 | 8.0 | 7.1 | 8.8 | 9.2 |
| | P-value (Varieties) | | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 |

Locations were significant ($P = <.0001$), there was a significant Entry x Location Interaction ($P = .0038$)

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD ($p = 0.05$)

Table 15. 2015 Intrastate Winter Wheat Test (Exp. 35): Multi-Location Stripe Rust Evaluation, including data from Pullman and Mt. Vernon, WA

| Cultivar/Line | Stripe Rust | | | | | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|------------------|----|------------------|----|-------------------|-----|
| | Montana (%) | | | | | | Pullman, WA | | MT. Vernon, WA | | | |
| | Kalispell | | | Bozeman | | FE | Milk | | Stem elong. | | Heading/flowering | |
| d = cultivars/lines dropped + = new for 2015, # = paid entry | 7-Jun | 25-Jun | 29-Jul | 8-Jun | 16-Jun | 29-Jun | IT ^{1/} | % | IT ^{1/} | % | IT ^{1/} | % |
| Bearpaw | 43 | 70 | 74 | 14 | 50 | 40 | 8 | 80 | 8 | 30 | 8 | 65 |
| #+ Brawl CL Plus | 60 | 50 | 75 | 26 | 43 | 50 | 3 | 10 | - | - | - | - |
| Broadview | 75 | 90 | 85 | 9 | 28 | 50 | 8 | 10 | - | - | - | - |
| #+ Byrd | 45 | 78 | 87 | 8 | 44 | 70 | 5 | 20 | 8 | 60 | 8 | 50 |
| CDC Falcon | 75 | 83 | 60 | 3 | 11 | 50 | 8 | 30 | 8 | 80 | 8 | 95 |
| Colter | 5 | 4 | 20* | 4 | 3 | 0 | 5 | 1 | 3 | 10 | 2 | 20 |
| Cowboy | 95 | 93 | 89 | 20 | 59 | 70 | 2 | 5 | - | - | - | - |
| Decade | 50 | 69 | 92 | 5 | 39 | 30 | 8 | 20 | 8 | 50 | 8 | 75 |
| #+ d Denali | 65 | 89 | 81 | 26 | 56 | 80 | 5 | 10 | 8 | 40 | 5 | 60 |
| Freeman | 10 | 10 | 50 | 5 | 1 | 0 | 8 | 2 | 5 | 10 | 5 | 30 |
| d Genou | 45 | 83 | 90 | 4 | 21 | 60 | 8 | 30 | 8 | 50 | 8 | 90 |
| Jerry | 70 | 92 | 90 | 7 | 57 | 40 | 8 | 50 | 8 | 50 | 8 | 65 |
| Judee | 1 | 2 | 10* | 9 | 3 | 0 | 3 | 5 | 6 | 20 | 2 | 20 |
| # Keldin | 5 | 11 | 35 | 0 | 5 | 5 | 8 | 5 | 2 | 5 | 5 | 35 |
| + # d LCH 10-13 | 70 | 92 | 92 | 9 | 39 | 30 | 5 | 5 | 8 | 50 | 8 | 100 |
| # d LCS Mint | 4 | 16 | 23 | 0 | 4 | 0 | - | - | - | - | - | - |
| d Ledger | 10 | 15 | 66 | 3 | 13 | 25 | 8 | 20 | 5 | 20 | 5 | 25 |
| d MT1078 | 10 | 11 | 31 | 6 | 9 | 5 | 2 | 5 | 3 | 10 | 2 | 20 |
| d MT1117 | 0** | 4 | 19* | 0 | 4 | 0 | 2 | 2 | - | - | - | - |
| MT1138 | 3 | 5 | 24 | 2 | 7 | 3 | 2 | 1 | 3 | 5 | 2 | 5 |
| MT1257 | 5 | 6 | 23* | 3 | 5 | 0 | 2 | 1 | - | - | - | - |
| MT1265 | 3 | 5 | 21* | 0 | 0 | 0 | 2 | 2 | - | - | - | - |
| d MT1286 | 18 | 38 | 80 | 1 | 20 | 5 | 5 | 20 | - | - | - | - |
| + MT1332 | 3 | 3 | 12* | 3 | 2 | 3 | 2 | 1 | 3 | 10 | 2 | 20 |
| + MT1348 | 0** | 4 | 15* | 4 | 5 | 3 | 2 | 2 | 8 | 50 | 3 | 10 |
| + MT1354 | 3 | 5 | 16* | 2 | 6 | 15 | 2 | 2 | 8 | 40 | 2 | 5 |
| + MT1356 | 10 | 8 | 27 | 2 | 4 | 5 | 3 | 5 | - | - | - | - |
| + d MT1361 | 3 | 5 | 17* | 3 | 5 | 10 | 3 | 10 | 8 | 40 | 2 | 20 |
| MTCL1131 | 8 | 5 | 20* | 3 | 8 | 5 | 3 | 2 | - | - | - | - |
| + d MTCL1329 | 5 | 17 | 32 | 8 | 10 | 20 | 2 | 10 | 3 | 5 | 5 | 20 |
| d MTCS1204 | 20 | 31 | 48 | 18 | 32 | 20 | 3 | 5 | 8 | 50 | 2 | 10 |
| d MTF1232 | 15 | 22 | 53 | 0 | 29 | 25 | 5 | 25 | - | - | - | - |
| d MTS0826-63 | 0** | 6 | 15* | 3 | 12 | 0 | 2 | 2 | 5 | 20 | 2 | 10 |
| MTS1224 | 3 | 2 | 7* | 4 | 5 | 0 | 2 | 2 | - | - | - | - |
| + d MTS1305 | 5 | 12 | 33 | 2 | 6 | 5 | 2 | 5 | 8 | 50 | 5 | 15 |
| Northern | 5 | 1** | 5** | 4 | 3 | 0 | 3 | 2 | 2 | 5 | 2 | 20 |
| Rampart | 15 | 12 | 62 | 2 | 8 | 15 | 5 | 10 | 5 | 30 | 5 | 30 |
| #+ SY Clearstone 2C | 1 | 5 | 17* | 2 | 8 | 5 | 2 | 1 | 2 | 10 | 2 | 20 |
| #+ SY Monument | 1 | 3 | 21* | 1 | 0 | 0 | 2 | 1 | - | - | - | - |
| #+ SY Sunrise | 2 | 12 | 32 | 3 | 0 | 10 | 2 | 1 | 2 | 5 | 3 | 5 |
| # SY Wolf | 5 | 6 | 22* | 1 | 3 | 0 | 8 | 10 | - | - | - | - |
| # T158 | 3 | 2 | 20* | 5 | 0 | 0 | - | - | - | - | - | - |
| Warhorse | 5 | 7 | 6* | 1 | 3 | 0 | 2 | 2 | 6 | 20 | 2 | 20 |
| WB3768 | 3 | 7 | 17* | 3 | 1 | 5 | 8 | 5 | 3 | 10 | 5 | 15 |
| # WB4059CLP | 80 | 85 | 98 | 8 | 35 | 30 | 8 | 5 | 8 | 60 | 8 | 100 |
| # WB4614 | 28 | 23 | 44 | 6 | 9 | 10 | 5 | 10 | 8 | 40 | 5 | 30 |
| #+ WB4623CLP | 0** | 4 | 12* | 3 | 6 | 0 | 5 | 10 | 8 | 40 | 5 | 45 |
| WB-Quake | 5 | 9 | 9* | 15 | 14 | 0 | 3 | 5 | 5 | 20 | 2 | 20 |
| Yellowstone | 3 | 8 | 23 | 2 | 6 | 0 | 2 | 5 | 2 | 5 | 5 | 50 |
| Average | 20.2 | 26.9 | 40.8 | 5.5 | 15.0 | 16.3 | | | | | | |
| LSD (0.05) | 17.9 | 9.1 | 17.8 | 10.3 | 13.9 | | | | | | | |

1/ Infection Type (IT) was recorded based on the 0-9 scale with ITs 8 and 9 combined as 8 (the most susceptible reaction) in field data. Generally IT 0-3 are considered resistant, 4-6 intermediate, and 7-9 susceptible. Heterogenous reactions of an entry were indicated by two or more ITs separated by "," for most plants with the first IT and few plants with the second IT or connected with "-" for entries containing plants with continuous ITs.

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's Protected LSD (p =0.05)

Table 16. 2015 Winter Wheat Quality Drill Strips, Northern Agricultural Research Center

| Entry | ID | Yield* | Test Weight | Moisture | Protein | Head Date | Plant Ht | Sawfly |
|----------|--------------------|--------|-------------|----------|---------|-----------|----------|--------|
| | | bu/ac | lb/bu | % | % | day | in | % cut |
| 1 | Yellowstone | 52.3 | 60.9 | 11.0 | 13.4 | 6/2/15 | 31.8 | 9.3 |
| 2 | Jagalene | 44.4 | 62.2 | 11.3 | 14.2 | 5/29/15 | 28.1 | 10.8 |
| 3 | MTS0826-63 | 47.1 | 60.1 | 10.7 | 13.9 | 6/7/15 | 28.3 | 0.7 |
| 4 | MTS1224 | 52.1 | 60.3 | 11.6 | 13.8 | 6/6/15 | 25.7 | 1.0 |
| 5 | MT1265 | 46.8 | 61.2 | 11.2 | 13.0 | 6/4/15 | 30.4 | 8.7 |
| 6 | MT1286 | 47.3 | 61.2 | 11.1 | 12.8 | 6/3/15 | 30.5 | 12.8 |

*Yield adjusted to 12% moisture.

Seeded September xx, 2014

Harvested July xx, 2015

Table 17. 2012-2015 Intrastate Winter Wheat Test (Exp. 3501): Bozeman Yield, Test Weight and Protein

| Cultivar/Line | Grain Yield (bushels/acre) | | | | Test Weight (lb/bu) | | | | Protein (%) | | | |
|-------------------|----------------------------|---------|---------|---------|---------------------|---------|---------|---------|-------------|---------|---------|---------|
| | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 |
| | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y |
| Bearpaw | 42.0 | 67.5 | 72.5 | 73.0 | 53.2 | 58.1 | 58.8 | 58.9 | 18.3 | 16.0 | 15.5 | 15.5* |
| #+ Brawl CL Plus | 71.3 | | | | 56.4 | | | | 17.4 | | | |
| Broadview | 42.9 | 70.0 | 72.7 | 70.6 | 51.9 | 57.2 | 57.4 | 57.4 | 18.6 | 15.9 | 15.5 | 15.5* |
| #+ Byrd | 57.2 | | | | 53.6 | | | | 15.9 | | | |
| CDC Falcon | 55.4 | 75.4 | 77.0 | 75.4 | 51.4 | 57.1 | 57.5 | 57.6 | 18.8 | 15.9 | 15.5 | 15.3* |
| Colter | 87.0* | 94.4* | 92.2* | 87.9* | 57.4 | 60.0 | 59.7* | 59.3 | 17.2 | 15.4 | 15.2 | 15.3* |
| Cowboy | 56.4 | 79.1 | 82.9 | | 54.1 | 58.4 | 58.9 | | 16.8 | 14.5 | 14.3 | |
| Decade | 46.6 | 70.7 | 76.8 | 77.2 | 52.5 | 57.5 | 58.2 | 58.4 | 18.4 | 15.9 | 15.6 | 15.7* |
| #+ Denali | 50.2 | | | | 56.0 | | | | 16.2 | | | |
| Freeman | 83.8 | 92.3* | | | 52.5 | 57.1 | | | 16.2 | 14.5 | | |
| Genou | 40.9 | 65.7 | 69.9 | 69.5 | 56.6 | 59.9 | 60.2* | 60.1* | 19.4 | 16.4 | 15.9 | 16.0* |
| Jerry | 42.1 | 70.6 | 73.4 | 73.9 | 53.9 | 57.9 | 58.3 | 58.3 | 17.9 | 15.8 | 15.4 | 15.3* |
| Judee | 64.6 | 81.6* | 81.7 | 79.2 | 56.2 | 60.0 | 59.9* | 59.5* | 14.3 | 13.9 | 14.5 | 14.9 |
| # Keldin | 85.1 | 99.1* | | | 54.8 | 59.0 | | | 18.2 | 15.8 | | |
| + # LCH 10-13 | 73.4 | | | | 57.4 | | | | 17.1 | | | |
| # LCS Mint | 83.5 | 94.7* | | | 57.1 | 61.1 | | | 16.9 | 14.9 | | |
| Ledger | 49.5 | 72.1 | 74.4 | 74.3 | 56.1 | 59.7 | 60.0* | 60.0* | 16.9 | 14.7 | 14.4 | 14.3 |
| MT1078 | 83.7 | 95.3* | 96.1* | 94.8** | 54.5 | 58.2 | 58.4 | 58.3 | 17.1 | 14.8 | 14.3 | 14.3 |
| MT1117 | 82.6 | 93.0* | 90.1* | | 57.3 | 59.9 | 59.9* | | 16.4 | 14.9 | 14.9 | |
| MT1138 | 87.0* | 99.8* | 96.4** | | 56.4 | 59.2 | 59.2 | | 16.3 | 14.6 | 14.5 | |
| MT1257 | 87.7* | 100.0** | | | 57.0 | 59.2 | | | 16.3 | 14.8 | | |
| MT1265 | 82.1 | 96.1* | | | 56.6 | 58.9 | | | 16.0 | 14.7 | | |
| MT1286 | 77.6 | 93.8* | | | 58.0 | 60.7 | | | 16.9 | 15.0 | | |
| + MT1332 | 88.6* | | | | 57.3 | | | | 16.1 | | | |
| + MT1348 | 89.9* | | | | 55.7 | | | | 16.2 | | | |
| + MT1354 | 82.6 | | | | 57.9 | | | | 16.1 | | | |
| + MT1356 | 85.7* | | | | 57.0 | | | | 16.5 | | | |
| + MT1361 | 75.8 | | | | 55.1 | | | | 16.1 | | | |
| MTCL1131 | 85.1 | 96.1* | 94.1* | | 58.0 | 60.3 | 60.2* | | 16.0 | 14.7 | 14.7 | |
| + MTCL1329 | 79.8 | | | | 58.6 | | | | 16.1 | | | |
| MTCS1204 | 59.2 | 76.0 | | | 56.2 | 59.5 | | | 17.1 | 15.4 | | |
| MTF1232 | 55.3 | 75.1 | | | 57.7 | 59.8 | | | 19.6 | 17.0 | | |
| MTS0826-63 | 70.7 | 80.9 | 80.8 | | 61.1** | 61.9 | 61.5** | | 18.3 | 16.0 | 15.8 | |
| MTS1224 | 89.9* | 96.9* | | | 58.3 | 60.6 | | | 15.5 | 14.2 | | |
| + MTS1305 | 63.4 | | | | 55.7 | | | | 17.3 | | | |
| Northern | 83.1 | 90.4* | 90.6* | 87.6* | 57.3 | 59.9 | 59.6* | 59.1 | 16.7 | 15.0 | 14.9 | 15.0 |
| Rampart | 53.6 | 71.4 | 72.3 | 71.7 | 57.2 | 59.8 | 60.0* | 60.0* | 19.5 | 16.8 | 16.4 | 16.4** |
| SY Clearstone 2CL | 82.6 | 94.5* | 90.3* | 88.4* | 54.9 | 58.2 | 58.1 | 57.7 | 16.7 | 15.0 | 15.0 | 15.0 |
| #+ SY Monument | 85.9* | | | | 53.3 | | | | 16.7 | | | |
| #+ SY Sunrise | 96.5** | | | | 56.3 | | | | 16.2 | | | |
| # SY Wolf | 83.2 | 92.9* | 94.5* | 92.0* | 57.2 | 60.5 | 60.8* | 61.0** | 16.9 | 15.1 | 14.9 | 14.8 |
| # T158 | 95.3* | 94.9* | | | 58.9 | 61.3 | | | 16.4 | 14.6 | | |
| Warhorse | 69.8 | 80.7 | 83.0* | 80.6 | 55.2 | 58.6 | 58.8 | 58.8 | 18.4 | 16.1 | 15.5 | 15.6* |
| WB3768 | 79.3 | 92.3* | 92.4* | 88.8* | 58.8 | 60.6 | 60.2* | 59.7* | 16.4 | 14.7 | 14.8 | 15.0 |
| # WB4059CLP | 56.2 | 72.1 | | | 55.6 | 58.9 | | | 18.6 | 16.4 | | |
| # WB4614 | 62.0 | 79.9 | | | 57.6 | 60.3 | | | 17.2 | 15.0 | | |
| #+ WB4623CLP | 72.7 | | | | 58.9 | | | | 17.8 | | | |
| WB-Quake | 64.9 | 78.8 | 78.1 | 77.5 | 56.7 | 59.5 | 59.7* | 59.5* | 16.5 | 15.0 | 15.0 | 15.2 |
| Yellowstone | 84.4 | 96.4* | 95.8* | 91.7* | 56.9 | 59.4 | 59.4 | 58.9 | 13.5 | 13.4 | 13.6 | 14.1 |
| Average | 72.0 | 85.1 | 83.8 | 80.8 | 56.2 | 59.4 | 59.3 | 59.0 | 17.0 | 15.2 | 15.0 | 15.2 |
| LSD (0.05) | 11.0 | 18.7 | 13.5 | 10.5 | 1.4 | ns | 2.1 | 1.5 | | ns | ns | 1.2 |
| C.V. | 8.7 | 10.8 | 9.8 | 9.2 | 1.4 | 2.5 | 2.2 | 1.8 | | 5.8 | 5.6 | 5.5 |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 18. 2012-2015 Intrastate Winter Wheat Test (Exp. 3502): Havre Yield, Test Weight and Protein

| Cultivar/Line | Grain Yield (bushels/acre) | | | | Test Weight (lb/bu) | | | | Protein (%) | | | |
|--------------------------|----------------------------|---------------|---------------|-------------|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 |
| | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y |
| Bearpaw | 60.1 | 56.7 | 60.7 | 59.4 | 60.5 | 60.6 | 59.6 | 59.4 | 12.7 | 13.0* | 12.9* | 13.0* |
| #+ Brawl CL Plus | 52.3 | | | | 61.9 | | | | 13.5* | | | |
| Broadview | 69.5* | 65.9* | 67.0* | 63.4 | 60.0 | 60.2 | 59.4 | 59.1 | 12.2 | 12.4 | 12.3 | 12.2 |
| #+ Byrd | 70.5* | | | | 62.1 | | | | 11.4 | | | |
| CDC Falcon | 66.3 | 63.2* | 61.5 | 59.5 | 60.4 | 60.7 | 60.0 | 59.8 | 12.2 | 12.4 | 12.2 | 12.5* |
| Colter | 65.1 | 63.1* | 63.3 | 65.2 | 60.9 | 61.1 | 60.5* | 60.1* | 13.0 | 13.1* | 12.9* | 12.7* |
| Cowboy | 71.7* | 68.7** | 73.3** | | 61.8 | 61.7 | 60.9* | | 11.2 | 11.4 | 11.2 | |
| Decade | 59.5 | 57.7 | 60.9 | 59.7 | 61.3 | 61.1 | 60.3 | 60.1* | 13.1 | 12.8* | 13.0* | 12.9* |
| #+ Denali | 72.1** | | | | 62.6 | | | | 11.0 | | | |
| Freeman | 57.4 | 56.4 | | | 60.3 | 60.4 | | | 12.6 | 12.1 | | |
| Genou | 58.4 | 57.9 | 62.1 | 57.5 | 60.7 | 61.1 | 60.4 | 59.8 | 12.8 | 12.5 | 12.3 | 12.8* |
| Jerry | 58.9 | 54.8 | 57.7 | 54.4 | 60.0 | 60.1 | 59.2 | 58.9 | 12.5 | 12.8* | 12.6* | 12.8* |
| Judee | 60.5 | 60.8 | 64.7 | 60.8 | 61.8 | 61.9 | 61.3** | 60.2* | 12.8 | 12.8* | 12.6* | 13.1** |
| # Keldin | 61.4 | 59.5 | | | 61.3 | 61.2 | | | 12.3 | 12.4 | | |
| + # LCH 10-13 | 53.2 | | | | 62.2 | | | | 13.9** | | | |
| # LCS Mint | 55.5 | 57.1 | | | 63.1** | 63.4** | | | 12.3 | 11.9 | | |
| Ledger | 63.7 | 62.2* | 62.6 | 59.0 | 61.7 | 61.7 | 60.7* | 60.5* | 12.3 | 12.2 | 12.0 | 12.0 |
| MT1078 | 65.9 | 61.7* | 65.8 | 64.9 | 60.1 | 60.3 | 59.5 | 58.9 | 11.7 | 11.9 | 11.8 | 11.8 |
| MT1117 | 60.5 | 61.4* | 63.6 | | 60.9 | 61.3 | 60.8* | | 12.9 | 13.0* | 12.5 | |
| MT1138 | 65.4 | 63.2* | 64.1 | | 61.2 | 61.0 | 60.3 | | 12.3 | 12.5 | 12.4 | |
| MT1257 | 64.2 | 63.4* | | | 60.5 | 60.7 | | | 12.4 | 12.6 | | |
| MT1265 | 58.3 | 58.7 | | | 60.7 | 60.9 | | | 12.7 | 12.7* | | |
| MT1286 | 61.5 | 59.3 | | | 61.1 | 61.2 | | | 12.3 | 12.7* | | |
| + MT1332 | 66.4* | | | | 61.1 | | | | 12.7 | | | |
| + MT1348 | 67.4* | | | | 61.4 | | | | 12.5 | | | |
| + MT1354 | 65.7 | | | | 61.4 | | | | 12.6 | | | |
| + MT1356 | 63.3 | | | | 60.7 | | | | 13.1 | | | |
| + MT1361 | 64.2 | | | | 60.6 | | | | 13.1 | | | |
| MTCL1131 | 57.6 | 57.5 | 62.2 | | 61.8 | 61.7 | 60.5* | | 12.4 | 12.6 | 12.3 | |
| + MTCL1329 | 62.9 | | | | 62.1 | | | | 11.9 | | | |
| MTCS1204 | 61.7 | 57.6 | | | 61.1 | 61.0 | | | 12.2 | 12.7* | | |
| MTF1232 | 56.6 | 51.6 | | | 59.8 | 60.1 | | | 12.9 | 13.1* | | |
| MTS0826-63 | 57.7 | 57.8 | 61.8 | | 58.8 | 59.9 | 59.4 | | 13.6* | 13.5** | 13.1** | |
| MTS1224 | 55.5 | 53.2 | | | 60.7 | 60.6 | | | 13.3 | 13.4* | | |
| + MTS1305 | 65.0 | | | | 61.3 | | | | 12.2 | | | |
| Northern | 61.2 | 61.6* | 65.9 | 63.2 | 60.6 | 60.8 | 60.4 | 59.9 | 13.0 | 13.1* | 12.8* | 12.9* |
| Rampart | 60.1 | 58.3 | 61.1 | 57.5 | 59.7 | 60.3 | 59.5 | 59.3 | 13.3* | 13.0* | 13.0* | 13.1** |
| SY Clearstone 2CL | 58.0 | 58.3 | 63.8 | 62.7 | 60.7 | 60.7 | 60.0 | 59.3 | 12.5 | 12.5 | 12.3 | 12.6* |
| #+ SY Monument | 65.9 | | | | 61.0 | | | | 11.2 | | | |
| #+ SY Sunrise | 64.1 | | | | 61.8 | | | | 12.9 | | | |
| # SY Wolf | 59.9 | 65.5* | 67.5* | 64.7 | 62.5 | 62.4 | 61.0* | 60.9** | 12.3 | 12.5 | 12.5 | 12.7* |
| # T158 | 55.7 | 61.2* | | | 61.8 | 62.0 | | | 12.5 | 11.6 | | |
| Warhorse | 60.3 | 54.2 | 59.4 | 57.5 | 60.8 | 60.9 | 60.3 | 59.6 | 12.7 | 13.1* | 12.8* | 12.9* |
| WB3768 | 63.0 | 59.2 | 63.3 | 60.5 | 60.6 | 61.1 | 60.7* | 60.3* | 12.8 | 13.0* | 12.7* | 12.8* |
| # WB4059CLP | 48.3 | 51.7 | | | 61.8 | 61.1 | | | 13.4* | 13.0* | | |
| # WB4614 | 59.9 | 59.4 | | | 61.4 | 61.9 | | | 12.6 | 12.4 | | |
| #+ WB4623CLP | 55.0 | | | | 60.7 | | | | 13.5* | | | |
| WB-Quake | 57.1 | 51.9 | 58.3 | 55.9 | 60.7 | 60.8 | 59.9 | 59.7 | 12.8 | 12.8* | 12.4 | 12.9* |
| Yellowstone | 65.2 | 63.7* | 64.7 | 61.6 | 60.9 | 60.8 | 60.3 | 59.8 | 12.3 | 12.5 | 12.3 | 12.6* |
| Average | 61.4 | 59.2 | 63.3 | 60.4 | 61.1 | 61.0 | 60.2 | 59.7 | 12.6 | 12.6 | 12.5 | 12.7 |
| LSD (0.05) | 5.7 | 7.7 | 7.0 | ns | 0.5 | 0.9 | 0.8 | 0.9 | 0.5 | 0.8 | 0.5 | 0.7 |
| C.V. | 5.3 | 6.4 | 6.7 | 7.9 | 0.4 | 0.7 | 0.8 | 1.1 | 2.5 | 3.3 | 2.6 | 3.9 |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 19. 2012//2015 Intrastate Winter Wheat Test (Exp. 3503): Sidney Yield, Test Weight and Protein

No harvest in 2013 due to severe hail, 8/10/13
 No harvest in 2014 and 2015 due to severe winter-kill

| Cultivar/Line | Grain Yield (bushels/acre) | | Test Weight (lb/bu) | | Protein (%) | |
|-------------------|----------------------------|------|---------------------|------|-------------|------|
| | 2012 | 2012 | 2012 | 2012 | 2012 | 2012 |
| | 1y | | 1y | | 1y | |
| Bearpaw | 60.3* | | 58.0 | | 11.5 | |
| #+ Brawl CL Plus | | | | | | |
| Broadview | 58.1* | | 57.5 | | 11.3 | |
| #+ Byrd | | | | | | |
| CDC Falcon | 61.9* | | 58.5* | | 12.8 | |
| Colter | 62.5* | | 59.0* | | 10.9 | |
| Cowboy | | | | | | |
| Decade | 55.3 | | 60.0* | | 12.2 | |
| #+ Denali | | | | | | |
| Freeman | | | | | | |
| Genou | 53.4 | | 59.0* | | 14.0 | |
| Jerry | 65.9* | | 58.0 | | 11.8 | |
| Judee | 51.9 | | 58.0 | | 11.4 | |
| # Keldin | | | | | | |
| + # LCH 10-13 | | | | | | |
| # LCS Mint | | | | | | |
| Ledger | 46.3 | | 58.5* | | 11.8 | |
| MT1078 | 60.1* | | 56.5 | | 10.1 | |
| MT1117 | | | | | | |
| MT1138 | | | | | | |
| MT1257 | | | | | | |
| MT1265 | | | | | | |
| MT1286 | | | | | | |
| + MT1332 | | | | | | |
| + MT1348 | | | | | | |
| + MT1354 | | | | | | |
| + MT1356 | | | | | | |
| + MT1361 | | | | | | |
| MTCL1131 | | | | | | |
| + MTCL1329 | | | | | | |
| MTCS1204 | | | | | | |
| MTF1232 | | | | | | |
| MTS0826-63 | | | | | | |
| MTS1224 | | | | | | |
| + MTS1305 | | | | | | |
| Northern | 63.5* | | 60.0* | | 11.9 | |
| Rampart | 43.9 | | 57.5 | | 11.8 | |
| SY Clearstone 2CL | 62.9* | | 57.0 | | 11.0 | |
| #+ SY Monument | | | | | | |
| #+ SY Sunrise | | | | | | |
| # SY Wolf | 54.1 | | 60.5** | | 11.2 | |
| # T158 | | | | | | |
| Warhorse | 50.9 | | 56.0 | | 11.4 | |
| WB3768 | 59.7* | | 58.0 | | 11.1 | |
| # WB4059CLP | | | | | | |
| # WB4614 | | | | | | |
| #+ WB4623CLP | | | | | | |
| WB-Quake | 49.4 | | 56.5 | | 13.5 | |
| Yellowstone | 63.7* | | 58.8* | | 12.0 | |
| Average | 57.4 | | 58.8 | | 11.7 | |
| LSD (0.05) | 9.6 | | 1.9 | | | |
| C.V. | 8.3 | | 1.6 | | | |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 20. 2012//2015 Intrastate Winter Wheat Test (Exp. 3504): Williston Yield, Test Weight and Protein

| Cultivar/Line | No harvest in 2014 due to extreme winter-kill | | | | | | | | |
|-------------------|---|----------|----------|---------------------|----------|----------|-------------|----------|----------|
| | Grain Yield (bushels/acre) | | | Test Weight (lb/bu) | | | Protein (%) | | |
| | 2015 | 2013//15 | 2012//15 | 2015 | 2013//15 | 2012//15 | 2015 | 2013//15 | 2012//15 |
| | 1y | 2y | 3y | 1y | 2y | 3y | 1y | 2y | 3y |
| Bearpaw | 42.9 | 45.7 | 46.0 | 60.6 | 59.8 | 59.0 | 13.5 | 13.0* | 13.1 |
| #+ Brawl CL Plus | 25.5 | | | 62.0* | | | 14.3 | | |
| Broadview | 58.1* | 55.5* | 57.8* | 60.6 | 59.6 | 59.4 | 11.4 | 11.8 | 12.1 |
| #+ Byrd | 49.3 | | | 61.2 | | | 13.3 | | |
| CDC Falcon | 54.8* | 50.3 | 53.4* | 60.9 | 59.6 | 59.4 | 12.5 | 11.9 | 11.9 |
| Colter | 48.4 | 62.2* | 55.4* | 61.4 | 59.9 | 59.0 | 12.8 | 12.3* | 12.9 |
| Cowboy | 28.7 | 41.0 | | 61.2 | 60.6* | | 12.0 | 11.3 | |
| Decade | 47.7 | 52.4 | 49.4* | 61.5 | 60.1* | 59.6 | 14.7 | 13.5* | 13.7* |
| #+ Denali | 39.8 | | | 61.3 | | | 11.9 | | |
| Freeman | 45.0 | | | 58.4 | | | 14.0 | | |
| Genou | 47.6 | 49.8 | 43.0 | 61.6 | 60.6* | 59.0 | 12.9 | 12.2* | 13.0 |
| Jerry | 52.3* | 58.8* | 57.1* | 59.6 | 58.5 | 58.3 | 12.9 | 12.4* | 12.6 |
| Judee | 27.9 | 32.7 | 28.9 | 60.6 | 60.4* | 58.6 | 15.7 | 13.6** | 14.4** |
| # Keldin | 28.1 | | | 61.3 | | | 15.0 | | |
| + # LCH 10-13 | 33.0 | | | 61.6 | | | 12.8 | | |
| # LCS Mint | 29.9 | | | 63.0** | | | 12.6 | | |
| Ledger | 45.5 | 44.7 | 41.3 | 61.3 | 60.3* | 59.5 | 12.6 | 12.5* | 12.8 |
| MT1078 | 42.8 | 40.9 | 41.8 | 60.2 | 59.1 | 57.9 | 12.2 | 11.4 | 12.1 |
| MT1117 | 46.5 | 53.1 | | 61.1 | 60.5* | | 13.1 | 12.2* | |
| MT1138 | 52.4* | 59.4* | | 60.8 | 59.9 | | 11.4 | 11.7 | |
| MT1257 | 51.5* | | | 60.4 | | | 11.5 | | |
| MT1265 | 48.4 | | | 60.2 | | | 12.3 | | |
| MT1286 | 54.3* | | | 60.4 | | | 13.0 | | |
| + MT1332 | 57.3* | | | 60.7 | | | 12.1 | | |
| + MT1348 | 38.4 | | | 60.1 | | | 12.5 | | |
| + MT1354 | 52.1* | | | 60.4 | | | 13.3 | | |
| + MT1356 | 50.6* | | | 60.1 | | | 12.6 | | |
| + MT1361 | 51.0* | | | 61.0 | | | 12.8 | | |
| MTCL1131 | 55.4* | 62.6* | | 60.7 | 59.5 | | 11.3 | 11.1 | |
| + MTCL1329 | 46.2 | | | 60.9 | | | 12.7 | | |
| MTCS1204 | 48.7 | | | 61.4 | | | 11.9 | | |
| MTF1232 | 31.2 | | | 58.9 | | | 14.8 | | |
| MTS0826-63 | 54.9* | 52.2 | | 61.4 | 60.8** | | 13.4 | 12.9* | |
| MTS1224 | 52.1* | | | 61.1 | | | 12.8 | | |
| + MTS1305 | 27.1 | | | 60.5 | | | 12.4 | | |
| Northern | 50.5 | 56.0* | 51.1* | 60.9 | 59.9 | 58.8 | 11.7 | 11.5 | 12.5 |
| Rampart | 33.0 | 41.5 | 39.6 | 61.0 | 59.7 | 59.2 | 13.9 | 13.2* | 13.4* |
| SY Clearstone 2CL | 45.7 | 48.0 | 44.8 | 61.2 | 60.2* | 58.4 | 12.1 | 11.4 | 12.5 |
| #+ SY Monument | 40.8 | | | 60.0 | | | 13.2 | | |
| #+ SY Sunrise | 24.2 | | | 62.1* | | | 14.9 | | |
| # SY Wolf | 35.9 | 44.7 | 38.9 | 61.4 | 59.9 | 59.1 | 13.4 | 12.6* | 13.0 |
| # T158 | 35.6 | | | 60.8 | | | 12.8 | | |
| Warhorse | 40.8 | 47.6 | 47.3 | 59.9 | 59.4 | 58.4 | 12.0 | 11.7 | 12.5 |
| WB3768 | 53.2* | 57.9* | 56.2* | 61.5 | 60.6* | 59.7 | 12.1 | 11.4 | 12.0 |
| # WB4059CLP | 21.6 | | | 60.1 | | | 14.5 | | |
| # WB4614 | 43.9 | | | 61.6 | | | 12.4 | | |
| #+ WB4623CLP | 14.4 | | | 57.7 | | | 15.4 | | |
| WB-Quake | 47.3 | 53.4 | 51.4* | 61.1 | 60.0* | 58.9 | 13.5 | 13.4* | 13.7* |
| Yellowstone | 64.2** | 67.4** | 59.5** | 60.7 | 59.4 | 58.2 | 12.5 | 12.2* | 13.0 |
| Average | 43.2 | 51.2 | 47.9 | 60.8 | 59.9 | 58.9 | 13.0 | 12.2 | 12.8 |
| LSD (0.05) | 13.7 | 13.7 | 11.7 | 1.3 | 1.0 | ns | | 1.5 | 1.3 |
| C.V. | 15.8 | 12.9 | 14.7 | 1.1 | 0.8 | 1.6 | | 5.9 | 6.0 |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 21. 2012-2015 Intrastate Winter Wheat Test (Exp. 3505): Kalispell Yield, Test Weight and Protein

| Cultivar/Line | Grain Yield (bushels/acre) | | | | Test Weight (lb/bu) | | | | Protein (%) | | | | | | |
|-------------------|----------------------------|---------|---------|---------|---------------------|--------|--------|---------|-------------|---------|------|--------|---------|---------|---------|
| | 2015 | | 2014-15 | 2013-15 | 2012-15 | 2015 | | 2014-15 | 2013-15 | 2012-15 | 2015 | | 2014-15 | 2013-15 | 2012-15 |
| | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y | | | |
| Bearpaw | 81.3 | 100.1 | 77.1 | 61.6 | 59.2 | 60.6 | 53.1 | 51.8 | 10.4 | 11.4* | 13.0 | 14.0** | | | |
| #+ Brawl CL Plus | 90.5 | | | | 61.3 | | | | 11.4 | | | | | | |
| Broadview | 67.3 | 98.1 | 85.8 | 67.4 | 57.1 | 59.5 | 55.9 | 54.5 | 11.2 | 11.6* | 12.1 | 12.6 | | | |
| #+ Byrd | 85.9 | | | | 60.3 | | | | 9.1 | | | | | | |
| CDC Falcon | 89.2 | 107.1 | 96.9 | 82.4 | 62.0 | 61.8* | 59.9* | 57.8* | 9.9 | 10.9 | 11.4 | 11.8 | | | |
| Colter | 151.2* | 152.1** | 144.6** | 132.3** | 63.0 | 62.4* | 61.5* | 60.9* | 9.9 | 11.4* | 11.9 | 12.3 | | | |
| Cowboy | 91.7 | 116.9 | 101.7 | | 60.1 | 61.0* | 57.8* | | 10.1 | 10.5 | 11.2 | | | | |
| Decade | 69.3 | 91.2 | 74.9 | 58.5 | 59.0 | 59.6 | 53.9 | 51.5 | 9.5 | 10.9 | 12.3 | 13.1* | | | |
| #+ Denali | 94.1 | | | | 61.4 | | | | 10.1 | | | | | | |
| Freeman | 120.3 | 133.4* | | | 61.8 | 61.4* | | | 9.4 | 10.9 | | | | | |
| Genou | 64.9 | 92.2 | 80.6 | 64.5 | 61.3 | 61.7* | 57.8* | 55.9 | 10.1 | 11.1 | 12.0 | 13.0* | | | |
| Jerry | 59.5 | 90.2 | 74.4 | 59.7 | 57.7 | 59.4 | 54.4 | 53.1 | 9.5 | 10.6 | 11.6 | 12.1 | | | |
| Judee | 125.4 | 130.9* | 122.8* | 107.3 | 63.7 | 63.2* | 61.2* | 59.0* | 9.9 | 11.2 | 11.5 | 12.3 | | | |
| # Keldin | 122.3 | 133.2* | | | 63.8 | 62.9* | | | 9.8 | 11.2 | | | | | |
| + # LCH 10-13 | 76.7 | | | | 62.1 | | | | 10.4 | | | | | | |
| # LCS Mint | 119.4 | 135.6* | | | 64.6 | 62.5* | | | 9.7 | 11.2 | | | | | |
| Ledger | 104.6 | 115.8 | 110.3 | 93.6 | 63.6 | 63.0* | 61.4* | 60.2* | 9.9 | 11.0 | 11.3 | 11.7 | | | |
| MT1078 | 139.0 | 141.8* | 130.0* | 113.3 | 61.9 | 61.6* | 59.0* | 58.2* | 9.2 | 10.6 | 11.6 | 12.3 | | | |
| MT1117 | 138.7 | 142.2* | 138.5* | | 63.1 | 63.1* | 62.4** | | 9.8 | 11.0 | 11.2 | | | | |
| MT1138 | 143.5* | 147.4* | 141.7* | | 62.8 | 62.5* | 61.8* | | 9.5 | 10.8 | 11.3 | | | | |
| MT1257 | 144.3* | 144.7* | | | 62.3 | 62.3* | | | 10.0 | 11.1 | | | | | |
| MT1265 | 139.8 | 144.4* | | | 61.8 | 61.6* | | | 9.3 | 10.7 | | | | | |
| MT1286 | 113.5 | 130.5* | | | 62.4 | 62.6* | | | 9.0 | 10.3 | | | | | |
| + MT1332 | 144.8* | | | | 62.4 | | | | 9.0 | | | | | | |
| + MT1348 | 132.9 | | | | 63.9 | | | | 9.7 | | | | | | |
| + MT1354 | 154.6** | | | | 63.6 | | | | 9.9 | | | | | | |
| + MT1356 | 149.7* | | | | 62.8 | | | | 10.1 | | | | | | |
| + MT1361 | 123.7 | | | | 62.7 | | | | 9.8 | | | | | | |
| MTCL1131 | 140.6 | 147.3* | 138.3* | | 62.9 | 62.8* | 61.7* | | 10.2 | 11.1 | 11.4 | | | | |
| + MTCL1329 | 126.4 | | | | 63.5 | | | | 10.0 | | | | | | |
| MTCS1204 | 108.3 | 122.7 | | | 63.3 | 62.8* | | | 10.4 | 11.8* | | | | | |
| MTF1232 | 109.4 | 125.8* | | | 63.5 | 63.1* | | | 10.1 | 11.6* | | | | | |
| MTS0826-63 | 126.1 | 127.5* | 120.6 | | 63.8 | 63.1* | 62.4** | | 10.1 | 11.5* | 12.2 | | | | |
| MTS1224 | 144.7* | 142.3* | | | 62.9 | 62.6* | | | 9.6 | 11.1 | | | | | |
| + MTS1305 | 100.7 | | | | 63.5 | | | | 9.5 | | | | | | |
| Northern | 130.8 | 140.8* | 135.5* | 116.7* | 62.7 | 62.9* | 60.9* | 59.2* | 10.5 | 11.5* | 12.0 | 12.7 | | | |
| Rampart | 101.0 | 113.5 | 104.3 | 90.4 | 63.1 | 62.7* | 61.1* | 60.6* | 10.8 | 12.1* | 12.5 | 13.0* | | | |
| SY Clearstone 2CL | 132.0 | 139.1* | 132.0* | 118.0* | 62.7 | 62.4* | 61.5* | 60.1* | 10.4 | 11.1 | 11.4 | 12.0 | | | |
| #+ SY Monument | 121.5 | | | | 62.2 | | | | 9.1 | | | | | | |
| #+ SY Sunrise | 111.3 | | | | 64.0 | | | | 9.8 | | | | | | |
| # SY Wolf | 105.7 | 121.6 | 119.4 | 104.6 | 63.1 | 62.5* | 61.4* | 59.4* | 9.5 | 11.1 | 11.9 | 12.7 | | | |
| # T158 | 119.0 | 119.9 | | | 64.0 | 63.3** | | | 10.1 | 11.4* | | | | | |
| Warhorse | 132.4 | 130.9* | 125.7* | 112.9 | 62.9 | 62.3* | 61.8* | 61.0** | 11.0 | 12.2** | 12.5 | 12.9 | | | |
| WB3768 | 135.8 | 143.6* | 136.2* | 126.6* | 63.1 | 63.0* | 61.4* | 60.8* | 9.6 | 10.7 | 11.0 | 11.5 | | | |
| # WB4059CLP | 61.6 | 74.2 | | | 61.0 | 60.1 | | | 10.8 | 11.9* | | | | | |
| # WB4614 | 106.9 | 122.9 | | | 63.3 | 62.9* | | | 9.8 | 11.1 | | | | | |
| #+ WB4623CLP | 115.9 | | | | 63.8 | | | | 10.9 | | | | | | |
| WB-Quake | 127.5 | 125.1 | 120.1 | 108.1 | 63.6 | 63.1* | 62.1* | 60.9* | 9.6 | 11.1 | 11.6 | 12.2 | | | |
| Yellowstone | 140.5 | 140.5* | 135.1* | 122.4* | 62.4 | 62.2* | 61.2* | 60.2* | 9.6 | 10.8 | 11.3 | 11.8 | | | |
| Average | 115.0 | 125.3 | 115.1 | 96.7 | 62.4 | 62.1 | 59.8 | 58.0 | 9.9 | 11.1 | 11.7 | 12.4 | | | |
| LSD (0.05) | 12.6 | 26.9 | 22.2 | 17.5 | | 2.3 | 5.4 | 4.3 | | 0.8 | ns | 1.0 | | | |
| C.V. | 6.2 | 10.6 | 11.7 | 12.7 | | 1.8 | 5.5 | 5.3 | | 3.7 | 6.1 | 5.8 | | | |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 22. 2012-2015 Intrastate Winter Wheat Test (Exp. 3507): Moccasin Yield, Test Weight and Protein

| Cultivar/Line | Grain Yield (bushels/acre) | | | | Test Weight (lb/bu) | | | | Protein (%) | | | |
|--------------------------|----------------------------|---------------|---------------|---------------|---------------------|-------------|-------------|---------------|-------------|---------------|---------------|---------------|
| | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 |
| | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y |
| Bearpaw | 57.9 | 53.8 | 55.2 | 49.4 | 57.5 | 59.7 | 59.5 | 59.5 | 10.7 | 11.8 | 12.2 | 12.5* |
| #+ Brawl CL Plus | 50.1 | | | | 61.9** | | | | 9.0 | | | |
| Broadview | 55.9 | 55.7 | 55.4 | 49.8 | 58.6 | 59.8 | 59.3 | 59.2 | 9.0 | 11.0 | 11.5 | 12.2 |
| #+ Byrd | 61.4* | | | | 58.5 | | | | 9.1 | | | |
| CDC Falcon | 54.4 | 55.4 | 56.6 | 51.1 | 58.4 | 59.4 | 59.4 | 59.0 | 9.0 | 11.2 | 11.8 | 12.3* |
| Colter | 57.9 | 60.3 | 60.1 | 54.2* | 59.7 | 60.0 | 59.9 | 60.0* | 9.8 | 11.4 | 11.7 | 12.1 |
| Cowboy | 62.6* | 60.2 | 60.7 | | 58.6 | 59.6 | 58.8 | | 8.8 | 10.8 | 11.4 | |
| Decade | 55.3 | 56.4 | 58.0 | 51.5 | 58.9 | 60.5 | 59.7 | 60.2* | 9.6 | 11.5 | 11.9 | 12.3* |
| #+ Denali | 62.0* | | | | 60.7* | | | | 8.6 | | | |
| Freeman | 55.3 | 57.7 | | | 56.3 | 58.1 | | | 8.9 | 11.0 | | |
| Genou | 44.8 | 46.3 | 46.6 | 42.0 | 58.2 | 58.4 | 58.6 | 58.1 | 9.4 | 11.9 | 12.1 | 13.0** |
| Jerry | 59.1* | 55.3 | 56.4 | 49.6 | 58.4 | 59.0 | 59.0 | 58.9 | 9.6 | 12.5* | 12.2 | 12.8* |
| Judee | 42.1 | 46.1 | 46.8 | 42.7 | 59.7 | 59.9 | 59.5 | 58.7 | 10.4 | 12.3* | 12.4* | 13.0** |
| # Keldin | 61.5* | 59.0 | | | 60.9* | 60.8 | | | 8.1 | 10.6 | | |
| + # LCH 10-13 | 50.6 | | | | 60.7* | | | | 9.8 | | | |
| # LCS Mint | 56.5 | 57.2 | | | 59.5 | 61.6 | | | 10.1 | 11.6 | | |
| Ledger | 48.2 | 49.8 | 49.5 | 44.3 | 58.3 | 59.8 | 59.7 | 59.6* | 9.7 | 11.4 | 11.6 | 12.1 |
| MT1078 | 60.1* | 59.9 | 60.1 | 54.1* | 57.5 | 59.0 | 58.4 | 58.5 | 8.9 | 10.9 | 11.3 | 11.8 |
| MT1117 | 61.0* | 61.9* | 64.6* | | 60.3* | 60.5 | 60.4 | | 9.3 | 11.6 | 11.6 | |
| MT1138 | 69.0** | 66.4* | 68.3** | | 59.9 | 60.6 | 60.3 | | 9.6 | 11.4 | 11.3 | |
| MT1257 | 68.0* | 66.7** | | | 59.5 | 60.0 | | | 9.6 | 11.6 | | |
| MT1265 | 56.9 | 59.0 | | | 57.5 | 58.8 | | | 10.3 | 11.9 | | |
| MT1286 | 58.2 | 59.9 | | | 60.4* | 61.6 | | | 9.2 | 10.8 | | |
| + MT1332 | 58.8* | | | | 60.3* | | | | 8.8 | | | |
| + MT1348 | 59.6* | | | | 61.3* | | | | 9.0 | | | |
| + MT1354 | 56.3 | | | | 59.2 | | | | 9.9 | | | |
| + MT1356 | 56.7 | | | | 60.2* | | | | 8.9 | | | |
| + MT1361 | 66.5* | | | | 59.2 | | | | 9.7 | | | |
| MTCL1131 | 62.6* | 63.6* | 66.1* | | 60.5* | 60.7 | 60.5 | | 9.3 | 11.5 | 11.5 | |
| + MTCL1329 | 65.4* | | | | 60.8* | | | | 9.4 | | | |
| MTCS1204 | 52.7 | 52.6 | | | 58.2 | 59.9 | | | 11.0 | 12.1* | | |
| MTF1232 | 44.1 | 48.5 | | | 58.2 | 58.5 | | | 10.7 | 12.2* | | |
| MTS0826-63 | 38.8 | 42.3 | 44.1 | | 56.6 | 58.8 | 59.1 | | 11.9 | 13.2** | 13.2** | |
| MTS1224 | 54.3 | 56.0 | | | 58.1 | 59.8 | | | 9.5 | 11.2 | | |
| + MTS1305 | 50.4 | | | | 60.4* | | | | 9.0 | | | |
| Northern | 64.2* | 61.2* | 61.3 | 54.7* | 59.9 | 60.1 | 60.0 | 59.6* | 11.0 | 12.4* | 12.4* | 12.9* |
| Rampart | 45.1 | 44.7 | 44.8 | 40.8 | 58.3 | 58.7 | 59.3 | 59.2 | 9.6 | 12.1* | 12.3* | 13.0** |
| SY Clearstone 2CL | 56.9 | 59.2 | 63.1 | 56.0** | 59.1 | 59.4 | 58.7 | 58.5 | 9.4 | 11.1 | 11.6 | 12.0 |
| #+ SY Monument | 59.8* | | | | 58.1 | | | | 9.0 | | | |
| #+ SY Sunrise | 55.8 | | | | 60.2* | | | | 10.1 | | | |
| # SY Wolf | 52.5 | 55.9 | 56.1 | 50.4 | 60.1* | 60.7 | 60.8 | 60.9** | 9.8 | 11.3 | 11.5 | 12.0 |
| # T158 | 54.9 | 57.4 | | | 61.5* | 62.2 | | | 8.6 | 10.7 | | |
| Warhorse | 51.9 | 51.9 | 54.6 | 48.9 | 59.3 | 60.1 | 59.6 | 59.7* | 9.8 | 11.7 | 12.1 | 12.4* |
| WB3768 | 59.5* | 60.1 | 61.0 | 54.1* | 60.5* | 60.1 | 60.0 | 59.8* | 10.0 | 11.3 | 11.4 | 12.2 |
| # WB4059CLP | 48.9 | 50.2 | | | 60.0* | 59.8 | | | 10.2 | 12.1* | | |
| # WB4614 | 57.4 | 57.1 | | | 59.2 | 60.0 | | | 8.9 | 11.1 | | |
| #+ WB4623CLP | 47.7 | | | | 60.0* | | | | 9.3 | | | |
| WB-Quake | 46.5 | 47.7 | 51.3 | 46.0 | 57.8 | 59.1 | 59.0 | 58.6 | 10.1 | 11.8 | 11.9 | 12.6* |
| Yellowstone | 59.2* | 60.7* | 62.6 | 55.8* | 59.6 | 60.7 | 60.1 | 59.7* | 9.8 | 11.4 | 11.6 | 12.2 |
| Average | 55.8 | 55.9 | 56.7 | 49.7 | 59.3 | 59.9 | 59.5 | 59.3 | 9.6 | 11.5 | 11.8 | 12.4 |
| LSD (0.05) | 10.8 | 6.1 | 5.1 | 4.5 | 1.9 | ns | ns | 1.3 | | 1.2 | 1.0 | 0.8 |
| C.V. | 10.9 | 5.4 | 5.5 | 6.4 | 1.6 | 1.7 | 1.5 | 1.6 | | 5.1 | 4.9 | 4.5 |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 23. 2012-2014 Intrastate Winter Wheat Test (Exp. 3508): Huntley Yield, Test Weight and Protein

| Cultivar/Line | 2014 = Late Harvest, Sept. 8: 2015 = Not Planted | | | | | | | | |
|-------------------|--|--------------|--------------|---------------------|--------------|-------------|---------------|---------------|---------------|
| | Grain Yield (bushels/acre) | | | Test Weight (lb/bu) | | | Protein (%) | | |
| | 2014 | 2013-14 | 2012-14 | 2014 | 2013-14 | 2012-14 | 2014 | 2013-14 | 2012-14 |
| | 1y | 2y | 3y | 1y | 2y | 3y | 1y | 2y | 3y |
| Bearpaw | 86.5 | 74.2 | 67.5 | 54.9 | 56.8 | 58.9 | 13.5 | 14.1 | 13.0 |
| #+ Brawl CL Plus | | | | | | | | | |
| Broadview | 75.8 | 70.9 | 67.4 | 53.0 | 55.9 | 58.3 | 13.9 | 14.3* | 13.2 |
| #+ Byrd | | | | | | | | | |
| CDC Falcon | 88.6 | 77.9* | 72.3 | 53.3 | 55.7 | 58.2 | 13.6 | 14.1 | 12.8 |
| Colter | 99.6* | 83.2* | 77.8* | 54.2 | 56.6 | 58.6 | 14.1 | 14.1 | 13.1 |
| Cowboy | 90.4 | 83.8* | | 54.1 | 57.1 | | 12.2 | 12.6 | |
| Decade | 85.5 | 78.4* | 73.8 | 53.0 | 55.7 | 58.3 | 13.8 | 14.3* | 13.3 |
| #+ Denali | | | | | | | | | |
| Freeman | 96.8 | | | 54.8 | | | 12.7 | | |
| Genou | 66.1 | 61.5 | 58.9 | 55.2 | 57.8 | 59.8 | 14.6* | 14.6* | 13.5* |
| Jerry | 73.0 | 67.2 | 64.1 | 52.7 | 56.4 | 58.4 | 13.9 | 13.9 | 12.9 |
| Judee | 79.3 | 70.6 | 67.9 | 53.9 | 56.9 | 59.1 | 14.0 | 14.5* | 13.8 |
| # Keldin | 100.8* | | | 55.8 | | | 12.3 | | |
| + # LCH 10-13 | | | | | | | | | |
| # LCS Mint | 106.4* | | | 58.0** | | | 12.8 | | |
| Ledger | 73.5 | 66.9 | 62.9 | 55.7 | 57.7 | 59.6 | 13.4 | 13.7 | 12.6 |
| MT1078 | 98.7* | 87.0* | 83.9* | 53.6 | 56.0 | 58.0 | 13.1 | 13.5 | 12.3 |
| MT1117 | 93.5 | 78.9* | | 54.2 | 56.7 | | 13.4 | 13.8 | |
| MT1138 | 89.8 | 78.8* | | 53.0 | 55.7 | | 13.5 | 13.9 | |
| MT1257 | 99.8* | | | 53.4 | | | 13.4 | | |
| MT1265 | 97.8 | | | 53.4 | | | 13.4 | | |
| MT1286 | 89.9 | | | 54.8 | | | 13.0 | | |
| + MT1332 | | | | | | | | | |
| + MT1348 | | | | | | | | | |
| + MT1354 | | | | | | | | | |
| + MT1356 | | | | | | | | | |
| + MT1361 | | | | | | | | | |
| MTCL1131 | 95.4 | 79.2* | | 54.1 | 56.1 | | 12.6 | 13.5 | |
| + MTCL1329 | | | | | | | | | |
| MTCS1204 | 87.4 | | | 55.5 | | | 13.9 | | |
| MTF1232 | 82.6 | | | 56.4 | | | 15.2** | | |
| MTS0826-63 | 86.5 | 74.8 | | 56.2 | 58.4* | | 14.5* | 14.9* | |
| MTS1224 | 94.5 | | | 54.4 | | | 13.6 | | |
| + MTS1305 | | | | | | | | | |
| Northern | 99.1* | 83.5* | 76.4* | 53.8 | 56.2 | 58.3 | 13.9 | 14.2 | 13.2 |
| Rampart | 77.5 | 65.5 | 62.3 | 55.9 | 57.9 | 59.7 | 14.8* | 15.0** | 14.1** |
| SY Clearstone 2CL | 100.9* | 82.4* | 78.4* | 52.6 | 54.5 | 56.9 | 13.7 | 14.0 | 12.9 |
| #+ SY Monument | | | | | | | | | |
| #+ SY Sunrise | | | | | | | | | |
| # SY Wolf | 99.2* | 81.9* | 77.5* | 51.5 | 55.8 | 58.1 | 13.5 | 14.0 | 13.0 |
| # T158 | 104.6* | | | 57.4* | | | 12.4 | | |
| Warhorse | 94.6 | 78.7* | 74.2 | 55.9 | 56.7 | 58.8 | 14.4 | 14.9* | 13.8* |
| WB3768 | 81.4 | 70.3 | 67.2 | 52.9 | 56.0 | 58.0 | 13.8 | 14.0 | 13.0 |
| # WB4059CLP | 70.3 | | | 53.0 | | | 13.7 | | |
| # WB4614 | 70.0 | | | 55.2 | | | 14.3 | | |
| #+ WB4623CLP | | | | | | | | | |
| WB-Quake | 84.9 | 70.4 | 67.8 | 57.2* | 58.4* | 60.2 | 13.1 | 13.9 | 13.1 |
| Yellowstone | 99.4* | 82.4* | 78.1* | 54.4 | 56.4 | 58.4 | 13.0 | 13.4 | 12.6 |
| Average | 90.6 | 77.4 | 72.4 | 54.5 | 56.8 | 58.8 | 13.5 | 13.9 | 13.0 |
| LSD (0.05) | 10.2 | 12.9 | 9.4 | 1.1 | 2.1 | 1.5 | 0.7 | 0.7 | 0.6 |
| C.V. | 6.6 | 8.1 | 7.9 | 1.3 | 1.8 | 1.5 | 3.1 | 2.4 | 2.9 |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 24. 2012-2015 Intrastate Winter Wheat Test (Exp. 3518): Conrad Yield, Test Weight and Protein

| Cultivar/Line | Grain Yield (bushels/acre) | | | | Test Weight (lb/bu) | | | | Protein (%) | | | |
|-------------------|----------------------------|----------------|----------------|---------------|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 |
| | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y | 1y | 2y | 3y | 4y |
| Bearpaw | 66.9 | 82.7 | 82.6 | 81.5 | 58.9 | 59.5 | 60.0 | 60.3 | 13.7 | 13.3 | 13.3 | 13.0 |
| #+ Brawl CL Plus | 85.7* | | | | 62.9* | | | | 13.4 | | | |
| Broadview | 77.5 | 93.6 | 92.3 | 91.2* | 58.8 | 59.7 | 59.7 | 60.1 | 13.5 | 12.8 | 12.9 | 12.6 |
| #+ Byrd | 74.4 | | | | 58.7 | | | | 12.4 | | | |
| CDC Falcon | 81.8* | 93.1 | 90.0 | 90.7 | 59.3 | 60.0 | 59.7 | 60.2 | 13.2 | 12.6 | 12.7 | 12.4 |
| Colter | 79.6* | 93.4 | 93.8 | 94.2* | 58.2 | 59.2 | 59.7 | 60.1 | 13.5 | 13.2 | 13.2 | 12.8 |
| Cowboy | 83.6* | 99.1* | 98.6* | | 59.5 | 60.4 | 60.1 | | 12.3 | 11.9 | 12.1 | |
| Decade | 72.9 | 91.3 | 90.6 | 88.4 | 59.8 | 60.2 | 60.4* | 60.9* | 13.5 | 13.0 | 12.9 | 12.8 |
| #+ Denali | 95.9** | | | | 61.5* | | | | 11.9 | | | |
| Freeman | 89.3* | 98.0* | | | 59.6 | 59.2 | | | 12.6 | 12.5 | | |
| Genou | 67.4 | 85.2 | 81.7 | 80.6 | 59.8 | 60.6 | 60.4* | 60.7* | 14.0* | 13.2 | 13.4* | 13.1 |
| Jerry | 74.6 | 86.1 | 84.3 | 82.9 | 58.5 | 59.2 | 59.2 | 59.5 | 13.0 | 12.6 | 12.7 | 12.4 |
| Judee | 63.1 | 80.3 | 79.8 | 83.7 | 58.6 | 60.4 | 60.4* | 61.0* | 14.4* | 13.5* | 13.3 | 12.9 |
| # Keldin | 89.8* | 102.7* | | | 60.3 | 60.9 | | | 13.5 | 12.9 | | |
| + # LCH 10-13 | 81.8* | | | | 63.3** | | | | 13.9* | | | |
| # LCS Mint | 95.2* | 109.0** | | | 62.0* | 62.9** | | | 12.4 | 12.2 | | |
| Ledger | 77.4 | 85.9 | 84.8 | 83.2 | 61.3 | 61.4* | 61.1* | 61.4* | 12.6 | 12.2 | 12.1 | 11.9 |
| MT1078 | 75.2 | 91.9 | 96.0 | 96.0* | 55.3 | 57.4 | 58.1 | 58.6 | 13.1 | 12.5 | 12.5 | 12.2 |
| MT1117 | 72.2 | 93.6 | 94.0* | | 58.4 | 60.0 | 60.2 | | 14.4* | 13.5* | 13.3 | |
| MT1138 | 76.8 | 98.6* | 98.9* | | 58.7 | 59.6 | 59.8 | | 13.3 | 12.7 | 12.8 | |
| MT1257 | 82.3* | 100.5* | | | 59.9 | 60.2 | | | 12.7 | 12.4 | | |
| MT1265 | 80.4* | 100.0* | | | 58.7 | 59.8 | | | 13.4 | 12.7 | | |
| MT1286 | 89.0* | 101.0* | | | 61.2 | 61.3* | | | 12.9 | 12.6 | | |
| + MT1332 | 87.3* | | | | 59.9 | | | | 12.5 | | | |
| + MT1348 | 89.9* | | | | 59.6 | | | | 12.7 | | | |
| + MT1354 | 72.6 | | | | 57.9 | | | | 13.7 | | | |
| + MT1356 | 87.2* | | | | 59.6 | | | | 12.8 | | | |
| + MT1361 | 89.5* | | | | 59.2 | | | | 12.7 | | | |
| MTCL1131 | 89.0* | 101.4* | 102.0** | | 58.5 | 60.0 | 59.9 | | 12.4 | 12.2 | 12.3 | |
| + MTCL1329 | 73.9 | | | | 62.1* | | | | 12.7 | | | |
| MTCS1204 | 72.7 | 87.6 | | | 60.3 | 61.0 | | | 13.2 | 12.8 | | |
| MTF1232 | 68.4 | 83.4 | | | 58.4 | 59.3 | | | 14.5* | 14.1** | | |
| MTS0826-63 | 64.8 | 80.1 | 81.6 | | 57.9 | 58.7 | 59.2 | | 14.9** | 14.0* | 13.9** | |
| MTS1224 | 80.7* | 94.3 | | | 57.5 | 58.8 | | | 13.3 | 12.9 | | |
| + MTS1305 | 74.8 | | | | 60.6 | | | | 13.1 | | | |
| Northern | 87.9* | 101.4* | 99.0* | 98.5** | 59.3 | 59.7 | 60.0 | 60.2 | 12.9 | 12.6 | 12.8 | 12.5 |
| Rampart | 59.5 | 79.6 | 78.3 | 77.1 | 59.7 | 60.4 | 60.5* | 60.4 | 14.5* | 14.0* | 13.9** | 13.7** |
| SY Clearstone 2CL | 83.0* | 95.8 | 95.6* | 93.4* | 57.2 | 58.9 | 58.5 | 59.0 | 12.6 | 12.2 | 12.5 | 12.4 |
| #+ SY Monument | 83.9* | | | | 58.5 | | | | 12.7 | | | |
| #+ SY Sunrise | 82.4* | | | | 62.6* | | | | 13.3 | | | |
| # SY Wolf | 90.8* | 101.3* | 97.9* | 95.5* | 61.8* | 61.7* | 61.6** | 61.7** | 12.9 | 12.7 | 12.6 | 12.4 |
| # T158 | 83.4* | 92.0 | | | 62.6* | 62.9** | | | 13.2 | 12.7 | | |
| Warhorse | 58.2 | 75.1 | 76.6 | 78.6 | 57.4 | 58.8 | 58.8 | 59.4 | 14.0* | 13.5* | 13.5* | 13.0 |
| WB3768 | 74.9 | 96.3* | 97.0* | 94.9* | 59.6 | 60.1 | 60.2 | 60.5 | 13.8* | 13.1 | 13.0 | 12.8 |
| # WB4059CLP | 65.4 | 66.4 | | | 61.7* | 60.9 | | | 13.9* | 13.4 | | |
| # WB4614 | 75.5 | 87.9 | | | 60.5 | 60.7 | | | 13.6 | 12.9 | | |
| #+ WB4623CLP | 67.1 | | | | 59.9 | | | | 14.0* | | | |
| WB-Quake | 54.3 | 75.8 | 76.4 | 79.2 | 58.6 | 59.4 | 59.8 | 60.3 | 14.0* | 13.4 | 13.3 | 12.9 |
| Yellowstone | 83.1* | 100.2* | 98.7* | 98.1* | 60.0 | 60.0 | 60.2 | 60.3 | 12.7 | 12.4 | 12.5 | 12.2 |
| Average | 78.2 | 91.5 | 90.0 | 88.2 | 59.7 | 60.1 | 59.9 | 60.2 | 13.3 | 12.9 | 12.9 | 12.6 |
| LSD (0.05) | 16.6 | 12.7 | 8.0 | 7.7 | 1.9 | 1.8 | 1.3 | 1.1 | 1.1 | 0.6 | 0.5 | 0.4 |
| C.V. | 12.2 | 6.8 | 5.4 | 6.1 | 1.8 | 1.5 | 1.3 | 1.2 | 4.9 | 2.2 | 2.5 | 2.5 |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 25. 2012-2015 Intrastate Winter Wheat Test (Exp. 3501): Combined Locations Yield, Test Weight and Protein

| Cultivar/Line | Grain Yield (bushels/acre) | | | | Test Weight (lb/bu) | | | | Protein (%) | | | |
|--------------------------|----------------------------|---------------|---------------|---------------|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 |
| location-years | 6 | 12 | 19 | 27 | 6 | 12 | 19 | 27 | 6 | 12 | 19 | 27 |
| Bearpaw | 58.5 | 70.9 | 67.6 | 63.0 | 58.3 | 59.4 | 58.2 | 58.2 | 13.2* | 13.1 | 13.4* | 13.4 |
| #+ Brawl CL Plus | 62.6 | | | | 61.1* | | | | 13.2* | | | |
| Broadview | 61.9 | 75.0 | 72.2 | 66.8 | 57.8 | 58.8 | 58.2 | 58.2 | 12.7 | 12.7 | 12.9 | 12.9 |
| #+ Byrd | 66.5 | | | | 59.1 | | | | 11.9 | | | |
| CDC Falcon | 67.0 | 77.6 | 73.8 | 69.5 | 58.7 | 59.3 | 59.0 | 58.8 | 12.6 | 12.7 | 12.8 | 12.7 |
| Colter | 81.5* | 89.5* | 87.0* | 81.4** | 60.1 | 60.1 | 59.9* | 59.7* | 12.7 | 13.0 | 13.0 | 12.9 |
| Cowboy | 65.8 | 80.6 | 79.0 | | 59.2 | 59.8 | 59.2 | | 11.9 | 11.8 | 12.0 | |
| Decade | 58.6 | 72.3 | 70.8 | 65.4 | 58.8 | 59.3 | 58.4 | 58.5 | 13.1* | 13.0 | 13.3 | 13.3 |
| #+ Denali | 69.0 | | | | 60.6* | | | | 11.6 | | | |
| Freeman | 75.2* | 84.8* | | | 58.2 | 58.8 | | | 12.3 | 12.4 | | |
| Genou | 54.0 | 67.3 | 65.5 | 59.8 | 59.7 | 60.0 | 59.4* | 59.0 | 13.1* | 13.1 | 13.2 | 13.5* |
| Jerry | 57.8 | 69.9 | 67.9 | 63.4 | 58.0 | 58.6 | 57.9 | 57.9 | 12.6 | 12.9 | 12.9 | 12.9 |
| Judee | 63.9 | 75.5 | 73.4 | 68.0 | 60.1 | 60.4 | 60.1* | 59.4* | 12.9 | 13.1 | 13.1 | 13.4 |
| # Keldin | 74.7* | 86.3* | | | 60.4* | 60.5 | | | 12.8 | 12.7 | | |
| + # LCH 10-13 | 61.5 | | | | 61.2* | | | | 13.0* | | | |
| # LCS Mint | 73.3* | 86.9* | | | 61.6* | 62.0** | | | 12.3 | 12.4 | | |
| Ledger | 64.8 | 74.2 | 72.0 | 65.8 | 60.4* | 60.6 | 60.2* | 60.1* | 12.3 | 12.4 | 12.4 | 12.4 |
| MT1078 | 77.8* | 86.9* | 84.2* | 78.9* | 58.3 | 58.9 | 58.4 | 58.3 | 12.0 | 12.2 | 12.3 | 12.3 |
| MT1117 | 76.9* | 87.0* | 85.1* | | 60.2 | 60.4 | 60.3* | | 12.7 | 12.9 | 12.8 | |
| MT1138 | 82.4* | 91.1* | 88.7** | | 60.0 | 60.0 | 59.7* | | 12.1 | 12.4 | 12.5 | |
| MT1257 | 83.0* | 91.8** | | | 59.9 | 59.9 | | | 12.1 | 12.5 | | |
| MT1265 | 77.7* | 88.5* | | | 59.3 | 59.5 | | | 12.3 | 12.6 | | |
| MT1286 | 75.7* | 86.1* | | | 60.6* | 60.8 | | | 12.2 | 12.4 | | |
| + MT1332 | 83.9** | | | | 60.3* | | | | 11.9 | | | |
| + MT1348 | 79.5* | | | | 60.3* | | | | 12.1 | | | |
| + MT1354 | 80.7* | | | | 60.1 | | | | 12.6 | | | |
| + MT1356 | 82.2* | | | | 60.1 | | | | 12.3 | | | |
| + MT1361 | 78.5* | | | | 59.6 | | | | 12.4 | | | |
| MTCL1131 | 81.7* | 90.2* | 88.0* | | 60.4* | 60.5 | 60.0* | | 11.9 | 12.3 | 12.4 | |
| + MTCL1329 | 75.8* | | | | 61.3* | | | | 12.1 | | | |
| MTCS1204 | 67.2 | 77.4 | | | 60.1 | 60.4 | | | 12.6 | 12.9 | | |
| MTF1232 | 60.8 | 73.5 | | | 59.4 | 59.7 | | | 13.8** | 13.8** | | |
| MTS0826-63 | 68.8 | 76.5 | 74.8 | | 59.9 | 60.2 | 60.2* | | 13.7* | 13.7* | 13.7** | |
| MTS1224 | 79.5* | 86.0* | | | 59.8 | 60.0 | | | 12.3 | 12.7 | | |
| + MTS1305 | 63.6 | | | | 60.3* | | | | 12.3 | | | |
| Northern | 79.6* | 88.4* | 86.1* | 78.8* | 60.1 | 60.1 | 59.7* | 59.4* | 12.6 | 12.9 | 12.9 | 13.1 |
| Rampart | 58.7 | 70.4 | 68.2 | 62.9 | 59.8 | 60.1 | 59.8* | 59.7* | 13.6* | 13.7* | 13.7** | 13.8** |
| SY Clearstone 2CL | 76.4* | 86.7* | 83.9* | 78.0* | 59.3 | 59.4 | 58.9 | 58.6 | 12.3 | 12.5 | 12.6 | 12.7 |
| #+ SY Monument | 76.3* | | | | 58.9 | | | | 12.0 | | | |
| #+ SY Sunrise | 72.4* | | | | 61.2* | | | | 12.9 | | | |
| # SY Wolf | 71.3* | 84.1* | 82.1* | 75.3 | 61.0* | 60.7 | 60.4** | 60.3** | 12.5 | 12.7 | 12.8 | 12.9 |
| # T158 | 74.0* | 82.6 | | | 61.6** | 61.8* | | | 12.3 | 12.3 | | |
| Warhorse | 68.9 | 76.7 | 76.3 | 71.4 | 59.3 | 59.8 | 59.5* | 59.3 | 13.0* | 13.3 | 13.3 | 13.2 |
| WB3768 | 77.6* | 86.4* | 84.5* | 78.9* | 60.7* | 60.3 | 60.0* | 59.8* | 12.5 | 12.6 | 12.6 | 12.7 |
| # WB4059CLP | 50.3 | 60.1 | | | 60.0 | 59.5 | | | 13.6* | 13.5* | | |
| # WB4614 | 67.6 | 77.3 | | | 60.6* | 60.7 | | | 12.4 | 12.6 | | |
| #+ WB4623CLP | 62.1 | | | | 60.2 | | | | 13.5* | | | |
| WB-Quake | 66.3 | 74.2 | 73.7 | 69.4 | 59.8 | 60.2 | 59.9* | 59.6* | 12.8 | 12.9 | 13.0 | 13.2 |
| Yellowstone | 82.8* | 90.5* | 87.9* | 81.3* | 60.1 | 60.1 | 59.7* | 59.4* | 11.7 | 12.2 | 12.4 | 12.6 |
| Average | 70.9 | 80.7 | 77.9 | 71.0 | 59.9 | 60.0 | 59.4 | 59.1 | 12.6 | 12.8 | 12.9 | 13.0 |
| LSD (0.05) | 14.0 | 7.9 | 6.9 | 5.9 | 1.4 | 0.9 | 1.1 | 1.0 | 0.8 | 0.5 | 0.4 | 0.3 |
| C.V. | 17.3 | 12.2 | 13.8 | 15.4 | 2.0 | 1.8 | 2.9 | 3.0 | 5.8 | 4.8 | 4.6 | 4.9 |

+ = new for 2015, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 26. 2007//2015 Intrastate Winter Wheat Test (Exp. 35): Combined Locations Winter Survival and associated Yield (Locations: Williston (2007-2008, 2012, 2013, 2015), Sidney (2008, 2010, 2011) = 8 locations

***** No recordable Winterkill, with a harvest, in 2009 and 2014 *****

| | Winter Survival (%) | | | | | | | Yield under Winterkill conditions | | | | | | |
|--------------------------|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2015 | 2013-15 | 2012-15 | 2011-15 | 2010-15 | 2008-15 | 2007-15 | 2015 | 2013-15 | 2012-15 | 2011-15 | 2010-15 | 2008-15 | 2007-15 |
| location-years | 1 | 2 | 3 | 4 | 5 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 7 | 8 |
| Bearpaw | 73 | 47 | 40 | 45 | 45 | | | 42.9 | 45.7 | 46.0 | 48.2 | 48.4 | | |
| #+ Brawl CL Plus | 53 | | | | | | | 25.5 | | | | | | |
| Broadview | 95* | 63* | 60* | 60* | 62* | | | 58.1* | 55.5* | 57.8* | 57.3* | 59.3* | | |
| #+ Byrd | 88* | | | | | | | 49.3 | | | | | | |
| CDC Falcon | 94* | 63* | 59* | 61* | 62* | 53* | 56* | 54.8* | 50.3 | 53.4* | 54.3* | 55.6* | 49.5* | 52.7* |
| Colter | 90* | 67* | 51* | 52* | | | | 48.4 | 62.2* | 55.4* | 58.2* | | | |
| Cowboy | 28 | 21 | | | | | | 28.7 | 41.0 | | | | | |
| Decade | 78* | 53* | 51* | 57* | 57* | 52* | 55* | 47.7 | 52.4 | 49.4 | 53.3* | 54.7* | 48.2* | 51.9* |
| #+ Denali | 75 | | | | | | | 39.8 | | | | | | |
| Freeman | 73 | | | | | | | 45.0 | | | | | | |
| Genou | 83* | 50 | 37 | 41 | 42 | 33 | 36 | 47.6 | 49.8 | 43.0 | 43.1 | 44.3 | 35.7 | 38.4 |
| Jerry | 98** | 72** | 61** | 63** | 64** | 56** | 60** | 52.3* | 58.8* | 57.1* | 59.9* | 60.7* | 53.7** | 56.5** |
| Judee | 40 | 27 | 20 | 27 | 33 | 27 | | 27.9 | 32.7 | 28.9 | 32.8 | 36.6 | 30.0 | |
| # Keldin | 28 | | | | | | | 28.1 | | | | | | |
| + # LCH 10-13 | 60 | | | | | | | 33.0 | | | | | | |
| # LCS Mint | 29 | | | | | | | 29.9 | | | | | | |
| Ledger | 73 | 42 | 35 | 38 | 39 | 31 | 34 | 45.5 | 44.7 | 41.3 | 42.1 | 43.1 | 34.5 | 37.6 |
| MT1078 | 58 | 32 | 26 | | | | | 42.8 | 40.9 | 41.8 | | | | |
| MT1117 | 90* | 55* | | | | | | 46.5 | 53.1 | | | | | |
| MT1138 | 90* | 58* | | | | | | 52.4* | 59.4* | | | | | |
| MT1257 | 85* | | | | | | | 51.5* | | | | | | |
| MT1265 | 88* | | | | | | | 48.4 | | | | | | |
| MT1286 | 88* | | | | | | | 54.3* | | | | | | |
| + MT1332 | 90* | | | | | | | 57.3* | | | | | | |
| + MT1348 | 53 | | | | | | | 38.4 | | | | | | |
| + MT1354 | 90* | | | | | | | 52.1* | | | | | | |
| + MT1356 | 78* | | | | | | | 50.6* | | | | | | |
| + MT1361 | 93* | | | | | | | 51.0* | | | | | | |
| MTCL1131 | 80* | 64* | | | | | | 55.4* | 62.6* | | | | | |
| + MTCL1329 | 69 | | | | | | | 46.2 | | | | | | |
| MTCS1204 | 88* | | | | | | | 48.7 | | | | | | |
| MTF1232 | 63 | | | | | | | 31.2 | | | | | | |
| MTS0826-63 | 90* | 58* | | | | | | 54.9* | 52.2 | | | | | |
| MTS1224 | 95* | | | | | | | 52.1* | | | | | | |
| + MTS1305 | 50 | | | | | | | 27.1 | | | | | | |
| Northern | 85* | 57* | 42 | 49 | | | | 50.5 | 56.0* | 51.1* | 55.4* | | | |
| Rampart | 70 | 46 | 37 | 40 | 38 | 29 | 31 | 33.0 | 41.5 | 39.6 | 41.6 | 41.4 | 32.2 | 34.5 |
| SY Clearstone 2CL | 73 | 47 | 35 | | | | | 45.7 | 48.0 | 44.8 | | | | |
| #+ SY Monument | 75 | | | | | | | 40.8 | | | | | | |
| #+ SY Sunrise | 36 | | | | | | | 24.2 | | | | | | |
| # SY Wolf | 55 | 39 | 28 | 33 | | | | 35.9 | 44.7 | 38.9 | 43.9 | | | |
| # T158 | 60 | | | | | | | 35.6 | | | | | | |
| Warhorse | 78* | 55* | 45 | 50 | 49 | | | 40.8 | 47.6 | 47.3 | 50.3 | 51.3 | | |
| WB3768 | 90* | 63* | 51* | 49 | | | | 53.2* | 57.9* | 56.2* | 58.2* | | | |
| # WB4059CLP | 30 | | | | | | | 21.6 | | | | | | |
| # WB4614 | 78* | | | | | | | 43.9 | | | | | | |
| #+ WB4623CLP | 16 | | | | | | | 14.4 | | | | | | |
| WB-Quake | 75 | 52 | 41 | 45 | 46 | | | 47.3 | 53.4 | 51.4* | 51.8 | 51.3 | | |
| Yellowstone | 93* | 65* | 50* | 51* | 51 | 42 | 44 | 64.2** | 67.4** | 59.5** | 61.5** | 61.6** | 51.3* | 53.8* |
| Average | 71.4 | 52.0 | 42.6 | 47.5 | 49.0 | 40.5 | 45.1 | 43.2 | 51.2 | 47.9 | 50.7 | 50.7 | 41.9 | 46.5 |
| LSD (0.05) | 21.8 | 20.3 | 14.4 | 12.6 | 10.5 | 9.0 | 6.9 | 13.7 | 13.7 | 11.7 | 9.5 | 7.7 | 6.4 | 5.6 |
| C.V. | 15.2 | 18.8 | 20.5 | 18.7 | 16.8 | 20.5 | 15.1 | 15.8 | 12.9 | 14.7 | 13.1 | 12.0 | 14.2 | 11.9 |

+ = new for 2014, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 27. 2012-2015 Intrastate Winter Wheat Test (Exp. 35): Combined Locations Heading Date, Height, and Lodging

| Cultivar/Line | Heading Date (Julian) | | | | Plant Height (in) | | | | Lodging % | | |
|--------------------------|-----------------------|--------------|--------------|--------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 2015 | 2014-15 | 2013-15 | 2012-15 | 2015 | 2014-15 | 2013-15 | 2012-15 | 2014 | 2013-14 | 2011-14 |
| location-years | 6 | 12 | 20 | 27 | 6 | 12 | 20 | 28 | 1 | 3 | 5 |
| Bearpaw | 156.8 | 159.3 | 161.7 | 162.0 | 32.4 | 32.1 | 32.0 | 31.6 | 1 | 9 | 9 |
| #+ Brawl CL Plus | 152.0 | | | | 32.1 | | | | | | |
| Broadview | 157.5 | 160.0 | 162.6 | 162.8 | 33.5 | 33.1 | 32.9 | 32.3 | 0 | 0 | 6 |
| #+ Byrd | 153.8 | | | | 32.5 | | | | | | |
| CDC Falcon | 156.7 | 159.6 | 161.7 | 161.9 | 30.2 | 30.4 | 30.7 | 30.6 | 0 | 1 | 1 |
| Colter | 158.6 | 161.7 | 163.9 | 164.2 | 35.2 | 34.8 | 34.5 | 34.0 | 1 | 1 | 1 |
| Cowboy | 155.8 | 158.7 | 161.3 | | 33.3 | 32.9 | 32.8 | | 2 | 1 | |
| Decade | 156.4 | 158.5 | 160.7 | 161.1 | 32.1 | 32.3 | 32.5 | 32.1 | 0 | 0 | 2 |
| #+ Denali | 156.1 | | | | 34.3 | | | | | | |
| Freeman | 151.7 | 154.4 | | | 32.7 | 32.4 | | | 3 | | |
| Genou | 157.0 | 160.2 | 162.7 | 163.1 | 36.8 | 36.7 | 36.4 | 35.7 | 1 | 20 | 22 |
| Jerry | 157.5 | 160.9 | 163.2 | 163.5 | 37.4 | 37.6 | 37.7 | 37.1 | 3 | 4 | 6 |
| Judee | 157.0 | 159.3 | 162.0 | 162.5 | 33.1 | 33.0 | 32.9 | 32.5 | 1 | 16 | 15 |
| # Keldin | 157.6 | 160.4 | | | 32.7 | 32.2 | | | 0 | | |
| +# LCH 10-13 | 153.0 | | | | 34.5 | | | | | | |
| # LCS Mint | 153.8 | 156.0 | | | 34.1 | 33.3 | | | 0 | | |
| Ledger | 156.9 | 159.3 | 161.9 | 162.2 | 33.0 | 32.6 | 32.3 | 31.9 | 0 | 0 | 5 |
| MT1078 | 158.2 | 160.9 | 163.3 | 163.4 | 33.5 | 33.0 | 32.7 | 32.4 | 1 | 1 | |
| MT1117 | 158.3 | 161.3 | 163.7 | | 35.4 | 35.1 | 34.5 | | 1 | 4 | |
| MT1138 | 157.8 | 160.6 | 163.0 | | 35.6 | 35.5 | 35.2 | | 0 | 0 | |
| MT1257 | 157.5 | 160.4 | | | 35.0 | 35.0 | | | 0 | | |
| MT1265 | 158.6 | 161.8 | | | 35.7 | 35.4 | | | 4 | | |
| MT1286 | 157.9 | 160.7 | | | 35.1 | 35.4 | | | 5 | | |
| + MT1332 | 158.0 | | | | 35.7 | | | | | | |
| + MT1348 | 156.5 | | | | 33.5 | | | | | | |
| + MT1354 | 158.3 | | | | 35.4 | | | | | | |
| + MT1356 | 158.2 | | | | 35.2 | | | | | | |
| + MT1361 | 159.8 | | | | 32.4 | | | | | | |
| MTCL1131 | 158.7 | 161.7 | 163.9 | | 35.4 | 35.9 | 35.6 | | 0 | 0 | |
| + MTCL1329 | 155.8 | | | | 32.8 | | | | | | |
| MTCS1204 | 157.5 | 160.6 | | | 34.1 | 33.8 | | | 0 | | |
| MTF1232 | 160.3 | 163.5 | | | 43.7 | 44.5 | | | 0 | | |
| MTS0826-63 | 159.9 | 163.0 | 165.4 | | 35.7 | 35.7 | 35.4 | | 1 | 28 | |
| MTS1224 | 158.6 | 162.0 | | | 31.4 | 31.3 | | | 8 | | |
| + MTS1305 | 156.7 | | | | 31.3 | | | | | | |
| Northern | 158.8 | 161.6 | 164.1 | 164.4 | 34.2 | 33.7 | 33.5 | 32.9 | 7 | 16 | 11 |
| Rampart | 158.0 | 160.7 | 162.9 | 163.3 | 36.6 | 36.7 | 36.4 | 35.6 | 1 | 38 | 30 |
| SY Clearstone 2CL | 157.9 | 160.7 | 163.3 | 163.6 | 35.4 | 35.4 | 35.0 | 34.5 | 0 | 0 | |
| #+ SY Monument | 155.8 | | | | 32.5 | | | | | | |
| #+ SY Sunrise | 154.4 | | | | 29.0 | | | | | | |
| # SY Wolf | 156.0 | 158.3 | 160.4 | 160.5 | 31.3 | 31.4 | 31.3 | 31.2 | 0 | 0 | 0 |
| # T158 | 151.5 | 154.5 | | | 31.2 | 30.1 | | | 0 | | |
| Warhorse | 158.5 | 160.9 | 163.4 | 163.7 | 32.5 | 32.3 | 32.3 | 31.8 | 2 | 18 | 10 |
| WB3768 | 160.9 | 163.7 | 166.2 | 166.5 | 37.3 | 37.7 | 37.2 | 36.5 | 8 | 27 | 15 |
| # WB4059CLP | 153.1 | 155.5 | | | 28.9 | 28.5 | | | 0 | | |
| # WB4614 | 157.2 | 160.1 | | | 31.8 | 31.8 | | | 0 | | |
| #+ WB4623CLP | 158.3 | | | | 30.7 | | | | | | |
| WB-Quake | 158.1 | 161.5 | 164.2 | 164.6 | 33.0 | 33.2 | 33.3 | 32.8 | 1 | 4 | 8 |
| Yellowstone | 157.8 | 161.2 | 163.4 | 163.7 | 35.1 | 34.8 | 34.7 | 34.2 | 0 | 0 | 1 |
| Average | 156.9 | 160.1 | 163.0 | 163.2 | 33.8 | 33.9 | 34.0 | 33.3 | 3.1 | 8.1 | 7.8 |
| LSD (0.05) | 1.0 | 0.8 | 0.6 | 0.5 | 1.4 | 1.1 | 0.8 | 0.6 | 13.0 | 19.5 | 12.6 |
| C.V. | 0.6 | 0.6 | 0.6 | 0.6 | 3.8 | 4.0 | 3.6 | 3.6 | 257 | 146 | 128 |

+ = new for 2014, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 28. 2008-2015 Intrastate Winter Wheat Test (Exp. 35): Combined Locations Sawfly Cutting and Stripe Rust

| Cultivar/Line | Limited Sawfly Cutting at Havre in 2014 and 2015 (2.1 and 5.3%) | | | | | | Stripe Rust (%) Bozeman and Kalispell | | | | | | |
|-------------------|---|---------|---------|---------|---------|---------|---------------------------------------|---------|---------|---------|---------|---------|---------|
| | Sawfly Cutting (%) Havre | | | | | | Stripe Rust (%) Bozeman and Kalispell | | | | | | |
| | 2013 | 2012-13 | 2011-13 | 2010-13 | 2009-13 | 2008-13 | 2015 | 2014-15 | 2013-15 | 2012-15 | 2011-15 | 2010-15 | 2009-15 |
| location-years | 1 | 2 | 3 | 4 | 5 | 6 | 2 | 3 | 4 | 5 | 7 | 8 | 9 |
| Bearpaw | 6* | 4* | 3* | 3* | 2* | | 62 | 47 | 60 | 68 | 69 | 62 | 57 |
| #+ Brawl CL Plus | | | | | | | 59 | | | | | | |
| Broadview | 11 | 10 | 8 | 9 | | | 57 | 40 | 55 | 64 | 65 | 61 | |
| #+ Byrd | | | | | | | 66 | | | | | | |
| CDC Falcon | 5* | 6* | 5* | 5* | 7* | 12 | 36 | 25 | 44 | 55 | 56 | 49 | 44 |
| Colter | 13 | 12 | 11 | | | | 11* | 8* | 16* | 25* | 23* | | |
| Cowboy | 11 | | | | | | 74 | 53 | 65 | | | | |
| Decade | 9* | 9 | 8 | 7 | 9* | 14 | 66 | 54 | 66 | 72 | 72 | 73 | 65 |
| #+ Denali | | | | | | | 69 | | | | | | |
| Freeman | | | | | | | 26* | 17* | | | | | |
| Genou | 7* | 7* | 5* | 7 | 6* | 7* | 55 | 49 | 61 | 69 | 68 | 63 | 56 |
| Jerry | 10* | 12 | 10 | 14 | 19 | 20 | 74 | 67 | 75 | 80 | 77 | 72 | 64 |
| Judee | 5* | 4* | 4* | 4* | 4* | 5* | 6* | 4* | 11* | 19* | 19* | 17* | 15** |
| # Keldin | | | | | | | 20* | 13* | | | | | |
| + # LCH 10-13 | | | | | | | 66 | | | | | | |
| # LCS Mint | | | | | | | 14* | 9* | | | | | |
| Ledger | 9* | 7* | 5* | 8 | 9* | 15 | 40 | 27 | 46 | 56 | 59 | 54 | 50 |
| MT1078 | 11 | 7 | | | | | 20* | 14* | 34 | 42 | | | |
| MT1117 | 9* | | | | | | 11* | 8* | 12* | | | | |
| MT1138 | 13 | | | | | | 15* | 10* | 20* | | | | |
| MT1257 | | | | | | | 14* | 9* | | | | | |
| MT1265 | | | | | | | 11* | 7* | | | | | |
| MT1286 | | | | | | | 50 | 35 | | | | | |
| + MT1332 | | | | | | | 7* | | | | | | |
| + MT1348 | | | | | | | 10* | | | | | | |
| + MT1354 | | | | | | | 11* | | | | | | |
| + MT1356 | | | | | | | 16* | | | | | | |
| + MT1361 | | | | | | | 11* | | | | | | |
| MTCL1131 | 16 | | | | | | 14* | 9* | 16* | | | | |
| + MTCL1329 | | | | | | | 21* | | | | | | |
| MTCS1204 | | | | | | | 40 | 27 | | | | | |
| MTF1232 | | | | | | | 41 | 30 | | | | | |
| MTS0826-63 | 7* | | | | | | 13* | 9* | 20* | | | | |
| MTS1224 | | | | | | | 6* | 4* | | | | | |
| + MTS1305 | | | | | | | 19* | | | | | | |
| Northern | 7* | 8 | 6* | | | | 4** | 3** | 9** | 22* | 25* | | |
| Rampart | 4* | 2** | 1** | 3* | 2** | 4** | 35 | 25 | 43 | 53 | 52 | 46 | 42 |
| SY Clearstone 2CL | 14 | 13 | | | | | 13* | 8* | 28* | 35* | | | |
| #+ SY Monument | | | | | | | 11* | | | | | | |
| #+ SY Sunrise | | | | | | | 16* | | | | | | |
| # SY Wolf | 8* | 6* | 6* | | | | 13* | 8* | 14* | 23* | 26* | | |
| # T158 | | | | | | | 10* | 7* | | | | | |
| Warhorse | 2** | 2* | 2* | 2** | | | 4** | 3** | 10* | 18** | 17** | 15** | |
| WB3768 | 15 | 17 | 13 | | | | 9* | 6* | 22* | 27* | 24* | | |
| # WB4059CLP | | | | | | | 66 | 65 | | | | | |
| # WB4614 | | | | | | | 27* | 18* | | | | | |
| #+ WB4623CLP | | | | | | | 9* | | | | | | |
| WB-Quake | 4* | 4* | 4* | 3* | | | 11* | 9* | 21* | 34* | 30* | 26* | |
| Yellowstone | 10* | 10 | 8 | 8 | 11 | 12 | 15* | 10* | 27* | 33* | 31 | 27* | 24* |
| Average | 10.4 | 9.3 | 7.9 | 8.6 | 11.3 | 12.3 | 27.9 | 21.0 | 33.6 | 44.2 | 44.4 | 47.0 | 46.4 |
| LSD (0.05) | 8.0 | 5.2 | 5.2 | 5.4 | 7.9 | 7.9 | 26.0 | 21.3 | 21.3 | 7.7 | 13.4 | 12.7 | 12.2 |
| C.V. | 46 | 27 | 40 | 45 | 56 | 56 | 46 | 62 | 45 | 32 | 28 | 27 | 28 |

+ = new for 2014, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

Table 29. 2008//2013 Intrastate Winter Wheat Test (Exp. 35): Coleoptile Length

*** Test not run in 2009, 2011, 2014 and 2015 ***

| Cultivar/Line | Pedigree | Coleoptile Length (in) | | | |
|--------------------------|---|------------------------|------------|------------|------------|
| | | 2013 | 2012-2013 | 2010//2013 | 2008//2013 |
| location-years | | 1 | 2 | 3 | 4 |
| Bearpaw | Montana, 2011 | 3.1 | 3.0 | 3.0 | |
| #+ Brawl CL Plus | Colorado, 2011 (CO Wheat Res. Fdn.) | | | | |
| Broadview | Alberta, 2009 (Meridian Seeds) | 2.8 | 2.8 | 2.7 | |
| #+ Byrd | Colorado, 2011 (CO Wheat Res. Fdn.) | | | | |
| CDC Falcon | Sask/WestBred, 1999 | 3.0 | 2.9 | 2.9 | 2.9 |
| Colter | Montana, 2013 | 3.0 | 2.9 | | |
| Cowboy | Wyoming/Colorado, 2012 | 3.1 | | | |
| Decade | Montana/North Dakota, 2010 | 3.4 | 3.2 | 3.1 | 3.1 |
| #+ Denali | Colorado, 2011 (CO Wheat Res. Fdn.) | | | | |
| Freeman | Nebraska, 2013 | | | | |
| Genou | Montana, 2004 | 4.5 | 4.3 | 4.1 | 4.2 |
| Jerry | North Dakota, 2001 | 3.4 | 3.2 | 3.2 | 3.2 |
| Judee | Montana, 2011 | 4.1 | 3.8 | 3.7 | 3.8 |
| # Keldin | WestBred, 2011 | | | | |
| + # LCH 10-13 | Limagrain Cereals experimental | | | | |
| # LCS Mint | Limagrain Cereals, 2012 | | | | |
| Ledger | WestBred, 2004 | 3.4 | 3.3 | 3.3 | 3.3 |
| MT1078 | MT02113*4/MTS0359 | 3.3 | 3.3 | | |
| MT1117 | Yellowstone*3/KS96WGRC40 | 2.9 | | | |
| MT1138 | W99-194/2*Yellowstone | 2.8 | | | |
| MT1257 | Yellowstone/Krichauff | | | | |
| MT1265 | Yellowstone*4/KS96WGRC40 (Lr41, wcm) | | | | |
| MT1286 | Yellowstone*2/NE99445 | | | | |
| + MT1332 | Yellowstone/00X52E99/Yellowstone(340,233) | | | | |
| + MT1348 | PI572290/BigSky | | | | |
| + MT1354 | MT08184//MT08188/MT08175 | | | | |
| + MT1356 | MT08184//MT08185/MT08177 | | | | |
| + MT1361 | MT08189//MT08188/MT0419-1 (Sr2+36) | | | | |
| MTCL1131 | Yellowstone*4/3/MTCL01158/CDC Teal 11A//Jag | 2.5 | | | |
| + MTCL1329 | Yellowstone/4/Jagalene/3/98X78cC82cl/MT009 | | | | |
| MTCS1204 | MTCL0510/4/Paul/3/98X96C16cl/CDC Teal 11A | | | | |
| MTF1232 | Yellowstone/MT0684 | | | | |
| MTS0826-63 | MT9524/G15048//Rampart | 3.7 | | | |
| MTS1224 | Yellowstone//MTS0112/MTS0125 | | | | |
| + MTS1305 | MTS0525//97X253E54/MT03108 | | | | |
| Northern | Montana, 2015 (MT0978) | 2.7 | 2.5 | | |
| Rampart | Montana, 1996 | 4.9** | 4.6* | 4.4** | 4.4** |
| SY Clearstone 2CL | Montana/Syngenta, 2012 | 3.1 | 3.0 | | |
| #+ SY Monument | Syngenta (AgriPro), 2014 | | | | |
| #+ SY Sunrise | Syngenta, 2015 (06BC796#68) | | | | |
| # SY Wolf | Syngenta (AgriPro), 2010 | 3.1 | 3.0 | | |
| # T158 | Trio Research/Limagrain Cereals, 2009 | | | | |
| Warhorse | Montana, 2013 | 3.4 | 3.3 | 3.3 | |
| WB3768 | Montana/WestBred, 2013 | 2.9 | 2.8 | | |
| # WB4059CLP | WestBred, 2013 | | | | |
| # WB4614 | WestBred, 2013 | | | | |
| #+ WB4623CLP | WestBred, 2014 | | | | |
| WB-Quake | WestBred, 2011 | 2.8 | 2.8 | 2.7 | |
| Yellowstone | Montana 2005 | 2.8 | 2.7 | 2.7 | 2.7 |
| Average | | 3.1 | 3.1 | 3.2 | 3.3 |
| LSD (0.05) | | 0.2 | 0.2 | 0.2 | 0.2 |
| C.V. | | 3.6 | 3.5 | 4.7 | 4.3 |

+ = new for 2014, # = paid entry

** = indicates highest value within a column

* = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)